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Comprehensive Assessment and Specific Learning Disabilities:
A Comparison of Discrepancy Versus RTI Psychological Reports

A Thesis submitted in partial satisfaction
of the requirements for the degree of

Master of Arts

in

Education

by

Danielle Eryn Stomel

March 2012

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ABSTRACT OF THE THESIS

Comprehensive Assessment and Specific Learning Disabilities:
A Comparison of Discrepancy Versus RTI Psychological Reports

by

Danielle Eryn Stomel

Doctor of Philosophy, Graduate Program in Education
University of California, Riverside, March 2012
Dr. Michael L. Vanderwood, Chairperson

This study examined the differences between special education eligibility psychological reports written for students assessed for Specific Learning Disabilities (SLD). Previous research documents the need for including previously attempted intervention and linking assessment results to intervention in SLD classification efforts in order to inform future instruction (Reschly, 1980). Forty reports were analyzed using a measure called the Psychological Report Survey, which was created for this study and designed to examine reports utility in informing future instruction. Twenty reports were written using a discrepancy approach and 20 reports were written using a Response to Intervention (RTI) approach. Results demonstrated statistical significant differences ($p < .01$) between the two types of reports for 4 of the 5 categories measured by the Psychological Report Survey. Findings revealed that differences do exist in the reports' use of data and evidence-based practices. However, no significant differences existed between the reports' Conclusion and Recommendations sections. Limitations of the study and future directions for future research in the area are discussed.

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Comprehensive Assessment and Specific Learning Disabilities:

A Comparison of Discrepancy versus RTI Psychological Reports

The data gathered by school psychologists to create a “comprehensive assessment” are used by Individual Education Plan (IEP) teams to make high-stakes decisions, which have the potential to make significant impacts on students’ lives. The data that are collected document students’ strengths and weaknesses, which may lead to decisions regarding services linked to academic and/or behavioral outcomes (Donovan & Nickerson, 2007). The purpose of assessment is to collect data with the intentions of making decisions regarding a student’s education (Salvia, Ysseldyke, & Bolt, 2007). Once the assessments are complete, psychologists create reports in order to help other the school based professionals understand the student’s current skill levels and possible deficit areas, so that they can make informed decisions regarding the student’s educational experience and future interventions (American Educational Research Association, American Psychological Association, & National Council on Measurement in Education [AERA/APA/NCME], 1999). Thus, it is important that the data gathered by the interdisciplinary teams are comprehensive, provide useful information to guide the team’s decision, and help inform future instruction (Vanderheyden, Witt, & Gilbertson, 2007).

Comprehensive assessments should contain data gathered ecologically and include data garnered through various methods, sources, and settings (Salvia, Ysseldyke, & Bolt, 2007; Tallent, 1993). Potential components of the data could be gathered through methods including: 1) a review of the student’s records; 2) interviews, 3) observations,

and 4) appropriate testing (RIOT; Christ, 2008). The data should also be collected in various domains including: 1) instruction; 2) curriculum; 3) environment; and 4) the learner (ICEL; Christ, 2008). Additionally, the best decisions are made based upon a broad collection of data from multiple sources (Salvia, Ysseldyke, & Bolt, 2007).

The goal of the assessment process is for educators to be able to draw conclusions from the data and suggest recommendations that will inform future instruction (Fletcher et al., 2004). In order to draw these conclusions, educators need data regarding the impact of current and previous instruction and information about instructional match through intervention. The data gathered during comprehensive assessment process are presented to IEP teams through the school psychologist's reports. It is essential for the identification process to focus on assessments that are directly related to intervention and to prioritize intervention over eligibility (Fletcher et al., 2004). The report can be seen as a source of documentation for what practices occurred during the assessment process. The purpose of this study is to examine differences in the process of assessing students at-risk for qualifying for having a Specific Learning Disability (SLD). This study will use psychological reports, written by school psychologists, as a documentation of this process. Therefore, it is important to first review the structure and components included in school psychological assessments used in qualifying students as having an SLD.

Report writing comprises a large proportion of current school psychologists' practice. A survey revealed that school psychologists spend 50% of their time conducting assessments (Bramlett et al., 2002). Hosp and Reschly (2002) also surveyed school psychologists, and found that they spend one half to two thirds of their time involved in

eligibility activities, such as assessment, IEP meetings, and other conferences. Because such a large proportion of current psychologists' time is devoted to assessment, it is important to investigate the content included in the reports, the procedures used to arrive at the assessment results, and to determine what information is seen as valuable by the team, in order to make the assessment process more efficient and beneficial tools for decision making.

