HOW SCHOOL PSYCHOLOGISTS CONSIDER AND ACCOMMODATE FOR FACTORS THOUGHT TO INFLUENCE CHILDREN'S PERFORMANCE ON INDIVIDUALLY ADMINISTERED TESTS

Except where reference is made to the work of others, the work described in this dissertation is my own or was done in collaboration with my advisory committee. This dissertation does not include proprietary or classified information.

_____
Colleen Marie Holthaus

Certificate of Approval:

_____	_____
David M. Shannon Humana-Germany-Sherman Distinguished Professor Educational Foundations, Leadership, and Technology	Joseph A. Buckhalt, Chair Wayne T. Smith Distinguished Professor Special Education, Rehabilitation, Counseling/School Psychology
_____	_____
Annette S. Kluck Assistant Professor Special Education, Rehabilitation, Counseling/School Psychology	George T. Flowers Dean Graduate School

HOW SCHOOL PSYCHOLOGISTS CONSIDER AND ACCOMMODATE FOR FACTORS THOUGHT TO INFLUENCE CHILDREN'S PERFORMANCE ON INDIVIDUALLY ADMINISTERED TESTS

Colleen Marie Holthaus

A Dissertation

Submitted to

the Graduate Faculty of

Auburn University

in Partial Fulfillment of the

Requirements for the

Degree of

Doctor of Philosophy

Auburn, Alabama
August 10, 2009

HOW SCHOOL PSYCHOLOGISTS CONSIDER AND ACCOMMODATE FOR FACTORS THOUGHT TO INFLUENCE CHILDREN'S PERFORMANCE ON INDIVIDUALLY ADMINISTERED TESTS

Colleen Marie Holthaus

_____
Signature of Author

_____
Date of Graduation

DISSERTATION ABSTRACT

HOW SCHOOL PSYCHOLOGISTS CONSIDER AND ACCOMMODATE FOR FACTORS THOUGHT TO INFLUENCE CHILDREN'S PERFORMANCE ON INDIVIDUALLY ADMINISTERED TESTS

Colleen Marie Holthaus

Doctor of Philosophy, August 10, 2009
Ed.S., Auburn University, 2008
M.Ed., State University of West Georgia, 2003
B.A., State University of West Georgia, 2000

266 Typed Pages

Directed by Joseph A. Buckhalt

School psychologists' professional responsibilities include administration and interpretation of a great many psychological and educational tests for numerous purposes. These tests are most frequently used to assess students and determine strengths and weaknesses which affect school performance. Test results are then used in preparing comprehensive evaluations which are in turn considered by Individual Education Planning (IEP) Teams when determining eligibility for Special Education Services and recommended educational interventions. Examiner manuals for tests almost always include child factors such as illness, fatigue, or lack of cooperation that might affect or

even invalidate the results. A review of 23 test manuals was conducted and the factors mentioned were used to develop a survey of 220 school psychologists in a nationwide sample. Informants reported on the frequency of their observations of child factors, their views of the importance of the factors, and the actions they have taken when they have encountered a factor that might affect the testing situation and the child's performance.

Among the main results were statistically significant positive correlations between beliefs regarding the importance of child factors and the school psychologist's frequency of observing or taking actions over the previous 12 months when child factors such as fatigue, inattention, rapport, refusal and sleepiness were present in the examinees.

Findings also suggested that pressures felt by school psychologists regarding the need to continue testing in spite of the presence of child factors were positively correlated with examinee anxiety, fatigue, fear, hunger/thirst, inattention, motivation, shyness, sleepiness and temporary illness in terms of the observation of or actions taken by school psychologists over the previous 12 months of testing.

Several child factors not currently mentioned in commonly used test manuals but are believed by the school psychologists to be important to the outcome validity of the instruments were identified and data revealed that school psychologists feel that sleep is very important to the validity of their test results in spite of this child factor rarely being mentioned in test examiner's manuals.

ACKNOWLEDGMENTS

My thanks and appreciation to Dr. Joseph Buckhalt for his persevering with me and providing insight, valuable suggestions and guidance as my esteemed advisor through out the time it took me to complete this research and write this dissertation. The members of my dissertation committee, Dr. David Shannon and Dr. Annette Kluck have also generously given their time and expertise to better my work. I thank all of my committee members for their contributions and support during the dissertation. I also want to thank my outside reader Dr. Steven Shapiro for his suggestions and insightful discussions.

And to my siblings, whose unwavering support gave me the courage to begin this adventure and to see it through to a conclusion. I offer my most heartfelt gratitude to my brother, Justin and my sisters, Rachelle, Jolene and Mylene for being my very best friends. I am also tremendously thankful to Billy who has encouraged me to follow my dreams with his constant support and love. Thank you for holding my hand along the way. Thank you to my friends for encouraging me to laugh and to cherish the memories.

And above all, I dedicate this project to my parents, Joe and Fran whom I owe a perpetual debt of gratitude for their unwavering love, support, advice and encouragement over the years. Your love is the faith and inspiration behind all of my dreams.

Publication Manual of the American Psychological Association, Fifth Edition

Microsoft Word, Version 2003

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I:

GENERAL OVERVIEW

School psychologists work with all types of children including those who need extra assistance in achieving academic success, those with behavior problems, children with psychological, cognitive and physical disabilities as well as those with adaptive behavior and/or social skills difficulties. These professionals are responsible for many tasks such as consultation, program evaluation, leadership, crisis intervention, administrative duties, assessment, research, testing, intervention development and training future psychologists as well as being the primary psychological experts within the schools.

Psychologists emerged in the schools following the introduction of compulsory schooling and the implementation of special education services (Fagan & Wise, 2000). Primary reasons for incorporating psychologists in the schools revolved around a need to secure personnel who could help educators sort children reliably into segregated educational settings where each individual could be successful (Fagan & Wise, 2000). World War I led to a rapid movement in psychological test development that soon filtered into the school systems. School psychologists were deemed to be highly trained and appropriate administrators of psychological tests who could adequately group students

into academic learning groups that were based on individual intelligence (Fagan & Wise, 2000).

History reveals that school psychologists were traditionally incorporated into the schools for evaluation purposes. Therefore, testing has always been a primary responsibility for these professionals. In the past, assessment consisted mostly of testing and was used to detect and highlight differences in student learning in order to rank students according to their achievement levels (Stiggins, 2007). As federal laws have changed over the years, psychological accreditation bodies emerged and the "No Child Left Behind Act" of 2001 passed into law, less emphasis was placed on merely sorting students into rank orders and more value was assigned to helping all students succeed in meeting educational standards (Fagan & Wise, 2000). This shift increased accountability amongst educators and heightened focus on early detection of "at-risk" children for the purpose of promoting future academic success. A proactive rather than reactive approach to meeting the needs of all students became the norm when testing criteria and standards became more stringent and school systems were mandated to meet specific benchmarks deemed as Adequate Yearly Progress (AYP) in order to retain federal funding (Sattler, 2001).

School psychologists are responsible for the task of writing psychoeducational reports to be referenced by eligibility teams in determining special education services. Eligibility teams are required to make intra-individual comparisons among students as well as comparisons of students to their peers in deciding whether or not a child is in need of additional assistance in meeting their educational goals (Sattler, 2001).

Many resources are used in determining special education eligibility for students in need. Some examples include parent and teacher interviews, grades, curriculum based assessments, portfolios, current work samples, medical examination reports, direct observations, group test results and individually administered norm referenced standardized tests as well as any other available information that would assist with informing the Individualized Education Planning team regarding a students' educational strengths and weaknesses. Individualized assessments completed by school psychologists often involves the use of individually administered norm referenced standardized tests and the results of these test instruments along with other evaluation information are analyzed and interpreted in psychoeducational reports. The test scores are used during the special education eligibility decision and are referenced when determining specific recommendations for the student in terms of educational placement and academic planning (Sattler, 2001)**.** These tests require specific training to administer and may include cognitive or intelligence tests, achievement tests, curriculum based assessments, aptitude tests, adaptive behavior inventories, personality assessments, self report rating scales, and teacher and parent rating scales.

The individualized tests used by school psychologists are selected based on the referral question given to them by the eligibility team (Sattler, 2001). All tests selected should be standardized, be research and theory based, have manuals that provide statistical data regarding reliability and validity as well as providing specific examiner qualifications and administration procedures (Jacob & Hartshorne, 2003). The

individualized tests used for eligibility purposes should also be normed on a population similar to that of the examinee (Sattler, 2001).

Information regarding the quality of tests to be used for eligibility purposes can be gathered from resources such as the local psychological services department within the school district, the state board of education, published literature sources, or the Mental Measurements Yearbook (Conoley, J.C. & Impara, J.C. EDS, 1995). School psychologists are certified and licensed professionals as well as members of their state, local and national organizations. These associations, licensing boards and organizations require school psychologists to abide by professional standards and ethical responsibilities when using standardized test instruments for evaluation purposes (Jacob & Hartshorne, 2003; Sattler, 2001).

With the recent revisions to public law 94 – 142 (H.R. 94-142, 1997) eligibility teams are required to use Functional Behavior Analysis as well as a Response to Intervention approach when addressing special education needs for children in their school systems (Sattler, 2001). The Disabilities Act requires that all children being considered for a mild, moderate or severe intellectual deficiency be measured on adaptive behavior and show a significant deficit in this area to be given an eligibility status for special education (Jacob & Hartshorne, 2003).

A "Response to Intervention" approach expands the use of individually administered norm referenced standardized tests. School psychologists are using tests to confirm information supporting the need for special education services and using them to make recommendations regarding research-based interventions to be used in the

classroom (Sattler, 2001). Specific academic and behavioral weaknesses in children can be identified from the results of individually administered norm referenced standardized tests and this information can be used to determine specific deficit areas to target, so that each child has an increased opportunity to improve their academic, behavioral or social performance.

Standardized test authors should publish a test manual that describes specific standardization qualities, norm group demographics, statistical data, and administrator qualifications as well as administration procedures (Jacob & Hartshorne, 2003; See Table 6). Within the general administration procedures section of test manuals, there is information regarding child factors that may affect the outcome or results of each of the individualized tests. Examiners are instructed by test authors to discontinue testing, take a break or note the occurrence of certain child factors present during the test situation.

This study examined twenty three test manuals that are used in current professional practices by school psychologists to determine which child factors are most frequently mentioned as having an impact on test results when present in the examinee during testing sessions. Published literature was reviewed to determine the presence or absence of current theories and information regarding child factors. Sleepiness is rarely mentioned in test manuals, so research was conducted to determine current information on the impact of sleep and academic success in school aged children.

Data was obtained from a nationwide survey that consisted of 220 practicing school psychologists. This data was then examined in an attempt to determine whether or not the child factors that were mentioned in test manuals as possible inhibitors to the

validity of the test results were being recognized by school psychologists. Further information of interest included whether or not school psychologists were taking action when these child factors were present.

School psychologist's beliefs regarding the importance of these child factors were compared to current observations and actions taken by school psychologists to determine whether or not there is a relationship between beliefs and actions.

Sleepiness was examined due to this being a child factor which is rarely mentioned in test manuals as having an impact on test results in spite of the recent published literature suggesting that sleep may have an impact on long term academic success.

School psychologists were queried as to additional child factors which they believe to be important to test results. These responses provided information regarding which child factors are recognized as being important to test users.

Additional information regarding whether or not pressures felt by school psychologists to complete psychoeducational evaluations within specific timelines impacted their observations and actions taken when child factors occurred during testing sessions. Demographic data, grade levels served by the respondents, and professional responsibilities were examined in order to determine whether or not group differences or relationships existed between these variables and the observation or actions taken when child factors are present during testing.

The objective of this study was to obtain current information related to child factors from practicing school psychologists who regularly use psychological and educational test instruments to evaluate students.

CHAPTER II:

LITERATURE REVIEW

In reviewing several of the most commonly used test manuals, it is apparent that most test authors include examiner qualifications as well as purposes for the tests (See Table 1 and Table 6). Many manuals explain the theory used in developing each of the tests, which is recommended, but not always true of all tests (See Table 1, Appendix A, and Appendix B).

Many of the same child factors believed to invalidate test results appear repeatedly in test manuals, but there is not a general consensus (See Table 2). Some test manuals include many factors, whereas others are sparser in the inclusion of child factors that may affect the results of the tests they are promoting (See Table 2 and Appendix A). After reviewing several manuals, which explain commonly used individually administered norm referenced standardized tests, a list of the most common child factors mentioned in these manuals was compiled (See Table 3).

Table 1

Age Appropriateness, Theory Basis, and Purpose for Test Instruments

Test[a]	Ages	Theory	Purpose
Bender Gestalt	3 to Adult	Visual Gestalt Psychology	Child Visual Motor Test
CDI	7 to17 yrs	Symptom-Oriented Depression	Depression Inventory
CTONI	6-0 to 89-11	Eclectic Theories of Intelligence	Nonverbal Intelligence Test
DAP	3 to 17 yrs	Cooke & Ricci, 1800s	Nonverbal Ability Test
ITPA-III	5 yrs to 12-11	Osgood's Communication Model	Cognitive Ability Test
K-Bit	4 to 90 yrs	Crystallized/Fluid Intelligence Model	Intelligence Test
K-TEA	6-0 to 18-11	Rasch-Wright Latent Trait Model	Achievement Test
MBA	4 to 90+ yrs		Achievement Test
MCMI-III	Clinical Adults	Evolutionary Theory & Personality Theory	Clinical Assessment
MMPI-2	18 to 90+ yrs	Hathaway & McKinley, 1930s	Personality Inventory
NEO-PI-R	17+ yrs	Five-Factor Model of Personality	Personality Inventory
PIAT-R	5-0 to 18-11		Achievement Test
RISB	9th Grade to 90 yrs	Word Association to Sentence Completion	Personality Adjustment Test

Test[a]	Ages	Theory	Purpose
Slosson	5 to 21 yrs	Modern Cognitive Theory	Intelligence Screening Test
Stanford-Binet	2 to 85+ yrs		Intelligence Test
TAT	7 to 90+ yrs	Psychoanalytic Theory	Projective Personality Test
UNIT	5-0-0 to 17-11-30		Nonverbal Intelligence Test
Vineland ABS	Birth to 18 to 11/LF Adult	Edgar A. Doll, 1935 & P.L 94-142	Adaptive Behavior Scale
Vineland SEEC	Birth to 5-11	Edgar A. Doll, 1935 & P.L 94-142	Social/Emotional Scale
Wechsler Memory			Memory Assessment Scale
WISC-IV	6-0 to 16-11		Intelligence Test
WJ-III	2 to 90+ yrs	Cattell, Horn, Catell/Info. Proc.	Intelligence Test
WPPSI-III	2-6 to 7-3	Cognitive Dev/Contemporary Intelligence	Intelligence Test

[a](1) Visual Motor Gestalt Test (Bender Gestalt); (2) Children's Depression Inventory (CDI), (3) Comprehensive Test of Nonverbal Intelligence (CTONI); (4) Draw a Person (DAP); (5) Illinois Test of Psycholinguistic Abilities-III (ITPA-III); (6) Kaufman Brief Intelligence Test (K-BIT); (7) Kaufman Test of Educational Acheivement (K-TEA); (8) Mini-Battery of Achievement (MBA); (9) Millon Clinical Multiaxial Inventory-III (MCMI-III); (10) Minnesota Multiphasic Personality Inventory –2nd edition (MMPI-2); (11) NEO Personality Inventory-Revised (NEO-PI-R); (12) Peabody Individual Achievement Test-Revised (PIAT-R); (13) Rotter Incomplete Sentences Blank (RISB); (14) Slosson Full Range Intelligence Test (Slosson); (15) Standford-Binet Intelligence Scales-Fifth Edition (Stanford-Binet); (16) Thematic Apperception Test (TAT); (17) Universal Nonverbal Intelligence Scale (UNIT); (18) Vineland Adaptive Behavior Scales (Vineland ABS); (19) Vineland SEEC Scales (Vineland SEEC); (20) Wechsler Memory Scale –III (WMS-III); (21) Wechsler Intelligence Scale for Children –IV (WISC-IV); (22) Woodcock Johnson Test of Cognitive Abilities – III (WJ-III); (23) Wechsler Preschool and Primary Scale of Intelligence-III (WPPSI-III).

Table 2

Factors Mentioned in Individually Administered Norm Referenced Standardized Test's Examiner Manuals

Factor	Test mentioned	Times mentioned
Ability to relax	7	1
Ability to sustain effort	6	1
Accuracy	11	1
Acquiescence	11	1
Activity level	6, 7, 20, 22	4
Adjustment problems	9	1
Aggression	15	1
Anger	15	1
Anxiety	1, 6, 7, 9, 12, 13, 15, 17, 18, 20, 21, 23	12
Apprehension	20, 21	2
Attention level	3, 5, 6, 7, 12, 21, 22, 23	8
Attitude	3, 5, 6, 8, 9, 10, 15, 16	8
Behavior problems	1, 7, 8, 9, 11, 13, 15, 17, 22	9
Block/freeze-up	3	1
Boredom	7, 8, 17, 20, 23	5
Break	3, 6, 7, 12, 14, 15, 17, 20, 21, 23	10
Carefulness	10, 11, 22	3
Changes in affect	7, 9	2

Factor	Test mentioned	Times mentioned
Complaining	9	1
Concentration problems	8, 10, 22	3
Confidence problems	7, 12	2
Confusion	3, 5, 9, 10, 11	5
Cultural deprivation	10	1
Cynicism	6	1
Defensiveness	6, 7, 10	3
Demographics	9	1
Denial	9	1
Depression	6, 7, 9, 10	4
Disappointment	7	1
Discomfort	5, 6, 7, 8, 9, 13, 16, 17, 22	9
Discouraged easily	12	1
Disorientation	10	1
Distractibility	3, 5, 6, 7, 8, 9, 10, 15	8
Distortion effects	9	1
Distraught/distress	3, 15	2
Drifting thoughts	17	1
Dull-witted	16	1
Ease	5, 7, 18, 22	4
Effort	7, 21	2

Factor	Test mentioned	Times mentioned
Embarrassment	6	1
Emotional dependency	23	1
Emotional upset/stress	3, 6, 7, 10, 15, 16, 23	7
Energy level changes	5, 6, 7	3
Engagement	23	1
Exaggeration	9, 10, 18	3
Examiner/examinee relationship	3, 6, 8, 15, 16, 20	6
Faking	9, 10	2
Fatigue	1, 3, 5, 6, 7, 9, 15, 17, 20, 21, 23	11
False negatives	2, 9	2
False positives	2, 9	2
Fear/trepidation	5, 6, 7, 17, 23	5
Feelings of alienation	17	1
Fidgetiness	23	1
Forgetfulness	3	1
Frustration	6, 7, 15, 17, 23	5
Guessing	3, 5, 15, 18	4
Honesty	9, 11	2
Hostility	6, 7	2
Hot	6, 7	2
Illness	3, 5, 8, 9, 15, 21, 22	7

Factor	Test mentioned	Times mentioned
Immaturity	8	1
Impulsivity	6, 12	2
Inadequacy	15	1
Inappropriate/unusual/ silly responses	6, 7	2
Insecurity	6, 7, 17	3
Interest problem	3, 5, 6, 7, 12, 14, 17, 20, 21, 22	10
Intoxication	9, 10	2
Intrusions	10	1
Lack of exposure to testing	3, 16	2
Language/speech/hearing/reading communication difficulties	6, 7, 8, 10, 11, 13, 15, 17, 20, 21, 22	11
Medication	9, 10, 15, 21	4
Mood changes	6, 20, 23	3
Motivation	3, 5, 6, 7, 10, 11, 12, 15, 17	9
Need for excessive reassurance	6	1
Nervousness	3	1
On-task behavior	3, 5, 16	3
Openness	9	1
Opposition	15	1
Ordinary life difficulties	9	1

Factor	Test mentioned	Times mentioned
Over-stimulation	21	1
Panic	3	1
Persistence problems	17, 22	2
Physical environment	3, 4, 5, 6, 7, 8, 10, 11, 12, 15, 16, 17, 18, 19, 21, 23	16
Physical disability	3, 8, 10, 11, 13, 15	6
Positive environment	8	1
Power struggle	7	1
Psychological environment	6, 7, 17	3
Random responding	9, 10, 11	3
Rapport	6, 7, 11, 12, 14, 15, 17 18, 19, 20, 21, 22, 23	13
Readiness	8	1
Refusal to participate	6, 15, 22	3
Resentfulness	18	1
Resistance	6, 7, 9, 16, 21, 23	6
Responding hesitance	12, 23	2
Response to praise	6	1
Restlessness	17	1
Restroom	6, 12, 14, 17, 23	5
Sedation	9	1
Self-concept	6, 7	2

Factor	Test mentioned	Times mentioned
Self-confidence	7, 22, 23	3
Self-consciousness	6	1
Self-esteem	6, 7	2
Seriousness	9	1
Shyness/reticence	5, 6, 9, 16, 17, 23	6
State of health	3	1
Stubbornness	23	1
Suspicion	16	1
Taciturn	3	1
Temperament	15	1
Tension	21	1
Thirst/hunger	6, 12, 14, 15, 17	5
Time for testing	8, 18	2
Tired/tiring	3, 5, 6, 7, 21, 23	6
Trust	6, 17	2
Unassertiveness	17	1
Uncooperativeness/ cooperation difficulties	3, 6, 7, 10, 11, 12, 13, 15, 16, 17, 20, 21, 22, 23	14
Uneasiness	1	1
Unexpected results	3, 5	2
Unusual responses	15	1

Factor	Test mentioned	Times mentioned
Unwillingness to respond verbally	4, 16	2
Unwillingness to take a risk	17	1
Visual problems	3, 8, 10, 11	4
Withdrawal	10	1
Work habits	4	1

Table 3

Most Frequently Referenced Child Factors in Test Examiner Manuals

Factors	Tests[a]	Times referenced
Physical environment	3, 4, 5, 6, 7, 8, 10, 11, 12, 15, 16, 17, 18, 19, 21, 23	16
Uncooperativeness/ cooperation difficulties	3, 6, 7, 10, 11, 12, 13, 15, 16, 17, 20, 21, 22, 23	14
Rapport	6, 7, 11, 12, 14, 15, 17 18, 19, 20, 21, 22, 23	13
Fatigue	1, 3, 5, 6, 7, 9, 15, 17, 20, 21, 22, 23	12
Language/speech/hearing/reading communication difficulties	6, 7, 8, 10, 11, 13, 15, 17, 20, 21, 22	11
Interest problem	3, 5, 6, 7, 12, 14, 17, 20, 21, 22	10
Motivation	3, 5, 6, 7, 10, 11, 12, 15, 17	9
Emotional upset/stress	3, 6, 7, 10, 15, 16, 23	7
Illness	3, 5, 8, 9, 15, 21, 22	7
Examiner/examinee relationship	3, 6, 8, 15, 16, 20	6
Physical disability	3, 8, 10, 11, 13, 15	6
Resistance	6, 7, 9, 16, 21, 23	6
Shyness/reticence	5, 6, 9, 16, 17, 23	6
Tired/tiring	3, 5, 6, 7, 21, 23	6
Fear/trepidation	5, 6, 7, 17, 23	5

Factors	Tests[a]	Times referenced
Frustration	6, 7, 15, 17, 23	5
Restroom	6, 12, 14, 17, 23	5
Thirst/hunger	6, 12, 14, 15, 17	5

[a](1) Visual Motor Gestalt Test (Bender Gestalt); (2) Children's Depression Inventory (CDI), (3) Comprehensive Test of Nonverbal Intelligence (CTONI); (4) Draw a Person (DAP); (5) Illinois Test of Psycholinguistic Abilities-III (ITPA-III); (6) Kaufman Brief Intelligence Test (K-BIT); (7) Kaufman Test of Educational Acheivement (K-TEA); (8) Mini-Battery of Achievement (MBA); (9) Millon Clinical Multiaxial Inventory-III (MCMI-III); (10) Minnesota Multiphasic Personality Inventory –2nd edition (MMPI-2); (11) NEO Personality Inventory-Revised (NEO-PI-R); (12) Peabody Individual Achievement Test-Revised (PIAT-R); (13) Rotter Incomplete Sentences Blank (RISB); (14) Slosson Full Range Intelligence Test (Slosson); (15) Standford-Binet Intelligence Scales-Fifth Edition (Stanford-Binet); (16) Thematic Apperception Test (TAT); (17) Universal Nonverbal Intelligence Scale (UNIT); (18) Vineland Adaptive Behavior Scales (Vineland ABS); (19) Vineland SEEC Scales (Vineland SEEC); (20) Wechsler Memory Scale –III (WMS-III); (21) Wechsler Intelligence Scale for Children –IV (WISC-IV); (22) Woodcock Johnson Test of Cognitive Abilities – III (WJ-III); (23) Wechsler Preschool and Primary Scale of Intelligence-III (WPPSI-III).

Following this compilation, the decision was made to exclude environmental factors known to affect the testing situation and to only include less researched child factors that are frequently mentioned in test manuals (Berger, 1998; Harms, 1998; Walters et al., 2004). Speech, hearing, and physical disabilities, are all factors that are frequently mentioned in test manuals (See Table 3), but these factors were excluded from this study due to a greater availability of accessible research in these areas (Davis et al., 1986; Miller, 2006; Wart & Darrah, 2002). The incorporation of environmental as well as speech, language and physical disabilities would be less beneficial to extending the current research, since many more studies have focused on these areas.

The child factors examined in this study are those frequently mentioned in test manuals and those with which there has been a lack of sufficient research addressing them. See Table 3 for a list of the most frequently mentioned child factors that affect the testing situation as well as the specific tests that mention them and the exact number of times they are referenced in the manuals reviewed. The factors that are used in this study are mentioned in five or more of the test manuals reviewed (See Table 3). They are rapport, illness, inattention, hunger/thirst, sleepiness, emotional upset, refusal to participate, frustration, fear, shyness, motivation and anxiety. See Table 4 for information regarding the specific tests that mention each of the child factors and suggest that the presence of these factors can have an adverse effect on the validity of the test results.

Table 4

Part A

Test[a]	Rapport	Illness	Inattention	Hunger/Thirst	Tiredness	Emotional upset	Fatigue	Refusal
Bender Gestalt							X	
CDI		X	X		X	X	X	
CTONI								
DAP								X
ITPA-III	X	X		X		X		
K-BIT	X	X	X	X	X	X	X	X
K-TEA	X		X		X	X	X	X
MBA		X						
MCMI-III	X					X	X	X
MMPI-2						X		
NEO-PI-R	X							

Child Factors in Test Manuals That Require the Examiner to Discontinue Testing

Test[a]	Rapport	Illness	Inattention	Hunger/Thirst	Tiredness	Emotional upset	Fatigue	Refusal
PIAT-R	X		X	X				X
RISB								
Slosson	X			X				
Stanford-Binet	X	X		X		X	X	X
TAT						X		X
UNIT	X			X			X	
Vineland ABS	X							
Vineland SEEC	X							
WMS-III	X		X			X	X	
WISC-IV	X		X			X	X	X
WJ-III		X	X	X				X
WPPSI-III	X		X		X	X	X	X
TOTAL	13	7	9	5	5	10	11	10

Part B

Test[a]	Anxiety	Uncooperative	Frustration	Fear	Shyness	Motivation	Sleepiness	TOTAL
Bender Gestalt		X						2
CDI								0
CTONI		X			X	X		8
DAP								1
ITPA-III				X	X	X		7
K-BIT	X	X	X	X	X	X		14
K-TEA	X	X	X	X		X		11
MBA								1
MCMI-III	X				X			6
MMPI-2		X				X		3
NEO-PI-R		X				X		3
PIAT-R	X	X				X		7

Test[a]	Rapport	Illness	Inattention	Hunger/Thirst	Tiredness	Emotional upset	Fatigue	Refusal
RISB		X	X					2
Slosson								2
Stanford-Binet	X	X	X			X		10
TAT			X			X		4
UNIT	X	X	X	X	X	X		9
Vineland ABS	X							2
Vineland SEEC								1
WMS-III	X	X						6
WISC-IV	X	X						7
WJ-III		X						5
WPPSI-III	X	X	X	X	X			11
TOTAL	12	14	5	5	7	9	0	

[a](1) Visual Motor Gestalt Test (Bender Gestalt); (2) Children's Depression Inventory (CDI), (3) Comprehensive Test of Nonverbal Intelligence (CTONI); (4) Draw a Person (DAP); (5) Illinois Test of Psycholinguistic Abilities-III (ITPA-III); (6) Kaufman Brief Intelligence Test (K-BIT); (7) Kaufman Test of Educational Acheivement (K-TEA); (8) Mini-Battery of Achievement (MBA); (9) Millon Clinical Multiaxial Inventory-III (MCMI-III); (10) Minnesota Multiphasic Personality Inventory –2nd edition (MMPI-2); (11) NEO Personality Inventory-Revised (NEO-PI-R); (12) Peabody Individual Achievement Test-Revised (PIAT-R); (13) Rotter Incomplete Sentences Blank (RISB); (14) Slosson Full Range Intelligence Test (Slosson); (15) Standford-Binet Intelligence Scales-Fifth Edition (Stanford-Binet); (16) Thematic Apperception Test (TAT); (17) Universal Nonverbal Intelligence Scale (UNIT); (18) Vineland Adaptive Behavior Scales (Vineland ABS); (19) Vineland SEEC Scales (Vineland SEEC); (20) Wechsler Memory Scale –III (WMS-III); (21) Wechsler Intelligence Scale for Children –IV (WISC-IV); (22) Woodcock Johnson Test of Cognitive Abilities – III (WJ-III); (23) Wechsler Preschool and Primary Scale of Intelligence-III (WPPSI-III).

Discussion of Pertinent Child Factors Mentioned in Test Manuals

Rapport is frequently cited as an essential element of successful counseling and therapy (Corey, 2000; 1996; Sattler, 2001; Sue, 2003). Student teacher rapport has been noted as a critical component of what makes a good educator (Brown, 2004). Many test manuals also list this factor as extremely important for obtaining relevant test results. See Table 4 and Appendix A for additional information regarding which tests mention each child factor and for additional information regarding specific page numbers.

Little research has been done on the specific effects of illness on the test-taking situation (Turnage & Kennedy, 1992). This may be due to the belief that school psychologists inherently recognize that children who present for testing with colds, upset stomachs, nose bleeds, headaches or flu-like symptoms are obviously going to score lower than what would be expected when they are healthy. Many test publishers recommend that testing be discontinued when an examinee is experiencing temporary illness, but there seems to be a lack of specific data in this arena (See Table 4 and Appendix A for specific manual data). In contrast, there is a great deal of research on inattention experienced by children. With the increase in diagnosis for Attention Deficit Hyperactivity Disorder (ADHD), including both Predominantly Inattentive and Predominantly Hyperactive-Impulsive subtypes, more research has been devoted to this topic (American Psychiatric Association, 2000).

Research indicates that disruptive behavior patterns exhibited by children with ADHD will likely lead to academic underachievement if these students are left untreated

(Marshall et al, 1997). Currently children with ADHD are being served under an "Other Health Impaired" (OHI) eligibility, for special education and must be evaluated by a medical professional, school psychologist and eligibility team before being provided special services within the school system. Individually administered norm referenced standardized testing frequently occurs with students experiencing severe attention problems. School psychologists often need to use standardized tests to measure cognitive and achievement abilities of these students. These tests specifically indicate that results obtained from the instruments could be compromised by inattention during testing (See Table 4 for specific test identification information).

Hunger and thirst are also mentioned in test manuals as having an adverse effect on the results of individually administered norm referenced standardized tests (See Table 4). This may be another factor that publishers assume school psychologists will naturally take into account when considering the validity of the test results, but there is a lack of research on how often children present for testing being hungry or thirsty. There is also a lack of descriptive statistics relating to how often school psychologists take action or note this child factor in their psychological reports.

Research tells us that when comparing the intellectual performance of children with emotional disorders to that of normal children, normal children tend to exhibit higher scores (Hodges & Plow, 1990; Zimet et al., 1994). When extrapolating this research to the individually administered norm referenced standardized testing situation, it is reasonable to assume that temporary emotional upset would also have an effect on testing. Many research manuals suggest that the outcomes of the tests they are promoting

can be affected by temporary emotional upset. Therefore, it is often recommended that testing be interpreted with extreme caution when students are tested when emotionally upset (See Table 4).

Human performance can be affected by many factors including the physical status of the individual. Students show performance decrements even on well-learned tasks when significant changes occur in testing conditions (Canas, Quesada, Antoli & Fajardo, 2003; Turnage & Kennedy, 1992). When a student is fatigued, they may have a change in normal behavior such as becoming less likely to want to engage in tasks that usually interest them. When a child becomes fatigued during testing authors suggest in their manuals that the results of the tests can be aversively affected. Many test publishers claim that extreme fatigue seen in the examinee during testing requires actions to be taken by the school psychologist or examiner (See Tables 4 and 5).

Many students who are asked to perform individually administered norm referenced standardized tests refuse to participate and are uncooperative for many different reasons. Test authors noted that refusal to participate affects the validity of their test results and examiners are instructed to discontinue testing and resume at a later time. This study seeks to examine the frequency with which school psychologists observe and take actions such as taking a break, discontinuing testing or noting in their psychoeducational reports the presence of examinee refusal to participate or uncooperativeness during individualized testing.

Many children experience frustration when asked to complete difficult academic tasks. Studies have shown this to be especially true in at-risk children (Ross et al., 1995).

However, at-risk children who receive research-based interventions in the area of reading were more likely to avoid becoming frustrated with academic tasks while simultaneously achieving higher levels of success (Ross et al., 1995). Test publishers claim in their manuals that examinee frustration may cause students to put forth inaccurate information regarding their true abilities when they are frustrated which would in turn cause problems with the accuracy of the test results (See Table 4).

Children become fearful for many reasons. They may experience fear stemming from tasks that are unknown to them or when they encounter individuals or situations to which they are unfamiliar. When children are asked to participate in individually administered norm referenced standardized testing they are sometimes unfamiliar with the school psychologist doing the testing and may be fearful of what might happen during the testing situation. Students may also fear that they will not perform adequately. When fear is present in an examinee, test publishers claim that the validity of the results may be compromised and recommend that testing be discontinued and resumed when more valid results can be obtained (See Table 4).

Shyness refers to inhibited or tense behavior with strangers and has been associated with fearfulness (Check & Buss, 1981). Shy individuals have a tendency to escape from social interaction and withdraw from interactions with strangers (Verlag, 2002). Shyness is frequently mentioned in test manuals as having an effect on the validity of test results (See Table 4). Shyness has previously correlated significantly with test scores in a research study, which noted a difference in group test versus individualized test results for shy versus non-shy children (Crozier & Hostettler, 2003). Formal

assessments of language development on psychometric tests of vocabulary have shown to be negatively affected by shyness (Crozier & Hostettler, 2003).

Motivation is a theoretical construct that frequently appears in personality assessments and is used to explain the initiation, direction, intensity and persistence of a behavior (Criste & Neil-White, 2005). There are two types of motivation, which are termed intrinsic motivation and extrinsic motivation. These refer to complex dynamics that include both individual (dispositional) and situational (contextual) variables, which have both been linked to student's academic success or failure in schools (Bandura, 1997; Hardre, Crowson, Debacker & White, 2007). Academic motivation refers to the reasons students put forth effort, attend to, and strive towards achieving mastery in academics (Beck, 2004). Many test authors believe that motivation can have an aversive affect on individually administered norm referenced standardized test results and suggest that specific actions be taken when examinees lack motivation during the testing situation (See Table 4).

Anxiety occurs in some children who are given individually administered norm referenced standardized tests and many test authors and publishers believe that this anxiety can negatively affect test scores when the child experiences abnormal levels of this emotion (See Table 4). Previous research suggests that there is a tendency for higher order skills such as reading, mathematics and composite scores to suffer more interference than lower order skills such as spelling on cognitive and achievement tests (McCandless, Palermo & Castaneda, 1956).

Overview of the Current Study

Primary Purpose

This study seeks to examine the frequency with which school psychologists observe, take action or note when students exhibit behaviors that suggest poor rapport, temporary illness, inattention, hunger/thirst, emotional upset, refusal to participate, frustration fear, shyness, motivation problems and/or extreme anxiety during the testing situation.

Secondary Purpose

A goal of many educational researchers is to identify variables that can be modified to increase academic success. Recent research suggests that there may be a link between sleep problems and academic success in minorities (Buckhalt, El Sheikh & Keller, 2007). This link may be a key component in helping to reduce the gap between minority school-aged children and those in the majority population. Many children with psychoeducational problems report having sleep problems. A secondary goal of this research is to identify the actions school psychologists are taking when students are sleepy while participating in individually administered norm referenced standardized testing and then to report data on this critical child factor that is rarely mentioned in test manuals (See Table 5).

Table 5

Direct Quotes for Responsibility Regarding Fatigue, Tiredness, and Sleepiness

Test[a]	Fatigue	Tiredness
Bender Gestalt	"If given when the individual is fatigued, this should be noted, as fatigue tends to exaggerate disturbances in the gestalt function, increasing perseverative tendencies or calling forth other engergy saving processes or regressive tendencies" (p. 7).	N/A
CDI	N/A	N/A
CTONI	"Physical and emotional well-being contributes to test error and cannot be precisely determined. Therefore, examiners must be alert to certain conditions (e.g. fatigue, state of health, nervousness, attitude toward the test, attention level) that may affect performance" (p. 54).	"Stop testing if the examinee tires or loses I nterest. Continue testing at another time" (p. 18).
DAP	N/A	N/A

Test[a]	Fatigue	Tiredness
ITPA-III	"Examiner error in giving or scoring the test, situational influences, (e.g. distractions, and noises during the testing session), and child factors (e.g. inattention, fatigue, low energy level, poor attitude, lack of motivation) can also influence a child's ITPA-3 scores" (p. 30).	"Stop testing if the examinee tires or loses I nterest. Continue testing at another time" (p. 18).
K-BIT	"A good relationship must first be established, then maintained throughout a testing session that will often evoke some measure of frustration, fatigue, and anxiety" (p. 11).	If you are tired, hot, bored or anxious, the examinee may feel the same way" (p. 14).
	"Do not begin testing of a young child unless you are sure that his or her physical needs have been met--thirst, hunger, fatigue, restroom. Reschedule the test if necessary" (p. 12).	
	"Be especially attuned to fatigue, inattention, or mood changes in elderly people who may be on medication or may be manifesting symptoms of any of the various diseases that increase dramatically with advancing age" (p. 14).	

Test[a]	Fatigue	Tiredness
K-TEA	"A good relationship must first be established, then maintained throughout a testing session that will often evoke some measure of frustration, fatigue, and anxiety" (p. 16).	"If you are tired, hot, bored or anxious, the examinee may feel the same way" (p. 14). "If the rapport making takes 15 to 30 minutes, the student may tire before the testing is even half done" (p. 17).
MBA	N/A	N/A
MCMI-III	"The great majority of patients can complete the MCMI-III in 20 to 30 minutes, facilitating relatively simple and rapid administration while minimizing patient resistance and fatigue" (p. 3). "Optimally, the client should be reasonably comfortable and free of distraction or excessive fatigue" (p. 111).	N/A
MMPI-2	N/A	N/A
NEO-PI-R	N/A	N/A
PIAT-R	N/A	N/A
RISB	N/A	N/A

Test[a]	Fatigue	Tiredness
Slosson	N/A	N/A
Stanford-Binet	"Examiners may need to divide the testing into shorter sessions for individuals with medical conditions or elderly adults who fatigue easily" (p. 41). "At the child's first sign of fatigue, distraction or dislike for the task, the examiner must be ready to make a mental adjustment by pausing, encouraging the child, stopping to play with the objects or toys, or taking a break to get a drink of water" (p. 43).	N/A
TAT	N/A	N/A
UNIT	"Examiners should be especially sensitive to individual examinee factors, such as fatigue, when working with individuals with physical disabilities" (p. 40). "When the examinee shows signs of fatigue, restlessness, boredom, or discomfort, the examiner can briefly discontinue the test administration between subtests and allow the examinee to take a brief break" (p. 42).	N/A

Test[a]	Fatigue	Tiredness
Vineland ABS	N/A	N/A
Vineland SEEC	N/A	N/A
Wechsler Memory	"After testing begins, if the examinee appears fatigued, bored, or excessively anxious, brief conversations between subtests, in addition to the standard transition statements, may rekindle interest or reduce apprehension" (p. 32).	N/A

Note. Sleepiness was not applicable for all tests.

a(1) Visual Motor Gestalt Test (Bender Gestalt); (2) Children's Depression Inventory (CDI), (3) Comprehensive Test of Nonverbal Intelligence (CTONI); (4) Draw a Person (DAP); (5) Illinois Test of Psycholinguistic Abilities-III (ITPA-III); (6) Kaufman Brief Intelligence Test (K-BIT); (7) Kaufman Test of Educational Acheivement (K-TEA); (8) Mini-Battery of Achievement (MBA); (9) Millon Clinical Multiaxial Inventory-III (MCMI-III); (10) Minnesota Multiphasic Personality Inventory –2nd edition (MMPI-2); (11) NEO Personality Inventory-Revised (NEO-PI-R); (12) Peabody Individual Achievement Test-Revised (PIAT-R); (13) Rotter Incomplete Sentences Blank (RISB); (14) Slosson Full Range Intelligence Test (Slosson); (15) Standford-Binet Intelligence Scales-Fifth Edition (Stanford-Binet); (16) Thematic Apperception Test (TAT); (17) Universal Nonverbal Intelligence Scale (UNIT); (18) Vineland Adaptive Behavior Scales (Vineland ABS); (19) Vineland SEEC Scales (Vineland SEEC); (20) Wechsler Memory Scale –III (WMS-III); (21) Wechsler Intelligence Scale for Children –IV (WISC-IV); (22) Woodcock Johnson Test of Cognitive Abilities – III (WJ-III); (23) Wechsler Preschool and Primary Scale of Intelligence-III (WPPSI-III).

Table 6

Test Uses and Examiner Qualification Levels

Test[a]	Uses	Administrator qualification level[b]
Bender Gestalt	Explore retardation, regression, loss of function, personality deviations and organic brain defects in adults and children. Diagnostic purposes and used in recording improvements.	Level C
CDI	Descriptive purposes, diagnostic uses, assessment of treatment outcome. To test research hypotheses and to select research subjects. Screening instrument as well.	Level B, C
CTONI	To assess the intellectual ability of individuals who cannot be given most other mental ability tests due to bias etc. To make comparisons of verbal and nonverbal ability and to use in research studies.	Level B, C
DAP	To estimate developmental and intellectual status. Can be used as a screening device. To use with children unwilling to interact verbally. Used for research purposes.	Level B, C
ITPA-III	Early childhood education, speech and language pathology, learning disabilities and developmental psychology. School performance abilities are discovered using the concept of intra-ability differences.	Level B, C

Test[a]	Uses	Administrator qualification level[b]
K-BIT	To facilitate score comparisons with intelligence tests. Brief measure of intelligence used to screen for educational diagnosis. Testing job applicants. Used as part of a thorough personality assessment. Estimating the intelligence of prisoners, patients, military recruits, or juvenile delinquents. Identification of high risk children. assessment of treatment outcome. Research purposes.	Level B, C
K-TEA	Measure of school achievement. Contributing to a battery of tests. Analyzing strenghts and weaknesses analyzing errors, program planning, research, measuring adaptive functioning, personnel selection, student self-appraisal, pre- and post-testing, and making placement decisions. To assist government funded social agencies in decision making processes.	Level B, C
MBA	Test of basic skills and knowledge. Used in educational, clinical, vocational, or research programs. Provides information regarding level of achievement. Kindergarten screening programs.	Level B, C
MCMI-III	Forensic settings, neuropsychology, substance abuse patients, Post-Traumatic Stress Disorder patients, correctional settings, marital counseling, treatment planning, psychotherapy and research purposes.	Level B, C

Test[a]	Uses	Administrator qualification level[b]
MMPI-2	To assess major patterns of personality and psychological disorders. For research, training, or clinical assessment. Correctional settings and court decisions.	Level C
NEO-PI-R	Measure of normal personality traits. Clinical, educational and research settings. Counseling, clinical psychology and psychiatry. Behavioral medicine, health psychology, vocational and industrial/organizational psychology.	Level B, C
PIAT-R	To measure school achievement. Assist in selecting diagnostic instruments. Schools, clinics, private practices, social service agencies and court systems. Individual evaluation, program planning, guidance and counseling, admissions and transfers, grouping students' follow-up evaluations, personnel selection, research and training.	Level B, C
RISB	Psychological assessment, college and university settings. Industry, military settings, high schools, research, hospitals, Veterans Administration hospitals, mental health clinics and private practices. Screening instrument and treatment outcome.	Level B, C
Slosson	Screening, tentative diagnosis, confirmation of other tests and research. Quick estimate of cognitive ability.	Level B, C

Test[a]	Uses	Administrator qualification level[b]
Stanford-Binet	Assess cognitive abilities. Diagnose children and adults. Clinical and neuropsychological assessment, research, psychoeducational evaluations, special education placement, adult social security and workman's compensation. Individual education planning, career assessment, and employee selection. Forensic contexts and placement in programs for intellectually gifted children.	Level C
TAT	Comprehensive study of personality, behavior disorder interpretation, psychosomatic illnesses, neuroses, and pscychosis. Revealing dominant drives, emotions, sentiments, complexes and conflicts of personality. Research purposes.	Level C
UNIT	To measure nonverbal intelligence and cognitive abilities. Educational and psychiatric settings, used with individuals from different cultural backgrounds, limited English proficiency, speech and language impairments, and serious emotional or psychological disorders. Used with individuals who have physical disabilities.	Level B, C
Vineland ABS	Determining areas of strengths and weaknesses. Assess personal and social sufficiency. Systematic basis for preparing educational, habilitative, or treatment programs. Program evaluation, classroom behavior assessment, diagnostic purposes, outcome measures, progress monitoring, and research.	Level B, C

Test[a]	Uses	Administrator qualification level[b]
Vineland SEEC	Assessment of usual social/emotional functioning. Defining educational, habilitative, and treatment objectives. Estimate of personal and social sufficiency, educational and clinical settings such as Head Start intervention programs, pre-school and kindergarten special education and intervention plans. Universities, research laboratories, nursing schools, hospitals, and private practices. Monitoring individual development.	Level B, C
Wechsler Memory	Clinical evaluation and diagnosis. Provide information regarding level of memory functioning and memory processes. Identification of memory impairment, dementias, and degenerative conditions. Evaluation of encoding vs. memory deficits, measure treatment efficacy, monitoring of disease course, treatment planning and research.	Level C
WISC-IV	General cognitive functioning, identify intellectual giftedness, mental retardation and cognitive strengths and weaknesses. Treatment planning, placement decisions, and diagnosis in clinical, educational, research and neuropsychological settings. Educational intervention, special education and program planning.	Level C
WJ-III	Measuring intellectual abilities and academic achievement. Diagnosis, determination of discrepancies, treatment planning, special education placement decisions, educational programming, planning individual programs, guidance, assessing growth, research, evaluation and training.	Level C

Note. For B Level Tests: Verification of a Master's level degree in Psychology or Education or the equivalent in a related field with relevant training in assessment or verification of membership in, or certification by a professional organization recognized by the Psychological Corporation to require training and experience in a relevant area of assessment consistent with the expectations outlined in the 1985 Standards for Educational and Psychological Testing. For Level C Tests: Verification of a Ph.D. level degree in Psychology or Education or the equivalent in a related field with relevant training in assessment or verification of licensure or certification by an agency recognized by the Psychological Corporation to require training and experience in a relevant area of
assessment consistent with the expectations outlined in 1985 Standards for Educational and Psychological Testing (The Psychological Corporation 2003 Catalogue, p. 92).

[a](1) Visual Motor Gestalt Test (Bender Gestalt); (2) Children's Depression Inventory (CDI), (3) Comprehensive Test of Nonverbal Intelligence (CTONI); (4) Draw a Person (DAP); (5) Illinois Test of Psycholinguistic Abilities-III (ITPA-III); (6) Kaufman Brief Intelligence Test (K-BIT); (7) Kaufman Test of Educational Acheivement (K-TEA); (8) Mini-Battery of Achievement (MBA); (9) Millon Clinical Multiaxial Inventory-III (MCMI-III); (10) Minnesota Multiphasic Personality Inventory –2nd edition (MMPI-2); (11) NEO Personality Inventory-Revised (NEO-PI-R); (12) Peabody Individual Achievement Test-Revised (PIAT-R); (13) Rotter Incomplete Sentences Blank (RISB); (14) Slosson Full Range Intelligence Test (Slosson); (15) Standford-Binet Intelligence Scales-Fifth Edition (Stanford-Binet); (16) Thematic Apperception Test (TAT); (17) Universal Nonverbal Intelligence Scale (UNIT); (18) Vineland Adaptive Behavior Scales (Vineland ABS); (19) Vineland SEEC Scales (Vineland SEEC); (20) Wechsler Memory Scale –III (WMS-III); (21) Wechsler Intelligence Scale for Children –IV (WISC-IV); (22) Woodcock Johnson Test of Cognitive Abilities – III (WJ-III); (23) Wechsler Preschool and Primary Scale of Intelligence-III (WPPSI-III).

[b]For all tests: An individual must show verification or certification by an agency recognized by the Psychological Corporation to require training and expertise in a relevant area of assessment consistent with the expectations outlined in the 1985 Standards for Educational and Psychological Testing for access to the instruments (MDE, Special Education Policy Section Draft 7/26/2005).

Sleepiness should be separated from child factors such as fatigue and tiredness. Fatigue refers to wariness from labor or exertion and tiredness is drained being drained of strength and energy (Webster, 1986). Tiredness and fatigue seem to be very similar to one another, but sleepiness is unique and different. Sleepiness describes someone who is ready to fall asleep or sluggish specifically due to a lack of sleep (Webster, 1986). Students could become fatigued or tired following physical or mental exertion in spite of having had adequate sleep over long periods of time. Experience has shown that school teachers refer to children as being tired following state mandated standardized group testing sessions. School employees often refer to the state of being tired or fatigued as a physical result of a recent stressor. When professionals working in the field believe that a child is experiencing sleepiness, it is frequently associated with a lack of sleep.

Possible Important Child Factor

New research has emerged on the topic of sleep and academic performance in recent years, which suggests that information acquired during wakefulness is actively altered, restructured, and strengthened during sleep (Peigneux et al., 2002). Some experimental evidence suggests that NREM sleep and REM sleep differentially modulate the consolidation of declarative and non-declarative memories, respectively. This is termed as the "Dual Process Theory" and has gained increasing attention as it relates to acquisition of academic learning (Plihal & Born, 1997; 1999; Smith, 1995).

Parents can attest to their children's behavior being negatively affected by a lack of sufficient sleep. Children who are tired are more likely than their peers to become emotionally upset and easily frustrated at school. Children who are sleepy often have trouble concentrating and struggle with completing daily tasks (Dahl, 1996). When children come to school lacking sufficient sleep, they also have difficulties performing on a level commensurate with their academic abilities. The amount of academic learning that children obtain, through direct intervention or instruction, is measured by achievement tests (Sattler, 2001). A lack of sleep over time may cause gaps in acquired learning and indirectly affect the results of special education eligibility testing.

Supporting Evidence

Furthermore, research suggests that individuals report having a preference towards mornings or evenings (Horne & Ostberg, 1976). This study attempts to address whether or not school psychologists take this into account when scheduling individually administered norm referenced standardized testing that may be used for special education eligibility purposes. Considering that sleep may be an important child factor to mention

in future test manuals, the beliefs and actions of professionals regarding the importance of time of day testing should and does occur may lend direct support to the argument for including sleepiness as an important child factor that may affect the outcome of individually administered norm referenced standardized tests.

Group Comparisons

Demographic variables, grade level served, experience, certification/licensure and educational attainment may have an effect on actions that school psychologists take when conducting individually administered norm referenced standardized tests. This study seeks to examine these variables and provide descriptive statistics and group comparisons that will increase knowledge regarding gaps in the training of school psychologists.

Examination of Relative Importance

Time spent in professional activities such as assessment, testing, Response to Intervention (RTI), report writing and time spent training/supervision doctoral and practicum students may relate to the actions taken by school psychologists when child factors are present during the testing process. Determining whether or not there is an impact on testing practices due to the time spent in professional activities may be beneficial to current practices and professional development.

Discussion of Purpose

An extensive literature review of previous research and “major” test manuals used by school psychologists revealed several child factors that are reported as having an

effect on the standard administration and outcome validity of individually administered norm referenced standardized tests. Particular child factors appear in the test manuals with more prevalence than others. These factors were compiled and documented in table format for further review. Currently, there are no objective means of determining whether these conditions exist in the child or not. Furthermore, there was a lack of data regarding the prevalence of test discontinuation and specifically detailed actions taken on the part of the school psychologist when they observe such factors in a child they are testing for eligibility purposes. In spite of a lack of research in this area, test manuals require that examiners discontinue testing if extraneous child factors are present. The goal of this survey research is to determine how often school psychologists take action, break from testing, make note of the presence of these factors in their psychological reports or discontinue testing. This study also seeks to examine how important school psychologists feel these factors are to the testing situation and whether their previous experience, beliefs, education levels, and demographic variables affect their current practices.

Finally, the research review indicated that there is a lack of documentation on time of day testing occurs and sleepiness during testing as factors to consider in test administration. The survey which was used in this study queried practitioners as to whether or not they have recently observed sleepiness in children, made mention of this child factor in their reports, or canceled and rescheduled testing based on this factor.

Significance

This study extends the current research by providing descriptive statistics related to actions taken by school psychologists when they encounter child factors that test

authors claim to invalidate the results of individually administered norm referenced standardized tests that are often used as an integral part of determination for special education eligibility. This study provides information regarding specific actions taken by school psychologists, the number of times they have mentioned these factors in their reports and how frequently they discontinue testing due to the presence of the most frequently mentioned factors identified in test manuals. Furthermore, this study may reveal educational and regional differences as well as grade level served comparisons amongst practicing school psychologists who encounter these child factors during testing situations. The goal of this study is to provide descriptive data as well as to provide information related to the importance of child factors in the outcome and use of results from individually administered norm referenced standardized tests. Information on actions taken when sleepiness affects the test-taking situation will be provided and data reporting attitudes and current practices regarding morningness/eveningness will result from this study. Morningness refers to a tendency to prefer mornings over evening hours. When given the preference, these individuals prefer to be active in the mornings and to go to sleep earlier in the evenings. Eveningness refers to a tendency to prefer evenings over morning hours. When given the preference, these individuals prefer to be active in the evenings and to wake up later in the mornings.

Primary Research Questions

1. How often in the past 12 months do school psychologists report having observed, taken short breaks from testing, noted in psychoeducational reports, or

discontinued individually administered norm referenced standardized testing due to child factors mentioned in test manuals and research?

2. How many times in the last ten cases do school psychologists report having observed, taken a break from testing, noted in their psychoeducational reports, or discontinued individually administered norm referenced standardized testing due to child factors mentioned in test manuals and research? (Ten cases were arbitrarily selected due to convenience and easy recollection by survey participants)
3. Do beliefs regarding importance of child factors mentioned in test manuals correlate with observations and actions taken by school psychologists when engaging in individually administered norm referenced standardized testing procedures?
4. Part A: How often do school psychologists feel pressured to continue testing in spite of the presence of child factors that may affect the individually administered norm referenced standardized testing process?

   Part B: Do pressures felt by school psychologists to continue testing in spite of the presence of child factors correlate with their observations and actions taken during individually administered norm referenced standardized testing?
5. How do school psychologists deal with the other child factors they believe to affect individually administered norm referenced standardized testing?

Secondary Research Questions

1. Do school psychologists take morningness/eveningness into consideration when conducting individually administered norm referenced standardized testing?

2. What time of day is most prevalent for individually administered norm referenced standardized testing?
3. What are current beliefs and practices concerning the importance of sleep in individually administered norm referenced standardized testing practices?
4. Does grade level served affect individually administered norm-referenced standardized testing practices?
5. Part A: Does level of education, experience, or regional location affect individually administered norm-referenced standardized testing practices?

   Part B: Does time spent doing assessment, Response to Intervention (RTI), testing, report writing or training/supervising school psychology doctoral interns and practicum students make a difference in terms of school psychologist's individually administered norm referenced standardized testing practices?

Operational Definitions

Achievement Test*:* A measurement of knowledge, information or skills obtained through instruction, training or experience. These tests measure acquired knowledge and do not presume to make predictions regarding the future (Whiston, 2000).

Administrative Duties: Duties performed by school psychologists that would generally be described as those falling under administrative responsibilities within the typical public school system.

Anxiety: An abnormal and overwhelming sense of apprehension and fear often marked by physiological signs such as sweating, increased pulse and tension. Usually characterized by doubt concerning the reality and nature of the threat and by self-doubt concerning one's ability to cope with it (Webster, 1986).

Aptitude Test: Provides a prediction about the student's future performance or ability to learn and purport to predict either future academic or vocation success (Whiston, 2000).

Assessment: This is a complex activity requiring the interplay of knowledge of psychometric concepts with expertise in the area of professional school psychological practice or application. This is a conceptual, problem solving process of gathering reliable, relevant information about an individual in order to make informed decisions regarding their educational well being (American Psychological Association, 2000).

Breaks: A notable change of subject matter, attitude or treatment (Webster, 1986) Referred to in this project as a break from individualized testing that resumes after a short period of time.

Certification: In most states, the state department of education (SDE) certifies school psychologists for practice in school settings. This is the most common certificate held by

school psychology practitioners and usually requires at least a specialist degree level of educational attainment along with practicum and internship requirements (Jacob & Hartshorne, 2003).

Cognitive Instruments: Tests that assess cognition usually involving skills such as perceiving, processing, concrete and abstract thinking and remembering. These include intelligence or general ability tests as well as achievement tests and aptitude tests (Whiston, 2000).

Consultation: The act of consulting or conferring (Webster, 1986). This usually involves the school psychologist as consultant to members of the school system, administration, community, outside agencies, parents and students.

Counseling: Professional guidance provided to an individual by utilizing psychological methods. Usually involving the collection of case history data, using various techniques of the personal interview and testing interests and aptitudes (Webster, 1986).

Crisis Intervention: The provision of emergency psychological care to students in crisis as to assist those victims in returning to an adaptive level of functioning in school and to prevent or lesson the potential of negative impact of the psychological trauma (Everly & Mitchell, 1999).

Discontinued Testing: The test user determines that further testing would yield invalid results and therefore decides to stop or discontinue individually administered norm referenced standardized testing for the day. This does not include the decision to break from testing and then resuming after a short delay.

Emotional Upset: Being overwhelmed with emotion to the point of being consumed and unable to complete a task or individualized test accurately. This category is used separately from that of fear, frustration, and anxiety for purposes of this project.

Eveningness: A tendency to prefer evenings over morning hours. When given the preference, these individuals aspire to be more active in the evenings and to sleep later in the mornings.

Fatigue: Weariness from labor or exertion. The temporary loss of power to respond induced in a sensory receptor or motor end organ by continued stimulation (Webster, 1986).

Fear: For purposes of this project this is to be afraid or apprehensive during the testing situation to the point of an inability to provide accurate responses to test questions (Webster, 1986).

Frustration: Disappointed or discouraged in some endeavor or purpose (Webster, 1986). The act of being frustrated to the point of an inability to continue answering test questions for the purposes of this project.

Hunger/Thirst: An inability to concentrate or participate accurately in testing due to an overwhelming desire for food or hydration.

Illness: An unhealthy condition of body or mind. For purposes of this study, illness is described as a temporary ailment that affects the individualized testing situation.

Inattention: Lack of attention, notice or regard. Easily distracted from the task at hand (Webster, 1986).

Individually administered norm referenced standardized Tests: The use of tests should typically be viewed within the context of the broader concept of assessment. These are measurement procedures for assessing ability, aptitude, achievement, attitudes, interests, personality, cognitive functioning and mental health in which a sample of an examinee's behavior is obtained and subsequently evaluated and scored using a standardized process. These are used in individually administered norm referenced

standardized testing decision-making procedures, within the school environment, such as for eligibility criteria and intervention assistance. (American Psychiatric Association, 2000).

Intervention: "Intervention applies to children of school age or younger who are discovered to have or be at risk of developing a handicapping condition or other special need that may affect their development. Intervention consists in the provision of services to such children and their families for the purpose of lessening the effects of the condition. Early intervention can be remedial or preventive in nature--remediating existing developmental problems or preventing their occurrence. Early intervention may focus on the child alone or on the child and the family together. Early intervention programs may be center-based, home-based, hospital-based, or a combination. Services range from identification--that is, hospital or school screening and referral services--to diagnostic and direct intervention programs. Early intervention may begin at any time between birth and school age; however, there are many reasons for it to begin as early as possible" (US Department of Education, 2007).

Licensure: Usually issued by a state psychology board. School psychologists holding this title are less restricted in the offering of certain types of services than their peers who are only certified by the state board of education (Hurtshorne, 2003).

Morningness: A tendency to prefer mornings over evening hours. When given the preference, these individuals prefer to be active in the mornings and to go to sleep earlier in the evenings.

Motivation: For purposes of this project, motivation is defined as incentive or drive to complete the task at hand, during individualized testing.

Norm Referenced Instruments: Test in which the interpretation of performance is based on the comparisons of individuals in the test takers peer group (Whiston, 2000).

Projective Assessment: A type of personality test that provides the client with an ambiguous stimulus and encourages a non-structured response. Interpretation of such assessments requires extensive training and is often subjective (Whiston, 2000).

Program Evaluation and Development: Researching the effects of a program and measuring the success or lack they're of the particular outcome goals for purposes of refining or inventing programs.

Psychological Report: The school psychologist documents in writing the assessment process and outcomes as well as recommendations for assisting a child in the school setting. Typical reports include background information, behavioral observations, individually administered norm referenced standardized test results, and interpretations as well as a summary. It may be used in making special education decisions such as eligibility or in identifying instructional needs. These may be used as a history of psychological performance, as communication tools or as documentation in a legal proceeding. This report is geared towards other professionals (Hartshorne, 2003).

Rapport: Relationship marked by harmony, accord, trust, affinity, conformity and accord. Referring to the relationship between examiner and examinee for purposes of this project.

Rating Scales: Considered to be the most formal type of interview. Allow questions to be asked in a standardized way and to be accompanied by the same stimulus materials with a limit to response options. These can be given to a student, teacher, parent or caretaker to assess overt behaviors (Ysseldyke, 2004).

Refusal to Participate: The willful decision not to cooperate in completing a task or individualized test etc. This category includes child factors described as resistance, unwillingness and hesitance to respond for purposes of this project. Cooperation and Uncooperativeness are considered to be a separate child factor.

Research: To search or investigate a topic. For school psychologists, research consists of searching for purposes of intervening with student suffering academically or for program evaluation, consultation or intervention purposes etc.

Shyness: The act of being timidly reserved and often causes a student to shrink inwardly and retreat from contact with others. Can include a distrust of ones own ability or opinion that causes hesitation in acting or speaking (Webster, 1986). Reticence and extremely taciturn are considered to be descriptors of this child factor for purposes of this project.

Sleepiness: An adverb describing a person who is ready to fall asleep and is sluggish due to lack of adequate sleep (Webster, 1986).

Standardized Test: An instrument having established materials and fixed directions for administration and scoring. The development was done using particular standards (Whiston, 2000).

Test User Qualifications: The test user is considered to be the school psychologist or anyone under their direct supervision who should have knowledge, skills, abilities, training, experience, and credentials important for optimal use of instruments used during individually administered norm referenced standardized testing (American Psychological Association, 2000).

Tired: Drained of strength and energy (Webster, 1986)

Training/Supervising: The process of overseeing, directing and assuming responsibility for the actions of others involved in the individually administered norm referenced standardized testing process (American Psychological Association, 2000).

Uncooperative: A lack of desire, willingness, ability or effort in terms of working with others (Webster, 1986).

Description of Study

This study first sought to explore the practical implications of adverse child factors mentioned in test manuals as they occurred during individually administered norm referenced standardized testing. Information pertaining to these child factors was obtained by using survey research which requested that school psychologists report their beliefs regarding the importance of child factors and the actions they take when they were present during the testing situation. This study also considered any factors mentioned by school psychologists that were not included in the survey questions but were noted as apparent and important in their current practices.

Secondly, this study sought to gain information regarding whether or not sleepiness was considered to be an important child factor for practicing school psychologists in terms of the effect it has on children and adolescents engaged in the individually administered norm referenced standardized testing process. Examinee preference towards morningness/eveningness was explored to determine whether school psychologists believed this to be an important factor when determining time of day for testing. Sleepiness proved to be an important factor to professionals in school psychology and the argument will be presented to include this as a child factor in future test manuals. Data collected that obtains to time of day of testing and preference towards

morningness/eveningness was used to support the inclusion of sleepiness in test manual revisions.

Finally, this study sought to determine if demographic variables, experience, supervisory responsibilities, certification level, deadline pressures and time spent in testing activities had an effect on the actions taken by school psychologists when child factors were present during individually administered norm referenced standardized testing.

CHAPTER III:

METHOD

Overview

This chapter will include a discussion of the sample participants, development of survey instrumentations, research design and procedures, as well as information pertaining to procedures used during the analysis of data. This chapter will conclude with a description of the survey that was developed for the purpose of this study.

Participants

The population that was targeted in order to answer the primary research questions included school psychologists in the United States. In order to investigate the problem, an appropriate sample which represented this population was identified. The National Association of School Psychologists has compiled and published membership directories, which include email addresses. This list encompasses school psychologists throughout the United States and several of these members along with school psychologists working in the top 100 most populated school districts were queried via survey method. School psychologists email addresses were located by utilizing the websites of the top 100 largest school districts along with the NASP directory.

Participants consisted of 220 School Psychologists with 216 currently working in a school setting and four employed outside of the school system. The psychologists who are not employed in the school system are working in private practice (Two), a university

position (One), and in an educational service unit, a cooperative serving 21 school districts in western New England.

Table 7 below represents the regional location within the United States in which the school psychologists are currently practicing. Table 8 represents the grade levels served by the school psychologists. Table 9 describes the psychologists highest education levels reported. Table 10 lists the experience levels of the psychologists. The certifications held by the psychologists are reported in the Table 11. The professional memberships held by the psychologists are shown in Table 12.

Table 7

Regional Location of School Psychologists

Southeast region	Northeast region	Western region	Central region	Total
107	43	36	32	220

Note. Southeast = (AL, AR, FL, GA, KY, LA, MS, NC, SC, TN, TX, VA, WV); Northeast region (CT, DE, DC, ME, MD, MA, NH, NJ, NY, PA, PR, RI, VT); Western region (AK, AZ, CA, CO, HI, ID, MT, NV, NM, OR, UT, WA, WY); and Central region (IL, IN, IA, DS, MI, MN, MO, NE, ND, OH, OK, SD, WI).

Table 8

Grade Levels Served by School Psychologists

Elem. only	Middle only	High only	Elem. & middle	Middle & high	Elem. & high	All grades	No grades	Total	Pre-K
67	5	12	54	4	18	57	3	223	137

Table 9

School Psychologists' Educational Attainment

Master's degree	Specialist degree	Post-specialist	Doctoral degree	Post-doctoral	Other	Missing	Total
30	120	16	45	2	3	4	220

Table 10

School Psychologists' Experience

1-3 years	4- 6 years	7- 9 years	10-15 years	More than 15	Missing	Total
40	29	35	38	76	2	220

Table 11

Certifications Held by the School Psychologists

State certification	National certification	State license	National license	Student Non-certified	Non-renewable certificate	Other	Total
178	97	52	4	1	1	6	339

Note. Multiple Licenses/Certifications are held by many of the psychologists

Table 12

Professional Memberships of the School Psychologists

N.A.S.P.	S.A.S.P.	A.P.A.	State association	Other	Total
148	2	15	117	50	332

Note. National Association of School Psychologists (NASP). Student Association of School Psychologists (SASP, a university program-based organization). American Psychological Association (APA).

Comparisons were conducted to determine the representativeness of this sample to the general population of school psychologists. Most research regarding characteristics of school psychologists has been conducted by the National Association of School Psychologists (NASP). This research has found that in 2004, there were 37,893 certified/licensed school psychologists in the United States with 29,367 employed in the public school system (Charvat, 2005). Fagan (1994) estimated that 70% of all school psychologists belong to NASP (Fagan & Wise, 2002). Recent research comparing characteristics of school psychologists who are members of NASP to Non-NASP affiliated school psychologists yielded no statistically significant differences between the groups on the variables measured (Lewis, Truscott & Volker, 2008). The results of this study which used a telephone survey approach suggested that in most respects, studies which incorporated random sampling of NASP members can probably claim that their samples were representative of school psychology in the United States (Lewis et al., 2008).

The current study used both NASP (67%) and Non-NASP (33%) school psychologists as respondents. The percentage of NASP to Non-NASP school

psychologists was determined to be similar to the estimates provided in previous research which depict the general population (Fagan & Wise, 2002). National estimates indicate that 77% of school psychologists are employed in the public school system (Charvat, 2005), while 98% of respondents in the current study reported being employed in the public school system. This study aimed to obtain survey responses who were employed in school systems. This was important because school psychologists currently employed in schools were most likely to be able to reflect upon their recent practices. These respondents are also most likely to be using up-to-date testing instruments and following current national guidelines for standardized test procedures. School psychologists who are solely employed as researchers may have to go back several years and are less likely to provide reliable data, so they were excluded from this study. All responses used in this study were obtained from school psychologists who have worked in school settings at least one day per week for the previous 12 months.

Curtis et al. (1999) reported that 72.3% of the studies respondents belonged to their state school psychology associations. This study indicated that 53% of the respondents belonged to their state school psychology associations.

Lewis et al. (2008) reported respondents' years of experience in 5-year increments. "The largest subgroup (30.6%, n = 38) reported having between 1 and 5 years of experience. The percentages of the total sample were generally similar to those reported in NASP survey research (15.3%–17.7%, n = 19–22) for the 6–10, 11–15, and 16–20 years of experience groups, but then declined for the 21–25 years (10.4%, n = 13) and 26+ years (8.0%, n = 10) groups. Most respondents held a Specialist level degree (Lewis, Truscott & Volker, 2008, p. 472)." The educational background in the Lewis et al (2008) study consisted of 16.1% Master's level, 70.9% Specialist level and 12.9%

doctoral level school psychologists with 35.2% of the respondents reporting an NCSP credential and 57.3% reporting NASP membership, 11.3% indicating APA membership, and 59.6% being members of their state association (Lewis, Truscott & Volker, 2008). The current study results indicated that the largest subgroup for years of experience was those with more than 15 years (34.5%) with the second largest subgroup being one to three years experience (18.2%). The largest subgroup for educational background was similar to the Lewis (2008) study in that the majority of respondents held a Specialist level degree (54.5%). The remaining education levels consisted of 13.6% Master's level, 7.3% Post-Specialist, 20.5% Doctoral level.

Instrumentation

No current instrumentation could be located during a thorough research review. There are survey instruments available to measure individual factors such as tendency towards morningness or eveningness, but no complete survey to answer specific factors related to the practice of individually administered norm referenced standardized testing situations. A published and frequently referenced professional in the sleep research and school psychology arenas confirmed that there are currently no known surveys available to address this information. Also, the most frequently used time for testing and the frequency with which school psychologists provide information to students and parents regarding the importance of children getting sleep prior to taking individually administered norm referenced standardized tests is currently unreported in the research.

Literature reviews of the most widely used test manuals, books and journal articles in the school psychology arena as well as interviews with experts confirmed that the child factors listed in this survey are widely accepted variables for determining

whether or not to discontinue testing when these factors are present in the student being tested and are aversively affecting the test results. Please see the table in Appendix C for information regarding the research behind the development and inclusion of the questions in the initial survey.

Survey Response Options

The response options use a Likert Scale due to consistent research on the acceptability of this type of question format in social science research as well as research done with school psychologists (Duncan & Dunn, 2002; Jaccard & Wan, 1996). The specific answer choices are those which are similar to questions used in previous NASP survey research and were continued in this study for survey population familiarity reasons (Hosp & Reschly, 2002; Lewis et al., 2008).

All the demographic and experience information incorporated in this survey was necessary for determining differences amongst respondents. The demographic information reported by school psychologists was examined and reported using descriptive data to assist in answering the research questions. Some demographic information that would not be helpful in answering the research questions, which was subsequently left out of the survey included gender, ethnicity and age.

Research indicates that child factors are believed by test manual authors and publishers to affect the testing situation. Test manuals instruct test administrators to discontinue testing when these factors are present in the test taker. However, no objective means on how often tests are actually discontinued have been gathered. There is also no information regarding the importance school psychologists place on these factors or the actions being taken when they determine the presence of these factors during testing.

Therefore, the questions asked in this survey were used to determine the previously mentioned variables.

Content Review of Survey

The initial content review of this survey instrument involved three populations and occurred in the following step-wise fashion: The first consisted of seventeen survey developers and university researchers who successfully completed a doctoral level survey research course at Auburn University and whom offered several constructive criticisms. The second content review was conducted with a specialist in the sleep area who is also a professor and program head of school psychology at Auburn University. The third content review was done with three school psychology Specialist/Doctoral students at Auburn University.

Initial Content Review

The initial content review was done with 17 survey research students and one professor of educational psychology. During this phase, several suggestions for wording changes and formatting revisions were made. Rather than using pull down scales, the use of matrix scales was suggested and this change was included in the final survey. The suggestion to rearrange question order in two cases as well as spelling revisions were made and changes to the survey followed this discussion. Finally, specific questions regarding applicability to respondents and the possibility of incorporating the use of skipping questions was discussed.

Second Content Review

During the second phase of content review, the expert suggested adding several additional factors to the list due to the completion of research on child factors most frequently mentioned in test manuals. These included emotional upset, fatigue, anxiety, fear, shyness, frustration, and motivation. Clarification was made regarding the differences between sleepiness and fatigue. These subtle differences were evidenced and conclusions were drawn that warranted the use of two separate categories to support these areas and both were included on the survey. The decision to remove the not applicable option that was previously on the survey was also made. The expert determined that this option is not necessary when surveying school psychologists because their most essential responsibility is individualized individually administered norm referenced standardized testing and all respondents would engage in this activity as part of their daily employment responsibilities. Finally, rewording was suggested for the morningness/eveningness question and this revision was made to the survey. Questions regarding the licensure/certification question arose during the initial pilot phase with the surveyors and clarification was requested from the expert. It was determined that including both facets in one question is best practice.

Third Content Review

The third and final phase of content review was done with graduate level school psychology students who are currently working in the school systems completing practicum requirements. They are also NASP student members and they conduct individually administered norm referenced standardized testing as part of their daily routines. These individuals confirmed the face validity of the survey and offered

feedback on the lack of ambiguity in the questions. They also were used to determine the time needed to take the survey. This group of respondents offered no other suggestions, regarding changes to be made to the survey. The time needed for responding to the survey following the three step pilot phase was found to be between five and ten minutes with the average being eight and one half minutes.

Survey

See survey printout in Appendix A or refer to the web link below:

http://www.surveymonkey.com/s.aspx?sm=yS8SauKvdSQFnFxVwVLLOg_3d_3d

Please also see Appendix B for a hard copy the survey invitation letter used in the email and follow-up emails.

Design and Procedure

All respondents were given a number that provided for anonymity in responses. The best means of surveying this population in order to elicit an optimal response rate and return on the questions was determined to be via a mixed mode approach. The original proposal included using an email survey method followed by a mail follow-up if deemed necessary. The survey was sent via email to 1134 school psychologists across the United States. The response rate total was 273 with 53 of these being partial responses only. Therefore, the partial responses were excluded and the response rate of 19.4% was calculated using the 220 full responses as the numerator. The minimal response rate determined and approved by the institutional research board at Auburn University was 50 responses. Due to the return rate on the email survey method producing 220 responses, the mail follow-up approach was not utilized.