The Structure and Components of Psychological Reports

In order to classify a student as having an SLD in the school setting, a comprehensive assessment must be completed and a psychological report that compiles the data must be written and presented to IEP teams (Individuals with disabilities education act (IDEA), 2004). Some authors suggest that the goal of the assessment in schools should not only be to classify students, but more importantly to inform intervention (Reschly, 1980; Tallent, 1993). Reschly (1980) stated those assessments that do not “result in effective interventions should be regarded as useless...” (p. 842).

Regardless of the eligibility model used at the school or district, psychological reports typically include the referral question, background information, assessment results, and conclusions and/or recommendations. Each of these sections includes information that constructs a portrait of the student, and is then used by IEP teams to inform decisions that will impact that student's education. As a whole, a successful comprehensive assessment reflects a linking of assessment results to intervention, serves as an informative aid in the IEP team's decision-making process, and specifies the student's educational experiences and current skills (Reschly, 1980).

Referral question and background information. A sufficient referral question presents the reason for referral in explicit, objective, and measurable terminology (Lichtenberger et al., 2004). This question or statement defines the mission of the assessment and justifies the acquisition of psychological information (Tallent, 1993). The purpose of the assessment should be clear and answered with use of the assessment tools that the psychologist has selected (Tallent, 1993). It is best practice for the referral question to be relevant, parsimonious, testable, and useful to guide instruction and intervention (Christ, 2008). All of the subsequent sections should reflect this referral question and, in part, answer it.

Additionally, the information provided in the background information section should be relevant to the referral question. Too much information is unnecessary, however too little information may not define the purpose of the assessment (Tallent, 1993). It is important for the reports to include enough pertinent information to support the referral question. Within the background information, many reports include information about students' past and present levels in the classroom setting and the effect that present and past instructional programs have had. These statements can be very informative of future interventions especially if there are data to support them, because they can provide the IEP team with evidence of previously effective or ineffective instruction, which can guide the decisions.

Exclusionary Factors. Individuals with Disabilities Improvement Act (IDEA) requires that exclusionary factors be addressed prior to assessment, and thus the psychoeducational reports should supply data that addresses whether or not the

underlying problem is due to visual, hearing, or other biological concerns, as well as cultural factors, environmental or economical disadvantages, limited English proficiency, or motor disability, mental retardation/intellectual disability, emotional disturbance, and lack of appropriate instruction (IDEA, 2004). It is important to include data that support each of the exclusionary and instructional factors, in order to accurately discern that the student's lack of academic progress or success is not due to factors outside of the child that can be remediated.

Intervention Results and Progress Monitoring. In defining SLD, the law requires schools to provide “data that demonstrate that prior to, or as a part of, the referral process, the child was provided appropriate instruction in regular education settings, delivered by qualified personnel” as well as, “data-based documentation of repeated assessments of achievement at reasonable intervals, reflecting formal assessment of student progress during instruction, which was provided to the child’s parents” (IDEA, 2004). Therefore, law requires providing pre-referral interventions and monitoring the student’s progress prior to special education consideration. This process is also time and cost effective, reduces the likelihood of assessing false positives, and provides valuable information about students’ skill levels (Fuchs & Fuchs, 1986; Fuchs et al., 2003; Lichtenstein, 2008). Thus, it is important that psychological reports include pre-referral intervention data and results.

According to research, providing evidence-based interventions to students struggling with academics improves student outcomes (Fuchs & Fuchs, 1986). Fuchs and Fuchs (1986) demonstrated the effects of systematic formative assessment. The findings

of this meta-analysis showed that it can be expected for students to achieve, on average, 0.7 standard deviation higher than students who are not systematically progress monitored, when progress monitoring alone is used to determine intervention effectiveness. Therefore, the use of progress monitoring has a desired impact on students' achievement and is extremely useful in informing intervention. Thus, progress monitoring and evidence-based intervention information is useful to include in psychoeducational reports.

Assessment results. The assessment tools used in the comprehensive assessment will, ideally, reflect the referral question and attempt to answer part of that question. Because one goal of the assessment is to inform future intervention, the assessment results should be able to be linked to intervention development (Batsche et al., 2008). Researchers have found that reports that draw a clear link between the referral question and corresponding answers are favored by teachers and parents over those that are less clear (Mastoras et al., 2011). As discussed previously, reports are written with the intention of being read by the IEP team; thus, the language in which they are written, particularly the assessment results, should be clear, understandable, and free of technical jargon (Brenner, 2003; Harvey, 2006; Pelco et. al, 2009; Tallent, 1980, 1993). Furthermore, the results should be discussed in a way that explicitly specifies what the child could and could not do given his or her current skill level (Lichtenberger et al., 2004).