An email survey was sent to psychologists with email addresses listed in the NASP directory along with to school psychologists in the top 100 most populated school districts who provided email addresses linked to their school district websites. The next step included compiling a list of numbers for all psychologists who did not respond to the initial survey invitation within two weeks. These participants were sent a second email survey and another list was compiled of non-responders following another two-week time lapse. If the number of surveys returned had still been insufficient after three email attempts, mail surveys would have been sent to school psychologists' work addresses, which are also published in the NASP manual. However, paper surveys were not used due to the number of responses that were returned via email. Any emails that were returned upon initial surveying were immediately recognized and noted for possible mail survey method. As the mail survey method was not utilized, psychologists whose email addresses were determined to be no longer valid did not receive the survey invitation and were stricken from the possible respondent list.

The criterion for an appropriate response rate which was established prior to the start of the study and approved by the institutional research board was found to have been met and the researcher began looking at the data. This plan targeted the correct population, which were all school psychologists. The plan used one delivery method, but prepared for the use of two methods which allowed for a better opportunity to reach the target sample. By using email and standard mail survey methods, minimum response rates were not believed to be compromised based on technological difficulties.

Data Analyses

This study analyzed data collected in survey format that was prospective in nature.

The data analysis consisted of frequency data, descriptive statistics and group comparisons. Each question on the survey produced answers that were coded according to the number of possible responses. Group comparison statistics were obtained using Multiple Analysis of Variance (MANOVA) and relationships were examined using bivariate correlations and multiple linear regression analyses. Secondary Analysis of Variance (ANOVA) data is also available in the appendix section. The information from all of the different analyses were analyzed and compiled into tables that depicted the results.

Group comparisons using Multivariate Analysis of Variance (MANOVA) were made between elementary only, elementary and middle school level, elementary and high school level, and all grade levels served psychologists in terms of the actions they take when child factors occur during individualized testing. This was done using data obtained from the question asking respondents to identify grade levels served and comparing this to data asking how often in the past 12 months psychologists have discontinued testing due to the presence of specific child factors, observed these factors during testing, and/or noted them in their reports.

Descriptive statistics (mean, median, or mode) along with the frequency data and percentages were analyzed for the number of times in the last ten cases that school psychologist's reported having observed, taken a break from testing, noted in their psychoeducational reports, or discontinued high stakes individualized testing due to child factors mentioned in test manuals and research.

The time that psychologists spend doing assessment, testing and report writing was compared to their current practices of discontinuing, taking breaks, observing, and noting the presence of child factors in their reports. Time spent training school psychology students were compared to current practices when child factors occurred during individually administered norm referenced standardized testing. This was done through multivariate regression analyses.

Beliefs regarding the importance of child factors that are frequently mentioned in test manuals were compared with observations and actions taken by school psychologists when engaging in individualized testing procedures over the previous 12 months. Correlations were conducted to determine the presence or absence of a relationship between beliefs regarding the importance of child factors and observations of these factors over the previous ten testing sessions.

Demographic data was reported using frequency statistics. Level of education, experience, certification, licensure, association membership, and regional location were also reported.

The survey asked school psychologists to list other child factors they have found to be very important in the individualized testing process. The results of this question were analyzed and the responses along with the actions taken were reported. This analysis consisted of taking frequency data for each response. All responses were recorded as reported and no coding was used in the analysis of this question. Only exact responses were considered within the same category. When the school psychologists reported having taken a break, discontinued testing and/or noted the child factor in their psychoeducational report the response was coded as a one and no action was recorded as zero.

Descriptive statistics were reported regarding the frequency to which school psychologists feel pressured to continue testing in spite of the presence of child factors that may affect the testing process. Bivariate correlations were conducted to determine the presence or absence of a relationship between feeling pressured to complete testing in spite of the presence of child factors and observation or actions taken by the school psychologists. The data was analyzed with SPSS software.

Primary Research Questions Analyses

Specific analyses of each primary research question are as follows.

Question 1

Question 1 is, "How often in the past 12 months do school psychologists report having observed, taken short breaks from testing, noted in psychoeducational reports, or discontinued individually administered norm referenced standardized testing due to child factors mentioned in test manuals and research?" School psychologists reports regarding whether or not they have observed, taken a break from testing, noted in their psychoeducational reports, or discontinued individually administered norm referenced standardized testing over the past 12 months were measured using frequency and descriptive data. The median and mode were used as measures of central tendency due to the likert scale responses being most meaningful when reported in this manner.

Question 2

Question 2 is, "How many times in the last ten cases do school psychologist's report having observed, taken a break from testing, noted in their psychoeducational reports, or discontinued individually administered norm referenced standardized testing due to child factors mentioned in test manuals and research? (Ten cases were arbitrarily selected due to convenience and easy recollection by survey participants.) Frequencies, valid percentages and descriptive statistics were calculated in order to determine how many times in the last ten cases the school psychologists surveyed reported having observed, taken a break from testing, noted in their psychoeducational reports, or discontinued individually administered norm referenced standardized testing due to child factors mentioned in test manuals and research.

Frequency and valid percentages data were put into tables in order to compare all child factors based on whether or not school psychologists reported having observed, taken a short break, discontinued testing or noted their presence in psychoeducational reports over the past ten testing sessions. The survey question that was used to answer this research question asked the psychologists to report the exact number of times out of their last ten testing sessions that they observed each of the child factors, took a break due to each of the child factors, discontinued testing for each of the child factors, and/or noted the child factors in their psychoeducational reports.

The response choices were from zero to ten times in the last ten testing sessions. For example, the respondents were asked how many times in the last ten cases they observed examinee anxiety. After answering this question they were asked how many

times in the last ten cases they took a break from testing due to examinee anxiety. This line of questioning continued for each child factor and each observation or action taken.

Question 3

Question 3 is, "Do beliefs regarding importance of child factors mentioned in test manuals correlate with actions taken by school psychologists when engaging in individually administered norm referenced standardized testing procedures?" Bivariate correlations were conducted to address the research question of whether or not beliefs regarding importance of child factors mentioned in test manuals correlate with actions taken by school psychologists when engaging in individually administered norm referenced standardized testing procedures. The dependent variable addressed psychologist's beliefs regarding importance of child factors in terms of their effects on the outcomes of testing. The dependent variable incorporated the responses to how often in the past 12 months psychologists have observed, discontinued, taken a break or noted in psychoeducational reports the presence of child factors during testing. Follow-up Bonferroni corrections were applied in order to control for some of the familywise alpha errors that may have occurred due to the large number of correlations performed in these analyses.

Bivariate correlations were also conducted to determine whether or not beliefs regarding importance of child factors mentioned in test manuals correlated with the observations of the child factors by school psychologists in their previous ten testing sessions. Follow-up Bonferroni corrections were applied in order to control for familywise alpha errors.

Question 4

Question 4 involves two parts, hereafter referred to as A and B. Question 4a is, "How often do school psychologists feel pressured to continue testing in spite of the presence of child factors that may affect the individually administered norm referenced standardized testing process?" Frequencies, valid percentages, and descriptive statistics (mean, median, and mode) were calculated in order to describe how often the school psychologists surveyed reported having felt pressured to continue testing in spite of the presence of child factors that may affect the individually administered norm referenced standardized testing process.

Question 4b is, "Do pressures felt by school psychologists to continue testing in spite of the presence of child factors correlate with their observations and actions taken during individually administered norm referenced standardized testing?" As a follow-up to the original analyses, bivariate correlations were conducted to determine the presence or absence of a relationship between feeling pressured to continue testing in spite of the presence of child factors and whether or not the school psychologists observed, took a break, discontinued testing, or noted the child factors in their psychoeducational reports over the previous 12 months of testing. Follow-up Bonferroni corrections were applied in order to control for some of the familywise alpha errors that may have occurred due to the large number of correlations performed in these analyses.

Question 5

Question 5 is, "How do school psychologists deal with the other child factors they believe to affect individually administered norm referenced standardized testing?" Open-

ended question responses were analyzed and reviewed. This information was compiled into a list of additional child factors that the school psychologists who responded indicated as having an impact on the outcome of individually administered norm referenced standardized testing. The results also included a narrative describing the procedures or actions that school psychologist report as having taken when they have encountered these additional child factors during testing sessions.

Secondary Research Questions Analyses

Specific analyses of each secondary research question are as follows.

Question 1

Question 1 is, "Do school psychologists take morningness/eveningness into consideration when conducting individually administered norm referenced standardized testing?" Frequencies, valid percentages, and descriptive statistics (mean, median, and mode) were calculated in order to describe how often the school psychologists take morningness/eveningness into consideration when conducting individually administered norm referenced standardized testing.

Question 2

Question 2 is, "What time of day is most prevalent for individually administered norm referenced standardized testing?" Frequencies, valid percentages, and descriptive statistics (mean, median, and mode) were calculated in order to describe what time of day

school psychologists reported as being the most prevalent time for conducting individually administered norm referenced standardized testing.

Question 3

Question 3 is, "What are current beliefs and practices concerning the importance of sleep in individually administered norm referenced standardized testing practices?" Frequencies, valid percentages, and descriptive statistics (mean, median, and mode) were calculated in order to describe current beliefs and practices concerning the importance of sleep in individually administered norm referenced standardized testing practices. These analyses were first conducted for responses indicating the importance of sleep and then further analysis was done regarding the practices that school psychologists undergo in terms of querying the examinee regarding sleep and frequency to which they provide information to parents.

Question 4

Question 4 is, "Does grade level served affect individually administered norm-referenced standardized testing practices?" A primary analysis using multivariate analysis of variance (MANOVA) was conducted for the independent variable (grade level served) in order to analyze group differences. The dependent variables were the thirteen specific child factors measured in survey question number six, which were found to be statistically correlated. The researcher was only interested in the differences between the groups in answering this research question.

Bartlett's Test of Sphericity was used to determine sufficient correlation between the dependent variables. Box's Test of Equality of Covariance Matrices (Box's M) was

analyzed and Wilks's Lambda was chosen to be employed if the Box's M test was not statistically significant and Pillai's trace if the Box's M was statistically significant. These were used to determine the presence or absence of a statistically significant main effect.

Follow-up one-way between-subjects univariate analyses of variance (ANOVA's) were to be conducted if appropriate in order to analyze whether or not the grade levels served reported by the respondents made a difference in term of the school psychologist's practices regarding each child factor during individually administered norm referenced standardized testing. Post Hoc comparisons would then be conducted when appropriate to determine specific group differences. "The Tukey procedure considers all pairwise comparisons by using the standard error of the mean and the studentized range distribution. This procedure controls the experimentwise (overall) error rate at the rate for the entire set of all pairwise comparisons. This procedure is considered to be moderately conservative and is recommended by many commentators" (Myers, Gamst, & Guarino, 2006). When the Levene's Test of Error Variance was statistically significant the Dunnett's T3 test would be used. "The Dunnett's T3 provides pairwise comparisons based on the studentized maximum modulus and can be used with unequal variances" (Myers, Gamst, & Guarino, 2006). These analyses assess mean differences between all grade level groups while controlling the probability level to avoid alpha inflation.

Question 5

Question 5 involves two parts. Question 5a is, "Does level of education, experience or regional location affect individually administered norm referenced standardized testing practices?" Primary analyses using thirteen different hierarchical

multiple regressions were conducted in order to analyze how the demographic variables (level of education, experience and regional location) which were lumped together and used as independent variables related to the testing practices of the respondents. The dependent variables used were the frequency data for how often in the past 12 months school psychologists observed, took a break, discontinued testing or noted each child factor in their psychoeducational reports.

The survey research question that produced the data used in these analyses lumped the observation and actions taken together and separated all thirteen child factors (anxiety, emotional upset, fatigue, fear, frustration, hunger/thirst, inattention, motivation, rapport, refusal to participate/uncooperativeness, shyness, sleepiness, and temporary illness). For example, the respondents were queried as to how often they observed, took a break, discontinued testing or noted in their psychoeducational reports the presence of examinee anxiety. This same line of questioning was continued for each of the child factors.

This analysis was completed in order to determine the dynamics underlying the action or inaction taken by psychologists when child factors occurred during the testing situation by indicating which of the variables in combination were more strongly associated with observing or taking action. This analysis provides information on whether or not level of education, experience, or regional location of the respondents contributed to the variation in their testing practices. This analysis was useful in determining which variables contributed to school psychologist's practices for the examined child factors.

Follow-up bonferroni corrections were applied in order to control for some of the familywise alpha error that may have occurred due to the large number of multiple regression analyses that were conducted.

Additional one-way between-subjects univariate analyses of variance's (ANOVA's) can be found in Appendix F and were conducted in order to analyze whether or not level of education, experience or regional location yielded group differences in term of the school psychologist's practices regarding each child factor during individually administered norm referenced standardized testing. Thirteen ANOVA's were done for level of education to examine group differences for each different child factor. Thirteen ANOVA's were then completed with level of experience acting as the independent variable and finally, another thirteen ANOVA's were conducted to examine the presence or absence of group differences amongst psychologists depending on their regional location. These secondary analyses were selected because the data included one continuous dependent variable and one categorical independent variable with more than two levels. A Post Hoc comparison was conducted to determine which groups differed from which groups. "The Tukey procedure considers all pairwise comparisons by using the standard error of the mean and the studentized range distribution. This procedure controls the experimentwise (overall) error rate at the rate for the entire set of all pairwise comparisons. This procedure is considered to be moderately conservative and is recommended by many commentators" (Myers, Gamst, & Guarino, 2006). When the Levene's Test of Error Variance was statistically significant the Dunnett's T3 test was used. "The Dunnett's T3 provides pairwise comparisons based on the studentized maximum modulus and can be used with unequal variances" (Myers, Gamst, & Guarino, 2006). These analyses assess mean differences between all grade level groups while controlling the probability level to avoid alpha inflation. Results of these secondary analyses should be interpreted with caution due to the higher likelihood of committing a Type I alpha error while conducting these analyses.

Part B of Question 5 is, "Does time spent doing assessment, testing, report writing, Response to Intervention (RTI), and supervising/training doctoral interns and practicum students make a difference in terms of school psychologist's individually administered norm referenced standardized testing practices?" Primary analyses using thirteen hierarchical multiple regressions were conducted in order to analyze how the professional practices used as independent variables added above and beyond the demographic variables (level of education, experience level and regional location). These analyses were completed in order to determine the dynamics underlying the different actions taken by psychologists when child factors occurred during the testing situation by indicating which variables in combination were more strongly associated with the actions. This analysis provides information on whether or not time spent doing Response to Intervention (RTI), assessment, testing and report writing by the respondents contributed to the variation in their testing practices above and beyond the demographic variables that were measured in research question five. This analysis was useful in determining which variables contributed to school psychologist's practices for the examined child factors.

Additional one-way between-subjects univariate analyses of variance's (ANOVAs) can be found in Appendix G and were conducted in order to analyze whether or not time spent doing Response to Intervention (RTI), assessment, testing, report writing and training/supervision of doctoral interns and practicum students by the respondents made a difference in terms of the school psychologist's practices regarding each child factor during individually administered norm referenced standardized testing over the previous 12 months. Each independent variable (RTI, assessment, testing, report writing and training/supervision) was separated and analyzed by doing thirteen

ANOVA's, one for each child factor. For example, the data for how often the respondents participated in Response to Intervention Activities (RTI) was compared to how frequently they observed or took action when anxiety was present over the previous 12 months. The observation of the child factor and actions taken were lumped together for the dependent variables. This process was continued for each independent variable until a total of sixty-five (Five Independent Variables x 13 Dependent Variables) ANOVA's were completed.

The results of these analyses can be found in Appendix F. These additional analyses were selected because the data included one continuous dependent variable and one categorical independent variable with more than two levels. A Post Hoc comparison was conducted to determine which groups differed from which groups. "The Tukey procedure considers all pairwise comparisons by using the standard error of the mean and the studentized range distribution. This procedure controls the experimentwise (overall) error rate at the rate for the entire set of all pairwise comparisons. This procedure is considered to be moderately conservative and is recommended by many commentators" (Myers, Gamst, & Guarino, 2006). When the Levene's Test of Error Variance was statistically significant the Dunnett's T3 test was used. "The Dunnett's T3 provides pairwise comparisons based on the studentized maximum modulus and can be used with unequal variances" (Myers, Gamst, & Guarino, 2006). These analyses assess mean differences between all grade level groups while controlling the probability level to avoid alpha inflation. Results of these secondary analyses should be interpreted with caution due to the higher likelihood of committing a Type I alpha error while conducting these analyses.

Coding of the Variables

The following codes were used prior to each data analysis and are described by survey question number below.

Table 13

Coding of the Independent and Dependent Variables

Survey question	Coding information
Question 1: Are you currently working in a school or school system?	Yes = 0 No = 1
Question 2: If no, please explain current employment situation below:	No coding = open-ended
Question 3: Grade levels currently served: (Check all that apply)	Elementary Only = 0 (K-6) Elementary and Middle = 1 (K8) Elementary and High = 2 (K-6 & 9-12) All Grades = 3 (K-12)
Question 4: How often do you participate in the following area of practice?	Very often = 3 Moderately often =2 Slightly often = 1 Not at all = 0
Question 5: How important to you are each of the following child factors in terms of their effects on the outcomes of individually administered norm referenced standardized testing?	Very Important = 3 Moderately Important = 2 Slightly Important = 1 Not At All Important = 0
Question 6: How often in the past 12 months have you observed, discontinued, taken a break or noted in psychoeducational reports the presence of the following child factors during individually administered norm referenced standardized testing?	Very often = 3 Moderately often =2 Slightly often = 1 Not at all = 0
Question 7: In the last ten assessments, how many times have you completed the following actions based on the presence of these child factors?	Blank = 0

Survey question	Coding information
Question 8: Please describe any other child factors that you have found to be very important in the high stakes individualized testing process as well as actions you take when they are present.	Open Ended = No changes Action = 1 No Action =2
Question 9: How often do you feel pressured to complete testing in spite of the presence of child factors?	Very Often = 3 Moderately Often = 2 Slightly Often = 1 Not At All = 0
Question 10: What time of day do you mostly conduct individually administered norm referenced standardized testing?	Early Morning = 0 Mid-Morning = 1 Early Afternoon = 2 Late Afternoon = 3
Question 11: Some children are at their best early in the morning, while others are best later in the afternoon. How often have you taken this into consideration when deciding conducting times for individually administered norm referenced testing?	Very Often = 3 Moderately Often = 2 Slightly Often = 1 Not At All = 0
Question 12: How often do you provide parents with information on the importance of sleep to performance on individually administered norm referenced standardized tests?	Very Often = 3 Moderately Often = 2 Slightly Often = 1 Not At All = 0
Question 13: How often do you query the child on their sleep the night prior to individually administered norm referenced standardized testing?	Very Often = 3 Moderately Often = 2 Slightly Often = 1 Not At All = 0
Question 14: How important do you feel quality sleep is to individually administered norm referenced standardized testing?	Very Important = 3 Moderately Important = 2 Slightly Important = 1 Not At All Important = 0
Question 15: What is your current level of education?	Master's Degree = 0 Specialist Degree = 1 Doctoral Degree = 2

Survey question	Coding information
Question 16: What is your current level of experience as a school psychologist?	1 to 3 = 0 4 to 6 = 1 7 to 9 = 2 10 to 15 = 3 More than 15 = 4
Question 17: What is your current level of certification/licensure as a school psychologist? (Check all that apply)	Not Certified = 0 Student Intern = 1 Non-Renewable Certificate = 2 State Certified = 3 Nationally Certified = 4 Licensed State Psychologist = 5 Nationally Licensed Psychologist = 6 Other = 7
Question 18: What are your current association memberships? (Check all that apply)	NASP = 1 SASP = 2 APA = 3 State Assoc. = 4 Other = 5
Question 19: In which of these regions are you currently employed as a school psychologist?	Central = 0 Southeast = 1 Northeast = 2 Western = 3

CHAPTER IV:

RESULTS

Overview

This chapter addresses the primary and secondary research questions by analyzing data obtained from frequency information, valid percents, measures of central tendency, Multiple Analysis of Variance (MANOVA), between subjects Analysis of Variance (ANOVA) and Multiple Regression analyses. The chapter begins with survey reliability information then follows with the primary research questions analyses and concludes with the secondary research question analyses.

Survey Reliability Analysis

Reliability techniques such as alpha models, split-half models, Guttman models, as well as parallel and strict parallel models were considered and rejected due to the composition of the survey used in this study. Face validity as well as content validity were able to be used and these were addressed during the initial and secondary content reviews. The 25 reviewers confirmed the face and content validity of the survey. Therefore, the survey was considered by the researcher to be a useful instrument in collecting the data required for this study.

Question 1

In the last 12 months school psychologists reports regarding whether or not they have observed, taken a break from testing, noted in their psychoeducational reports, or discontinued individually administered norm referenced standardized testing vary in frequency depending on the child factor being addressed. This survey question analyzed whether or not the respondents observed or took action when each child factor was present over the past 12 months. The observation and actions were not separated for this survey question because they were separated for the survey question that asked how many times in the last ten assessments they had observed or taken action. The purpose of this question was to determine whether or not they observed each child factor or took action at all, slightly often, moderately often or very often when child factors occurred during their previous 12 months of testing. Table 14 depicts the descriptive data and percentages that resulted from this analysis.

Table 14

Descriptive Data and Percents for Number of Times Observed and/or Taken Action Over the Previous 12 Months

Variable	Mean	Standard deviation	Median	Mode	Valid percent
Anxiety	1.68	.771	2	2	44.5
Emotional upset	.59	.714	0	0	51.8
Fatigue	.90	.714	1	1	58.0
Fear	1.66	.900	2	1	36.6
Frustration	1.42	.689	1	1	50.2
Hunger/thirst	1.40	1.133	1	1	33.0
Inattention	.82	.724	1	1	54.4
Motivation	2.16	.819	2	2	41.6
Rapport	.73	.804	1	0	46.4
Refusal/uncooperativeness	1.06	.703	1	1	62.7
Shyness	1.13	.719	1	1	60.5
Sleepiness	1.32	.770	1	1	54.3
Temporary Illness	1.09	.777	1	1	58.2

Note. 0 = Not At All, 1 = Slightly Often, 2 = Moderately Often, 3 = Very Often.

Table 14 above summarizes the mean, standard deviation, median, mode and valid percent associated with the first primary research question. The school psychologists surveyed reported a range of answers from "not at all" to "very often" on each of the child factors surveyed. The most frequently occurring response for anxiety (44.5%) and motivation (41.6%) was moderately often. Responses indicated that the most frequently occurring response for fatigue (58.0%), fear (36.6%), frustration (50.2%), hunger/thirst (33.0%), inattention (54.4%), refusal to participate (62.7%), shyness (60.5%), sleepiness (54.3%) and temporary illness (58.2%) was slightly often. The most occurring response for emotional upset (51.8%) and rapport (46.4%) indicated that psychologists did not observe these child factors in students over the course of the previous 12 months.

Question 2

In the last ten psychoeducational assessments, how many times have you observed the presence of examinee child factors during individually administered norm referenced standardized testing?

Tables 15, 16, and 17 below describe the frequency and percent of child factors that were observed by school psychologists during testing as well as the actions of taking a break, discontinuing testing for the day and reporting child factors in psychoeducational reports when these factors were present during the last ten testing sessions conducted by the 220 school psychologists surveyed. This frequency data provides a summary of the lengthier frequency data that can be found in Appendix D and depicts whether or not the child factor was or was not observed and whether or not actions were or were not taken regardless of the number of times that were specifically reported by the respondents. For

example, inattention was observed somewhere between one and ten times as reported by 159 of the total respondents surveyed. The valid percent data indicates that 72.3% of the respondents observed inattention in their last ten testing sessions. Conversely, this also explains that 27.7% of the respondents surveyed did not observe inattention during their previous ten testing sessions. This data was collected for each child factor and each observation and action taken.

Inattention was observed most frequently (72.3%) during the last ten assessments conducted by the 220 school psychologists surveyed. Anxiety (69.1%), Motivation (54.1%), Frustration (44.5%) and Fatigue (43.2%) along with inattention, were the top five factors most frequently observed by school psychologists during their last ten testing sessions.

Inattention (61.4%) was the most common reason reported by school psychologists for taking a break when conducting their last ten testing sessions. The top five child factors mentioned in regards to taking a break during testing were Anxiety (52.7%), Frustration (44.8%), Fatigue (37.3%), and Emotional Upset (33.6%). On average, all of the child factors were reported as having caused a need to take a break during the school psychologists last ten testing sessions.

Table 15

Number of Times School Psychologists Observed Child Factors over the Past 10 Test Sessions

Variable	Frequency	Valid percent
Inattention	159	72.3
Anxiety	152	69.1
Motivation	119	54.1
Frustration	129	44.5
Fatigue	95	43.2
Emotional upset	93	42.3
Rapport	83	37.7
Refusal	83	37.7
Sleepiness	75	34.1
Shyness	74	33.6
Hunger/thirst	53	24.1
Temporary illness	42	19.1
Fear	28	12.7

Note. Number of times respondents reported child factor observances over the past 10 testing sessions (One to ten times were counted as 1 and zero times were excluded).

Table 16

Number of Times Psychologisists Took a Break Over the Past 10 Test Sessions

Variable	Frequency	Valid percent
Inattention	135	61.4
Anxiety	116	52.7
Frustration	98	44.8
Fatigue	82	37.3
Emotional upset	74	33.6
Hunger/thirst	70	31.8
Sleepiness	51	23.2
Motivation	49	22.3
Refusal/uncooperativeness	44	20.0
Temporary illness	16	7.3
Shyness	15	6.8
Fear	14	6.4
Rapport	12	5.5

Note. Number of times respondents reported having to take a break due to child factors over the past ten testing sessions (One to ten times counted as 1 and zero times were excluded)

Table 17

Number of Times Testing was Discontinued by Psychologists Over the Past 10 Test Sessions

Variable	Frequency	Valid percent
Refusal	74	33.6
Fatigue	57	25.9
Inattention	54	24.5
Emotional upset	52	23.6
Anxiety	42	19.1
Sleepiness	41	18.6
Frustration	40	18.2
Motivation	32	14.5
Temporary illness	31	14.1
Fear	11	5.0
Rapport	10	4.5
Shyness	7	3.2
Hunger/thirst	6	2.8

Note. Number of times respondents reported that testing was discontinued over the past ten testing sessions (One to ten times were counted as one occurrence and zero times were excluded).

Refusal (33.6%) was noted as the most frequently occurring child factor that caused the action of discontinuing testing for the day. School psychologists reported that the other top five child factors causing the action of discontinuing testing for the day were Fatigue (25.9%), Inattention (24.5%), Emotional Upset (23.6%), and Anxiety (19.1%). All of the child factors were reported as having occurred and caused the need to discontinue testing for the day over the course of the school psychologists last ten testing sessions.

The child factors that were most frequently noted in psychoeducational reports over the school psychologists last ten testing sessions were Anxiety (72.7%), Inattention (71.4%), Frustration (57.3%), Motivation (50.0%), and Fatigue (43.2%). On average, all of the child factors were noted in psychoeducational reports over the course of the school psychologists last ten testing sessions. See Appendix D for detailed frequency and valid percent data for each child factor. This section provides specific details on the number of times each child factor was observed or actions were taken, between zero and ten times, for the previous ten testing sessions.

Table 18 below depicts the mean and standard deviation for each action taken by the school psychologists when child factors were present during their last ten testing sessions. These mean results were obtained by examining the observation and each of the actions separately and comparing them to each of the child factors presented.

Table 18

Number of Times Psychologists Noted Factors in Reports Over the Past 10 Test Sessions

Variable	Frequency	Valid percent
Anxiety	160	72.7
Inattention	157	71.4
Frustration	126	57.3
Motivation	110	50.0
Fatigue	95	43.2
Emotional upset	90	40.9
Refusal	90	40.9
Rapport	79	35.9
Shyness	69	31.4
Sleepiness	69	31.4
Temporary illness	37	16.8
Hunger/thirst	29	13.2
Fear	22	10.0

Note. Number of times factors were noted in psychoeducational reports in the last ten testing sessions (One to times counted as one occurrence and zero times were excluded).

Table 19

Mean and Standard Deviations for Each Action over the Past 10 Test Sessions

Behavior/ variable	Observed	Taken a break	Discontinued	Noted in report
	Mean (*SD*)	Mean (*SD*)	Mean (*SD*)	Mean (*SD*)
Anxiety	1.69 (1.90)	1.21 (1.74)	.32 (.93)	1.85 (2.02)
Emotional upset	.76 (1.32)	.57 (1.14)	.32 (.75)	.75 (1.35)
Fatigue	.94 (1.58)	1.01 (1.87)	.48 (1.11)	.93 (1.57)
Fear	.22 (.84)	.11 (1.94)	.07 (.77)	.93 (2.35)
Frustration	1.91 (2.34)	1.27 (1.97)	.29 (.77)	1.90 (2.35)
Hunger/thirst	.53 (1.25)	.84 (1.85)	.03 (.20)	.26 (.90)
Inattention	2.89 (2.52)	2.30 (2.52)	.52 (1.12)	2.79 (2.53)
Motivation	2.09 (3.08)	.48 (1.08)	.27 (1.00)	1.96 (3.06)
Rapport	2.76 (4.25)	.15 (.86)	.10 (.75)	2.71 (4.24)
Refusal	.57 (1.07)	.34 (.87)	.47 (.87)	.69 (1.30)
Shyness	.61 (1.27)	.10 (.43)	.07 (.49)	.58 (1.22)
Sleepiness	.70 (1.34)	.45 (1.18)	.30 (.86)	.61 (1.23)
Temporary illness	.30 (.89)	.10 (.46)	.20 (.79)	.25 (.75)

The results of this analysis as expected reveal that the averages indicate that all of the child factors were observed by the respondents or caused the psychologists to break from testing, discontinue testing or the child factors were noted in psychoeducational reports to varying degrees. A mean of zero would only indicate that none of the psychologists observed or took action over the previous ten testing sessions when the child factors were assessed. Therefore, further analysis can be completed which reveals more valuable information.

Some of the low mean scores may be due to the fact that several psychologists indicated that they did not observe or take actions related to the child factors. Due to the data of the non-observers or those who did not take action, the mean scores were lowered. The respondents indicated an average of observing child factors such as inattention, rapport, motivation, frustration and anxiety resulted in the highest mean data. These were noted for at least one or two times out of their last ten testing sessions. However, the mean scores for observing child factors such as emotional upset, fatigue, fear, hunger/thirst, refusal to participate/uncooperativeness, and shyness were less than one time in the previous ten assessments. When coupling the mean scores with standard deviations for observation, it is apparent that for the child factors with low mean scores the responses varied by more than one assessment except for fear. Respondents indicated that they rarely observed fear in their previous ten testing sessions. Frequency data, valid percents, and standard deviations should be noted when considering the overall results.

The highest mean results for taking a break from testing were due to inattention, frustration, anxiety, fatigue, and hunger/thirst. The mean for inattention was clearly higher than the other child factors and indicated that school psychologists took a break due to inattention an average of two times per their last ten assessments. The results

indicated that for fatigue and hunger/thirst the responses for taking a break were higher than observation of these factors. This indicates some difficulties with the measurement instrument and therefore should be interpreted with caution. It may be that the respondents who indicated having taken a break did not indicate that they observed this factor because they misunderstood the question. They may have thought that answering that they observed the child factor meant that they only observed and did not take action. This was not the intention of the question and the answer choices allowed the respondents to pick observation and actions.

The lowest mean results for taking a break were for child factors such as emotional upset, fear, hunger/thirst, motivation, rapport, refusal to participate/uncooperativeness and shyness. When considering the standard deviations, child factors such as rapport, refusal to participate/uncooperativeness and shyness were the least likely to cause school psychologists to take a break from testing. This may be due to the fact that these factors were less likely to be observed than the other child factors. It is unclear whether the factors were not present or if the school psychologists did not recognize their presence.

The respondents reported the lowest overall mean results for discontinuing testing. This indicates that in general, the psychologists surveyed were less likely to discontinue testing than to observe, take a break from testing, or note the presence of child factors in their psychoeducational reports. The highest mean results for discontinuing testing were for inattention, fatigue, and refusal to participate/uncooperativeness. When considering standard deviations along with the mean scores for discontinuing testing, it is clear that although school psychologists observe these child factors they are unlikely to discontinue testing due to their presence.

The highest means reported for noting child factors in psychoeducational reports resulted from the presence of inattention, rapport, motivation, frustration and anxiety. For anxiety, fear and refusal to participate/uncooperativeness, the mean for noting the child factors in their reports were higher than mean observations. This may indicate that some psychologists did not report that they observed the child factor when they reported having noted the factor in their psychoeducational reports. The option to indicate both observation and action was available, but this response must not have been utilized by at least some of the psychologists.

The lowest mean scores were for emotional upset, fear, fatigue, hunger/thirst, refusal to participate/uncooperativeness and shyness when the child factors were present and the psychologists responded to whether or not they noted the child factors in their psychoeducational reports. After considering the means and standard deviations associated with the less reported child factors, the least likely child factor to be noted in psychoeducational reports was hunger/thirst.

Overall, these mean and standard deviation results indicate that for the highest mean cases, psychologists who observed the factors were most likely to note them in their reports rather than take a break or discontinue testing. Of the child factors that were not observed, it is not clear whether they were not recognized or whether they were not present in the examinee.

Question #3

Thirteen bivariate correlations were conducted to address the third primary research question. Psychologist's beliefs regarding importance of child factors in their effects on the outcomes of testing were correlated with the responses to survey question

number five which were separated for each child factor. The responses to survey question number six which asked, "How often in the past 12 months have you observed, discontinued, taken a break or noted in psychoeducational reports the presence of the following child factors during testing" were also separated by each child factor. The purpose of asking this question without separating the four possible actions was to determine the frequency to which school psychologists took action when the child factors examined were present during testing regardless of the specific action they may or may not have taken. The child factors were matched for each question and correlated to determine whether or not the respondent's beliefs were correlated with their actions.

Do beliefs regarding importance of child factors mentioned in test manuals correlate with observations and actions taken by school psychologists when engaging in individually administered norm referenced standardized testing procedures?

Table 20

Correlations for Beliefs Regarding the Importance of Child Factors

Belief/importance of variable	Correlation with frequency of observing & action	Significance following Bonferroni corrections
Anxiety	.029	
Emotional Upset	-.064	
Fatigue	.320**	$p < .001$
Fear	-.011	
Frustration	.035	
Hunger/Thirst	.120	
Inattention	.200**	$p < .003$
Motivation	.169*	
Rapport	.266***	$p < .001$
Refusal	.249***	$p < .001$
Shyness	.064	
Sleepiness	.255***	$p < .001$
Temporary Illness	.185**	

*$p < .05$. **$p < .01$. ***$p < .001$.

As can be seen in Table 20 above, beliefs regarding the importance of child factors resulted in significant correlations with taking action when the factor was fatigue, inattention, motivation, rapport, refusal, sleepiness, or temporary illness. Beliefs regarding importance of child factors were not correlated with the actions taken by school psychologists when the factor was anxiety, emotional upset, frustration, fear, hunger/thirst, or shyness.

Due to the large number of correlations a Bonferroni Correction was applied to control for some of the familywise alpha error that may have occurred. This was completed by dividing the significance or alpha level by the number of correlations conducted and then comparing the results to the new significance level of .05/13 = .0038. After the correction was applied, findings suggested that beliefs regarding the importance of child factors were positively correlated with the school psychologist's frequency of observing or taking actions over the previous 12 months when child factors such as fatigue, inattention, rapport, refusal and sleepiness were present in the examinees. Application of the Bonferroni corrections indicated that child factors including motivation difficulties and temporary illness were no longer statistically significant. Therefore, in considering the relationship between beliefs and observation/actions taken when motivation difficulties or temporary illness are present during the testing situation these should only be considered as trends rather than statistically significant results.

Bivariate correlations were also conducted to determine the presence or absence of a relationship between beliefs regarding the importance of each child factor and the number of times in the previous ten testing sessions that psychologists reported having observed the presence of the child factor. The following table summarizes these findings using Pearson's Correlation Coefficients.

Table 21

Descriptive Data for Respondents Pressures Felt to Continue Testing

Belief/importance of variable	Correlation with frequency of observation
Anxiety	-.067
Emotional Upset	-.041
Fatigue	.110
Fear	.037
Frustration	.053
Hunger/Thirst	.046
Inattention	.026
Motivation	-.061
Rapport	.164*
Refusal	.006
Shyness	.087
Sleepiness	.000
Temporary Illness	.076

*$p < .05$. **$p < .01$. ***$p < .001$.

These results suggest that beliefs regarding examinee/examiner rapport are positively related to the frequency to which rapport is observed during school psychologist's testing sessions. No other beliefs regarding child factors were correlated with observation of these factors over the previous ten testing sessions. Slightly negative relationships were found for anxiety, emotional upset and motivation difficulties. It is unable to be determined whether or not the child factors were not present during the school psychologist's previous ten testing sessions or whether they did not recognize them in the examinee.

Due to the large number of correlations a Bonferroni Correction was applied to control for some of the familywise alpha error that may have occurred. This was completed by dividing the significance or alpha level by the number of correlations conducted and then comparing the results to the new significance level of .05/13 = .0038. After the correction was applied, findings suggested that beliefs regarding the importance of child factors were not related to the likelihood of observing these child factors over the previous ten testing sessions. Therefore, in considering the relationship between beliefs regarding the importance of rapport and observation of this child factor during the previous ten testing sessions a positive correlation should only be considered as a possible trend rather than a statistically significant result.

Question 4

The fourth primary research question was analyzed using descriptive data and the results are as follows.

How often do school psychologists feel pressured to continue testing in spite of the presence of child factors that may affect the individually administered norm referenced standardized testing process?

Table 22

Correlations with Observations and Actions Taken

Variable	Mean	Standard deviation
Pressure	1.34	.924

Table 23

Frequency and Valid Percent Data for Pressures to Continue Testing

Variable	Frequency	Valid percent
Very often	26	12.1
Moderately often	63	29.3
Slightly often	85	39.5
Not at all	41	19.1
TOTAL	215	100

A total of 215 school psychologists responded to the question asking them to describe how frequently they feel pressured to continue testing in spite of the presence of child factors during the testing session. The mean response was 1.34 with a standard deviation of one. Of the 215 respondents the median and mode response to this question

indicated that the school psychologists felt pressured to continue testing in spite of the presence of child factors slightly often (39.5%) as was indicated by 85 out of the 215 respondents. Of the other school psychologists 63 out of 215 indicated that they felt pressured moderately often (29.3%) with 41 out of 215 indicating that they did not feel pressured at all (19.1%) and 26 out of 215 reported that they felt pressured to continue testing in spite of the presence of child factors very often (12.1%).

As a follow-up to this analyses, bivariate correlations were conducted to determine whether or not a relationship was present between feeling pressured to continue testing in spite of the presence of child factors and the frequency to which school psychologists observed, took a break, discontinued testing and/or noted the child factors in their psychoeducational reports over the previous 12 months. Thirteen correlations were examined and the dependent variable used for each analysis grouped the school psychologist's observations and actions taken together. The following table depicts the results:

Table 24

Correlations Between Pressure and Actions Over the Previous 12 Months

Pressure felt for each variable	Correlation with frequency of observing & acting	Significance following Bonferroni corrections
Anxiety	.234**	$p < .001$
Emotional upset	.143*	N/A
Fatigue	.230**	$p < .001$
Fear	.286**	$p < .001$
Frustration	.190**	N/A
Hunger/thirst	.234**	$p < .001$
Inattention	.231**	$p < .001$
Motivation	.323**	$p < .001$
Rapport	.093	N/A
Refusal	.163*	N/A
Shyness	.207**	$p < .002$
Sleepiness	.197**	N/A
Temporary illness	.313**	$p < .001$

*$p < .05$. **$p < .01$. ***$p < .001$.

These results suggest that school psychologist's pressure they feel to complete testing in spite of the presence of child factors is statistically significantly positively correlated with their observing or actions taken over the previous 12 months of testing for all child factors except for examinee/examiner rapport. Examinee anxiety, fatigue, fear, frustration, hunger/thirst, inattention, motivation difficulties, shyness, and temporary illness were statistically correlated at the $p < .01$ significance level. Examinee emotional upset and refusal to participate/uncooperativeness were correlated with observation or actions taken over the previous 12 months at the $p < .05$ level of significance.

Due to the large number of correlations a Bonferroni Correction was applied to control for some of the familywise alpha error that may have occurred. This was completed by dividing the significance or alpha level by the number of correlations conducted and then comparing the results to the new significance level of $.05/13 = .004$. After the correction was applied, findings suggested that pressures felt regarding the need to continue testing in spite of the presence of child factors were positively correlated with examinee anxiety, fatigue, fear, hunger/thirst, inattention, motivation, shyness, sleepiness and temporary illness in terms of the observation of or actions taken by school psychologists over the previous 12 months of testing. Application of the Bonferroni corrections indicated that child factors including emotional upset, frustration, rapport problems and refusal to participate/uncooperativeness and were no longer statistically significant. Therefore, in considering the relationship between beliefs and observation/actions taken when the emotional upset, frustration, refusal to participate/uncooperativeness and sleepiness were present during the testing situation these should only be considered as trends rather than statistically significant results. Sleepiness was found to be significant at the .004 level, but was not found to be

significant at the .0038 level. Pressures felt to continue testing do not appear to be related to observation or actions taken over the previous 12 months of testing when examinee/examiner rapport problems occur during the testing sessions.

Question 5

School psychologists were surveyed and asked to respond to a query regarding other child factors that they have found to be very important during the testing process and that were not mentioned as one of the thirteen factors in previous survey questions. The responses were recorded as written and analyzed for frequency data. Exactly similar responses were grouped and all other responses were considered in their own category. Some survey respondents provided multiple additional factors. The results indicated that school psychologists believe the following factors to also be very important. These factors are ranked below in order of most frequently mentioned:

What additional child factors impact the testing process and how do you deal with these child factors when they are present during individually administered norm referenced standardized testing?

Table 25

Additional Child Factors Believed to Impact the Validity of Test Results

Variable	Frequency
Current classroom activity	24
Linguistic factors/second language (ESOL students)	18
Hyperactivity/impulsivity	15
Understanding the purpose of the testing	11
Testing environment	9
Socio-cultural issues	6
Family stressors	5
Recent stressors (Peer/teacher conflict, discipline)	5
Hearing/vision/sensory issues	4
Parental pressure to perform successfully	4
Receptive/expressive language skills	4
Attendance/multiple moves/truancy	3
Medications	3
Parental presence during testing	3
Perseverance/persistence	3
Rushing through the testing	3
Time of day (morning/afternoon)	3
Anger	2

Variable	Frequency
Attitude towards school	2
Easily distracted	2
Self-confidence	2
Developmental history	1
Drug/alcohol use	1
Examiner expectation	1
Fine motor skills	1
Listening comprehension skills	1
Maturation/age	1
Mental status	1
Nutrition	1
Optimism/positive outlook	1
Orthopedic issues	1
Pacing of testing	1
Post traumatic stress disorder (PTSD)	1
Psychosis	1
Restlessness	1
School failure	1
Suicidal ideations	1
Test materials	1
Understanding the role of the psychologist	1

School psychologists reported that they often take short breaks, discontinue testing for the day or reschedule testing based on most of the factors they mentioned. Respondents indicated that they incorporated the use of interpreters to assist in testing situations involving students in which English is their second language. Test Environment was usually controlled by moving to a new location or discontinuing for the day when problems arose. Hunger and Thirst in examinees was resolved by providing drinks and snacks. Redirection, counseling, movement breaks and breaking the testing up into several sessions were also used to help control for the presence of child factors. The development of rapport was mentioned as an important element in minimizing the presence of negative child factors during testing. Audio and visual technology along with the use of non-verbal test instruments were mentioned as means of assisting students with visual, hearing and linguistic difficulties.

Secondary Research Questions Results

Question 1

Do school psychologists take morningness/eveningness into consideration when conducting individually administered norm referenced standardized testing?

School psychologists were surveyed to answer the above secondary research question and the results are as followed:

Some children are at their best early in the morning, while others are best later in the afternoon. How often have you taken this into consideration when deciding conducting times for individualized high stakes testing times?

Table 26

Morningness/Eveningness Descriptive Data

Variable	Mean	Standard deviation
Morningness/eveningness	1.71	.905

Table 27

Frequency and Valid Percent Data for Morningness/Eveningness

Variable	Frequency	Valid percent
Very often	45	21.0
Moderately often	81	37.9
Slightly often	68	31.8
Not at all	20	9.3
TOTAL	214	100

A total of 214 school psychologists described how frequently they consider morningness/eveningness when deciding times to test examinees. The mean response was moderately often (1.71) with a standard deviation of .905. Of the 214 respondents the median and mode responses to this question also indicated that the school psychologists consider time of day when deciding test times moderately often (37.9%) as was indicated by 81 out of the 214 respondents. Of the other school psychologists 68 out of 214 indicated that they considered time of day slightly often (31.8%) with 45 out of 214

indicating that they considered time of day very often (21.0%) and 20 out of 214 reported that they do not consider time of day at all when deciding on testing session times (9.3%).

Question 2

What time of day is most prevalent for individually administered norm referenced standardized testing?

Table 28

Time of Day Descriptive Data

Variable	Mode	Median
Time of day	1 (Mid-morning)	1 (Mid-morning)

Table 29

Time of Day Frequency and Valid Percent Data

Variable	Frequency	Valid percent
Early morning	75	35.4
Mid-morning	130	61.3
Early afternoon	7	3.3
Late afternoon	0	0.0
TOTAL	212	100

Of the 212 school psychologists who responded the mean indicated that mid-morning (one) was the most prevalent time for testing and the standard deviation was one. The median and mode response indicated that the most prevalent time of day for testing was also mid-morning. Of the 212 respondents, 130 indicated that they tested most frequently during the mid-morning (61.3%) time of day. Of the other school psychologists, 75 indicated that they tested most frequently during the early morning (35.4%) time of day and 7 respondents reported that they test most frequently in the early afternoon (3.3%). None of the school psychologists indicated that they test most frequently in the late afternoon time of day.

Question 3

What are current beliefs and practices concerning the importance of sleep in individually administered norm referenced standardized testing practices?

In order to assess current beliefs regarding importance of sleep school psychologists were asked how important they felt quality sleep is to their individually administered norm referenced standardized testing practices and the results are as follows.

Table 30

Descriptive Data Regarding Sleep

Variable	Mean	Standard deviation
Importance of sleep	2.41	.610
Queries on prior night's sleep	1.66	.967
Parental information	1.24	.962

Table 31

Importance of Quality Sleep Frequency and Valid Percent Data

Variable	Frequency	Valid percent
Very important	104	47.7
Moderately important	100	45.9
Slightly important	14	6.4
Not at all important	0	0
TOTAL	218	100

Of the 218 school psychologists surveyed, the mean response indicated that school psychologists feel that sleep is moderately important (2.41) with a standard deviation of .510. The median response also indicated that the respondents felt that quality sleep is moderately important to individually administered normed referenced standardized testing practices with the mode response indicating that school psychologists most often reported sleep as being very important to their testing practices. Of the 218 respondents, 104 indicated that they felt examinee quality sleep prior to testing was very important (47.7%) to the validity of their test results. Of the other school psychologists, 100 indicated that they believed quality sleep to be moderately important (45.9%) and 14 respondents reported examinee quality sleep prior to testing to be slightly important (6.4%). None of the school psychologists indicated that they felt examinee quality sleep was unimportant to the results of their testing.

All of the school psychologists indicated that examinee quality sleep was important to their testing practices. Therefore, the following questions and results were used to further analyze current practices regarding examinee sleep.

How often do you query the child on their sleep the night prior to individually administered norm referenced standardized testing?

Table 32

Queries on Prior Night's Sleep Frequency and Valid Percent Data

Variable	Frequency	Valid percent
Very often	53	24.3
Moderately often	62	28.4
Slightly often	79	36.2
Not at all	24	11.0
TOTAL	218	100

A total of 218 school psychologists were asked to describe how frequently they query examinees on their sleep the night before testing. Of the 218 respondents the mean was moderately often (1.66) with a standard deviation of .967. The median response to this question indicated that the school psychologists queried the child moderately often (28.4%) as was indicated by 62 of the 218 respondents. The most occurring response or mode response indicated that the school psychologists queried the child regarding the previous nights sleep slightly often (36.2%) as was indicated by 79 of the 218 respondents. Of the other school psychologists 53 out of 218 indicated that they queried the child very often (24.3%) with 24 out of 218 indicating that they did not query the child at all (11.0%).

How often do you provide parents with information on the importance of sleep to performance on academic tests?

Table 33

Parental Information Regarding Sleep Frequency and Valid Percent Data

Variable	Frequency	Valid percent
Very often	26	12.0
Moderately often	53	24.5
Slightly often	83	38.4
Not at all	54	25.0
TOTAL	216	100

A total of 216 school psychologists described how frequently they provide parents with information regarding the importance of sleep to performance on academic tests. The mean response was slightly often (1.24) with a standard deviation of .962. Of the 216 respondents the median and mode responses to this question indicated that the school psychologists provided information to parents slightly often (38.4%) as was indicated by 83 of the 216 respondents. The other responses indicated that 26 of the 216 school psychologists reported that they provide information to parents very often (12.0%). A total of 53 out of 216 respondents indicated that they provided information to parents moderately often (24.5%) and 54 out of 216 indicated that they did not provide information to parents at all (25.0%).

Question 4

Does grade level served make a difference in terms of school psychologists practices during individually administered norm referenced standardized testing?

Grade Level Served

A multivariate analysis of variance (MANOVA) was conducted on each of thirteen dependent variables: Anxiety, Emotional Upset, Fatigue, Fear, Frustration, Hunger/Thirst, Inattention, Motivation, Rapport, Refusal to Participate/Uncooperativeness, Shyness, Sleepiness, and Temporary Illness to determine group differences. The independent variable in the first case was the grade level served by the school psychologists who were surveyed (Elementary Only, Elementary and Middle, Elementary and High, or All Grades. Responses from school psychologists who serve Middle only ($n = 5$), High only ($n = 10$) and Middle & High ($n = 4$) were excluded from this analysis due to their sample size being too small.

No extreme scores or univariate outliers were observed for the dependent measures, so all data was accepted. All missing value cases and those that indicated no grade levels served were also eliminated leaving an N of 185 school psychologists who reported their current education level. The following table depicts the frequency data for each category.

Table 34

Grade Level Served Frequency and Valid Percent Data

Grade level served	Frequency	Valid percent
Elementary only	64	34.6
Elementary & middle	51	27.6
Elementary & high	16	8.6
All grades	54	29.2
Total	185	100

The between subjects MANOVA compared the mean scores for grade level served reported by school psychologists with the frequency to which they have observed discontinued, taken a break or noted in psychoeducational reports the presence of the dependent variables during their last 12 months of testing. The four possible actions were grouped together for the purpose of this analysis. The overall results indicate an action or inaction of the respondents when the child factor was present regardless of the particular action. Univariate Analyses of Variance (ANOVA's) were conducted along with post hoc tests when appropriate. The results from survey question number six were used as the dependent variables. The MANOVA results are as follows.

Table 35

Grade Level Served Means and Standard Deviations

Variable	Elem.	Elem. & middle	Elem. & high	All grades
	Mean(SD)	Mean(SD)	Mean(SD)	Mean(SD)
Anxiety	1.64 (.721)	1.65 (.658)	1.69 (.704)	1.76 (.950)
Emotional upset	.45 (.589)	.51 (.612)	.62 (.619)	.81 (.892)
Fatigue	.77 (.584)	.82 (.555)	.87 (.619)	1.20 (.855)
Fear	1.55 (.907)	1.67 (.792)	1.44 (.964)	1.85 (.899)
Frustration	1.22 (.576)	1.43 (.640)	1.62 (.719)	1.50 (.771)
Hunger/thirst	1.20 (1.171)	1.45 (1.154)	1.69 (.873)	1.57 (1.159)
Inattention	.70 (.609)	.76 (.551)	.81 (.750)	1.07 (.887)
Motivation	2.19 (.833)	2.25 (.717)	1.87 (.957)	2.33 (.727)
Rapport	.61 (.681)	.73 (.802)	.69 (.704)	.83 (.966)
Refusal	.84 (.570)	1.10 (.500)	1.00 (.632)	1.28 (.878)
Shyness	1.03 (.689)	1.10 (.671)	1.19 (.750)	1.17 (.771)
Sleepiness	1.14 (.753)	1.35 (.559)	1.00 (.516)	1.52 (.885)
Temp. illness	.88 (.701)	1.06 (.645)	.94 (.772)	1.37 (.917)

Box's Test of Equality of Covariance Matrices was not statistically significant (Box's $M = 375.731$, $p > .115$), which indicates that the dependent variable covariance matrices are equal across the levels of the independent variable which allowed the use of Wilks's lambda to assess the multivariate effects. Bartlett's Test of Sphericity was statistically significant (approximate chi square = 1005.169, $p < .000$. This indicates sufficient correlation between the dependent variables to proceed with the analysis. The Wilks's Lambda criterion was used to determine the multivariate effect of grade level served on actions taken when the child factors were present during the respondents previous 12 months of testing. The table below depicts the results of the multivariate analysis.

Table 36

Grade Level Served Multiple Analysis of Variance (MANOVA) Results

Independent variable	*F*	Effect size	Post-hoc test	Post-hoc results
Grade level served	1.347	.094	N/A	N/A

Note. No values were significant at the .01 or .05 level.

The analysis indicated that the main effect was not statistically significant. Therefore, follow-up univariate analyses were not employed. The results suggest that there are no clinically significant main effects for grade level served in terms of their testing practices when child factors have occurred over the past 12 months. The dependent variables for emotional upset, hunger/thirst, and inattention yielded results that

are skewed or produce kurtosis data outside of the +1 to -1 acceptable range. An attempt to transform this data into a base-10 logarithm was unsuccessful. The data could not be conformed to fit the acceptable range. This may have contributed to a non-significant main effect.

When the dependent variables of emotional upset, hunger/thirst and inattention were excluded from the analysis, Box's Test of Equality of Covariance Matrices was not statistically significant (Box's M = 216.032, $p > .131$), which indicates that the dependent variable covariance matrices were equal across the levels of the independent variable which allowed the use of Wilks's lambda to assess the multivariate effects. Bartlett's Test of Sphericity was statistically significant (approximate chi square = 618.129, $p < .000$. This indicates sufficient correlation between the dependent variables to proceed with the analysis. The Wilks's Lambda criterion was used to determine the multivariate effect of grade level served on actions taken when the ten remaining child factors were present during the respondents previous 12 months of testing. The table below depicts the main effect results of this multivariate analysis.

Table 37

Grade Level Served MANOVA Follow-up Results

Interaction with grade level served and DV	*F*	Effect size	Levene's test	Post-hoc test	Post hoc results
Main effect	1.572*	.081	See below	See below	See below
Anxiety	.311	.005	N/A	N/A	N/A
Fatigue	5.266**	.078	$p < .049$	Dunnett's *T*	**All grades >Elem. Only *All grades > elem. & middle
Fear	1.868	.029	N/A	N/A	N/A
Frustration	2.511	.039	N/A	N/A	N/A
Motivation	1.959	.031	N/A	N/A	N/A
Rapport	.976	.015	N/A	N/A	N/A
Refusal	3.814*	.058	$p < .000$	Dunnett's *T*	*All grades > elem. only
Shyness	.432	.007	N/A	N/A	N/A
Sleepiness	3.570*	.062	$P < .002$	Dunnett's *T*	None
Temporary illness	4.788**	.072	$p < .004$	Dunnett's *T*	** All grades >elem. only

Note. N/A = Not Applicable.

* $p < .05$ ** $p < .01$

Results indicated that school psychologists who serve all grade levels were more likely to take action than psychologists who work with children in elementary schools only when examinee fatigue, refusal/uncooperativeness and temporary illness were present during testing. School psychologists who serve all grades were also more likely to take action when examinee fatigue occurred than psychologists who serve elementary and middle schools. Statistically significant between subjects effects were found for sleepiness, but post-hoc tests did not indicate clinically significant multiple comparison results. Although the main effect was statistically significant, the effect size was only .081 indicating that the results should be interpreted with caution as there is some likelihood that they may have occurred by chance.

Please see Appendix E for one way between subjects, univariate ANOVA results which did indicate some additional clinically significant group differences. However, these results should be interpreted with caution due to the higher likelihood of Type I error considering that there was no clinically significant main effect found during the MANOVA analysis. The results of separate ANOVA analysis revealed the following:

School psychologists who serve elementary school children only were more likely to take action than psychologists who work with children at all grade levels when examinee emotional upset is present during testing. School psychologists who serve all grades were more likely to take action than psychologists who serve middle school only when examinee motivation difficulties occur during the testing session. Finally, school psychologists who serve all grades were more likely to take action than elementary only, middle only or middle and high school psychologists when examinee sickness was present during the testing situation.

Question #5

Part A

Does level of education, experience, and regional location affect individually administered norm-referenced standardized testing practices?

Thirteen hierarchical multiple regressions were conducted using three demographic and three professional practices independent variables (IV) on each of thirteen dependent variables (DV): Anxiety, Emotional Upset, Fatigue, Fear, Frustration, Hunger/Thirst, Inattention, Motivation, Rapport, Refusal to Participate/Uncooperativeness, Shyness, Sleepiness, and Temporary Illness to examine the relative importance of the demographic IV's as they relate to each of the thirteen DV's. The independent variables were the education level, experience and regional location. Criterion coding was used for each categorical independent variable.

Data screening was completed using SPSS. Descriptive statistics such as frequencies, mean, median, standard deviation, minimum, maximum, skewness, and kurtosis were examined. No extreme minimum or maximum values were found. Means and standard deviations were all within published ranges and seemed reasonable. The missing values were less than 5% in all cases, so the SPSS default of listwise deletion was utilized.

No extreme scores or univariate outliers were found for the dependent measures, so all data was accepted following these analyses. Further data screening was conducted on the independent variables. Education level, experience and regional location were not statistically significantly correlated indicating a low likelihood that multicolinearity had occurred. Doctoral and Post-Doctoral level as well as Specialist and Post-Specialist cases

were combined and all missing value cases and those that indicated other as their education level were eliminated leaving an N of 201 school psychologists who reported their current education level. All missing cases were eliminated from the experience and regional location categories as well leaving an N of 218. The following tables depict the frequency data for each independent variable.

Table 38

Education Level Frequency and Valid Percent Data

Education Level	Frequency	Valid percent
Master's degree	30	14.1
Specialist degree	136	63.8
Doctoral degree	47	22.1
Total	213	100

Table 39

Experience Frequency and Valid Percent Data

Experience	Frequency	Valid percent
1 to 3 years	40	18.3
4 to 6 years	29	13.3
7 to 9 years	35	16.1
10 to 15 years	38	17.4
More than 15 years	76	34.9
Total	218	100

Table 40

Regional Location Frequency and Valid Percent Data

Regional location	Frequency	Valid percent
Central region	32	14.7
Southeast region	107	49.1
Northeast region	43	19.7
Western region	36	16.5
Total	218	100

The hierarchical multiple regression analyses compared the relative importance of each of the IV's reported by school psychologists with the frequency to which they have observed, discontinued, taken a break, or noted in psychoeducational reports the presence of the dependent variables during their last 12 months of testing. Observation along with the three possible actions that could be taken, were grouped together for the purpose of these analyses. The overall results indicated an observation, action or inaction by the respondents when the child factors were present regardless of the particular observation or action. The results from survey question number six were used as the dependent variables.

After the initial analyses, independent variables addressing professional duties were added to the demographic variables to address part B of research question number five. This question asks the following?

Part B

Does time spent doing assessment, testing, Response to Intervention (RTI), supervision and report writing make a difference in terms of school psychologist's individually administered norm referenced standardized testing practices?

The hierarchical multiple regression results are expressed in Tables 41 and 42.

Table 41

Hierarchical Multiple Regression Results (Demographic and Professional Duties)

DV	*R* square (demographics)	*R* square change (professional duties)	Overall *R* square	Variables with statistically significant ($p < .05$) Beta coefficients
Anxiety	.006	.047	.052	N/A
Emotional upset	.005	.024	.029	N/A
Fatigue	.007	.034	.041	N/A
Fear	.015	.047	.061	N/A
Frustration	.024	.056*	.080	Response to intervention (RTI)
Hunger/thirst	.054*	.012	.066	Experience level
Inattention	.010	.079*	.089	Assessment
Motivation	.016	.055	.071	N/A
Rapport	.006	.029	.035	N/A
Refusal	.008	.006	.015	N/A
Shyness	.009	.064	.074	N/A
Sleepiness	.018	.039	.056	N/A
Temporary illness	.028	.032	.060	N/A

Table 42

Multiple Regression Follow-up (Frustration)

Variable	Beta	Semi-partial	*t*
Response to intervention	.149	.138	2.014*

Note. Dependent Variable: Frustration.

* $p < .05$ ** $p < .01$

When analyzing the effects of the independent variables on the dependent variable of frustration, the only factor found to be statistically significant in this hierarchical regression was participation in Response to Intervention (RTI) activities. The demographic variables alone were not found to be related to the dependent variable, but the professional duties were found to be statistically significant when added to the regression analysis. Follow-up analyses suggested that psychologists who regularly participate in RTI duties were more likely to recognize examinee frustration and take action during their last 12 months of testing. These results should be interpreted with caution due to a low alpha level, small effect size, and multiple analyses used. No other independent variables were found to be statistically significant.

Due to the number of multiple regression analyses completed, a Bonferroni correction was used in order to control for some of the familywise alpha error. The alpha level was divided by the number of analyses (.05/13 = .0038) resulting in a new significance level of .0038. Following this correction, the main effect for professional duties was not found to be significant. Therefore, follow-up analyses indicating that

school psychologist's participation in response to intervention activities is related to their observation and actions taken over the previous 12 months of testing should be considered as a trend rather than a clinically significant finding.

Table 43

Multiple Regression Follow-up (Hunger/Thirst)

Variable	Beta	Semi-partial	*t*
Level of experience	-.201	-.201	-2.917**

Note. Dependent Variable: Hunger/Thirst.

* $p < .05$ ** $p < .01$

When analyzing the effects of the independent variables on the dependent variable of examinee frustration, the only factor found to be statistically significant in this hierarchical regression was level of experience. The demographic variables were found to be statistically significantly related to the dependent variable, but the professional duties were not found to be statistically significant when added to the regression analysis. Follow-up analyses suggested that school psychologists who are less experienced were more likely to recognize examinee hunger/thirst and take action to address this problem during their last 12 months of testing than psychologists with greater levels of experience. These results should be interpreted with caution due to a low alpha level, small effect size, and multiple analyses used. No other independent variables were found to be statistically significant.

Due to the number of multiple regression analyses completed a Bonferroni correction was used in order to control for some of the familywise alpha error. The alpha level was divided by the number of analyses (.05/13 = .0038) resulting in a new significance level of .0038. Following this correction, the main effect for demographic variables was not found to be significant. Therefore, follow-up analyses indicating that school psychologist's level of experience is related to their observation and actions taken over the previous 12 months of testing should be considered as a trend rather than a clinically significant finding.

Table 44

Multiple Regression Follow-up (Inattention)

Variable	Beta	Semi-partial	*t*
Assessment	.205	.176	2.563*

Note. Dependent Variable: Inattention .

* $p < .05$ ** $p < .01$

When analyzing the effects of the independent variables on the dependent variable of examinee inattention, the only factor found to be statistically significant in this hierarchical regression was time spent doing assessment activities. The demographic variables were not found to be statistically significantly related to the dependent variable, but the professional duties were found to be statistically significant when added to the regression analysis. Follow-up analyses suggested that psychologists who frequently participate in assessment activities were more likely to recognize examinee inattention

and take action to address this problem during their last 12 months of testing. These results should be interpreted with caution due to a low alpha level, small effect size, and multiple analyses used. No other independent variables were found to be statistically significant.

Due to the number of multiple regression analyses completed a Bonferroni correction was used in order to control for some of the familywise alpha error. The alpha level was divided by the number of analyses (.05/13 = .0038) resulting in a new significance level of .0038. Following this correction, the main effect for professional duties was not found to be significant. Therefore, follow-up analyses indicating that school psychologist's participation in assessment activities is related to their observation and actions taken over the previous 12 months of testing should be considered as a trend rather than a clinically significant finding.

Please see Appendix F for additional analyses related to group differences found within the demographic variables and Appendix G for group differences related to professional practices. These results should be interpreted with caution due to higher likelihood of committing a Type I Alpha error.

CHAPTER V:

DISCUSSION

Overview

This study was undertaken in order to determine current practices taken by school psychologists when child factors occur during individually administered norm referenced standardized testing. The child factors investigated were those that were mentioned in the test manuals of assessment instruments that are commonly used in the school environment. These tests are used in the process of completing psychoeducational assessments and reports that provide valuable information to Individualized Education Planning (IEP) Teams. These teams assist in determining whether or not children meet eligibility requirements for Special Education services. Psychoeducational reports are utilized to support educational planning and they provide information regarding student's individual strengths and weaknesses. School psychologists use specific testing instruments which aim to measure skill areas such as but not limited to cognitive ability, achievement, social-emotional skills, and adaptive functioning. The test instruments used assist in establishing the presence of characteristics within the child that are indicative of specific criteria set forth by each state regarding their Special Education eligibility categories.

The child factors investigated in this study were chosen following a research review of twenty-three frequently used psychoeducational assessment instruments. A list

of the top eighteen child factors that were mentioned in the manuals as having a direct impact on the outcome validity of the test when present in the examinee was compiled from a list of all the child factors found in the test manuals (See Table 2 for all factors and Table 3 for the most frequently referenced factors). This list of most frequently referenced factors (Table 3) included all factors that were mentioned in a minimum of five out of the twenty-three test manuals. Examination of the child factors resulted in five of them being eliminated from the study. The factors excluded were those referencing the Physical Environment, Language, Speech and Hearing problems, Communication difficulties, Physical Disability, Interest, and a need to use the restroom. Following content reviews and consultation with professors as well as practicing school psychologists, further study regarding these factors was believed to be less beneficial than studying the not as readily recognized child factors that are of equal importance.

The 12 child factors that remained on the list of those occurring most frequently in test manuals were used in this study. These included examinee anxiety, emotional upset, fatigue, fear, frustration, hunger/thirst, inattention, motivation, rapport, refusal to participate or uncooperativeness, shyness, and temporary illness. In reviewing the test manuals it was noted that sleepiness was not frequently mentioned as a child factor that may impede the validity of the results. Examinee sleepiness has been frequently observed during personal practical experiences with testing and was included as an additional child factor in order to explore whether or not other school psychologists are noting similar experiences and taking actions when this factor is present. The aim of this study was to analyze the current beliefs, observations, and actions that practicing school psychologists were taking when these child factors occur during testing situations. Test manuals suggest that examiners should take a short break, discontinue testing or make note of

these factors in their reports when they are present during testing sessions. However, there was no research found on how frequently school psychologists were observing these factors in the examinees and whether or not they were taking a break, discontinuing testing or noting the presence of these factors in their psychoeducational reports.

Following an extensive review of available instrumentation, a survey could not be located that addressed questions regarding the beliefs, observations and actions taken by school psychologists when they recognize the aforementioned child factors in examinees. Therefore, a survey was developed in order to query school psychologists across the United States who serve different grade levels and who have varying levels of education, experience, licensure, and certification (See Appendix A for a hard copy of the survey). Beliefs regarding the importance of these factors were addressed in the survey along with the frequency to which they have observed, taken a break, discontinued testing, or noted these child factors in their psychoeducational reports. The survey also requested information from the psychologists as to other child factors they deemed important and that were not mentioned in the present study. School psychologists were asked how often they participate in activities that are commonly associated with their job responsibilities and they were queried as to how frequently they feel pressured to complete testing in spite of the presence of child factors during their assessments. Finally, the school psychologists were asked what time of day they typically administer individualized norm referenced standardized tests, how often they query the examinee on their sleep the night before testing and how frequently they provide parents with information regarding the importance of adequate sleep prior to testing.

Several important findings resulted from this survey study of school psychologists across the northeast, southeast, central and western regions of the United States. Findings

suggested that beliefs regarding the importance of child factors were positively correlated with the school psychologist's frequency of observing and taking actions over the previous 12 months when child factors such as fatigue, inattention, rapport, refusal and sleepiness were present in the examinees. When child factors such as motivation difficulties or temporary illness are present during the testing situation there may be trends that suggest a relationship between these variables. Reported beliefs regarding the importance of anxiety, frustration, hunger/thirst, and shyness did not result in a clinically significant correlation with observations and actions taken over the previous 12 months of testing. These child factors are less overt and it may be that school psychologists believe these factors to be important, but observed or took action less frequently when these occurred. Beliefs regarding examinee emotional upset and fear were also not clinically significant and were found to be slightly negatively correlated with observations or actions taken by school psychologists over the previous 12 months of testing.

Bivariate correlations were conducted to determine the presence or absence of a relationship between beliefs associated with child factors and observations of these factors over the previous ten testing sessions. The results of these analyses indicated that there was only a possible positive trend suggesting a relationship between observation of examinee/examiner rapport and beliefs regarding the importance of rapport. All other relationships were found not to be statistically correlated. No other beliefs regarding child factors were correlated with observation of these factors over the previous ten testing sessions. Slightly negative relationships were found for anxiety, emotional upset and motivation difficulties. It is unable to be determined whether or not the child factors were

not present during the school psychologist's previous ten testing sessions or whether they did not recognize them in the examinee.

Overall, these results suggest that increasing the positive beliefs regarding the importance of child factors may have an impact on the frequency with which school psychologists observe and take action when child factors are present during the testing session. However, when the actions of taking a break, discontinuing testing or noting the child factor in psychoeducational reports are separated from observations of the child factors it seems that beliefs are less related. This may indicate that the presence of child factors without the need for actions to be taken is not as dependent upon beliefs regarding the importance of child factors to the validity of test results.

Training programs may wish to increase their instruction in this area in order to produce student graduates who are more cognizant of the importance of observing these child factors and are therefore more likely to recognize them and take action during their professional practices. Test publishers may want to analyze their specific test manuals and discuss the inclusion of more child factors. Specifically mentioning the child factors in test manuals may positively raise awareness of the importance level associated with these child factors and increase the beliefs of the examiners, which would likely impact their actions when the child factors occur during testing sessions. Also, it may be useful for school psychologists to routinely check for these factors by creating a checklist for themselves. Test publishers may wish to add child factors they are concerned may affect the validity of their test results to the notation page for interview observations on the test, so that they do their part in requesting evaluation of these issues.

School psychologists were queried as to how frequently over the last 12 months that they observed or took actions such as taking a break, discontinuing testing or noting

the presence of child factors in their psychoeducational reports. The most frequently occurring response for anxiety and motivation indicated that school psychologists observe and take action moderately often when this child factor is present. When examinee fatigue, fear, frustration, hunger/thirst, inattention, refusal to participate, shyness, sleepiness and temporary illness occurred, most school psychologists indicated that they observe and take action only slightly often. The most occurring response for emotional upset and difficulties establishing rapport indicated that most school psychologists did not observe or take action regarding these factors when they occurred over the previous 12 months.

School psychologists were asked their specific observations of and actions taken over the last ten assessments for each of the child factors examined. As expected, the responses indicated a wide range of variability. Inattention, anxiety, and motivation were the three child factors observed most frequently by the psychologists. Examinee inattention, anxiety and frustration were the child factors that most frequently resulted in school psychologists taking a break from testing. Refusal to participate, fatigue and inattention were the top three child factors that occurred prior to discontinuing testing. Anxiety, inattention and frustration were the top three child factors that were noted in psychoeducational reports. However, mean results indicated that child factors were noted as having been observed and child factors indicated some level of action taken by a subset of respondents.

Additional child factors that are believed to be important by the psychologists were reported, identified and recorded. Some of these factors included the examinee's current classroom activity, hyperactivity, understanding the purpose of the testing, depression, medication, sensory issues, maturation and many others. This information is

beneficial in identifying other child factors that school psychologists recognize and act upon during testing. Test publishers may wish to consider the most frequently occurring factors mentioned by their clientele as those to possibly include in future revisions of their test manuals.

Psychologists were asked how often they feel pressured to complete testing in spite of the presence of child factors during the testing sessions. The majority of respondents felt pressured to finish slightly often with a slightly lower number of school psychologists reporting that they felt pressured moderately often.

Further analyses were done to determine whether or not a relationship existed between feeling pressured to complete testing in spite of the presence of child factors and observations and actions taken over the previous 12 months of testing. These results suggested that school psychologist's pressure they feel to complete testing in spite of the presence of child factors is statistically significantly positively correlated with their observing and actions taken over the previous 12 months of testing for anxiety, fatigue, fear, hunger/thirst, inattention, motivation, shyness, and temporary illness in terms of the observation of or actions taken by school psychologists over the previous 12 months of testing. Child factors including emotional upset, frustration, rapport problems, sleepiness and refusal to participate/uncooperativeness were not statistically significant following familywise alpha corrections. It was noted that sleepiness resulted in a .004 significance level following corrections for familywise errors, but did not meet the .0038 significance level. Further research on this variable may yield valuable information regarding a possible link between pressures to continue testing and actions when sleepiness is present.

In considering a relationship between beliefs and observation/actions taken when emotional upset, frustration and refusal to participate/uncooperativeness are present during the testing situation these should only be considered as trends rather than statistically significant results. Pressures felt to continue testing do not appear to be related to observation or actions taken over the previous 12 months of testing when examinee/examiner rapport problems occur during the testing sessions.

These results indicated that school psychologists may not want to discontinue testing when child factors are present because of pressures associated with meeting their timelines. This is a systematic problem that may only be improved when recognized and addressed.

School psychologists were asked if they take morningness/eveningness into consideration when scheduling testing times. The most frequently occurring response indicated that psychologists take this into account moderately often. Most psychologists reported that they test most frequently during the mid-morning hours of the school day. The second most reported testing time was in the early morning.

School psychologists indicated that they felt sleep was very important to the results of individualized norm referenced standardized tests with no respondents indicating that sleep was not at all important. These reports suggest that the inclusion of sleep as a child factor that may invalidate the results of tests would be beneficial and represent the beliefs of a large subset of the test users.

Although school psychologists reported that sleep is very important to the testing process, the majority of the respondents only reported that they query the examinee regarding their sleep the night before testing slightly often. School psychologists reported that they only provide parents with information on the importance of sleep slightly often.

A disconnect between beliefs and actions may be due to the lack of sleep being included in test manuals as a child factor that could negatively affect the testing results. However, this finding should be interpreted with caution due to possible demand characteristics that may have been embedded within this survey question.

The initial MANOVA analyses conducted with grade level served as the independent variable resulted in a non-statistical main effect. After excluding emotional upset, inattention, and hunger/thirst, due to the data being unable to be corrected for skewness/kurtosis, a second MANOVA analyses indicated that school psychologists who serve all grade levels were more likely to take action than psychologists who serve elementary school students only when examinee fatigue, refusal/uncooperativeness and temporary illness were present during testing. School psychologists who serve all grades were also more likely to take action when examinee fatigue occurred than psychologists who serve elementary and middle schools. Clinically significant between subjects effects were found for sleepiness, but post-hoc tests did not indicate clinically significant multiple comparison results. This information highlights the possible differences between school psychologists who serve all grade levels and those in elementary schools only. Training programs may wish to address these differences in order to maintain a high level of professional competence.