Conclusions and recommendations. The conclusion and recommendation section of the psychological report is viewed as the most important (Brenner, 2004;

Harvey, 2006). This section should draw upon all of the assessment results and reference the questions stated in the reasons for referral (Brenner, 2003; Tallent, 1993). In 1988, Reschly stated that in the future, indication of a successful assessment would be whether it has a strong link with intervention, not merely its ability to classify students. Reschly's idea for the future is viewed as today's best practice (Batsche et al., 2008). Salvagno and Teglassi (1987) found that teachers desire and prefer recommendations that provide specific guidelines for implementation and are easy to follow. Therefore, useful and pragmatic recommendations that guide the team in implementing future instructional practices are ideal (Brenner, 2003). The IEP team and teachers should be able to use the recommendations to assist them in teaching the student based upon his or her current skill level.

Unfortunately, teachers are often dissatisfied with psychological reports because the recommendations in the reports are "unusable" or uninformative (Tallent, 1980). D'Amato and Dean (1987) found that the overall probability that information from the psychological report would be used in the IEP was .33 across all investigated areas. Therefore, although school psychologists spend time writing reports, the teams frequently do not find the information provided, specifically, the recommendations sections, useful. Including evidence-based interventions in the recommendation section of a report provides the IEP team, including teachers, with feasible, useable suggestions that can be implemented in the classroom.

Defining and Identifying SLD in the Schools

According to *Best Practice in School Psychology V*, “there is no standard battery for determining the presence of a SLD (Specific Learning Disability)” (Lichtenstein, 2008, p. 309), and thus the process of identifying a student as having an SLD is of the most difficult diagnostic tasks (Benson & Newman, 2010). Additionally, NASP (2011), the American Academy of School Psychology (2004) and IDEA (2004) state that SLD evaluation should be comprehensive and assess in “all areas of suspected disability” (Sec. 615 (b)(3)(B)). Due to the lack of an SLD “battery” to facilitate classification, and the continued criticism of the discrepancy model (Fuchs, Mock, Morgan, & Young, 2003; Gresham & Vellutino, 2010; Vaughn & Fuchs, 2006), the federal government modified the regulations for determining the existence of an SLD with its most recent revisions of the Individuals with Disabilities Education Improvement act of 2004 (IDEA, 2004). Although states specifically adopt criteria for determining whether a child has an SLD as defined by IDEA, the revision limited states by prohibiting them from *requiring* the use of a severe discrepancy between intellectual ability and achievement, and permitted the use of a process based on the child’s response to scientific, research-based intervention, and allowing the use of other alternative research-based procedures for determining whether a child has an SLD. Additionally, the underachievement must not be the result of exclusionary factors. In summary, the newest revision of IDEA allows for schools to choose to use a “Discrepancy Model Approach,” a “Response to Intervention” approach, or an alternative research-based approach for determining whether a student has a Specific Learning Disability. This legal document has implications for practicing school psychologists, as their assessment process, model, and report content may change.

Two models for identifying SLD

Discrepancy model. A discrepancy eligibility model defines an SLD as an unexpected underachievement, measured by the difference between a student's Intelligence Quotient (IQ) and achievement scores, which is attributed, in California, to a psychological processing deficit (California Education Code, Part 30, Section 56337; Dombrowski, Kamphaus, & Reynolds, 2004; Kavale & Spaulding, 2008; Swanson, 1999). In this model, the emphasis is placed on assessment scores, thus the psychologists' reports typically include assessments of intelligence, achievement, and, in some states, processing, in addition to providing evidence that the deficit is not caused by exclusionary factors (Reschly & Hosp, 2004).

Although widely used, this current model has undergone significant criticism (Fuchs et al., 2003; Lyon et al., 2001; Vaughn & Fuchs, 2006). According to the authors of a paper presented at the Learning Disabilities Summit (Fletcher et al., 2001), the discrepancy between IQ and achievement is neither a necessity nor is it sufficient in identifying students with SLD. Additionally, the President's Commission on Excellence in Special Education (2002) emphasized the importance of identifying and intervening early, simplifying the identification process, using universal design in accountability tools, and the need for intervention, thus de-emphasizing and critiquing the necessity of using IQ tests in the process of identifying students as having an SLD. Sternberg and Grigorenko (2002) and Peterson and Shinn (2002) highlighted significant flaws in the discrepancy model. One of their findings concluded that IQ assessments do not

necessarily capture the entire construct of intelligence, thus questioning the utility of these measures.