Overall results of the multiple regression analyses indicated that the demographic variables were statistically significant in their relationship to the actions taken over the past 12 months when examinee hunger/thirst occurred during their testing sessions. Follow-up analyses indicated that school psychologists with less experience are more likely to take action than veteran psychologists. However, these results should only be considered as trends rather than statistically significant results due to the main effect

being non-significant following the application of a Bonferroni correction to control for some of the familywise alpha error that may have existed due to the high numbers of multiple regressions performed.

Professional duties were found to be statistically significant in their relationship to the actions that school psychologists took over the previous 12 months when examinee frustration and inattention occurred during their testing sessions. Follow-up analyses indicated that participation in RTI activities was positively related to taking action when examinee frustration occurred during the testing sessions. Participation in assessment activities was positively related to taking action when examinee attention problems occurred.

However, these results should only be considered as trends rather than statistically significant results due to the main effect being non-significant following the application of a Bonferroni correction to control for some of the familywise alpha error that may have existed due to the high numbers of multiple regressions performed.

Finally, secondary ANOVAs were completed and can be found in the Appendix E. These were conducted in spite of the likelihood that these data analyses may include possible Type I errors. Following the initial ANOVA analyses, the results indicated that the grade levels that school psychologists serve makes a difference in terms of their actions when child factors such as emotional upset, attention, motivation, refusal to participate, and sickness are present during the testing session. School psychologists who serve elementary school children only were more likely to take action than psychologists who work with children at all grade levels when examinee emotional upset is present during testing. This may be due to the likelihood that elementary psychologists are more likely to encounter examinee emotional upset than other psychologists as younger

children are more likely to overtly express their emotions. School psychologists who serve all grades were found to be more likely to take action than middle school only psychologists when motivation difficulties were present in the examinee. Temporary illness was more likely to be recognized by school psychologists who serve all grades than elementary only, middle only, or middle and high school psychologists. These results should be considered as trends rather than clinically significant results.

Following a Bonferroni correction for the ANOVA's completed to compare group differences due to grade levels served and actions taken by school psychologists over the previous 12 months, Follow-up analyses using a Bonferroni correction (.05/13 =.0038) revealed only one statistically significant finding which was that school psychologists who serve all grades were more likely to take action than psychologists who serve middle school only when examinee motivation difficulties occur during the testing session. All other findings should be considered as trends rather than clinically significant results.

Additional ANOVA data related to demographic variable and professional duties group differences can be found in Appendix F. These results should be interpreted as trends rather than statistically significant findings due to the likelihood of increased familywise alpha errors. The analyses revealed that school psychologists with post doctoral degrees were more likely to take action than psychologists with master's, specialist, post specialist, doctoral and other level degrees when examinee fatigue, inattention, rapport, and sickness were present during testing.

School psychologists with post doctoral degrees were also more likely to take action than psychologists with a master's, specialist, post specialist or doctoral level degree when examinee hunger/thirst occurred during the testing session. Finally, school psychologists who reported their degree level as other were less likely to take action than

all other degree level psychologists when examinee refusal/uncooperativeness was present during the testing situation. Psychologists who reported their degree level as other were also less likely to take action than master's, specialist, post specialist and doctoral level psychologists when examinee hunger/thirst occurred during the testing session.

ANOVA analyses related to group differences based on experience level revealed trends that may suggest school psychologists with 10 to 15 years experience were more likely to take action than psychologists with more than 15 years experience when examinee fear, frustration, hunger/thirst and motivation problems were present during testing. School psychologists with four to six years experience may be more likely to take action than psychologists with more than 15 years experience when examinee hunger/thirst occurred during the testing session. Finally, school psychologists with seven to nine years experience and those with more than 15 years experience may have been more likely than school psychologists with four to six years of experience to take action when examinee inattention was present during the testing situation.

ANOVA analyses revealed that the regional location of school psychologists did not indicate any significant mean differences when examinee in terms of their actions when child factors such as anxiety, emotional upset, fatigue, fear, frustration, hunger/thirst, inattention, motivation, rapport, refusal to participate/uncooperativeness, shyness, sleepiness, or temporary illness/sickness are present during the testing session. School psychologists are taking similar actions when these child factors are present during the testing situation in spite of their differing regional locations indicating that school psychologists across the United States may use similar testing practices in regards to these specific child factors.

ANOVA data comparing group differences based on time spent completing professional duties also provided information regarding possible trends and implications for future research. Analysis revealed that school psychologists who participate in assessment procedures very often may be more likely to take action than psychologists who participate in assessment slightly often when examinee inattention or shyness are present during testing. School psychologists who participate in assessment procedures very often may be more likely to take action than psychologists who do not participate in assessment at all when examinee motivation difficulties occur during the testing session.

ANOVA results suggested that the amount of time school psychologists spend participating in testing practices did not result in differentiated practices following the presence of examinee anxiety, emotional upset, fatigue, fear, frustration, hunger/thirst, inattention, motivation, rapport, refusal to participate/uncooperativeness, shyness sleepiness, or temporary illness during the testing sessions.

School psychologists who participate in Response to Intervention (RTI) activities moderately often may be more likely to take action in comparison to school psychologists who do not participate in RTI at all when examinee frustration is present during the testing session.

ANOVA data indicated that the time that school psychologists spend doing report writing may make a difference in terms of their actions regarding the presence of child factors such as emotional upset, frustration, and sleepiness. School psychologists who participate in report writing very often may be more likely than all other psychologists to take action when sleepiness is present during the testing session. Those who participate in report writing very often may be more likely than those who only participate in report writing slightly often or not at all to take action when examinee emotional upset occurs

during the testing session. Finally, those who participate in report writing very often may be more likely than those who participate slightly often to take action when examinee frustration was present during testing. School psychologists who write reports more often may spend more time depicting the child factors in their general observations section of their psychoeducational reports.

ANOVA results also suggested that school psychologists who participate in training student interns or practicum students very often may be more likely to take action than those who participate in training slightly often when examinee fatigue is present during testing.

Limitations and Future Directions

Throughout the data collected, the sample sizes varied. Larger sample sizes would have yielded more accurate data and allowed for extrapolation to the general population of school psychologists with a greater degree of confidence. Similar sample sizes would also be beneficial. Future researchers are encouraged to repeat this study using larger sample sizes with similar numbers of participants and additional child factors.

This study was limited in that it used NASP affiliated psychologists and those who could be located from the 100 largest school systems. In some states, such as Texas, many people perform the job of "school psychologist" who are actually in other (though also qualified) fields such as clinical psychology, but are more interested in state licensure than NASP affiliation. Also, when email addresses were not posted on school system websites for the top 100 largest systems, the psychologists could not be located and surveyed.

The Likert scales used in this survey ranged from "not at all" to "very often" and were subjective in nature. This is a limitation due to the lack of validity associated with this type of measurement scale.

Summarizing the frequency data for each child factor referencing the specific observations, breaks taken, discontinuation of testing, and times school psychologist's noted child factors in their psychoeducational reports over the previous ten testing sessions limits the value of the data. However, separating the frequency data produces a plethora of tables and may be cumbersome to the reader.

Low correlations found in the study may reflect range restrictions due to some responses indicating that few people took action regarding child factors because few

people observed the child factors in some cases. This type of scenario would likely not result in any type of correlation at all.

Three dependent variables within survey question six were found to yield data with skewness/kurtosis. Base 10 logarithms were performed on this data, but the skewness could not be resolved. This may have negatively impacted the initial MANOVA data. Secondary MANOVA analyses were conducted with the exclusion of these variables. With all the MANOVA analyses conducted, the post-hoc results may have been reached via chance and should be interpreted with caution.

The results for education level of the respondents differed from the NASP survey respondents (Lewis, 2008). Although the majority of respondents were Specialist Degree level in this study and the NASP study, the current study consisted of 54.5% Specialist Degree level respondents and the NASP study consisted of 70.9%. The sample in this study seems to have more advanced training than that of the general NASP sample.

A major limitation of the study is that the survey was only based upon face validity and content validity through the measurement development process alone. Future researchers should strive to further validate their survey instruments by using instruments that allow for measures of reliability as well as construct, internal, concurrent, criterion and predictive validity.

Another major limitation of this study was that many analyses were conducted using the same data set and this creates a strong likelihood of finding an effect by chance due to familywise error rates. Correction attempts were used for most analyses, but some familywise error rate still exists in spite of using hypothesis related Bonferroni corrections. Future researchers may wish to analyze the data which was statistically

significant prior to making familywise corrections and that fell in the zone of accepting the null following Bonferroni corrections.

Bonferroni corrections were not made for the demographic variables and professional duties ANOVA's in Appendix F. These results should be interpreted as trends rather than statistically significant results. Future researchers may wish to analyze these group differences while controlling for alpha errors.

Analyzing more specific combinations of grade levels served, education levels, and experience levels may yield interesting data regarding specific populations of school psychologists to emulate, but this was not essential for answering the current research questions. Future researchers may want to determine specific group differences. For example, looking at school psychologists with fifteen plus years of experience from the central region and comparing them to school psychologists with one to three years experience from the southeast region. These types of analyses could help to further narrow the specific characteristics associated with exceptional school psychologists.

Further analyses regarding the pressures that school psychologists encounter regarding completing their assessments in spite of the presence of child factors may reveal ways in which the overall process could be enhanced. Researchers may wish to better separate observations of child factors from actions taken over the previous 12 months of testing.

It is unable to be determined whether or not school psychologists that responded to this survey actually researched their previous ten cases or answered the questions based on memory alone. If they used memory alone, there may be a disparity between the number of cases they reported as having occurred and the number of cases that actually occurred.

The present research study is limited in that it is impossible to decipher whether or not the child factors reported as not having been observed at all over the previous ten testing sessions did not occur in the child or went unnoticed by the examiner.

Further research studies should explore the child factors that the respondents mentioned as important in addition to the ones analyzed in this study. Some of the areas mentioned included the current classroom situation, expressive receptive language skills, and medications among many others. These could also be used in measurement development for future research studies.

The majority of school psychologists reported that they take morningness/eveningness in terms of the examinees preference into consideration moderately often. They also stated that they most frequently test in the mid-morning hours of the school day. This survey question may create some response demand and researchers may wish to reword this question in future studies. Further research regarding test results obtained at various times of the day may yield valuable information regarding the best time to test students. A limitation is noted due to school psychologists being unlikely to know the preference/performance pattern for the child in terms of their individual optimal testing time. A measure that could be used to test for this would be difficult to locate and therefore, it would be hard to take this variable into account if it can not be assessed.

School psychologists reported that they believed examinee sleepiness, fatigue, inattention, motivation, rapport, refusal, and illness were very important to the validity of their test results. In terms of these factors, it was found that the actions taken when they were present are statistically significantly correlated. However, their actions taken when anxiety, emotional upset, frustration, fear, hunger/thirst or shyness were present reflected

a lack of correlation with their reported beliefs. Further research regarding the reasons for this disparity between beliefs and actions may prove beneficial to test publishers and to training programs when developing curriculum for courses that are designed to teach assessment techniques.

Although the belief that sleepiness is a very important child factor, the results of this survey indicated that school psychologists only slightly often query the examinee regarding their sleep the night before testing. Results also indicated that the majority of respondents only provide parents with information on the importance of sleep to performance slightly often. Further research examining school psychologist's querying behaviors of children regarding their sleep may be beneficial to understanding whether or not their infrequent questioning is due to time constraints or typical routines during the initial testing session times, or whether their infrequent questioning is due to a lack of understanding the positive benefits gained from obtaining this information regarding the examinee's sleep behaviors.

Group differences were noted in terms of grade levels served and relationships were found for education level, experience, time spent doing assessment, report writing and training interns. Further research may provide additional information regarding why these disparities are present or the specific differences in terms of demographic variables and professional duties as they relate to the child factors assessed. Training programs may find this information useful in planning and course development.

The mean and standard deviation results for research question number two which separated and analyzed the observations and actions taken by school psychologists over the previous ten testing sessions revealed that respondents reported noting anxiety, refusal to participate/uncooperativeness, and fear in their psychoeducational reports more

times than they reported having observed these factors during testing. It was also noted that the respondents reported taking a break more frequently than they indicated observing fatigue and hunger/thirst over the previous ten testing sessions. The respondents were asked to report the specific number of observances of the child factors along with the number of times they took a break, discontinued testing, or noted the factors in their psychoeducational reports. However, some respondents may not have noted observances if they noted taking an action. It is also possible that some of the respondents guessed on this question rather than researching their previous ten testing sessions. This may also be a limitation of the soundness of the psychometric measure.

Low intervention rates or actions taken were discovered through analyses of the mean and standard deviation data were also found for research question number two which examined grade level group differences when motivation and examinee/examiner rapport difficulties were present in the previous ten testing sessions. This may indicate that school psychologists tend to take different actions than what were presented to them in this survey. They noted having observed these problems at higher rates than what they reported for the actions taken. Future researchers may wish to explore whether or not school psychologists tend to take actions that were not presented as choices in this survey research when motivation and/or rapport problems exist during testing sessions.

Conclusions and Contributions

School psychologists frequently use test instruments as an integral part of their psychoeducational assessments. These examiners reported feeling that the child factors mentioned in this research project are important to the validity of their test results. The results indicated that some of the respondents had seen each of these child factors at some

degree of occurrence during their previous 12 months of assessments. Therefore, it stands to reason that the inclusion of all of these child factors in test manuals would be beneficial to examiners that use the instruments.

Although sleepiness was not one of the most frequently mentioned child factors following research of test manuals, the majority of survey respondents reported that they believed this to be a very important factor and that there was a frequent occurrence of sleepiness during testing. These findings encourage the inclusion of sleepiness in future editions of test manuals.

The lack of differences for regional location are encouraging because it suggests that training programs across the country are producing similar school psychologists in terms of their beliefs and awareness of the importance of these child factors.

There may be differences found or trends that suggest differences amongst school psychologists who vary in the time they spend doing professional activities. With the increase in school psychologists participation with RTI it is important to note that the time taken away from other duties such as assessment may decrease their recognition of child factors while participating in testing practices. Professional development may be an avenue for reminding psychologists of the importance of recognizing child factors during testing as our job duties expand into other more consultative and collaborative roles within the school environment.

Overall, this research study has shown that the child factors mentioned most frequently in test manuals are important and should be included more consistently in test manuals. This study also suggests that sleepiness should be considered as a child factor to include in new test manuals and future editions of existing test manuals.

REFERENCES

Algozzine, B., Eaves, R. C., Mann, L., & Vance, H. R. (Ed.). (1998). *Slosson full range intelligence test examiner's manual*. East Aurora, NY: Slosson Educational Publications, Inc.

American Psychiatric Association (2000). *Diagnostic and statistical manual of mental disorders* (4th ed.-TR). Arlington, VA: American Psychiatric Association.

Bandura, A. (1997). *Social foundations of thought and action: A social cognitive theory.* Englewood Cliffs, NJ: Prentice-Hall.

Beck, R.C. (2004). *Motivation: Theories and principles* (5th ed). Upper Saddle River, NJ: Prentice-Hall.

Bender, L. (1965). *Instructions for the use of visual motor gestalt test*. New York, NY: The American Orthopsychiatric Association, Inc.

Berger, J. (1998). Testing 5-year-olds: Helpful or hard on the ego*? The New York Times*. Retrieved January, 22, 2009 from http://www.nytimes.com/1988/01/13/nyregion/education-testing-5-year-olds-helpful-or-hard-on-the-ego.html.

Bracken, B. A., & McCallum, R. S. (1998). *Universal Nonverbal Intelligence Test examiner's manual.* Itasca, IL: The Riverside Publishing Company.

Brown, N. (2004). What makes a good educator: The relevance of meta programmes. *Assessment and Evaluation in Higher Education, 29*, 515-533.

Buckhalt, J. A., El-Sheikh, M., & Keller, P. (2007) Children's sleep and cognitive functioning: Race and socioeconomic status as moderators of effects**.** *Child Development, 78***,** 213-231.

Buros Institute (1998). *Mental measurements yearbook* (13th ed.). Lincoln, NE: Buros Institute of Mental Measurements.

Butcher, J. N., Graham, J. R., Ben-Porath, Y. S., Tellegen, A., Dahlstrom, W. G., & Kaemer, B.(2001). *Minnesota multiphasic personality inventory-2 manual for*

administration, scoring, and interpretation (Revised ed.). Minneapolis, MN. *University of Minnesota Press.*

Canas, J. J., Quesada, J. F., Antoli, A., & Fajardo, I. (2003). Cognitive flexibility and adaptability to environmental changes in dynamic complex problem solving tasks. *Ergonomics, 46*, 482-501.

Castaneda, A., Palermo, D. S., & McCandless, B. R. (1956). Complex learning and performance in children as a function of anxiety in children and task difficulty. *Child Development, 27*, 327-332.

Charvat, J. L. (2005) NASP study: How many school psychologists are there? *Communique, 33*(6), 16-24 Retrieved March 30, 2009 from www.nasponline.org/publications/cq/cq336numsp.asp.

Check, J. M. & Buss, A. H. (1981). Shyness and sociability. *Journal of Personality and Social Psychology, 41*, 330-339.

Conoley, J. C., & Impara, J. C. (Eds.) (1995). *The twelfth mental measurements yearbook*. Lincoln, NE: The University of Nebraska Press.

Corey, G. (2000). *Theory & practice of group counseling* (5th ed.). Belmont, CA: Wadwsorth/Thomson Learning.

Corey, G. (1996). *Theory and practice of counseling and psychotherapy*. Pacific Grove, CA: Brooks/Cole Publishing Company.

Costa, P. T., & McCrae, R. R. (1992). *Revised NEO personality inventory and NEO five-factor inventory professional manual.* Lutz, FL: Psychological Assessment Resources, Inc.

Criste, A., & Neal-White, J. (2005). *Student achievement model foundations workshop training and reference manual.* Atlanta, GA: Georgia Psychoeducational Network.

Crozier, W. R., & Hostettler, K. (2003). The influence of shyness on children's test performance. *British Journal of Educational Psychology, 73*, 317-328.

Curtis, M. J., Hunley, S. A., Walker, K. J., & Baker, A. C. (1999). Demographics and professional practice in school psychology. *School Psychology Review, 28*, 104-115.

Dahl, R. E. (1996). The regulation of sleep and arousal: Development and psychopathology. *Development and Psychopathology, 8*, 3-27.

Davis, J. M., Elfenbein, J., Schum R., & Bentler, R. A. (1986). Effects of mild and moderate hearing impairments on language, educational and psychosocial behavior of children. *Journal of Speech and Hearing Disorders, 51*, 53-62.

Duncan, L., & Dunn, J. E. (2002). A proportional odd/hazards approach to analyzing Likert scale Data. SAS OnlineDoc Version 8. Cary, NC: SAS Institute, Inc.

Everly, G. S., & Mitchell, J. T. (1999). Critical incident stress management (CISM): A new era and standard of care in crisis intervention (2nd Ed.). Ellicott City, MD: Chevron.

Fagan, T. K., & Wise, P. S. (2002). *School psychology: Past, present and future* (2nd ed.). Bethesda, MD: NASP Publications.

Fisher, G. L., Jenkins, S. J., & Crumbley, J. D. (1986). A replication of a survey of school psychologists: Congruence between training, practice, preferred role, and competence. *Psychology in the Schools, 23*, 271–279.

Hammill, D. D., Mather, N., & Roberts, R. (2001). *Illinois test of psycholinguistic abilities examiner's manual* (3rd ed.). Austin, TX: PRO-ED, Inc.

Hammill, D. D., Pearson, N. A., & Wiederholt, J. L. (1997). *Comprehensive test of nonverbal intelligence examiner's manual.* Austin, TX. PRO-ED, Inc.

Hardre, P. L., Crowson, H. M., Debacker, T. K., & White, D. (2007). Predicting the academic motivation of rural high school students. *The Journal of Experimental Education, 75*, 247-269.

Harms, W. (1998). *Ability to learn greatly influenced by environmental factors*. Chicago, IL: The University of Chicago News Office.

Horne, J. A., & Ostberg, O. (1976). A self assessment questionnaire to determine morningness-eveningness in human circadian rhythms. *International Journal of Chronobiology, 4*, 97-110.

Hosp, J. L., & Reschly, D. J. (2002). Regional differences in school psychology practice. *School Psychology Review, 31*,11–29.

Individuals with Disabilities Education Act of 1997, H.R. 94-142. (1997).

Jaccard, J., & Wan, C. K. (1996). *LISREL approaches to interaction effects in multiple regression*. Thousand Oaks, CA: Sage Publications.

Jacob, S., & Hartshorne, T. S. (2003). *Ethics and law for school psychologists-fourth edition*. Hoboken, NJ: John Wiley & Sons, Inc.

Kaufman, A. S., & Kaufman, N. L. (1990). Kaufman Brief Intelligence Test manual. Circle Pines, MN: *American Guidance Service, Inc.*

Kaufman, A. S., & Kaufman, N. L. (1998). *Kaufman test of educational achievement comprehensive form manual.* Circle Pines, MN: American Guidance Service, Inc.

Kaufman, A. S., & Lichtenberger, E. O. (2005). Assessing Adolescent and Adult Intelligence (3rd ed.). Hoboken, NJ: John Wiley & Sons, Inc.

Kovacs, M. (1992). *Children's depression inventory manual*. North Tonawanda, NY: Multi-Health Systems, Inc.

Levinson, B. (1964). The "beat" phenomenon in Wechsler tests. *Journal of Clinical Psychology*, *20,* 118-120.

Levinson, E. M. (1990). Actual/desired role functioning, perceived control over role functioning, and job satisfaction among school psychologists. *Psychology in the Schools*, 27, 64–74.

Lewis, M. F., Truscott, S. D., & Volker, M. A. (2008). Demographics and professional practices of school psychologists: A comparison of NASP members and Non-NASP school psychologists by telephone survey. *Psychology in the Schools*, *45*, 467-482.

Markwardt, F. C. (1989). *Peabody individual achievement test-revised manual*. Circle Pines, MN: American Guidance Service.

Marshall, R. M., Hynd, G. W., Handwerk, M. J., & Hall, J. (1997). Academic underachievement in ADHD subtypes. *Journal of Learning Disabilities*, *30,* 635-642.

Mathews, N., & Woodcock, R. W. (2001). *Woodcock Johnson Tests of Cognitive Abilities examiner's manual standard and extended batteries* (3rd ed.). Itasca, IL: The Riverside Publishing Company.

Miller, C. A. (2006). Developmental relationships between language and theory of mind. *American Journal of Speech-Language Pathology, 15*, 142-154.

Millon, T., Davis, R., & Millon, C. (1997). *Millon Clinical Multiaxial Inventory-III manual* (2nded.). Minneapolis, MN: NCS Pearson Inc.

Murray, H. A. (1971). *Thematic apperception test manual.* Cambridge, MA: Harvard University Press.

Myers, L. S., Ganst, G., & Guarino, A. J. (2006) *Applied multivariate research-design and interpretation.* Thousand Oaks, CA: SAGE Publications.

Naglieri, J. A. (1988). *Draw a person a quantitative scoring system manual.* San Antonio, TX: The Psychological Corporation.

Peigneux, P., et al. (2002). Are spatial memories strengthened in the human hippocampus during slow wave sleep? *Neuron, 44,* 535–545.

Plihal, W., & Born, J. (1997). Effects of early and late nocturnal sleep on declarative and procedural memory. *Journal of Cognitive Neuroscience, 9,* 534-547.

Plihal, W., & Born, J. (1999). Effects of early and late nocturnal sleep on priming and spatial memory. *Psychophysiology, 36,* 571-582.

Roid, G. H. (2003). *Stanford-Binet intelligence scales examiner's manual* (5th ed.). Itasca, IL: The Riverside Publishing Company.

Rotter, J. B., Lah, M. I., & Rafferty, J. E. (1992). *Rotter incomplete sentences blank manual* (2nd ed.). San Antonio, TX: The Psychological Corporation.

Sattler, J. M. (2001). *Assessment of children: Cognitive applications* (4th ed.). San Diego, CA: Jerome M Sattler, Publisher Inc.

Smith, C. (1995). Sleep states and memory processes. *Behavioral and Brain Research, 69,* 1-2.

Smith, D. K. (1984). Practicing school psychologists: Their characteristics, activities, and populations served. *Professional Psychology: Research and Practice, 15,* 798–810.

Sparrow, S. S., Balla, D. A., & Cicchetti, D. V. (1984). *Vineland adaptive behavior scales interview edition survey for manual.* Circle Pines, MN: American Guidance Service.

Sparrow, S. S., Balla, D. A., & Cicchetti, D. V. (1998). *Vineland social-emotional early childhood scales.* Circle Pines, MN: American Guidance Service, Inc.

Stiggens, R. (2007). Assessment through the student's eyes. *Educational Leadership, 5,* 22-26.

Sue, D. W., & Sue, D. (2003). *Counseling the culturally diverse: Theory and practice* (4th ed.). New York, NY: John Wiley & Sons, Inc.

Turnage, J. J., & Kennedy, R. S. (1992). The development and use of a computerized human performance test battery for repeated-measures applications. *Human Performance, 5,* 265-301.

U.S. Department of Education. (2007). What is early intervention? Kidsource Online Inc. Retrieved August, 16, 2008 from http://www.kidsource/content/early.intervention.html#credits.

Walters, A. M., Lee, S., & Trapani, C. (2004). Stereotype threat, the test center environment, and performance on the GRE general test. GRE Board Research Report No. 01-03R. Princeton, NJ: Educational Testing Service.

Wart, L. & Darrah, J. (2002). Changing philosophical perspectives on the management of children with physical disabilities-their effect on the use of powered mobility. *Disability and rehabilitation, 24*, 492-498.

Wechsler, D. (1997). *Wechsler Memory Scale administration and scoring manual (3rd ed.)*. San Antonio, TX: The Psychological Corporation.

Wechsler, D. (2002). *WPPSI administration and scoring manual*. San Antonio, TX: The Psychological Corporation.

Whiston, S. C. (2000). *Principles and applications of assessment in counseling*. Belmont, CA: Wadworth/Thompson Learning.

Woodcock, R. W., McGrew, K. S., & Werder, J. K. (1994). *Woodcock-McGrew-Werder mini-battery of achievement test book.* Itasca, IL: The Riverside Publishing Company.

Verlag, S. (2002). Cross-cultural assessment of childhood temperament: A confirmatory factor analysis of the French emotionality activity and sociability (EAS) questionnaire. *European Child and Adolescent Psychiatry, 11*, 101-107.

APPENDIX A:

SURVEY

Child Factors Survey

Exit this survey >>

1. Information Letter

17%

"The Auburn University
Institutional Review Board
has approved this document for use
From June 2, 2008 to June 1, 2009.
Protocol #08-102 EX 0806."

AUBURN UNIVERSITY
DEPARTMENT OF COUNSELOR EDUCATION,
COUNSELING PSYCHOLOGY, AND SCHOOL PSYCHOLOGY
2084 Haley Center
Auburn, AL 36849
Office: 334-844-5160
Fax: 334-844-2860
www.auburn.edu/coun
coun@auburn.edu

INFORMATION LETTER for a Research Study entitled
"Survey Research on Child Factors that affect "Individually Administered Norm Referenced Standardized Testing Situations in the School Environment"

You are invited to participate in a research study to obtain information regarding current practices of school psychologists when encountering specific child factors that affect the individual testing process and outcome data. The study is being conducted by Colleen M. Holthaus, M.Ed, Ed.S, NCC, under the direction of Dr. Joseph Buckhalt in the Auburn University Department of School Psychology. You were selected as a possible participant because you are a practicing school psychologist and are age 19 or older.

If you decide to participate in this research study, you will be asked to answer a short online survey. Your total time commitment will be approximately ten minutes. There are no anticipated risks associated with participating in this study. If you participate in this study, you will be helping to advance our current knowledge regarding child factors that are commonly present when conducting evaluations within the field of school psychology. To thank you for your time you will be offered the opportunity to email me and obtain information regarding the results of the study. There are absolutely no costs to you for participating in this study.

If you change your mind about participating, you can withdraw at any time during the study. Your participation is completely voluntary and confidential.

Once you send us your data it cannot be withdrawn due to all data being anonymous. Your decision about whether or not to participate or to stop participating will not jeopardize your future relations with Auburn University, the Department of School Psychology or the College of Education.

Any data obtained in connection with this study will remain anonymous. We will protect your privacy and the data you provide by . Information collected through your participation may be compiled into group statistics and used to fulfill an educational requirement, published in a professional journal, and/or presented at a professional meeting, but no individual information will be available. The survey data is only accessible to my committee members who are three professors at Auburn University and myself. This survey research will be conducted anonymously.

If you have questions about this study, contact Colleen Holthaus via email at holthcm@auburn.edu or Dr. Joseph Buckhalt at buckhja@auburn.edu. If you have questions about your rights as a research participant, you may contact the Auburn University Office of Human Subjects Research or the Institutional Review Board by phone (334)-844-5966 or e-mail at hsubjec@auburn.edu or IRBChair@auburn.edu.

HAVING READ THE INFORMATION ABOVE, YOU MUST DECIDE IF YOU WANT TO PARTICIPATE IN THIS RESEARCH PROJECT.

IF YOU DECIDE TO PARTICIPATE, PLEASE INDICATE THAT YOU "ACCEPT" BY CLICKING ON THE "NEXT" BUTTON BELOW.

YOU MAY PRINT A COPY OF THIS LETTER TO KEEP.

Next >>

Child Factors Survey Exit this survey >>

2. Instructions

33%

Thank you for your participation!

Please move your computer cursor to the "Next" icon at the bottom of this page and left click on it to begin the survey. Continue clicking this same "Next" icon after completing each page. You may also left click on the "Prev" icon at the left of the "Next" icon to return to the previous page at any time during the survey.

Please respond by placing your computer curser over your answer selection and left clicking. Your response will be marked by an oval or checkmark. To change a response, simply left click on your updated response and the information will be automatically updated.

Please answer all questions before continuing on to the next question or page.

After completing the survey, please click on the "Done" icon located at the bottom of the page to submit your survey.

Again, the survey should take roughly ten minutes, and your information is completely confidential.

Thank you for your assistance.

Colleen Holthaus M.Ed., Ed.S. NBCC
Auburn University Doctoral Student
School Psychologist

<< Prev Next >>

Child Factors Survey Exit this survey >>

3. Current Experience

50%

***1. Are you currently working in a school or school system?**

- Yes
- No

2. If no, please explain current employment situation below:

3. Grade levels currently served: (Check all that apply)

- Pre-Kindergarten
- Kindergarten
- Grade 1
- Grade 2
- Grade 3
- Grade 4
- Grade 5
- Grade 6
- Grade 7
- Grade 8
- Grade 9
- Grade 10
- Grade 11
- Grade 12
- Other (please specify)

<< Prev Next >>

Child Factors Survey

Exit this survey >>

4. Practice

67%

4. How often do you participate in the following areas of practice?

	Very Often	Moderately Often	Slightly Often	Not At All
Administrative Duties	○	○	○	○
Assessment	○	○	○	○
Consultation	○	○	○	○
Counseling	○	○	○	○
Crisis Intervention	○	○	○	○
Individually Administered Norm Referenced Standardized Testing	○	○	○	○
Program Evaluation and Development	○	○	○	○
Report Writing	○	○	○	○
Research	○	○	○	○
Response to Intervention (RTI)	○	○	○	○
Training Future Psychologists	○	○	○	○

5. How important to you are each of the following in terms of their effects on the outcomes of Individually Administered Norm Referenced Standardized Testing?

	Very Important	Moderately Important	Slightly Important	Not At All Important
Anxiety	○	○	○	○
Emotional Upset	○	○	○	○
Fatigue	○	○	○	○
Fear	○	○	○	○
Frustration	○	○	○	○
Hunger/Thirst	○	○	○	○
Inattention	○	○	○	○
Motivation	○	○	○	○

Rapport	○	○	○	○
Refusal to Participate/Uncooperativeness	○	○	○	○
Shyness	○	○	○	○
Sleepiness	○	○	○	○
Temporary Illness (e.g. cold, flu, upset stomach, headache)	○	○	○	○

6. How often in the past twelve months have you observed, discontinued, taken a break or noted in psychoeducational reports the presence of the following child factors during Individually Administered Norm Referenced Standardized Testing?

	Very Often	Moderately Often	Slightly Often	Not At All
Anxiety	○	○	○	○
Emotional Upset	○	○	○	○
Fatigue	○	○	○	○
Fear	○	○	○	○
Frustration	○	○	○	○
Hunger/Thirst	○	○	○	○
Inattention	○	○	○	○
Motivation	○	○	○	○
Rapport	○	○	○	○
Refusal to Participate/Uncooperativeness	○	○	○	○
Shyness	○	○	○	○
Sleepiness	○	○	○	○
Temporary Illness	○	○	○	○

7. In the last ten assessments, how many times have you completed the following actions based on the presence of these child factors?

	Observed	Taken A Short Break	Discontinued For The Day	Noted In Report
Anxiety				
Emotional Upset				
Fatigue				
Fear				

Frustration				
Hunger/Thirst				
Inattention				
Motivation				
Rapport				
Refusal to Participate/Uncooperativeness				
Shyness				
Sleepiness				
Temporary Illness				

Comments

8. Please describe any other child factors that you have found to be very important in the high stakes individualized testing process as well as the actions you take when they are present.

9. How often do you feel pressured to complete testing in spite of the presence of child factors?

- ☐ Very Often
- ☐ Moderately Often
- ☐ Slightly Often
- ☐ Not At All

10. What time of day do you mostly conduct Individually Administered Norm Referenced Standardized Testing?

- ○ Early Morning
- ○ Mid-Morning
- ○ Early Afternoon
- ○ Late Afternoon

11. Some children are at their best early in the morning, while others are best later in the afternoon. How often have you taken this into consideration when deciding conducting

times for Individually Administered Norm Referenced Standardized Testing?

- Very Often
- Moderately Often
- Slightly Often
- Not At All

12. How often do you provide parents with information on the importance of sleep to performance on Individually Administered Norm Referenced Standardized Tests?

- Very Often
- Moderately Often
- Slightly Often
- Not At All

13. How often do you query the child on their sleep the night prior to Individually Administered Norm Referenced Standardized Testing?

- Very Often
- Moderately Often
- Slightly Often
- Not At All

14. How important do you feel quality sleep is to Individually Administered Norm Referenced Standardized Testing?

- Very Important
- Moderately Important
- Slightly Important
- Not At All Important

<< Prev Next >>

Child Factors Survey

Exit this survey >>

5. Demographics

83%

15. What is your current level of education?

- Master's Degree
- Specialist Degree
- Post-Specialist Degree
- Doctoral Degree
- Post-Doctoral Degree

Other (please specify)

16. What is your current level of experience as a school psychologist?

- 1 to 3 years
- 4 to 6 years
- 7 to 9 years
- 10 to 15 years
- More than 15 years

17. What is your current level of Certification/Licensure as a school psychologist? (Check All That Apply)

- Not Certified
- Student Intern
- Non-Renewable Certificate
- State Certified
- Nationally Certified
- Licensed State Psychologist
- Nationally Licensed Psychologist
- Other (please specify)

18. What are your current association memberships (Check All That Apply)

- ☐ National Association of School Psychologists (NASP)
- ☐ Student Association of School Psychologists (SASP)
- ☐ American Psychological Association (APA-Division 16)
- ☐ State Association of School Psychologists
- ☐ Other (please specify)

19. In which of these regions are you currently employed as a school psychologist?

- ○ Central (IL, IN, IA, DS, MI, MN, MO, NE, ND, OH, OK, SD, WI)
- ○ Southeast (AL, AR, FL, GA, KY, LA, MS, NC, SC, TN, TX, VA, WV)
- ○ Northeast (CT, DE, DC, ME, MD, MA, NH, NJ, NY, PA, PR, RI, VT)
- ○ Western (AK, AZ, CA, CO, HI, ID, MT, NV, NM, OR, UT, WA, WY)
- ○ Outside the United States

<< Prev Next >>

Child Factors Survey

Exit this survey >>

6. Thanks!

100%

Again, thank you for helping effectively support the needs of school psychologists (including those in training programs) and the children, families, and schools we serve.

<< Prev Done >>

APPENDIX B:

LETTER OF INVITATION

TO: SCHOOL PSYCHOLOGIST

Dear School Psychologist,

I am conducting a short survey (less than 10 minutes of your time) for my dissertation work at Auburn University, and your response would be greatly appreciated.

The purpose of this study is to obtain information from practicing school psychologists regarding child factors that affect the high stakes individualized testing process. All questions are applicable to school psychologists, as testing is one of our main job components.

The child factors examined in this study are those that are most frequently mentioned in test manuals as having a direct affect on the outcome validity and results. This study looks at how often school psychologists encounter specific child factors, the actions they take when these factors are present and the frequency at which they note these factors in their psychoeducational reports.

Again, the survey should take roughly ten minutes, and your information is completely confidential. Please read the attached "Information Letter" prior to making a decision regarding participation.

Thank you for your assistance,

Colleen M. Holthaus, M.Ed., Ed.S., NBCC
holthcm@auburn.edu
School Psychologist

APPENDIX C:

SURVEY DEVELOPMENT SOURCES

AND REFERENCES FOR EACH RESEARCH QUESTION

Survey item	Source	Reference
Question 1: Are you currently working in a school or school system?	Literature review	Smith, D. K. (1984). Practicing school psychologists: Their characteristics, activities, and populations served. Professional Psychology: Research and Practice, 15, 798–810.
Question 2: If no, please explain current employment situation below:	Content experts	Initial and Secondary Content reviews
Question 3: Grade levels currently served: (Check all that apply)	Literature review	Smith, D. K. (1984). Practicing school psychologists: Their characteristics, activities, and populations served. Professional Psychology: Research and Practice, 15, 798–810.
Question 4: How often do you participate in the following areas of practice?	Literature review	Fisher, G. L., Jenkins, S. J., & Crumbley, J. D. (1986). A replication of a survey of school psychologists: Congruence between training, practice, preferred role, and competence. Psychology in the Schools, 23, 271–279.
Question 5: How important to you are each of the	Test manuals	(1) Visual Motor Gestalt Test (Bender Gestalt)

following child factors in terms of their effects on the outcomes of individually administered norm referenced standardized testing?	* See References and Table 2 for additional information.	(2) Children's Depression Inventory (CDI) (3) Comprehensive Test of Nonverbal Intelligence (CTONI) (4) Draw a Person (DAP) (5) Illinois Test of Psycholinguistic Abilities-III (ITPA-III) (6) Kaufman Brief Intelligence Test (K-BIT) (7) Kaufman Test of Educational Achievement (K-TEA) (8) Mini-Battery of Achievement (MBA) (9) Millon Clinical Multiaxial Inventory-III (MCMI-III) (10) Minnesota Multiphasic Personality Inventory –2nd edition (MMPI-2) (11) NEO Personality Inventory-Revised (NEO-PI-R) (12) Peabody Individual Achievement Test -Revised (PIAT-R) (13) Rotter Incomplete Sentences Blank (RISB) (14) Slosson Full Range Intelligence Test (Slosson) (15) Standford-Binet Intelligence Scales-Fifth Edition (Stanford-Binet) (16) Thematic Apperception Test (TAT) (17) Universal Nonverbal Intelligence Scale (UNIT) (18) Vineland Adaptive Behavior Scales (Vineland ABS) (19) Vineland SEEC Scales (Vineland SEEC) (20) Wechsler Memory Scale –III (WMS-III) (21) Wechsler Intelligence Scale for

		Children –IV (WISC-IV) (22) Woodcock Johnson Test of Cognitive Abilities – III (WJ-III) (23) Wechsler Preschool and Primary Scale of Intelligence-III (WPPSI-III)
Question 6: How often in the past 12 months have you observed, discontinued, taken a break or noted in psychoeducational reports the presence of the following child factors during individually administered norm referenced standardized testing?	Test manuals * See references for additional information. & **Content expert	(1) Visual Motor Gestalt Test (Bender Gestalt) (2) Children's Depression Inventory (CDI) (3) Comprehensive Test of Nonverbal Intelligence (CTONI) (4) Draw a Person (DAP) (5) Illinois Test of Psycholinguistic Abilities-III (ITPA-III) (6) Kaufman Brief Intelligence Test (K-BIT)
Question 6 Continued: How often in the past 12 months have you observed, discontinued, taken a break or noted in psychoeducational reports the presence of the following child factors during individually administered norm referenced standardized testing?	Test manuals * See references for additional information. & **Content expert	(7) Kaufman Test of Educational Achievement (K-TEA) (8) Mini-Battery of Achievement (MBA) (9) Millon Clinical Multiaxial Inventory-III (MCMI-III) (10) Minnesota Multiphasic Personality Inventory –2nd edition (MMPI-2) (11) NEO Personality Inventory-Revised (NEO-PI-R) (12) Peabody Individual Achievement Test -Revised (PIAT-R) (13) Rotter Incomplete Sentences Blank (RISB) (14) Slosson Full Range Intelligence Test (Slosson) (15) Standford-Binet Intelligence Scales-Fifth Edition (Stanford-Binet) (16) Thematic Apperception Test

		(TAT) (17) Universal Nonverbal Intelligence Scale (UNIT) (18) Vineland Adaptive Behavior Scales (Vineland ABS) (19) Vineland SEEC Scales (Vineland SEEC) (20) Wechsler Memory Scale –III (WMS-III) (21) Wechsler Intelligence Scale for Children –IV (WISC-IV) (22) Woodcock Johnson Test of Cognitive Abilities – III (WJ-III) (23) Wechsler Preschool and Primary Scale of Intelligence-III (WPPSI-III) ** The second content review was conducted with a specialist in the sleep area who is also a professor and program head of school psychology at Auburn University.
Question 7: In the last ten assessments, how many times have you completed the following actions based on the presence of these child factors?	Test manuals * See references for additional information. & **Content expert	(1) Visual Motor Gestalt Test (Bender Gestalt) (2) Children's Depression Inventory (CDI) (3) Comprehensive Test of Nonverbal Intelligence (CTONI) (4) Draw a Person (DAP) (5) Illinois Test of Psycholinguistic Abilities-III (ITPA-III) (6) Kaufman Brief Intelligence Test (K-BIT) (7) Kaufman Test of Educational Achievement (K-TEA) (8) Mini-Battery of Achievement (MBA) (9) Millon Clinical Multiaxial Inventory-III (MCMI-III)

		(10) Minnesota Multiphasic Personality Inventory –2nd edition (MMPI-2) (11) NEO Personality Inventory-Revised (NEO-PI-R)
Question 7 Continued: In the last ten assessments, how many times have you completed the following actions based on the presence of these child factors?	Test manuals * See references for additional information. & **Content expert	(12) Peabody Individual Achievement Test -Revised (PIAT-R) (13) Rotter Incomplete Sentences Blank (RISB) (14) Slosson Full Range Intelligence Test (Slosson) (15) Standford-Binet Intelligence Scales-Fifth Edition (Stanford-Binet) (16) Thematic Apperception Test (TAT) (17) Universal Nonverbal Intelligence Scale (UNIT) (18) Vineland Adaptive Behavior Scales (Vineland ABS) (19) Vineland SEEC Scales (Vineland SEEC) (20) Wechsler Memory Scale –III (WMS-III) (21) Wechsler Intelligence Scale for Children –IV (WISC-IV) (22) Woodcock Johnson Test of Cognitive Abilities – III (WJ-III) (23) Wechsler Preschool and Primary Scale of Intelligence-III (WPPSI-III) ** The second content review was conducted with a specialist in the sleep area who is also a professor and program head of school psychology at Auburn University.
Question 8: Please describe any other child factors that you have found to be very important in the high stakes	Content experts	Initial and Secondary content reviewers: *The first consisted of seventeen

individualized testing process as well as actions you take when they are present. *Open-ended Question *No Anchors were Provided		survey developers and university researchers who successfully completed a doctoral level survey research course at Auburn University and whom offered several constructive criticisms. *The second content review was conducted with a specialist in the sleep area who is also a professor and program head of school psychology at Auburn University.
Question 9: How often do you feel pressured to complete testing in spite of the presence of child factors?	Literature review	Levinson, E. M. (1990). Actual/desired role functioning, perceived control over role functioning, and job satisfaction among school psychologists. Psychology in the Schools, 27, 64–74.
Question 10: What time of day do you mostly conduct individually administered norm referenced standardized testing?	Literature review	Horne, J.A. & Ostberg, O. (1976). A self assessment questionnaire to determine morningness-eveningness in human circadian rhythms. International Journal of Chronobiology, 4, 97-110.
Question 11: Some children are at their best early in the morning, while others are best later in the afternoon. How often have you taken this into consideration when deciding conducting times for individually administered norm referenced testing?	Literature review & Content expert	Horne, J.A. & Ostberg, O. (1976). A self assessment questionnaire to determine morningness-eveningness in human circadian rhythms. International Journal of Chronobiology, 4, 97-110. The content review was conducted with a specialist in the sleep area who is also a professor and program head of school psychology at Auburn University.
Question 12: How often do you provide parents with information on the importance of sleep to	Literature review	Dahl, R.E. (1996). The regulation of sleep and arousal: Development and psychopathology. Development and Psychopathology, 8, 3-27.

performance on individually administered norm referenced standardized tests?		
Question 13: How often do you query the child on their sleep the night prior to individually administered norm referenced standardized testing?	Literature review	Dahl, R.E. (1996). The regulation of sleep and arousal: Development and psychopathology. Development and Psychopathology, 8, 3-27.
Question 14: How important do you feel quality sleep is to individually administered norm referenced standardized testing?	Literature review	Plihal, W., & Born, J. (1997). Effects of early and late nocturnal sleep on declarative and procedural memory. Journal of Cognitive Neuroscience, 9, 534-547.
Question 15: What is your current level of education?	Literature review	Lewis, M.F., Truscott, F.D., & Volker, M.A. (2008). Demographics and professional practices of school psychologists: A comparison of NASP members and non-NASP school psychologists by telephone survey. Psychology in the Schools, 45(6), 467-482.
Question 16: What is your current level of experience as a school psychologist?	Literature review	Lewis, M.F., Truscott, F.D., & Volker, M.A. (2008). Demographics and professional practices of school psychologists: A comparison of NASP members and non-NASP school psychologists by telephone survey. Psychology in the Schools, 45(6), 467-482
Question 17: What is your current level of certification/licensure as a school psychologist? (Check all that apply)	Literature review	Lewis, M.F., Truscott, F.D., & Volker, M.A. (2008). Demographics and professional practices of school psychologists: A comparison of NASP members and non-NASP school psychologists by telephone survey. Psychology in the Schools, 45(6), 467-482
Question 18: What are your	Literature review	Lewis, M.F., Truscott, F.D., &

current association memberships? (Check all that apply)		Volker, M.A. (2008). Demographics and professional practices of school psychologists: A comparison of NASP members and non-NASP school psychologists by telephone survey. Psychology in the Schools, 45(6), 467-482
Question 19: In which of these regions are you currently employed as a school psychologist?	Literature review	Hosp, J. L., & Reschly, D. J. (2002). Regional differences in school psychology practice. School Psychology Review, 31, 11–29.

APPENDIX D:

FREQUENCY OF ACTIONS TAKEN BY

RESPONDENTS IN PREVIOUS TEN TEST SESSIONS

Anxiety: Observed

Ten assessments	Frequency	Valid percent	Mean
Ten	3	1.4	1.69
Nine	0	0	
Eight	1	.5	
Seven	3	1.4	
Six	1	.5	
Five	8	3.6	
Four	9	4.1	
Three	26	11.8	
Two	52	23.6	
One	49	22.3	
Zero	68	30.9	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean number of times anxiety was observed in the last ten assessments was 1.69 with a range from zero to ten times. Of the 220 school psychologists, 127 (57.7%) of them indicated that they observed anxiety from one to three times during their last ten testing sessions. Survey responses indicated that 21 (9.6%) of the school psychologists observed the presence of anxiety from four to seven times during their last ten testing sessions and four (1.9%) reported having observed anxiety in examinees from eight to ten times over the course of their last ten testing sessions. The remaining 68 (30.9%) psychologists reported that they did not observe anxiety during their previous ten testing sessions. Of the 220 school psychologists surveyed, 152 (69.1%) reported having observed the presence of anxiety in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you taken a break due to the presence of examinee anxiety during individually administered norm referenced standardized testing?

Anxiety: Taken a break

Ten Assessments	Frequency	Valid Percent	Mean
Ten	2	.9	1.21
Nine	0	0	
Eight	1	.5	
Seven	1	.5	
Six	3	1.4	
Five	7	3.2	
Four	5	2.3	
Three	16	7.3	
Two	29	13.2	
One	52	23.6	
Zero	104	47.3	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was 1.21 times in the last ten assessments with a range from zero to ten times. Of the 220 school psychologists, 87 (44.1%) of them indicated that they took a short break due to examinee anxiety from one to three times during their last ten testing sessions. Survey responses indicated that 16 (7.4%) of the school psychologists took a short break due to the presence of anxiety from four to seven times during their last ten testing sessions and three (1.4%) reported having taken a short break due to examinee anxiety from eight to ten times over the course of their last ten testing sessions. The remaining 104 (47.3%) school psychologists reported that they did not take a short break due to examinee anxiety during their previous ten testing sessions. Of the 220 school psychologists surveyed, 116 (52.7%) reported having taken a short break at some time during their last ten testing sessions due to the presence of anxiety in the examinees.

In the last ten psychoeducational assessments, how many times have you discontinued testing due to the presence of examinee anxiety during individually administered norm referenced standardized testing?

Anxiety: Discontinued

Ten Assessments Mean	Frequency	Valid Percent	
Ten	0	0	.32
Nine	0	0	
Eight	1	.5	
Seven	1	.5	
Six	3	.5	
Five	0	0	
Four	1	.5	
Three	2	.9	
Two	9	4.1	
One	28	12.7	
Zero	178	80.9	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was .32 times in the last ten assessments with a range from zero to eight times. Of the 220 school psychologists, 39 (17.7%) of them indicated that they discontinued testing for the day due to examinee anxiety from one to three times during their last ten testing sessions. Survey responses indicated that six (1.5%) of the school psychologists discontinued testing for the day due to the presence of anxiety from four to eight times during their last ten testing sessions. The remaining 178 (80.9%) school psychologists reported that they did not discontinue testing for the day due to examinee anxiety during their previous ten testing sessions. Of the 220 school psychologists surveyed, 42 (19.1%) reported discontinuing testing for the day due to the presence of anxiety at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you noted the presence of examinee anxiety during individually administered norm referenced standardized testing in your reports?

Anxiety: Noted

Ten Assessments	Frequency	Valid Percent	Mean
Ten	4	1.8	1.85
Nine	0	0	
Eight	2	.9	
Seven	4	1.8	
Six	1	.5	
Five	12	5.5	
Four	4	1.8	
Three	32	14.5	
Two	43	19.5	
One	58	26.4	
Zero	60	27.3	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean number of times anxiety was noted in the school psychologist's psychoeducational reports in the last ten assessments was 1.85 with a range from zero to ten times. Of the 220 school psychologists, 123 (60.4%) of them indicated that they noted anxiety in their psychoeducational reports from one to three times during their last ten testing sessions. Survey responses indicated that 21 (9.6%) of the school psychologists noted the presence of anxiety in their psychoeducational reports from four to seven times during their last ten testing sessions and six (2.7%) reported anxiety in examinees from eight to ten times over the course of their last ten testing sessions. The remaining 60 (27.3%) psychologists reported that they did not note anxiety in their psychoeducational reports following their previous ten testing sessions. Of the 220 school psychologists surveyed, 160 (72.7%) reported having noted the presence of examinee anxiety in their psychoeducational reports following their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you observed the presence of examinee emotional upset during individually administered norm referenced standardized testing?

Emotional Upset: Observed

Ten Assessments	Frequency	Valid Percent	Mean
Ten	1	.5	.76
Nine	0	0	
Eight	0	0	
Seven	1	.5	
Six	0	0	
Five	6	2.7	
Four	2	.9	
Three	4	1.8	
Two	22	10.0	
One	57	25.9	
Zero	127	57.7	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean number of times emotional upset was observed in the last ten assessments was .76 with a range from zero to ten times. Of the 220 school psychologists, 83 (37.7%) of them indicated that they observed emotional upset from one to three times during their last ten testing sessions. Survey responses indicated that nine (4.1%) of the school psychologists observed the presence of emotional upset from four to seven times during their last ten testing sessions and one (.5%) reported having observed emotional upset in examinees from eight to ten times over the course of their last ten testing sessions. The remaining 127 (57.7%) school psychologists reported that they did not observe emotional upset during their previous ten testing sessions. Of the 220 school psychologists surveyed, 93 (42.3%) reported having observed the presence of emotional upset in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you taken a break due to the presence of examinee emotional upset during individually administered norm referenced standardized testing?

Emotional Upset: Taken a break

Ten Assessments	Frequency	Valid Percent	Mean
Ten	1	.5	.57
Nine	0	0	
Eight	0	0	
Seven	0	0	
Six	0	0	
Five	3	1.4	
Four	2	.9	
Three	4	1.8	
Two	17	7.7	
One	47	22.4	
Zero	146	66.4	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was .57 times in the last ten assessments with a range from zero to ten times. Of the 220 school psychologists, 68 (31.9%) of them indicated that they took a short break due to examinee emotional upset from one to three times during their last ten testing sessions. Survey responses indicated that five (2.3%) of the school psychologists took a short break due to the presence of emotional upset from four to seven times during their last ten testing sessions and one (.5%) reported having taken a short break due to examinee emotional upset from eight to ten times over the course of their last ten testing sessions. The remaining 146 (66.4%) school psychologists reported that they did not take a short break due to examinee emotional upset during their previous ten testing sessions. Of the 220 school psychologists surveyed, 74 (33.6%) reported having taken a short break due to the presence of emotional upset in examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you discontinued testing due to the presence of examinee emotional upset during individually administered norm referenced standardized testing?

Emotional Upset: Discontinued

Ten Assessments	Frequency	Valid Percent	Mean
Ten	0	0	.32
Nine	0	0	
Eight	0	0	
Seven	0	0	
Six	0	0	
Five	2	.9	
Four	2	.9	
Three	0	0	
Two	5	2.3	
One	43	19.5	
Zero	168	76.4	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was .32 times in the last ten assessments with a range from zero to five times. Of the 220 school psychologists, 48 (21.8%) of them indicated that they discontinued testing for the day due to examinee emotional upset from one to three times during their last ten testing sessions. Survey responses indicated that four (1.8%) of the school psychologists discontinued testing for the day due to the presence of emotional upset from four to five times during their last ten testing sessions. The remaining 168 (76.4%) school psychologists reported that they did not discontinue testing for the day due to examinee emotional upset during their previous ten testing sessions. Of the 220 school psychologists surveyed, 52 (23.6%) reported discontinuing testing for the day due to the presence of emotional upset in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you noted the presence of examinee emotional upset in your reports following individually administered norm referenced standardized testing?

Emotional Upset: Noted

Ten Assessments	Frequency	Valid Percent	Mean
Ten	1	.5	.75
Nine	0	0	
Eight	0	0	
Seven	2	.9	
Six	0	0	
Five	4	1.8	
Four	3	1.4	
Three	5	2.3	
Two	18	8.2	
One	57	25.9	
Zero	130	59.1	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean number of times emotional upset was noted in the school psychologist's psychoeducational reports in their last ten assessments was .75 with a range from zero to ten times. Of the 220 school psychologists, 80 (36.4%) of them indicated that they noted emotional upset in their psychoeducational reports from one to three times during their last ten testing sessions. Survey responses indicated that nine (4.1%) of the school psychologists noted the presence of emotional upset in their psychoeducational reports from four to seven times during their last ten testing sessions and one (.5%) reported emotional upset in examinees from eight to ten times over the course of their last ten testing sessions. The remaining 130 (59.1%) psychologists reported that they did not note emotional upset in their psychoeducational reports following their previous ten testing sessions. Of the 220 school psychologists surveyed, 90 (40.9%) reported having noted the presence of examinee emotional upset in their psychoeducational reports at some time following their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you observed the presence of examinee fatigue during individually administered norm referenced standardized testing?

Fatigue: Observed

Ten Assessments	Frequency	Valid Percent	Mean
Ten	2	.9	.94
Nine	0	0	
Eight	0	0	
Seven	0	0	
Six	2	.9	
Five	4	1.8	
Four	9	4.1	
Three	11	5.0	
Two	18	8.2	
One	49	25.9	
Zero	125	56.8	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean number of times fatigue was observed in the last ten assessments was .94 with a range from zero to ten times. Of the 220 school psychologists, 78 (39.1%) of them indicated that they observed fatigue from one to three times during their last ten testing sessions. Survey responses indicated that 15 (6.8%) of the school psychologists observed the presence of fatigue from four to seven times during their last ten testing sessions and two (.9%) reported having observed fatigue in examinees from eight to ten times over the course of their last ten testing sessions. The remaining 125 (56.8%) psychologists reported that they did not observe fatigue during their previous ten testing sessions. Of the 220 school psychologists surveyed, 95 (43.2%) reported having observed the presence of fatigue in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you taken a break due to the presence of examinee fatigue during individually administered norm referenced standardized testing?

Fatigue: Taken a break

Ten Assessments	Frequency	Valid Percent	Mean
Ten	3	1.4	1.01
Nine	0	0	
Eight	1	.5	
Seven	1	.5	
Six	3	1.4	
Five	6	2.7	
Four	7	3.2	
Three	11	5.0	
Two	18	8.2	
One	32	14.5	
Zero	138	62.7	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was 1.01 times in the last ten assessments with a range from zero to ten times. Of the 220 school psychologists, 61 (27.7%) of them indicated that they took a short break due to examinee fatigue from one to three times during their last ten testing sessions. Survey responses indicated that 17 (7.8%) of the school psychologists took a short break due to the presence of fatigue from four to seven times during their last ten testing sessions and four (1.9%) reported having taken a short break due to examinee fatigue from eight to ten times over the course of their last ten testing sessions. The remaining 138 (62.7%) school psychologists reported that they did not take a short break due to examinee fatigue during their previous ten testing sessions. Of the 220 school psychologists surveyed, 82 (37.3%) reported having taken a short break due to the presence of fatigue in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you discontinued testing due to the presence of examinee fatigue during individually administered norm referenced standardized testing?

Fatigue: Discontinued

Ten Assessments	Frequency	Valid Percent	Mean
Ten	0	0	.48
Nine	0	0	
Eight	0	0	
Seven	2	.9	
Six	0	0	
Five	4	1.8	
Four	1	.5	
Three	3	1.4	
Two	11	5.0	
One	36	16.4	
Zero	163	74.1	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was .48 times in the last ten assessments with a range from zero to seven times. Of the 220 school psychologists, 50 (22.8%) of them indicated that they discontinued testing for the day due to examinee fatigue occurring one to three times during their last ten testing sessions. Survey responses indicated that seven (3.2%) of the school psychologists discontinued testing for the day due to the presence of fatigue from four to seven times during their last ten testing sessions. The remaining 163 (74.1%) school psychologists reported that they did not discontinue testing for the day due to examinee fatigue during their previous ten testing sessions. Of the 220 school psychologists surveyed, 57 (25.9%) reported discontinuing testing for the day due to the presence of fatigue in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you noted the presence of examinee fatigue in your reports following individually administered norm referenced standardized testing?

Fatigue: Noted

Ten Assessments	Frequency	Valid Percent	Mean
Ten	1	.5	.93
Nine	0	0	
Eight	1	.5	
Seven	0	0	
Six	5	2.3	
Five	2	.9	
Four	9	4.1	
Three	7	3.2	
Two	20	9.1	
One	50	22.7	
Zero	125	56.8	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean number of times fatigue was noted in the school psychologist's psychoeducational reports in the last ten assessments was .93 with a range from zero to ten times. Of the 220 school psychologists, 77 (35.0%) of them indicated that they noted examinee fatigue in their psychoeducational reports from one to three times during their last ten testing sessions. Survey responses indicated that 16 (7.3%) of the school psychologists noted the presence of fatigue in their psychoeducational reports from four to seven times during their last ten testing sessions and two (1.0%) reported fatigue in examinees from eight to ten times over the course of their last ten testing sessions. The remaining 125 (56.8%) psychologists reported that they did not note examinee fatigue in their psychoeducational reports following their previous ten testing sessions. Of the 220 school psychologists surveyed, 95 (43.2%) reported having noted the presence of examinee fatigue in their psychoeducational reports following their last ten individually administered norm referenced standardized testing sessions.

In the last ten psychoeducational assessments, how many times have you observed the presence of examinee fear during individually administered norm referenced standardized testing?

Fear: Observed

Ten Assessments	Frequency	Valid Percent	Mean
Ten	1	.5	.22
Nine	0	0	
Eight	0	0	
Seven	0	0	
Six	0	0	
Five	0	0	
Four	0	0	
Three	2	.9	
Two	7	3.2	
One	18	8.2	
Zero	192	87.3	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean number of times fear was observed in the last ten assessments was .22 with a range from zero to ten times. Of the 220 school psychologists, 27 (12.3%) of them indicated that they observed fear from one to three times during their last ten testing sessions. Survey responses indicated that zero (0.0%) of the school psychologists observed the presence of fear from four to seven times during their last ten testing sessions and one (.5%) reported having observed fear in examinees from eight to ten times over the course of their last ten testing sessions. The remaining 192 (87.3%) psychologists reported that they did not observe fear during their previous ten testing sessions. Of the 220 school psychologists surveyed, 28 (12.7%) reported having observed the presence of fear in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you taken a break due to the presence of examinee fear during individually administered norm referenced standardized testing?

Fear: Taken a break

Ten Assessments	Frequency	Valid Percent	Mean
Ten	0	0	.11
Nine	0	0	
Eight	0	0	
Seven	0	0	
Six	1	.5	
Five	0	0	
Four	0	0	
Three	0	0	
Two	5	2.3	
One	8	3.6	
Zero	206	93.6	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was .11 times in the last ten assessments with a range from zero to six times. Of the 220 school psychologists, 13 (5.9%) of them indicated that they took a short break due to examinee fear from one to three times during their last ten testing sessions. Survey responses indicated that one (.5%) of the school psychologists took a short break due to the presence of fear during six of their last ten testing sessions. The remaining 206 (47.3%) school psychologists reported that they did not take a short break due to examinee fear during their previous ten testing sessions. Of the 220 school psychologists surveyed, 14 (6.4%) reported having taken a short break due to the presence of fear in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you discontinued testing for the day due to the presence of examinee fear during individually administered norm referenced standardized testing?

Fear: Discontinued

Ten Assessments Mean	Frequency	Valid Percent	
Ten	0	0	.07
Nine	0	0	
Eight	0	0	
Seven	0	0	
Six	0	0	
Five	0	0	
Four	0	0	
Three	1	.5	
Two	3	1.4	
One	7	3.2	
Zero	209	95.0	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was .07 times in the last ten assessments with a range from zero to three times. Of the 220 school psychologists, 11 (5.0%) of them indicated that they discontinued testing for the day due to examinee anxiety from one to three times during their last ten testing sessions. The remaining 209 (95.0%) school psychologists reported that they did not discontinue testing for the day due to examinee fear during their previous ten testing sessions. Of the 220 school psychologists surveyed, 11 (5.0%) reported discontinuing testing for the day due to the presence of fear in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you noted the presence of examinee fear in your reports following individually administered norm referenced standardized testing?

Fear: Noted

Ten Assessments	Frequency	Valid Percent	Mean
Ten	1	.5	.93
Nine	0	0	
Eight	0	0	
Seven	0	0	
Six	0	0	
Five	0	0	
Four	0	0	
Three	3	.9	
Two	5	2.3	
One	14	6.4	
Zero	198	90.0	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean number of times anxiety was noted in the school psychologist's psychoeducational reports in the last ten assessments was .93 with a range from zero to ten times. Of the 220 school psychologists, 22 (9.6%) of them indicated that they noted fear in their psychoeducational reports from one to three times during their last ten testing sessions. Survey responses indicated that one (.5%) reported fear in an examinee ten times over the course of their last ten testing sessions. The remaining 198 (90.0%) psychologists reported that they did not note fear in their psychoeducational reports following their previous ten testing sessions. Of the 220 school psychologists surveyed, 22 (10.0%) reported having noted the presence of examinee fear in their psychoeducational reports following their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you observed the presence of examinee frustration during individually administered norm referenced standardized testing?

Frustration: Observed

Ten Assessments	Frequency	Valid Percent	Mean
Ten	5	2.3	1.91
Nine	0	0	
Eight	3	1.4	
Seven	4	1.8	
Six	4	1.8	
Five	14	6.4	
Four	13	5.9	
Three	32	11.4	
Two	23	10.5	
One	31	12.7	
Zero	91	55.5	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean number of times frustration was observed in the last ten assessments was 1.91 with a range from zero to ten times. Of the 220 school psychologists, 86 (34.6%) of them indicated that they observed anxiety from one to three times during their last ten testing sessions. Survey responses indicated that 35 (15.9%) of the school psychologists observed the presence of frustration from four to seven times during their last ten testing sessions and eight (3.7%) reported having observed frustration in examinees from eight to ten times over the course of their last ten testing sessions. The remaining 91 (55.5%) psychologists reported that they did not observe frustration during their previous ten testing sessions. Of the 220 school psychologists surveyed, 129 (44.5%) reported having observed the presence of frustration in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you taken a break due to the presence of examinee frustration during individually administered norm referenced standardized testing?

Frustration: Taken a break

Ten Assessments	Frequency	Valid Percent	Mean
Ten	2	.9	1.27
Nine	0	0	
Eight	3	1.4	
Seven	2	.9	
Six	5	2.3	
Five	3	1.4	
Four	7	3.2	
Three	25	11.4	
Two	23	10.5	
One	28	12.7	
Zero	122	55.5	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was 1.27 times in the last ten assessments with a range from zero to ten times. Of the 220 school psychologists, 76 (34.6%) of them indicated that they took a short break due to examinee frustration from one to three times during their last ten testing sessions. Survey responses indicated that 17 (7.8%) of the school psychologists took a short break due to the presence of frustration from four to seven times during their last ten testing sessions and five (2.3%) reported having taken a short break due to examinee frustration from eight to ten times over the course of their last ten testing sessions. The remaining 122 (55.5%) school psychologists reported that they did not take a short break due to examinee frustration during their previous ten testing sessions. Of the 220 school psychologists surveyed, 98 (44.5%) reported having taken a short break due to the presence of frustration in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you discontinued testing for the day due to the presence of examinee frustration during individually administered norm referenced standardized testing?

Frustration: Discontinued

Ten Assessments	Frequency	Valid Percent	Mean
Ten	0	0	.29
Nine	0	0	
Eight	0	0	
Seven	0	0	
Six	1	.5	
Five	1	.5	
Four	0	0	
Three	4	1.8	
Two	6	2.7	
One	28	12.7	
Zero	180	81.8	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was .29 times in the last ten assessments with a range from zero to six times. Of the 220 school psychologists, 38 (17.2%) of them indicated that they discontinued testing for the day due to examinee frustration from one to three times during their last ten testing sessions. Survey responses indicated that two (1.0%) of the school psychologists discontinued testing for the day due to the presence of anxiety from four to six times during their last ten testing sessions. The remaining 180 (81.8%) school psychologists reported that they did not discontinue testing for the day due to examinee frustration during their previous ten testing sessions. Of the 220 school psychologists surveyed, 40 (18.2%) reported having discontinued testing for the day due to the presence of frustration in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you noted the presence of examinee frustration in your reports following individually administered norm referenced standardized testing?

Frustration: Noted

Ten Assessments	Frequency	Valid Percent	Mean
Ten	4	1.8	1.90
Nine	2	.9	
Eight	2	.9	
Seven	4	1.8	
Six	7	3.2	
Five	10	4.5	
Four	12	5.5	
Three	32	14.5	
Two	26	11.8	
One	27	12.3	
Zero	94	42.7	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean number of times frustration was noted in the school psychologist's psychoeducational reports in the last ten assessments was 1.90 with a range from zero to ten times. Of the 220 school psychologists, 85 (38.6%) of them indicated that they noted frustration in their psychoeducational reports from one to three times during their last ten testing sessions. Survey responses indicated that 33 (15.0%) of the school psychologists noted the presence of frustration in their psychoeducational reports from four to seven times during their last ten testing sessions and eight (3.4%) reported frustration in examinees from eight to ten times over the course of their last ten testing sessions. The remaining 94 (42.7%) psychologists reported that they did not note frustration in their psychoeducational reports following their previous ten testing sessions. Of the 220 school psychologists surveyed, 126 (57.3%) reported having noted the presence of examinee frustration in their psychoeducational reports following their last ten individually administered norm referenced standardized testing sessions.

In the last ten psychoeducational assessments, how many times have you observed the presence of examinee hunger/thirst during individually administered norm referenced standardized testing?

Hunger/Thirst: Observed

Ten Assessments	Frequency	Valid Percent	Mean
Ten	1	.5	.53
Nine	0	0	
Eight	0	0	
Seven	1	.5	
Six	0	0	
Five	3	1.4	
Four	1	.5	
Three	8	3.6	
Two	17	7.7	
One	22	10.0	
Zero	167	75.9	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean number of times hunger or thirst was observed in the last ten assessments was .53 with a range from zero to ten times. Of the 220 school psychologists, 47 (21.3%) of them indicated that they observed hunger or thirst from one to three times during their last ten testing sessions. Survey responses indicated that five (2.4%) of the school psychologists observed the presence of hunger or thirst from four to seven times during their last ten testing sessions and one (.5%) reported having observed hunger or thirst in examinees ten times over the course of their last ten testing sessions. The remaining 167 (75.9%) psychologists reported that they did not observe hunger or thirst during their previous ten testing sessions. Of the 220 school psychologists surveyed, 53 (24.1%) reported having observed

the presence of hunger or thirst in the examinees during some time in their last testing sessions.

In the last ten psychoeducational assessments, how many times have you taken a break due to the presence of examinee hunger/thirst during individually administered norm referenced standardized testing?

Hunger/Thirst: Taken a break

Ten Assessments	Frequency	Valid Percent	Mean
Ten	4	1.8	.84
Nine	1	.5	
Eight	0	0	
Seven	2	.9	
Six	0	0	
Five	5	2.3	
Four	2	.9	
Three	8	3.6	
Two	17	7.7	
One	31	14.1	
Zero	150	68.2	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was .84 times in the last ten assessments with a range from zero to ten times. Of the 220 school psychologists, 56 (25.4%) of them indicated that they took a short break due to examinee hunger or thirst from one to three times during their last ten testing sessions. Survey responses indicated that nine (4.1%) of the school psychologists took a short break due to the presence of hunger or thirst from four to seven times during their last ten testing sessions and five (2.3%) reported having taken a short break due to examinee hunger or thirst from eight to ten times over the course of their last ten testing sessions. The remaining 150 (68.2%) school psychologists reported that they did not take a short break due to examinee hunger or thirst during their previous ten testing sessions. Of the 220 school psychologists surveyed, 70 (31.8%) reported having taken a short break due to the presence of hunger or thirst in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you discontinued testing for the day due to the presence of examinee hunger/thirst during individually administered norm referenced standardized testing?

Hunger/Thirst: Discontinued

Ten Assessments	Frequency	Valid Percent	Mean
Ten	0	0	.03
Nine	0	0	
Eight	0	0	
Seven	0	0	
Six	0	0	
Five	0	0	
Four	0	0	
Three	0	0	
Two	1	.5	
One	5	2.3	
Zero	214	97.3	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was .03 times in the last ten assessments with a range from zero to two times. Of the 220 school psychologists, five (2.3%) of them indicated that they discontinued testing for the day due to examinee hunger or thirst one time during their last ten testing sessions. Survey responses indicated that one (.5%) of the school psychologists discontinued testing for the day due to the presence of hunger or thirst two times during their last ten testing sessions. The remaining 214 (97.3%) school psychologists reported that they did not discontinue testing for the day due to examinee hunger or thirst during their previous ten testing sessions. Of the 220 school psychologists surveyed, six (2.8%) reported discontinuing testing for the day due to the presence of hunger or thirst in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you noted the presence of examinee hunger/thirst in your report following individually administered norm referenced standardized testing?

Hunger/Thirst: Noted

Ten Assessments	Frequency	Valid Percent	Mean
Ten	0	0	.26
Nine	0	0	
Eight	1	.5	
Seven	0	0	
Six	0	0	
Five	2	.9	
Four	1	.5	
Three	2	.9	
Two	7	3.2	
One	16	7.3	
Zero	191	86.8	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean number of times anxiety was noted in the school psychologist's psychoeducational reports in the last ten assessments was .26 with a range from zero to eight times. Of the 220 school psychologists, 25 (11.4%) of them indicated that they noted hunger or thirst in their psychoeducational reports from one to three times during their last ten testing sessions. Survey responses indicated that three (1.4%) of the school psychologists noted the presence of hunger or thirst in their psychoeducational reports from four to five times during their last ten testing sessions and one (.5%) reported hunger or thirst in examinees eight times over the course of their last ten testing sessions. The remaining 191 (86.8%) psychologists reported that they did not note hunger or thirst in their psychoeducational reports following their previous ten testing sessions. Of the 220 school psychologists surveyed, 29 (13.2%) reported having noted the presence of examinee hunger or thirst in their psychoeducational reports following their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you observed the presence of examinee inattention during individually administered norm referenced standardized testing?

Inattention: Observed

Ten Assessments	Frequency	Valid Percent	Mean
Ten	6	2.7	2.89
Nine	2	.9	
Eight	3	1.4	
Seven	6	2.7	
Six	12	5.5	
Five	22	10.0	
Four	33	15.0	
Three	41	18.6	
Two	20	9.1	
One	14	6.4	
Zero	61	27.7	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean number of times inattention was observed in the last ten assessments was 2.89 with a range from zero to ten times. Of the 220 school psychologists, 75 (34.1%) of them indicated that they observed inattention from one to three times during their last ten testing sessions. Survey responses indicated that 73 (33.2%) of the school psychologists observed the presence of inattention from four to seven times during their last ten testing sessions and 11 (5.0%) reported having observed inattention in examinees from eight to ten times over the course of their last ten testing sessions. The remaining 61 (27.7%) psychologists reported that they did not observe inattention during their previous ten testing sessions. Of the 220 school psychologists surveyed, 159 (72.3%) reported having observed the presence of inattention in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you taken a break due to the presence of examinee inattention during individually administered norm referenced standardized testing?

Inattention: Taken a break

Ten Assessments	Frequency	Valid Percent	Mean
Ten	6	2.7	2.30
Nine	1	.5	
Eight	3	1.4	
Seven	4	1.8	
Six	10	4.5	
Five	14	6.4	
Four	23	10.5	
Three	31	14.1	
Two	26	11.8	
One	17	7.7	
Zero	85	38.6	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was 2.30 times in the last ten assessments with a range from zero to ten times. Of the 220 school psychologists, 74 (33.6%) of them indicated that they took a short break due to examinee inattention from one to three times during their last ten testing sessions. Survey responses indicated that 51 (23.2%) of the school psychologists took a short break due to the presence of inattention from four to seven times during their last ten testing sessions and 10 (4.6%) reported having taken a short break due to examinee inattention from eight to ten times over the course of their last ten testing sessions. The remaining 85 (38.6%) school psychologists reported that they did not take a short break due to examinee inattention during their previous ten testing sessions. Of the 220 school psychologists surveyed, 135 (61.4%) reported having taken a short break due to the presence of inattention in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you discontinued testing for the day due to the presence of examinee inattention during individually administered norm referenced standardized testing?

Inattention: Discontinued

Ten Assessments	Frequency	Valid Percent	Mean
Ten	0	0	.52
Nine	0	0	
Eight	1	.5	
Seven	0	0	
Six	0	0	
Five	2	.9	
Four	2	.9	
Three	10	4.5	
Two	20	9.1	
One	19	8.6	
Zero	166	75.5	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was .52 times in the last ten assessments with a range from zero to eight times. Of the 220 school psychologists, 49 (22.2%) of them indicated that they discontinued testing for the day due to examinee inattention from one to three times during their last ten testing sessions. Survey responses indicated that four (1.8%) of the school psychologists discontinued testing for the day due to the presence of inattention from four to five times during their last ten testing sessions and one (.5%) school psychologist indicated having discontinued testing due to inattention during eight of their last ten testing sessions. The remaining 166 (75.5%) school psychologists reported that they did not discontinue testing for the day due to examinee inattention during their previous ten testing sessions. Of the 220 school psychologists surveyed, 54 (24.5%) reported discontinuing testing for the day due to the presence of inattention in the examinees during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you noted in your reports the presence of examinee inattention following individually administered norm referenced standardized testing?

Inattention: Noted

Ten Assessments	Frequency	Valid Percent	Mean
Ten	5	2.3	2.79
Nine	2	.9	
Eight	4	1.8	
Seven	6	2.7	
Six	11	5.0	
Five	26	11.8	
Four	27	12.3	
Three	34	15.5	
Two	24	10.9	
One	18	8.2	
Zero	63	28.6	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results for the number of times in the previous ten assessments that school psychologists noted the presence of examinee inattention during individually administered norm referenced standardized testing in their psychoeducational reports. The mean number of times inattention was noted in the school psychologist's psychoeducational reports in the last ten assessments was 2.79 with a range from zero to ten times. Of the 220 school psychologists, 76 (34.6%) of them indicated that they noted inattention in their psychoeducational reports from one to three times during their last ten testing sessions. Survey responses indicated that 70 (31.8%) of the school psychologists noted the presence of inattention in their psychoeducational reports from four to seven times during their last ten testing sessions and 11 (5.0%) reported inattention in examinees from eight to ten times over the course of their last ten testing sessions. The remaining 63 (28.6%) psychologists reported that they did not note inattention in their psychoeducational reports following their previous ten testing sessions. Of the 220 school psychologists surveyed, 157 (71.4%) reported having noted the presence of examinee inattention in their psychoeducational reports following their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you observed the presence of examinee motivation difficulties during individually administered norm referenced standardized testing?

Motivation: Observed

Ten Assessments	Frequency	Valid Percent	Mean
Ten	21	9.5	2.09
Nine	0	0	
Eight	3	1.4	
Seven	0	0	
Six	5	2.3	
Five	7	3.2	
Four	9	4.1	
Three	11	5.0	
Two	28	12.7	
One	35	15.9	
Zero	101	45.9	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results.. The mean number of times motivation was observed in the last ten assessments was 2.09 with a range from zero to ten times. Of the 220 school psychologists, 74 (33.6%) of them indicated that they observed motivation or motivation difficulties from one to three times during their last ten testing sessions. Survey responses indicated that 21 (9.6%) of the school psychologists observed motivation from four to seven times during their last ten testing sessions and 24 (10.9%) reported having observed motivation in examinees from eight to ten times over the course of their last ten testing sessions. The remaining 101 (45.9%) psychologists reported that they did not observe examinee motivation or lack there of during their previous ten testing sessions. Of the 220 school psychologists surveyed, 119 (54.1%) reported having observed motivation difficulties in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you taken a break due to the presence of examinee motivation difficulties during individually administered norm referenced standardized testing?

Motivation: Taken a break

Ten Assessments	Frequency	Valid Percent	Mean
Ten	0	0	.48
Nine	0	0	
Eight	0	0	
Seven	0	0	
Six	1	.5	
Five	3	1.4	
Four	2	.9	
Three	11	5.0	
Two	11	5.0	
One	21	9.5	
Zero	171	77.7	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was .48 times in the last ten assessments with a range from zero to six times. Of the 220 school psychologists, 43 (19.5%) of them indicated that they took a short break due to examinee motivation from one to three times during their last ten testing sessions. Survey responses indicated that six (2.8%) of the school psychologists took a short break due to motivation from four to six times during their last ten testing sessions. The remaining 171 (77.7%) school psychologists reported that they did not take a short break due to examinee motivation during their previous ten testing sessions. Of the 220 school psychologists surveyed, 49 (22.3%) reported having taken a short break due to motivation difficulties in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you discontinued testing for the day due to the presence of examinee motivation difficulties during individually administered norm referenced standardized testing?

Motivation: Discontinued

Ten Assessments	Frequency	Valid Percent	Mean
Ten	1	.5	.27
Nine	0	0	
Eight	0	0	
Seven	1	.5	
Six	0	0	
Five	1	.5	
Four	0	0	
Three	3	1.4	
Two	3	1.4	
One	23	10.5	
Zero	188	85.5	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was .27 times in the last ten assessments with a range from zero to ten times. Of the 220 school psychologists, 29 (13.3%) of them indicated that they discontinued testing for the day due to examinee motivation from one to three times during their last ten testing sessions. Survey responses indicated that two (1.0%) of the school psychologists discontinued testing for the day due to motivation from four to seven times during their last ten testing sessions and one (.5%) school psychologist reported discontinuing testing ten times during their previous ten testing sessions due to motivation. The remaining 188 (85.5%) school psychologists reported that they did not discontinue testing for the day due to examinee motivation during their previous ten testing sessions. Of the 220 school psychologists surveyed, 32 (14.5%) reported discontinuing testing for the day due to motivation difficulties in the examinees during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you noted the presence of examinee motivation difficulties in your reports following individually administered norm referenced standardized testing?

Motivation: Noted

Ten Assessments	Frequency	Valid Percent	Mean
Ten	19	8.6	1.96
Nine	0	0	
Eight	6	2.7	
Seven	0	0	
Six	3	1.4	
Five	7	3.2	
Four	7	3.2	
Three	11	5.0	
Two	23	10.5	
One	34	15.5	
Zero	110	50.0	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean number of times motivation was noted in the school psychologist's psychoeducational reports in the last ten assessments was 1.96 with a range from zero to ten times. Of the 220 school psychologists, 68 (31.0%) of them indicated that they noted examinee motivation in their psychoeducational reports from one to three times during their last ten testing sessions. Survey responses indicated that 17 (7.8%) of the school psychologists noted motivation in their psychoeducational reports from four to seven times during their last ten testing sessions and 25 (11.3%) reported motivation in examinees from eight to ten times over the course of their last ten testing sessions. The remaining 110 (50.0%) psychologists reported that they did not note motivation in their psychoeducational reports following their previous ten testing sessions. Of the 220 school psychologists surveyed, 110 (50.0%) reported having noted examinee motivation difficulties in their psychoeducational reports following their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you observed the presence of rapport during individually administered norm referenced standardized testing?

Rapport: Observed

Ten Assessments	Frequency	Valid Percent	Mean
Ten	52	23.5	2.76
Nine	1	.5	
Eight	3	1.4	
Seven	0	0	
Six	1	.5	
Five	2	.9	
Four	2	.9	
Three	0	0	
Two	8	3.6	
One	14	6.4	
Zero	137	62.3	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean number of times rapport was observed in the last ten assessments was 2.76 with a range from zero to ten times. Of the 220 school psychologists, 22 (10.0%) of them indicated that they observed rapport from one to three times during their last ten testing sessions. Survey responses indicated that five (2.3%) of the school psychologists observed the presence of rapport from four to seven times during their last ten testing sessions and 56 (25.4%) reported having observed rapport in examinees from eight to ten times over the course of their last ten testing sessions. The remaining 137 (62.3%) psychologists reported that they did not observe rapport during their previous ten testing sessions. Of the 220 school psychologists surveyed, 83 (37.7%) reported having observed the presence of rapport in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you taken a break due to a lack of rapport during individually administered norm referenced standardized testing?

Rapport: Taken a break

Ten Assessments	Frequency	Valid Percent	Mean
Ten	1	.5	.15
Nine	0	0	
Eight	0	0	
Seven	0	0	
Six	0	0	
Five	1	.5	
Four	1	.5	
Three	1	.5	
Two	3	1.4	
One	5	2.3	
Zero	208	94.5	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was .15 times in the last ten assessments with a range from zero to ten times. Of the 220 school psychologists, nine (4.2%) of them indicated that they took a short break due to examinee and examiner rapport from one to three times during their last ten testing sessions. Survey responses indicated that two (1.0%) of the school psychologists took a short break due to rapport from four to seven times during their last ten testing sessions and one (.5%) reported having taken a short break due to examinee and examiner rapport ten times over the course of their last ten testing sessions. The remaining 208 (94.5%) school psychologists reported that they did not take a short break due to rapport during their previous ten testing sessions. Of the 220 school psychologists surveyed, 12 (5.5%) reported having taken a short break due to rapport during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you discontinued testing for the day due to examiner and examinee rapport during individually administered norm referenced standardized testing?

Rapport: Discontinued

Ten Assessments	Frequency	Valid Percent	Mean
Ten	1	.5	.10
Nine	0	0	
Eight	0	0	
Seven	0	0	
Six	0	0	
Five	0	0	
Four	1	.5	
Three	0	0	
Two	1	.5	
One	7	3.2	
Zero	210	95.5	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results.. The mean was .10 times in the last ten assessments with a range from zero to ten times. Of the 220 school psychologists, eight (3.7%) of them indicated that they discontinued testing for the day due to rapport from one to three times during their last ten testing sessions. Survey responses indicated that one (.5%) of the school psychologists discontinued testing for the day due to rapport four times during their last ten testing sessions and one psychologist discontinued testing ten times due to rapport over their last ten testing sessions. The remaining 210 (95.5%) school psychologists reported that they did not discontinue testing for the day due to rapport during their previous ten testing sessions. Of the 220 school psychologists surveyed, 10 (4.5%) reported discontinuing testing for the day due to rapport during their last ten individually administered norm referenced standardized testing sessions.

In the last ten psychoeducational assessments, how many times have you noted the presence of examiner and examinee rapport during individually administered norm referenced standardized testing?

Rapport: Noted

Ten Assessments	Frequency	Valid Percent	Mean
Ten	51	23.2	2.71
Nine	2	.9	
Eight	2	.9	
Seven	0	0	
Six	1	.5	
Five	2	.9	
Four	3	1.4	
Three	0	0	
Two	6	2.7	
One	12	5.5	
Zero	141	64.1	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean number of times rapport was noted in the school psychologist's psychoeducational reports in the last ten assessments was 2.71 with a range from zero to ten times. Of the 220 school psychologists, 18 (8.2%) of them indicated that they noted rapport in their psychoeducational reports from one to three times during their last ten testing sessions. Survey responses indicated that six (2.8%) of the school psychologists noted rapport in their psychoeducational reports from four to seven times during their last ten testing sessions and 55 (25.0%) reported rapport in examinees from eight to ten times over the course of their last ten testing sessions. The remaining 141 (64.1%) psychologists reported that they did not note rapport in their psychoeducational reports following their previous ten testing sessions. Of the 220 school psychologists surveyed, 79 (35.9%)

reported having noted rapport in their psychoeducational reports following their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you observed the presence of examinee refusal to participate or uncooperativeness during individually administered norm referenced standardized testing?

Refusal: Observed

Ten Assessments	Frequency	Valid Percent	Mean
Ten	1	.5	.57
Nine	0	0	
Eight	0	0	
Seven	0	0	
Six	1	.5	
Five	0	0	
Four	3	1.4	
Three	2	.9	
Two	15	6.8	
One	61	27.7	
Zero	137	62.3	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean number of times refusal was observed in the last ten assessments was .57 with a range from zero to ten times. Of the 220 school psychologists, 78 (35.4%) of them indicated that they observed refusal or uncooperativeness from one to three times during their last ten testing sessions. Survey responses indicated that four (1.9%) of the school psychologists observed the presence of refusal or uncooperativeness from four to seven times during their last ten testing sessions and one (.5%) reported having observed refusal or uncooperativeness in examinees ten times over the course of their last ten testing sessions. The remaining 137 (62.3%) psychologists reported that they did not observe refusal to participate or uncooperativeness during their previous ten testing sessions. Of the 220 school psychologists surveyed, 83 (37.7%) reported having observed the presence of refusal or uncooperativeness in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you taken a break due to the presence of examinee refusal to participate or uncooperativeness during individually administered norm referenced standardized testing?

Refusal: Taken a break

Ten Assessments	Frequency	Valid Percent	Mean
Ten	0	0	.34
Nine	0	0	
Eight	0	0	
Seven	1	.5	
Six	0	0	
Five	1	.5	
Four	2	.9	
Three	2	.9	
Two	10	4.5	
One	28	12.7	
Zero	176	80.0	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was .34 times in the last ten assessments with a range from zero to seven times. Of the 220 school psychologists, 40 (18.1%) of them indicated that they took a short break due to examinee refusal or uncooperativeness from one to three times during their last ten testing sessions. Survey responses indicated that four (2.8%) of the school psychologists took a short break due to refusal to participate or uncooperativeness from four to seven times during their last ten testing sessions. The remaining 176 (80.0%) school psychologists reported that they did not take a short break due to examinee refusal to participate or uncooperativeness during their previous ten testing sessions. Of the 220 school psychologists surveyed, 44 (20.0%) reported having taken a short break due to refusal or uncooperativeness in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you discontinued testing for the day due to the presence of examinee refusal to participate or uncooperativeness during individually administered norm referenced standardized testing?

Refusal: Discontinued

Ten Assessments	Frequency	Valid Percent	Mean
Ten	0	0	.47
Nine	0	0	
Eight	1	.5	
Seven	0	0	
Six	0	0	
Five	0	0	
Four	1	.5	
Three	3	1.4	
Two	13	5.9	
One	56	25.5	
Zero	146	66.4	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was .47 times in the last ten assessments with a range from zero to eight times. Of the 220 school psychologists, 72 (32.8%) of them indicated that they discontinued testing for the day due to examinee refusal to participate or uncooperativeness from one to three times during their last ten testing sessions. Survey responses indicated that one (.5%) of the school psychologists discontinued testing for the day due to the presence of uncooperativeness four times during their last ten testing sessions and one (.5%) discontinued testing eight times over their last ten testing sessions due to uncooperativeness. The remaining 146 (66.4%) school psychologists reported that they did not discontinue testing for the day due to examinee refusal to participate or uncooperativeness during their previous ten testing sessions. Of the 220 school psychologists surveyed, 74 (33.6%) reported discontinuing testing for the day due to the presence of uncooperativeness in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you noted the presence of examinee refusal to participate or uncooperativeness in your reports following individually administered norm referenced standardized testing?

Refusal: Noted

Ten Assessments	Frequency	Valid Percent	Mean
Ten	2	.9	.69
Nine	0	0	
Eight	0	0	
Seven	0	0	
Six	1	.5	
Five	1	.5	
Four	3	1.4	
Three	4	1.8	
Two	17	7.7	
One	62	28.2	
Zero	130	59.1	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results.. The mean number of times refusal or uncooperativeness was noted in the school psychologist's psychoeducational reports in the last ten assessments was .69 with a range from zero to ten times. Of the 220 school psychologists, 83 (37.7%) of them indicated that they noted refusal or uncooperativeness in their psychoeducational reports from one to three times during their last ten testing sessions. Survey responses indicated that five (2.4%) of the school psychologists noted refusal or uncooperativeness in their psychoeducational reports from four to seven times during their last ten testing sessions and two (.9%) reported refusal or uncooperativeness in examinees ten times over the course of their last ten testing sessions. The remaining 130 (59.1%) psychologists reported that they did not note refusal to participate or uncooperativeness in their psychoeducational reports following their previous ten testing sessions. Of the 220 school psychologists surveyed, 90 (40.9%) reported having noted examinee refusal or uncooperativeness in their psychoeducational reports following their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you observed the presence of examinee shyness during individually administered norm referenced standardized testing?

Shyness: Observed

Ten Assessments	Frequency	Valid Percent	Mean
Ten	2	.9	.61
Nine	0	0	
Eight	0	0	
Seven	0	0	
Six	0	0	
Five	0	0	
Four	5	2.3	
Three	3	1.4	
Two	22	10.0	
One	42	19.1	
Zero	146	66.4	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean number of times shyness was observed in the last ten assessments was .61 with a range from zero to ten times. Of the 220 school psychologists, 67 (30.5%) of them indicated that they observed shyness from one to three times during their last ten testing sessions. Survey responses indicated that five (2.3%) of the school psychologists observed the presence of shyness four times during their last ten testing sessions and two (.9%) reported having observed shyness in examinees ten times over the course of their last ten testing sessions. The remaining 146 (66.4%) psychologists reported that they did not observe shyness during their previous ten testing sessions. Of the 220 school psychologists surveyed, 74 (33.6%) reported having observed the presence of shyness in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you taken a break due to the presence of examinee shyness during individually administered norm referenced standardized testing?

Shyness: Taken a break

Ten Assessments	Frequency	Valid Percent	Mean
Ten	0	0	.10
Nine	0	0	
Eight	0	0	
Seven	0	0	
Six	0	0	
Five	0	0	
Four	1	.5	
Three	0	0	
Two	4	1.8	
One	10	4.5	
Zero	205	93.2	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was .10 times in the last ten assessments with a range from zero to four times. Of the 220 school psychologists, 14 (6.3%) of them indicated that they took a short break due to examinee shyness from one to two times during their last ten testing sessions. Survey responses indicated that one (.5%) of the school psychologists took a short break due to the presence of shyness four times during their last ten testing sessions. The remaining 205 (93.2%) school psychologists reported that they did not take a short break due to examinee shyness during their previous ten testing sessions. Of the 220 school psychologists surveyed, 15 (6.8%) reported having taken a short break due to the presence of shyness in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you discontinued testing for the day due to the presence of examinee shyness during individually administered norm referenced standardized testing?

Shyness: Discontinued

Ten Assessments	Frequency	Valid Percent	Mean
Ten	0	0	.07
Nine	0	0	
Eight	0	0	
Seven	0	0	
Six	0	0	
Five	0	0	
Four	2	.9	
Three	1	.5	
Two	0	0	
One	4	1.8	
Zero	213	96.8	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was .07 times in the last ten assessments with a range from zero to four times. Of the 220 school psychologists, five (2.3%) of them indicated that they discontinued testing for the day due to examinee shyness from one to three times during their last ten testing sessions. Survey responses indicated that two (.9%) of the school psychologists discontinued testing for the day due to the presence of shyness four times during their last ten testing sessions. The remaining 213 (96.8%) school psychologists reported that they did not discontinue testing for the day due to examinee shyness during their previous ten testing sessions. Of the 220 school psychologists surveyed, 7 (3.2%) reported discontinuing testing for the day due to the presence of shyness in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you noted the presence of examinee shyness in your reports following individually administered norm referenced standardized testing?

Shyness: Noted

Ten Assessments	Frequency	Valid Percent	Mean
Ten	1	.5	.58
Nine	0	0	
Eight	1	.5	
Seven	0	0	
Six	0	0	
Five	0	0	
Four	0	0	
Three	5	2.3	
Two	5	2.3	
One	39	8.2	
Zero	151	68.6	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean number of times shyness was noted in the school psychologist's psychoeducational reports in the last ten assessments was .58 with a range from zero to ten times. Of the 220 school psychologists, 49 (12.8%) of them indicated that they noted shyness in their psychoeducational reports from one to three times during their last ten testing sessions. Survey responses indicated that 2 (.9%) of the school psychologists noted the presence of shyness in their psychoeducational reports from eight to ten times during their last ten testing sessions. The remaining 151 (68.6%) psychologists reported that they did not note shyness in their psychoeducational reports following their previous ten testing sessions. Of the 220 school psychologists surveyed, 69 (31.4%) reported having noted the presence of examinee shyness in their psychoeducational reports following their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you observed the presence of examinee sleepiness during individually administered norm referenced standardized testing?

Sleepiness: Observed

Ten Assessments	Frequency	Valid Percent	Mean
Ten	1	.5	.70
Nine	0	0	
Eight	1	.5	
Seven	0	0	
Six	0	0	
Five	2	.9	
Four	5	2.3	
Three	11	5.0	
Two	17	7.7	
One	38	17.3	
Zero	145	65.9	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean number of times sleepiness was observed in the last ten assessments was .70 with a range from zero to ten times. Of the 220 school psychologists, 66 (30.0%) of them indicated that they observed sleepiness from one to three times during their last ten testing sessions. Survey responses indicated that seven (3.2%) of the school psychologists observed the presence of sleepiness from four to five times during their last ten testing sessions and two (1.0%) reported having observed sleepiness in examinees from eight to ten times over the course of their last ten testing sessions. The remaining 145 (65.9%) psychologists reported that they did not observe sleepiness during their previous ten testing sessions. Of the 220 school psychologists surveyed, 75 (34.1%) reported having observed the presence of sleepiness in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you taken a break due to the presence of examinee sleepiness during individually administered norm referenced standardized testing?

Sleepiness: Taken a break

Ten Assessments	Frequency	Valid Percent	Mean
Ten	1	.5	.45
Nine	0	0	
Eight	1	.5	
Seven	0	0	
Six	0	0	
Five	2	.9	
Four	1	.5	
Three	6	2.7	
Two	8	3.6	
One	32	14.5	
Zero	169	76.8	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was .45 times in the last ten assessments with a range from zero to ten times. Of the 220 school psychologists, 46 (20.8%) of them indicated that they took a short break due to examinee sleepiness from one to three times during their last ten testing sessions. Survey responses indicated that three (1.4%) of the school psychologists took a short break due to the presence of sleepiness from four to seven times during their last ten testing sessions and two (1.0%) reported having taken a short break due to examinee sleepiness from eight to ten times over the course of their last ten testing sessions. The remaining 169 (76.8%) school psychologists reported that they did not take a short break due to examinee sleepiness during their previous ten testing sessions. Of the 220 school psychologists surveyed, 51 (23.2%) reported having taken a short break due to the presence of sleepiness in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you discontinued testing for the day due to the presence of examinee sleepiness during individually administered norm referenced standardized testing?

Sleepiness: Discontinued

Ten Assessments	Frequency	Valid Percent	Mean
Ten	0	0	.30
Nine	0	0	
Eight	1	.5	
Seven	0	0	
Six	0	0	
Five	1	.5	
Four	1	.5	
Three	2	.9	
Two	7	3.2	
One	29	13.2	
Zero	179	81.4	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was .30 times in the last ten assessments with a range from zero to eight times. Of the 220 school psychologists, 38 (18.0%) of them indicated that they discontinued testing for the day due to examinee sleepiness from one to three times during their last ten testing sessions. Survey responses indicated that two (1.0%) of the school psychologists discontinued testing for the day due to the presence of sleepiness from four to seven times during their last ten testing sessions and one (.5%) school psychologist noted having discontinued testing eight of the last ten times due to examinee sleepiness. The remaining 179 (81.4%) school psychologists reported that they did not discontinue testing for the day due to examinee sleepiness during their previous ten testing sessions. Of the 220 school psychologists surveyed, 41 (18.6%) reported discontinuing testing for the day due to the presence of sleepiness in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you noted the presence of examinee sleepiness in your report following individually administered norm referenced standardized testing?

Sleepiness: Noted

Ten Assessments	Frequency	Valid Percent	Mean
Ten	0	0	.61
Nine	0	0	
Eight	1	.5	
Seven	1	.5	
Six	1	.5	
Five	2	.9	
Four	3	1.4	
Three	7	3.2	
Two	16	7.3	
One	38	17.3	
Zero	151	68.6	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean number of times sleepiness was noted in the school psychologist's psychoeducational reports in the last ten assessments was .61 with a range from zero to eight times. Of the 220 school psychologists, 61 (27.8%) of them indicated that they noted sleepiness in their psychoeducational reports from one to three times during their last ten testing sessions. Survey responses indicated that seven (3.3%) of the school psychologists noted the presence of sleepiness in their psychoeducational reports from four to seven times during their last ten testing sessions and one (.5%) reported sleepiness in examinees eight times over the course of their last ten testing sessions. The remaining 151 (68.6%) psychologists reported that they did not note sleepiness in their psychoeducational reports following their previous ten testing sessions. Of the 220 school psychologists surveyed, 69 (31.4%) reported having noted the presence of examinee sleepiness in their psychoeducational reports following their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you observed the presence of examinee temporary illness during individually administered norm referenced standardized testing?

Temporary Illness: Observed

Ten Assessments	Frequency	Valid Percent	Mean
Ten	1	.5	.30
Nine	0	0	
Eight	0	0	
Seven	0	0	
Six	0	0	
Five	0	0	
Four	0	0	
Three	3	1.4	
Two	10	4.5	
One	28	12.7	
Zero	178	80.9	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean number of times temporary illness was observed in the last ten assessments was .30 with a range from one to ten times. Of the 220 school psychologists, 41 (18.6%) of them indicated that they observed temporary illness from one to three times during their last ten testing sessions. Survey responses indicated that one (.5%) of the school psychologists observed the presence of temporary illness ten times during their last ten testing sessions. The remaining 178 (80.9%) psychologists reported that they did not observe temporary illness during their previous ten testing sessions. Of the 220 school psychologists surveyed, 42 (19.1%) reported having observed the presence of temporary illness in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you taken a break due to the presence of examinee temporary illness during individually administered norm referenced standardized testing?

Temporary Illness: Taken a break

Ten Assessments	Frequency	Valid Percent	Mean
Ten	0	0	.10
Nine	0	0	
Eight	0	0	
Seven	0	0	
Six	0	0	
Five	1	.5	
Four	0	0	
Three	0	0	
Two	3	1.4	
One	12	5.5	
Zero	204	92.7	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was .10 times in the last ten assessments with a range from zero to five times. Of the 220 school psychologists, 15 (6.9%) of them indicated that they took a short break due to examinee temporary illness from one to two times during their last ten testing sessions. Survey responses indicated that one (.5%) of the school psychologists took a short break due to the presence of temporary illness five times during their last ten testing sessions. The remaining 204 (92.7%) school psychologists reported that they did not take a short break due to examinee temporary illness during their previous ten testing sessions. Of the 220 school psychologists surveyed, 16 (7.3%) reported having taken a short break due to the presence of temporary illness in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you discontinued testing for the day due to the presence of examinee temporary illness during individually administered norm referenced standardized testing?

Temporary Illness: Discontinued

Ten Assessments	Frequency	Valid Percent	Mean
Ten	1	.5	.20
Nine	0	0	
Eight	0	0	
Seven	0	0	
Six	0	0	
Five	0	0	
Four	0	0	
Three	1	.5	
Two	3	1.4	
One	26	11.8	
Zero	189	85.9	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean was .20 times in the last ten assessments with a range from zero to ten times. Of the 220 school psychologists, 30 (13.7%) of them indicated that they discontinued testing for the day due to examinee temporary illness from one to three times during their last ten testing sessions. Survey responses indicated that one (.5%) of the school psychologists discontinued testing for the day due to the presence of temporary illness ten times during their last ten testing sessions. The remaining 189 (85.9%) school psychologists reported that they did not discontinue testing for the day due to examinee temporary illness during their previous ten testing sessions. Of the 220 school psychologists surveyed, 31 (14.1%) reported discontinuing testing for the day due to the presence of temporary illness in the examinees at some time during their last ten testing sessions.

In the last ten psychoeducational assessments, how many times have you noted the presence of examinee temporary illness in your report following individually administered norm referenced standardized testing?

Temporary Illness: Noted

Ten Assessments	Frequency	Valid Percent	Mean
Ten	0	0	.25
Nine	0	0	
Eight	1	.5	
Seven	0	0	
Six	0	0	
Five	0	0	
Four	0	0	
Three	2	.9	
Two	7	3.2	
One	27	12.3	
Zero	183	83.2	
TOTAL	**220**	**100**	

The table above describes the frequency, percent and mean results. The mean number of times temporary illness was noted in the school psychologist's psychoeducational reports in the last ten assessments was .25 with a range from zero to eight times. Of the 220 school psychologists, 36 (16.4%) of them indicated that they noted temporary illness in their psychoeducational reports from one to three times during their last ten testing sessions. Survey responses indicated that one (.5%) of the school psychologists noted the presence of temporary illness in their psychoeducational reports eight times during their last ten testing sessions. The remaining 183 (83.2%) psychologists reported that they did not note temporary illness in their psychoeducational reports following their previous ten testing sessions. Of the 220 school psychologists surveyed, 37 (16.8%) reported having noted the presence of examinee temporary illness in their psychoeducational reports following their last ten testing sessions.

APPENDIX E:

ANOVA RESULTS FOR GRADE LEVEL SERVED

A one-way between-subjects univariate analysis of variance (ANOVA) was conducted on each of thirteen dependent variables: Anxiety, Emotional Upset, Fatigue, Fear, Frustration, Hunger/Thirst, Inattention, Motivation, Rapport, Refusal to Participate/Uncooperativeness, Shyness, Sleepiness, and Temporary Illness. The independent variable in each case was grade levels served (Elementary Only, Middle Only, High Only, Elementary and Middle, Middle and High, Elementary and High, All Grades, and No Grades).

No extreme scores or univariate outliers were observed for the dependent measures, so all data was accepted. There were two missing value cases which were eliminated from all of the analyses, leaving a total N of 218 school psychologists. Grade levels served were distributed as Elementary only (30.5%), Middle Only (2.3%), High Only (5.5%), Elementary and Middle (24.5%), Middle and High (1.8%), Elementary and High (8.2%), All Grades (25.9%) and No Grades (1.4%).

This one-way between subjects ANOVA compared the mean scores reported by school psychologists who serve children at different grade levels with the frequency to which they have observed discontinued, taken a break or noted in psychoeducational reports the presence of the dependent variables during their last 12 months of testing. The results are as follows:

Grade Level Served

Variable	F	p	partial ת2	Levene's Test
Anxiety	F (7, 210) = .523	p > .05	.017	F = 3.485, p <.001**
Emot. Upset	F (7, 210) = 2.889	p < .01**	.088	F = .430, p > .05
Fatigue	F (7, 211) = 2.676	p < .001**	.082	F = 2.099, p < .05
Fear	F (7, 208) = 1.222	p > .05	.040	F = .237, p > .05
Frustration	F (7, 211) = 1.607	p > .05	.051	F = .108, p > .05
Hunger/Thirst	F (7, 210) = .802	p > .05	.026	F = .116, p > .05
Inattention	F (7, 209) = 2.430	p < .05*	.075	F = 1.490, p > .05
Motivation	F (7, 211) = 3.166	p > .01**	.095	F = 1.795, p > .05
Rapport	F (7, 212) = 1.530	p > .05	.048	F = 2.062, p > .05
Refusal	F (7, 212) = 2.500	p < .05*	.076	F = 4.575, p <.001**
Shyness	F (7, 212) = .880	p > .05	.028	F = .464, p > .05
Sleepiness	F (7, 211) = 2.020	p > .05	.063	F = 4.301, p >.001**
Temp. Illness	F (7, 212) = 2.620	p < .05*	.080	F = 4.842, p <.001**

* Clinically Significant at p < .05
** Clinically Significant at p < .01

As shown in the table above, the grade level served by school psychologists did not indicate any significant mean differences when examinee anxiety, fatigue, fear, frustration, hunger/thirst, inattention, rapport, shyness, or sleepiness was present during the testing session. Significant differences were found for emotional upset, attention, motivation, refusal to participate, and sickness are present during the testing session. Specific post hoc analysis of the child factors that were found to be clinically significant are as follows:

Emotional Upset:

This assessment was statistically significant, F (7, 210) = 2.889, p <.01, partial ת2 = .088. A Tukey HSD test (p<.05) indicated that the Elementary Only (M = .45, SD = .585) psychologists mean score was significantly higher than the All Grades (M = .84, SD = .890) group of psychologists mean score indicating a greater frequency to which they

have taken observed, taken a break, discontinued or noted in their reports the presence of examinee emotional upset during testing sessions over the previous 12 months.

Fatigue:

This assessment was statistically significant, $F(7, 211) = 2.68$, $p < .001$, partial $\eta^2 = .082$. Levene's Test of Equality of Error Variances was statistically significant, $F = 2.099$, $p < .05$. The Dunnett's T post hoc procedure indicated that school psychologists who serve all grades were more likely to have observed, taken a break, discontinued testing or noted examinee fatigue in their reports over the previous 12 months than school psychologists who serve elementary schools only.

Attention:

This assessment was statistically significant, $F(7, 209) = 2.430$, $p < .05$, partial $\eta^2 = .075$. The main effect indicated that there are mean differences between grade levels. Levene's Test of Equality of Error Variance was not statistically significant, $F = 1.490$, $p > .05$. The Tukey's HSD post hoc procedure did not indicate any significant mean differences between grade levels served in terms of the psychologist's practices when examinee attention was present during the testing session.

Motivation:

This assessment was statistically significant, $F(7, 211) = 3.166$, $p > .01$, partial $\eta^2 = .095$. The main effect indicated that there are mean differences between grade levels in terms of their testing practices when examinee motivation problems are present. Levene's Test of Equality of Error Variance was not statistically significant, $F = 1.795$, $p > .05$. The Tukey's HSD post hoc procedure indicated significant mean differences between the middle school only group and the all grades group suggesting that psychologists who serve all grades took action more frequently when examinee motivation problems occurred than the psychologists who serve only middle school grades.

Refusal to Participate/Uncooperativeness:

This assessment was statistically significant, $F(7, 212) = 2.500$, $p < .05$, partial $\eta^2 = .076$. This indicates that there are group differences in terms of actions taken when examinee refusal to participate occurs during the testing session. Levene's Test of Equality of Error Variances was statistically significant, $F = 4.575$ $p < .001$. The Dunnett's T post hoc procedure was used in order to further examine the statistically significant main effect, but this analysis did not indicate significant mean differences between the grade level groups of psychologists in terms of their actions when examinee refusal to participate occurs during the testing session.

Sickness:

This assessment was statistically significant, $F(7, 212) = 2.620$, $p < .05$, partial $\eta^2 = .080$. This indicates that there are group differences in terms of actions taken when

examinee sickness is present during the testing session. Levene's Test of Equality of Error Variances was statistically significant, $F = 4.842$ $p < .001$. The Dunnett's T post hoc procedure was used in order to further examine the statistically significant main effect. This analysis indicated significantly higher mean scores for the all grades group when compared to the means of the elementary only, middle only, as well as the middle and high group. School psychologists who work in all grades reported taking action more frequently when examinee sickness occurs than did psychologists who are employed in elementary only, middle only or middle and high settings.

Post Hoc Results:

Overall, specific post hoc analysis revealed that school psychologists who serve elementary school children only were more likely to take action than psychologists who work with children at all grade levels when examinee emotional upset is present during testing. School psychologists who serve all grades were more likely to take action than psychologists who serve middle school only when examinee motivation difficulties occur during the testing session. Finally, school psychologists who serve all grades were more likely to take action than elementary only, middle only or middle and high school psychologists when examinee sickness was present during the testing situation.

Follow-up analyses using a Bonferroni correction (.05/13 =.0038) revealed only one statistically significant finding which was that school psychologists who serve all grades were more likely to take action than psychologists who serve middle school only when examinee motivation difficulties occur during the testing session. All other findings should be considered as trends rather than clinically significant results.

APPENDIX F:

DEMOGRAPHIC VARIABLES ANOVA RESULTS

Level of Education

Variable	F	p	partial ת2	Levene's Test
Anxiety	F (5, 208) = 1.023	p > .05	.024	F = .387, p > .05
Emot. Upset	F (5, 208) = 1.888	p > .05	.043	F = 1.007, p > .05
Fatigue	F (5, 209) = 2.508	p < .05*	.057	F = .870, p > .05
Fear	F (5, 206) = 1.186	p > .05	.028	F = .839, p > .05
Frustration	F (5, 209) = 1.350	p > .05	.031	F = .485, p > .05
Hunger/Thirst	F (5, 208) = 2.511	p < .05*	.057	F = 5.512, p < .01**
Inattention	F (5, 207) = 4.114	p < .01**	.090	F = .889, p > .05
Motivation	F (5, 209) = .811	p > .05	.019	F = 1.442, p > .05
Rapport	F (5, 210) = 2.905	p < .05*	.065	F = 2.062, p > .05
Refusal	F (5, 210) = 4.380	p < .01**	.094	F = 2.372, p < .05*
Shyness	F (5, 210) = 1.569	p > .05	.036	F = 1.767, p > .05
Sleepiness	F (5, 209) = 1.493	p > .05	.034	F = 1.559, p > .05
Temp. Illness	F (5, 210) = 4.503	p < .01**	.097	F = 1.202, p > .05

Results

As shown in the table above, the education level of school psychologists did not indicate any significant mean differences when examinee anxiety, emotional upset, fear, frustration, motivation, shyness or sleepiness was present during the testing session. Significant differences were found for fatigue, hunger/thirst, inattention, rapport, refusal to participate/uncooperativeness, and sickness.

Specific post hoc analysis of the child factors that were found to be clinically significant are as follows:

Fatigue:

This assessment was statistically significant, $F(5, 209) = 2.508$, $p < .05$, partial $\eta^2 = .057$. Levene's Test of Equality of Error Variances was not statistically significant, $F = .870$, $p > .05$. The Tukey's HSD post hoc procedure indicated significantly higher mean scores for post doctoral level school psychologists than master's, specialist, post specialist, doctoral and other school psychologists. Post doctoral level school psychologists were more likely to take action than any of the other respondents of various education levels when examinee fatigue was present during the testing sessions.

Hunger/Thirst:

This assessment was statistically significant, $F(5, 208) = 2.511$, $p < .05$, partial $\eta^2 = .057$. Levene's Test of Equality of Error Variances was statistically significant, $F = 5.512$, $p < .01$. The Dunnett's T post hoc procedure indicated that post doctoral level school psychologists were more likely than master's, specialist, post specialist, and doctoral degree level psychologists to take action when examinee hunger/thirst was present during the testing session. Analysis also revealed that mean scores for school psychologists who reported their education level as other were significantly lower than master's, specialist, post specialist, and doctoral degree level school psychologists indicating that they were less likely to take action when examinee hunger/thirst was present during the testing session.

Inattention:

This assessment was statistically significant, $F(5, 207) = 4.114$, $p < .01$, partial $\eta^2 = .090$. The main effect indicated that there are mean differences between psychologists with differing education levels. Levene's Test of Equality of Error Variance was not statistically significant, $F = .889$, $p > .05$. The Tukey's HSD post hoc procedure indicated significantly higher mean scores for post doctoral level school psychologists in comparison to master's, specialist, post specialist, doctoral, and other level school psychologists when examinee attention was present during the testing session.

Rapport:

This assessment was statistically significant, $F(5, 210) = 2.905$, $p > .05$, partial $\eta^2 = .065$. Levene's Test of Equality of Error Variances was statistically significant, $F = 2.062$, $p > .05$. The Tukey's HSD post hoc procedure indicated significantly higher mean scores

for post doctoral level school psychologists in comparison to master's, specialist, post specialist, doctoral, and other level school psychologists when examinee/examiner rapport problems were present during the testing session.

Refusal to Participate/Uncooperativeness:

This assessment was statistically significant, $F(5, 210) = 4.380$, $p < .01$, partial $\eta 2 = .094$. This indicates that there are group differences in terms of actions taken when examinee refusal to participate occurs during the testing session. Levene's Test of Equality of Error Variances was statistically significant, $F = 2.372$ $p < .05$. The Dunnett's T post hoc procedure was used in order to further examine the statistically significant main effect. This analysis indicated significantly lower means for school psychologists who reported their education level as other than those with master's, specialist, post specialist, and doctoral level degrees when examinee refusal to participate occurred during the testing session.

Sickness:

This assessment was statistically significant, $F(5, 210) = 4.503$, $p < .01$, partial $\eta 2 = .097$. This indicates that there are group differences in terms of actions taken when examinee sickness is present during the testing session. Levene's Test of Equality of Error Variances was statistically significant, $F = 1.202$, $p < .05$. The Tukey's HSD post hoc procedure was used in order to further examine the statistically significant main effect. This analysis indicated significantly higher mean scores for post doctoral level school psychologists in comparison to master's, specialist, post specialist, doctoral, and other level school psychologists when examinee temporary illness/sickness was present during the testing session.

Post Hoc Results:

Overall, specific post hoc analysis revealed that school psychologists with post doctoral degrees were more likely to take action than psychologists with master's, specialist, post specialist, doctoral and other level degrees when examinee fatigue, inattention, rapport, and sickness were present during testing. School psychologists with post doctoral degrees were also more likely to take action than psychologists with a master's, specialist, post specialist or doctoral level degree when examinee hunger/thirst occurred during the testing session. Finally, school psychologists who reported their degree level as other were less likely to take action than all other degree level psychologists when examinee refusal/uncooperativeness was present during the testing situation. Psychologists who reported their degree level as other were also less likely to take action than master's, specialist, post specialist and doctoral level psychologists when examinee hunger/thirst occurred during the testing session.

Experience

Variable	F	p	partial ת2	Levene's Test
Anxiety	F (4, 211) = 1.513	p > .05	.028	F = 3.256, p < .05*
Emot. Upset	F (4, 211) = .609	p > .05	.011	F = 1.364, p > .05
Fatigue	F (4, 212) = 1.328	p > .05	.024	F = 1.770, p > .05
Fear	F (4, 209) = 3.104	p < .05*	.056	F = 1.341, p > .05
Frustration	F (4, 212) = 2.714	p < .05*	.049	F = 3.672, p < .01**
Hunger/Thirst	F (4, 211) = 4.366	p < .05*	.076	F = 1.777, p > .05
Inattention	F (4, 210) = 2.883	p < .05*	.052	F = .549, p > .05
Motivation	F (4, 212) = 2.721	p < .05*	.049	F = 1.328, p > .05
Rapport	F (4, 213) = 1.745	p > .05	.032	F = 1.446, p > .05
Refusal	F (4, 213) = .892	p > .05	.016	F = .764, p > .05
Shyness	F (4, 213) = 1.344	p > .05	.025	F = 1.892, p > .05
Sleepiness	F (4, 212) = 1.072	p > .05	.020	F = .778, p > .05
Temp. Illness	F (4, 213) = 2.193	p > .05	.040	F = 1.515, p > .05

* Clinically Significant at p < .05

** Clinically Significant at p < .01

Results:

As shown in the table above, the experience level of school psychologists did not indicate any significant mean differences when examinee anxiety, emotional upset, fatigue, rapport, refusal to participate/uncooperativeness, shyness, sleepiness and temporary illness/sickness were present during the testing session. Significant differences were found for fear, frustration, hunger/thirst, inattention, and motivation are present during the testing session.

Specific post hoc analysis of the child factors that were found to be clinically significant are as follows:

Fear:

This assessment was statistically significant, F (4, 209) = 3.104, p < .05, partial η^2 = .056. Levene's Test of Equality of Error Variances was not statistically significant, F = 1.341, p > .05. The Tukey's HSD post hoc procedure indicated that school psychologists with more than 15 years experience were less likely than those with 10 to 15 years experience to take action when examinee fear was present during the testing session.

Frustration:

This assessment was statistically significant, F (4, 212) = 2.714, p < .05, partial η^2 = .049. Levene's Test of Equality of Error Variances was statistically significant, F = 3.672, p < .01. The Dunnett's T post hoc procedure indicated that school psychologists with more than 15 years experience were less likely than those with 10 to 15 years experience to take action when examinee frustration was present during the testing session.

Hunger/Thirst:

This assessment was statistically significant, F (4, 211) = 4.366, p < .05, partial η^2 = .076. Levene's Test of Equality of Error Variances was not statistically significant, F = 1.777, p > .05. The Tukey's HSD post hoc procedure indicated that school psychologists with more than 15 years experience were less likely than those with 10 to 15 years and four to six years experience to take action when examinee hunger/thirst was present during the testing session.

Attention:

This assessment was statistically significant, F (4, 210) = 2.883, p < .05, partial η^2 = .052. The main effect indicated that there are mean differences between psychologists with differing experience levels. Levene's Test of Equality of Error Variance was not statistically significant, F = .549, p > .05. The Tukey's HSD post hoc procedure indicated significantly higher mean scores for school psychologists with seven to nine years experience and more than 15 years experience in comparison to school psychologists with four to six years experience when examinee attention was present during the testing session. School psychologists with four to six years experience were less likely to take action when attention difficulties were present during the testing situation than psychologists with four to nine years experience and those with 15 or more years of experience.

Motivation:

This assessment was statistically significant, F (4, 212) = 2.721, p < .05, partial η^2 = .049. Levene's Test of Equality of Error Variances was not statistically significant, F = 1.328, p > .05. The Tukey's HSD post hoc procedure indicated that school psychologists with more than 15 years experience were less likely than those with 10 to 15 years experience to take action when examinee motivation problems were present during the testing session.

Post Hoc Results:

Overall, specific post hoc analysis revealed that school psychologists with 10 to 15 years experience were statistically significantly more likely to take action than psychologists with more than 15 years experience when examinee fear, frustration, hunger/thirst and motivation problems were present during testing. School psychologists with four to six years experience were also more likely to take action than psychologists with more than 15 years experience when examinee hunger/thirst occurred during the testing session. Finally, school psychologists with seven to nine years experience and those with more than 15 years experience were more likely than school psychologists with four to six years experience to take action when examinee inattention was present during the testing situation.

Regional Location

Variable	F	p	partial tseT s'eneveL	2ת
Anxiety	F (3, 212) = 1.822	p > .05	.025	F = 2.116, p > .05
Emot. Upset	F (3, 212) = .637	p > .05	.009	F = .430, p > .05
Fatigue	F (3, 213) = .875	p > .05	.012	F = .358, p > .05
Fear	F (3, 210) = .689	p > .05	.010	F = 2.229, p > .05
Frustration	F (3, 213) = 1.302	p > .05	.018	F = 1.091, p > .05
Hunger/Thirst	F (3, 212) = .269	p > .05	.004	F = .473, p > .05
Inattention	F (3, 211) = .751	p > .05	.011	F = .220, p > .05
Motivation	F (3, 213) = .389	p > .05	.005	F = .894, p > .05
Rapport	F (3, 214) = .684	p > .05	.010	F = .381, p > .05
Refusal	F (3, 214) = 1.624	p > .05	.022	F = .465, p > .05
Shyness	F (3, 214) = .322	p > .05	.016	F = 1.928, p > .05
Sleepiness	F (3, 213) = .779	p > .05	.005	F = .502, p > .05
Temp. Illness	F (3, 214) = .097	p > .05	.001	F = .464, p > .05

* Clinically Significant at $p < .05$

** Clinically Significant at $p < .01$

Results:

As shown in the table above, the regional location of school psychologists did not indicate any significant mean differences when examinee in terms of their actions when child factors such as anxiety, emotional upset, fatigue, fear, frustration, hunger/thirst, inattention, motivation, rapport, refusal to participate/uncooperativeness, shyness, sleepiness, or temporary illness/sickness are present during the testing session. School psychologists are taking similar actions when these child factors are present during the testing situation in spite of their differing regional locations indicating that school psychologists across the United States may use similar testing practices in regards to these specific child factors.

APPENDIX G:

PROFESSIONAL PRACTICES ANOVA RESULTS

Assessment:

Variable	F	p	partial ⫪2	Levene's Test
Anxiety	F (3, 214) = 2.737	p < .05*	.037	F = 1.954, p > .05
Emot. Upset	F (3, 214) = .319	p > .05	.004	F = .571, p > .05
Fatigue	F (3, 215) = 1.409	p > .05	.019	F = .737, p > .05
Fear	F (3, 212) = 2.934	p < .05*	.040	F = 1.344, p > .05
Frustration	F (3, 215) = 2.397	p > .05	.032	F = 4.266,p < .05*
Hunger/Thirst	F (3, 214) = 2.258	p > .05	.031	F = 4.650, p > .05
Inattention	F (3, 213) = 4.243	p < .01**	.056	F = 1.177, p > .05
Motivation	F (3, 215) = 2.968	p < .05*	.040	F = 2.946, p < .05*
Rapport	F (3, 216) = 1.961	p > .05	.027	F = 2.132, p > .05
Refusal	F (3, 216) = 1.107	p > .05	.015	F = .180, p > .05
Shyness	F (3, 216) = 4.201	p < .01**	.055	F = 2.546, p > .05
Sleepiness	F (3, 215) = 1.443	p > .05	.020	F = 3.730, p < .05*
Temp. Illness	F (3, 216) = 1.480	p > .05	.020	F = 1.560, p > .05

* Clinically Significant at p < .05
** Clinically Significant at p < .01

As shown in the table above, the time spent doing assessment by school psychologists did not indicate any significant mean differences when examinee emotional upset, fatigue, frustration, hunger/thirst, rapport, refusal to participate/uncooperativeness, sleepiness or temporary illness/sickness were present during the testing session. Significant differences

were found when anxiety, fear, inattention, motivation, and shyness were present during the testing session.

Specific post hoc analysis of the child factors that were found to be clinically significant are as follows:

Anxiety:

This assessment was statistically significant, $F(3, 214) = 2.737$, $p < .05$, partial η^2 = .037. Levene's Test of Equality of Error Variances was not statistically significant, $F = 1.954$, $p > .05$. The Tukey's HSB post hoc procedure did not indicate mean differences. The time spent doing assessment by school psychologists did result in a statistically significant main effect, but post hoc analysis did not indicate mean differences in terms of practices when examinee anxiety was present during the testing session.

Attention:

This assessment was statistically significant, $F(3, 213) = 4.243$, $p < .01$, partial η^2 = .056. The main effect indicated that there are mean differences between groups of school psychologists depending on the time they spend participating in assessment in terms of their practices when examinee attention problems occur during testing sessions. Levene's Test of Equality of Error Variance was not statistically significant, $F = 1.177$, $p > .05$. The Tukey's HSD post hoc procedure indicated statistically higher means for school psychologists who participate in assessment very often in comparison to school psychologists who participate in assessment only slightly often when examinee inattention was present during the testing session.

Motivation:

This assessment was statistically significant, $F(3, 215) = 2.968$, $p < .05$, partial η^2 = .040. The main effect indicated that there are mean differences between groups of school psychologists depending on the time they spend participating in assessment in terms of their practices when examinee attention problems occur during testing sessions. Levene's Test of Equality of Error Variance was statistically significant, $F = 2.946$, $p < .05$. The Dunnett's T post hoc procedure indicated statistically higher means for school psychologists who participate in assessment very often in comparison to school psychologists who do not participate in assessment at all when examinee inattention was present during the testing session.

Shyness:

This assessment was statistically significant, $F(3, 216) = 4.201$, $p < .01$, partial η^2 = .055. The main effect indicated that there are mean differences between groups of school psychologists depending on the time they spend participating in assessment in terms of their practices when examinee shyness occurred during testing sessions. Levene's Test of Equality of Error Variance was not statistically significant, $F = 2.546$, $p > .05$. The Tukey's HSD post hoc procedure indicated statistically higher means for school

psychologists who participate in assessment very often in comparison to school psychologists who participate in assessment only slightly often when examinee shyness was present during the testing session.

Results:

Overall, specific post hoc analysis revealed that school psychologists who participate in assessment procedures very often were more likely to take action than psychologists who participate in assessment slightly often when examinee inattention or shyness are present during testing. School psychologists who participate in assessment procedures very often were more likely to take action than psychologists who do not participate in assessment at all when examinee motivation difficulties occur during the testing session.

Testing:

Variable	F	p	partial tseT s'eneveL 2ɳ
Anxiety	F (3, 213) = .379	p > .05	.005 F = 2.471, p < .05*
Emot. Upset	F (3, 213) = 1.826	p > .05	.025 F = 3.052, p < .05*
Fatigue	F (3, 213) = 2.103	p > .05	.029 F = 1.239, p > .05
Fear	F (3, 211) = .263	p > .05	.004 F = .125, p > .05
Frustration	F (3, 215) = .821	p > .05	.011 F = 3.510, p < .05*
Hunger/Thirst	F (3, 213) = .708	p > .05	.010 F = .261, p > .05
Inattention	F (3, 212) = .716	p > .05	.010 F = .043, p > .05
Motivation	F (3, 214) = .464	p > .05	.006 F = 1.868, p > .05
Rapport	F (3, 215) = .906	p > .05	.012 F = 1.464, p > .05
Refusal	F (3, 215) = 1.490	p > .05	.020 F = 1.374, p > .05
Shyness	F (3, 215) = .854	p > .05	.012 F = 5.186, p < .01**
Sleepiness	F (3, 214) = .915	p > .05	.013 F = .401, p > .05
Temp. Illness	F (3, 215) = 1.862	p > .05	.025 F = 2.188, p > .05

* Clinically Significant at $p < .05$

** Clinically Significant at $p < .01$

Results:

As seen in the table above, results indicate that the amount of time school psychologists spend participating in testing practices did not result in differentiated practices following the presence of examinee anxiety, emotional upset, fatigue, fear, frustration, hunger/thirst, inattention, motivation, rapport, refusal to participate/uncooperativeness, shyness sleepiness, or temporary illness during the testing sessions.

Response to Intervention (RTI):

Variable	F	p	partial ת2	Levene's Test
Anxiety	F (3, 214) = 2.472	p > .05	.033	F = 4.595, p < .05*
Emot. Upset	F (3, 214) = 2.535	p > .05	.034	F = .447, p > .05
Fatigue	F (3, 215) = .289	p > .05	.004	F = 1.772, p > .05
Fear	F (3, 212) = .579	p > .05	.008	F = 2.815, p < .05*
Frustration	F (3, 215) = 2.831	p < .05*	.038	F = .270, p > .05
Hunger/Thirst	F (3, 214) = .522	p > .05	.007	F = .665, p > .05
Inattention	F (3, 213) = 2.421	p > .05	.033	F = .624, p > .05
Motivation	F (3, 215) = 1.682	p > .05	.022	F = .043, p > .05
Rapport	F (3, 216) = .736	p > .05	.010	F = .371, p > .05
Refusal	F (3, 216) = .814	p > .05	.011	F = 1.116, p > .05
Shyness	F (3, 216) = 1.119	p > .05	.016	F = .545, p > .05
Sleepiness	F (3, 215) = .292	p > .05	.004	F = .242, p > .05
Temp. Illness	F (3, 216) = 1.739	p > .05	.024	F = 2.115, p > .05

* Clinically Significant at $p < .05$

** Clinically Significant at $p < .01$

As shown in the table above, the amount of time school psychologists spend participating in RTI activities did not result in any significant mean differences when examinee anxiety, emotional upset, fatigue, fear, hunger/thirst, inattention, motivation, rapport, refusal to participate/uncooperativeness, shyness sleepiness, or temporary illness during the testing sessions. Significant differences were found for frustration.

Specific post hoc analysis of the child factor that was found to be clinically significant is as follows:

Frustration:

This assessment was statistically significant, F (3, 215) = 2.831, p > .05, partial ת2 = .038. Levene's Test of Equality of Error Variances was not statistically significant, F = .270, p > .05. The Tukey's HSD post hoc procedure indicated statistically higher means for school psychologists who participate in RTI moderately often in comparison to school psychologists who do not participate in RTI at all when examinee frustration was present during the testing session.

Report Writing:

Variable	F	p	partial ת2	Levene's Test
Anxiety	F (3, 211) = 2.304	p > .05	.032	F = 1.108, p > .05
Emot. Upset	F (3, 211) = 2.853	p < .05*	.039	F = .469, p > .05
Fatigue	F (3, 212) = 3.064	p > .05	.042	F = 2.573, p > .05
Fear	F (3, 209) = .771	p > .05	.011	F = .292, p > .05
Frustration	F (3, 212) = 3.679	p < .05*	.049	F = .991, p > .05
Hunger/Thirst	F (3, 211) = 1.436	p > .05	.020	F = 1.257, p > .05
Inattention	F (3, 210) = .292	p > .05	.004	F = 1.102, p > .05
Motivation	F (3, 212) = .740	p > .05	.010	F = .491, p > .05
Rapport	F (3, 213) = .589	p > .05	.008	F = .061, p > .05
Refusal	F (3, 213) = .629	p > .05	.009	F = .828, p > .05
Shyness	F (3, 213) = 1.383	p > .05	.019	F = 2.595, p > .05
Sleepiness	F (3, 212) = 3.960	p < .01**	.053	F = 1.377, p > .05
Temp. Illness	F (3, 213) = .214	p > .05	.003	F = .392, p > .05

* Clinically Significant at p < .05
** Clinically Significant at p < .01

As shown in the table above, the amount of time school psychologists spend writing reports did not result in any significant mean differences when examinee anxiety, fatigue,

fear, hunger/thirst, inattention, lack of motivation, rapport problems, refusal to participate/uncooperativeness, shyness, or temporary illness/sickness were present during the testing session. Significant differences were found for emotional upset, frustration, and sleepiness

Specific post hoc analysis of the child factor that was found to be clinically significant is as follows:

Emotional Upset:

This assessment was statistically significant, $F(3, 211) = 2.853$, $p < .05$, partial $\eta^2 = .039$. Levene's Test of Equality of Error Variances was not statistically significant, $F = .469$, $p > .05$. The Tukey's HSD post hoc procedure indicated statistically higher means for school psychologists who participate in report writing very often in comparison to school psychologists who participate in report writing slightly often and those who do not participate in report writing at all when examinee emotional upset was present during the testing session.

Frustration:

This assessment was statistically significant, $F(3, 212) = 3.679$, $p < .05$, partial $\eta^2 = .049$. Levene's Test of Equality of Error Variances was not statistically significant, $F = .991$, $p > .05$. The Tukey's HSD post hoc procedure indicated statistically higher means for school psychologists who participate in report writing very often in comparison to school psychologists who participate in report writing slightly often when examinee frustration was present during the testing session.

Sleepiness:

This assessment was statistically significant, $F(3, 212) = 3.960$, $p > .01$, partial $\eta^2 = .053$. Levene's Test of Equality of Error Variances was not statistically significant, $F = 1.377$, $p > .05$. The Tukey's HSD post hoc procedure indicated statistically higher means for school psychologists who participate in report writing very often in comparison to school psychologists who participate in report writing moderately often, slightly often, and not at all when examinee sleepiness was present during the testing session.

Post Hoc Results:

Specific post hoc analysis revealed that school psychologists who participate in report writing procedures very often were more likely to take action than psychologists who participate in report writing moderately often, slightly often or not at all when examinee sleepiness is present during testing. School psychologists who participate in report writing procedures very often were also more likely to take action than psychologists who participate in report writing slightly often or not at all when examinee emotional upset occurs during the testing session. Finally, school psychologists who participate in report writing very often were also more likely than those who participate in report

writing slightly often to take action when examinee frustration occurs during the testing session.

Does time spent training school psychology interns and practicum students make a difference in individually administered norm referenced standardized testing practices?

Training:

Variable	F	p	partial ɳ2	Levene's Test
Anxiety	F (3, 212) = 1.598	p > .05.	022	F = .302, p > .05
Emot. Upset	F (3, 212) = .055	p > .05	.001	F = 1.957, p > .05
Fatigue	F (3, 213) = 3.140	p < .05*	.042	F = .528, p > .05
Fear	F (3, 214) = .600	p > .05	.008	F = .561, p > .05
Frustration	F (3, 213) = 1.965	p > .05	.027	F = 1.113, p > .05
Hunger/Thirst	F (3, 213) = .872	p > .05	.003	F = .423, p > .05
Inattention	F (3, 213) = .167	p > .05	.024	F = .437, p > .05
Motivation	F (3, 213) = 1.675	p > .05	.023	F = 3.986, p < .01**
Rapport	F (3, 214) = 1.432	p > .05	.020	F = 1.663, p > .05
Refusal	F (3, 214) = .282	p > .05	.004	F = .656, p > .05
Shyness	F (3, 214) = .342	p > .05	.015	F = 1.010, p > .05
Sleepiness	F (3, 213) = .468	p > .05	.012	F = .362, p > .05
Temp. Illness	F (3, 214) = .262	p > .05	.004	F = 3.446, p < .05*

* Clinically Significant at p < .05

** Clinically Significant at p < .01

As shown in the table above, the amount of time school psychologists spend training practicum and pre-doctoral students did not result in any significant mean differences when examinee anxiety, emotional upset, fear, frustration, hunger/thirst, inattention, lack of motivation, rapport problems, refusal to participate/uncooperativeness, shyness, or temporary illness/sickness were present during the testing session. Significant differences were found for fatigue.

Specific post hoc analysis of the child factor that was found to be clinically significant is as follows

Fatigue:

This assessment was statistically significant, $F(3, 213) = 3.140$, $p < .05$, partial η^2 = .042. Levene's Test of Equality of Error Variances was not statistically significant, F = .528, $p > .05$. The Tukey's HSD post hoc procedure indicated statistically higher means for school psychologists who participate in training very often in comparison to school psychologists who participate in training slightly often when examinee fatigue was present during the testing session.

APPENDIX H:

FACTORS MENTIONED: PAGE NUMBERS IN MANUAL

Bender Gestalt: Deviate behavior (6) Anxiety (7), uneasiness (7), Fatigue (7)

Children's Depression Inventory: No Factors mentioned for discontinuing testing (false negatives and false positives (2)

CTONI: Motivation (18, 49, 58), testing situation (18) guessing (18), environment (18, 54), examiner ease (18), on-task behavior (18), tiring (18), loss of interest (18), illness (18, 55), distraction (18), confusion (18), Notably unexpected results (18), visual acuity problems (49), Lack of exposure to testing (49), Cooperation (49), Abnormally taciturn (50), Block, freeze-up or panic (50), Emotional reactions (50), forgetfulness (50), rest breaks (54), physical well-being (54), emotional well-being (54), fatigue (54), state of health (54), nervousness (54), attitude (54), attention level (54), distress (58)

Draw a Person: Unwillingness to respond verbally (3), Physical environment (23)

ITPA-3: motivation (18, 30, 38), testing situation (18), guessing (18), environment (18), comfort (18), ease (18), on-task (18), tired (18), loss of interest (18), illness (18), distraction (18), confusion (18), results are different from what examiner expected (18), disinterested (30), fear (30), shyness (30), inattention (30), fatigue (30), low energy level (30), attitude (30),

K-BIT: Rapport (7, 11, 12, 14, 17) Impulsivity (11), physical and psychological environment (11), Examiner/Examinee Relationship (11), Frustration (11, 13, 14, 17, 18), Fatigue (11, 12, 14), Anxiety (11, 12, 13, 14, 17, 18), Motivation (12, 13, 17), shyness (12), Uncooperativeness (12, 18) need for excessive reassurance (12) trust (12), cynicism (12), self-consciousness (12, 13, 14), Insecurity (12), Thirst/Hunger (12), Restroom (12) Embarrassment (13), Fear (14) Defensiveness, Resistance and Hostility (14), Self-esteem (14) Refusal to participate (14) unsettling emotional stress (14) Tired and hot (14) Break (14) Inattention (14, 17, 18), Distractibility (17) mood changes (14, 18) Discomfort (14, 15) Inappropriate or silly responses (14) Activity level (17) Ability to sustain effort (17), self-concept (17) language usage (17), speech habits (17) attitude (17), work habits (17) Response to praise (17) Interest (18) Energy level changes (18) Depression (18), Fear (18)

KTEA: Motivation (10, 18), behavior problems (10), attention span (10, 22), distractibility (10, 22), rapport (10, 16), Interest (10), environment (16), psychological environment (16), frustration (16, 19, 22), fatigue (16), anxiety (16, 23), at ease (16, 19), low self-confidence (17), tired (17, 19), insecurity (17), power struggle (18), disappointment (19), fear (19), emotional stress (19), defensiveness (19), resistance (19), hostility (19), self-esteem (19), hot (19), bored (19), breaks (19), discomfort (19), inappropriate/silly responding (20), activity level (22), effort (22), speech habits (22), language usage (22), self-concept (22), modifications in affect (23), energy level (23), depression (23), relaxed (24), Cooperation (24) emotional disturbance (32), confidence (34)

Mini-Battery of Achievement: Physical environment (224), Adequate time for testing (225), Readiness of examinee (226), comfort (226), Not feeling well (226), positive environment (227), boredom (227), distractibility (227, 234), behavior (228, 234), concentration problems (228), vision or hearing problems (228), language problems (228), immaturity (228), speech defects (228), disabilities (228), attitude (234), poor relationship between examiner and examinee (234)

MCMI-III: distortion effects (3), Random responding (3), faking (3), denial (3), complaining (3), Resistance (3), Fatigue (3), Physically ill (6), behaviorally medicated (6), behavior (7), demographics (7), Current affective states (7), exaggeration (7), faking good/bad (7), ordinary life difficulties (8), minor adjustment disorders (8), depressive state (8), Anxiety (8, 111), Comfort (111), distractions (111), fatigue (111), Confusion (111), Sedation (111), drug or alcohol intoxification (111), Attitude (112), honesty (112), Seriousness (112), Openness (112), reticence (113)

MMPI-2: Distraction (8, 9), intrusions (8), Comprehension (8), physical conditions (8), emotional states (8, 13), visual acuity (8), dyslexia (8), receptive aphasia (8), learning disorder (8), drug or alcohol intoxication (8) withdrawal state (8), toxic reactions to infectious agents (8), organic deliria (8), disorientation from brain injury or concussion (8), post-seizure confusion (8), residual neurological impairment from prolonged polydrug regimes (8), confusional states during catatonic episodes (8), bouts of hallucinations (8), profound psychomotor retardation of a major depressive condition (8) extreme distractibility of a manic reaction (8), intellectually limited (9), learning disabled (9), severely culturally deprived (9), recent immigration to the US (9), testing environment (9), Cooperation (9, 15), Care in completing the test (9), attitude (13), Motivation (13), Lack of insight (15), Obsessive (15), faking good/bad (15), Confusion (16), Concentration (16), Carelessness (16), Random responding (16), Defensiveness (16), over-reporting/exaggeration (17)

NEO-PI-R: Physical environment (5, 11), factors affecting ability to perform a self report (4), random responding (5, 6), behavior (5), poor reading skills (5, 11), visually impaired (5), honesty (5), Accuracy (5), Carelessness (6), Confusion (6), Acquiescence (6), Nay-saying (6), uncooperative (6), unmotivated (6), Physical or mental inability (31), Rapport (32)

PIAT-R: Questions in record form: Interest (3), Motivation (3), Rapport (5), Lack of Confidence (6), hesitant to respond (6), Easily discouraged (6), toilet (6), drink (6), breaks (6) Impulsivity (7), Anxiety (7), Cooperation (7) Inattention (7), physical environment (7),

Rotter Incomplete Sentences Blank 2nd ed.: Illiteracy (3), disturbed respondent (3), uncooperative (3), writing and language difficulties (3), educational deficit (14), Physical disability (14), uncomfortable (15), Anxiety (15), physical behavior (15)

Slosson: Rapport (2), Interest (10) Breaks for drink of water, bathroom (10)

Stanford-Binet: Series of questions SB5 RECORD FORM Unusual or notable behaviors that depart from the expected behavior of the typical examinee (34), Extreme distractibility (16, 34, 43), unusual responses (34), anger or opposition (34), poor communication skills (34, 16), highly emotional (34, 41), Distraught (41), Frustration (40, 41), anxiety (18, 40, 41), Inadequacy (40), Rapport (40, 41, 42, 43, 45, 46), Illness (41), Breaks (41, 42, 43), Medical conditions (41), Fatigue (41, 43), temperament (42), Motivation (42), physical attributes (42) Recent emotional event (42), physical setting (43), Cooperative (43), Drink of water (43**)**, coaching or teaching to the test (16), Learning disabilities (16), Oral expression problems (16), Illness (17), taking medications (17), refusal (44), guessing (44), Frustration (44), Aggressive or Negativistic behaviors (44), Inadequacy (44,, 45), cooperation (45), oppositional attitudes (45, 46), socioeconomic and language differences between examiner and examinee (46)

TAT: Dull-witted (5), unresponsive (5), Resistance (5), Suspicion (5), Unfamiliar with testing (5), friendliness (5), environment (5), examiner characteristics (5), attitude (5), comfort (5), suspiciousness (6), willingness to speak freely (6), reticence (7), Cooperation (8), on-task (17), emotional state (20)

UNIT: Communication skill problems (39, 41) frustration (39, 43), Behavior Problems (39, 41) Unassertiveness, lack of persistence, unwillingness to take a risk (39) Rapport (39, 41, 42, 44) motivation (39) Mistrust and Reticence (40) Fatigue (40, 42), Anxiety and Trepidation (41, 43), Cooperation (41, 42) Thoughts drifting (41) Restlessness (42), boredom (42), discomfort (42) break -restroom, drink, stretch, walk (42), Interest (42) psychological and physical environment (42, 43, 44) Feelings of alienation and fear (44) Feeling secure (44)

Vineland Adaptive Behavior Scales: Setting, Environment, Rapport (65, 63,68, 80), Positive atmosphere (63) Session ending due to time constraints (65), Anxiety or ease (80), resentfulness(80) exaggeration of responses (81), Guessing (81)

Vineland SEEC Scales: Environment (34), Rapport (34), other factors that may affect the child's home or school environment (37)

Wechsler Memory Scale: Rapport (31, 32), cooperative relationship (31) Examinee mood changes (32) Change in activity level (32) Cooperativeness (32), Fatigue (32),

Boredom (32) Excessive anxiousness (32) Loss of interest (32), Apprehension (32) Brief rest periods (32)
Communication problems (32)

WISC-IV: Illness (24, 146), Non-verbal or uncommunicative (24, 9), psychotropic medications (24), Attention Span (9, 20, 22), Fatigue (21), break (21), physical environment (22), Rapport (22, 59), Cooperation (22, 23) Effort (22), Interest (22), resistance (23), tension (23), apprehension (23), Over stimulating and excessive entertaining can cause child to tire prior to beginning testing (23), Engaged in testing process (59), Anxiety (59)

Woodcock Johnson – III: Rapport (25, 38, 41), Ease (25, 33), Ill feeling (25), Refusal to Respond (25, 38, 42), Attention (26, 32, 38, 39, 42), Interest (26), Inappropriate Behavior (32, 33, 41), Conversation Proficiency (32), Cooperation (32, 42), Activity levels (32, 39), Concentration (32), Self-Confidence (32), Care in Responding (32), Comfort (33), Persistence (33), Fidgetiness (33), Restless (33), Emotional Problems (33), Concentration (33),Distractibility (34, 41), Environment (36), Interest (37), Test Scheduling (37, 41), Shyness (38), Breaks (3 8, 41, 48), Drink (39), Snack(39), Frustration (41, 42), Non-Compliance (41, 42), Impulsivity (41), Anxiety (42), Volatility/Aggression (42), Fatigue (48), Motivation/Volition (79), Emotional State(79)

WPPSI-III: Physical Environment (17), Attention (18, 20), Rapport (19, 21, 29, 53, 55), Cooperation (19, 20, 21), Fear (19), Shyness (19) Resistance (19, 20), Tiredness (19) Hesitance (19), temperament (19), Mood Changes (20), Boredom (20), Anxiety (20), Fatigue (20, 21), Fidgetiness (20), Breaks (20, 53), Restroom (20), Frustration (20), emotional dependency (20), Lack of self-confidence (20), Stubbornness (20), Emotional Upset (20), Engagement (53)

APPENDIX I:

EXAMINER'S MANUAL PAGE

NUMBERS FOR ADMINISTRATION AND PURPOSE

Examiner's Manual Page Numbers for Administration and Purpose:

Bender Gestalt *Ages: 3 to Adult*
Purpose 3, 4, 6
Administration 5, 6,

(Research Mongraph No. 3 of the American Orthopsychiatric Association, A Visual Motor Gestalt Test and Its Clinical Use, 1938)Visual Gestalt Psychology p. 3, 4

Children's Depression Inventory Ages
Purpose 1,2,
Administration 2,3, 5,

(Need Theory)

CTONI: *Ages: 6-0 to 89-11*
Purpose: 13,
Administration: 14,15, 16,54

Eclectic theory: English and English (1958) Salvia and Yselyke's Theory of intelligence, Cattell and Horn's Model, Das's Model, Jensen's Model and Wechsler's Model

Draw a Person Ages
Purpose: 1, 3,
Administration: 2, 3, 23

(Cooke and Ricci, 1800's, Burt 1921, Goodenough (1926), Harris, 1963, Dunn, 1967)

ITPA-3: *Ages 5 to 12-11*
Purpose: ix,
Administration: 18,

Osgood's (1957) communication model, behavioral models of language

K-BIT *Ages: 4 to 90 years*
Purpose: 1 & 2
Administration: 4, 15, 17, 18

Chrystalized and Fluid Intelligence

KTEA: *Ages: 6-0 to 18-11*
Purpose: 1, 10, 11
Administration: 5, 6, 15

Rasch-Wright latent trait model (Rasch, 1960; Wright, 1968)

Mini-Battery of Achievement: *Ages: 4 to 90+*
Purpose: 221, 222, 223
Administration: 222

(Need Theory)

Millon Clinical Multiaxial Inventory-III *Ages: Adults seeking mental health tx with 8th grade reading level*
Purpose: 3, 5, 6, 143, 144, 145,146, 147
Administration: 3, 5, 6, 111

Evolutionary Theory: Millon, 1990; Millon & Davis, 1996, Theory of Personality: Millon, 1969; 983, 1981, 1986a, 1986b

MMPI-2: *Ages: 18 to 90+ MMPI-A is for 14 to 18*
Purpose: 1, 8
Administration: 7,

Hathaway and McKinley 1930's and published article in 1940

NEO-PI-R *Ages: 17 and older*
Purpose: 1, 7, 9, 31, 32, 33, 35, 36, 58
Administration: 4, 5

Five Factor Model of Personality

PIAT-R *Ages 5-0 to 18-11*

Purpose: 1, 2, 3
Administration: 2, 5 twice

(Need Theory)

Rotter Incomplete Sentences 2nd ed. *Ages: 9th grade to 90+*
Purpose: 1,4, 5, 67
Administration: 4, 7, 8

Semi-structured projective technique: Word Association Tests to Sentence Completion method

Slosson *ages 5 to 21*
Purpose: 1, 2
Administration: 2

Modern Cognitive Theory

Stanford-Binet *Ages 2 to 85+*
Purpose 1,2,4, 5,
Administration 6,7,8, 9, 10, 20, 21, 41

(Need Theory)

Thematic Apperception Test: *Ages 7 to 90+*
Purpose: 3,
Administration: 5, 8

Psychoanalytic Theory

UNIT *Ages 5 years 0 months 0 days through 17 years 11 months 30 days*
Purpose: 1, 2
Administration: 8, 9, 32, 37, 38, 39, 41, 42

(Need Theory)

Vineland Adaptive Behavior Scales *Ages Birth to 18 years 11 months or low functioning adult.*
Purpose: 1, 2, 4
Administration: 1, 61

Edgar A. Doll (1935, 1965) and Public Law 94-142

Vineland SEEC Scales *Ages: Birth to 5 years, 11 months*
Purpose: 1, 2, 4, 5, 6,
Administration: 6, 29,

Edgar A. Doll (1935, 1965) and Public Law 94-142

Wechsler Memory Scale (*Need Ages)*
Purpose: 8 & 9
Administration: 10, 33

(Need Theory)

WISC-IV: *Ages 6:0 to 16:11*
Purpose: 7, 8
Administration: 21, 8, 98, 99, 109

(Need Theory)

Woodcock Johnson – III *Ages: 2 to over 90 years of age*
Purpose: 1, 2, 6, 7,
Administration: 7, 8, 23, 24,

Cattell Horn Cattell Theory, Information Processing Model

WPPSI-III *Ages 2years 6 months to 7 years 3 mo 2: 6 to 7:3*
Purpose 6, 7
Administration: 8, 15, 16,

Cognitive Developmental Theory and Contemporary Intelligence