Furthermore, students with and without IQ-achievement discrepancies can respond to positively intervention (Siegel, 1992; Stage, Abbott, Jenkins, & Berninger, 2003; Vellutino, Scanlon, & Lyon, 2000). Additionally, there are differences in the application of the SLD discrepancy identification process not only across, but also within states. Therefore, the use of this process is not reliable and should not be the sole criterion in SLD identification (Kavale, 2001).

In terms of directly informing intervention, Gresham and Witt (1997) concluded that school study teams frequently ignore the results of IQ scores in making classification and placement decisions and that “intelligence tests contribute little reliable information for the planning, implementation, and evaluation of instructional interventions” (p. 249). In the literature, there is limited empirical evidence that supports the use of IQ and discrepancy models to inform intervention (McDermott, Fantuzzo, & Glutting, 1990). Although the discrepancy model has undergone harsh criticism in the literature and limited evidence exists to suggest that the information gathered is useful for informing instruction, it is still widely used in California.

RTI model. A Response to Intervention (RTI) model has been suggested as an alternative method to determine eligibility, in response to the overwhelming criticism of the discrepancy model (Fuchs et al., 2003; Vaughn & Fuchs, 2006). This model places emphasis on screening, intervening, and progress monitoring students, and is viewed as the leading alternative practice to identifying students as learning disabled (Burns,

Appleton, & Stehouwer, 2005; Fuchs et al., 2003; Fuchs & Young, 2006; VanDerHeyden, 2010). Those who advocate an RTI approach view learning difficulties contextually and in light of the educational and instructional variables (Harvey & Struzziero, 2008).

A school using an RTI model typically uses skill-based assessment tools to progress monitor and examine the impact that various instructional factors have on students' achievement over time. The use of skill-based assessment is supported throughout the literature because of its association with an increase in students' achievement (Fuchs, Deno, & Mirkin, 1984; Fuchs & Fuchs, 1986; Stecker, Fuchs, & Fuchs, 2005). Using skill-based assessments allows educators to consistently monitor the impact of intervention. This data can provide educators with information needed to modify the instruction or intervention when necessary, in order to meet a student's needs (Deno, 2003). In addition to providing instructional information, skill-based assessments can be used to discriminate between groups of students that are in need of intervention and those that are not in need (Sophie & Riccio, 2002).

Skill-based assessments provide evidence of the impact of empirically based interventions executed with the student, as well as repeated documentation of a student's achievement levels. In an RTI model, interventions are modified or changed after a period of time that a student is not making progress (Fuchs, Mock, Morgan & Young, 2003). This data can illustrate a potential student's continual lack of progress, despite the attempts of various empirically based interventions. An RTI model for eligibility, thus, ensures that a student's lack of progress is not due to instructional factors. Furthermore,

skill-based assessments can be used to document a compliance with “treatment validity,” which states that a student should not be placed in a special education setting without prior evidence showing that the student’s achievement is impacted more positively in the more restrictive environment than in the general education classroom (Fuchs, Fuchs, & Speece, 2002).

Psychologists’ reports include evidence that directly indicates the student’s rate of learning lags behind that of peers’, despite appropriate instruction and intervention in general education, which has led the team to commit to the evaluation of an SLD (Lichtenstein, 2008). Specifically, comprehensive reports in an RTI model typically include a history of screening, progress monitoring data, and changes in intervention, in addition to comprehensive assessments that provide evidence of low achievement that is not due to sensory impairments or other disabilities (Fletcher & Vaughn, 2009; Francis et al., 2005; Reschly, 2005). Because the data in an RTI model are obtained directly from the intervention results, the psychological reports include a clear link to the intervention. Furthermore, the skill-based assessment data provide a history of response to various empirically based interventions, which can be used by teams to inform future intervention. Therefore, the information provided in an RTI psychological report includes assessment data that are directly linked to instructional practice and intervention, and illustrate that the causes are not due to instructional factors from repeated data-based documentation that was collected during previous intervention attempts with skill-based assessments.

Purpose of This Study

Although numerous studies have examined various aspects of psychological reports (Harvey, 2006; Mastoras et al., 2011; Tallent, 1980, 1993) as well as the differences between the RTI and discrepancy approach to SLD eligibility (Dombrowski et al., 2004; Gresham & Vellutino, 2010; Sophie & Riccio, 2002), a review of the literature did not produce any studies examining a combination of these areas of inquiry. The current study seeks to examine the products of these two eligibility models, psychological reports, in order to determine if significant differences exist when comparing the components of these two eligibility models' reports using the Psychological Report Survey (PRS), an instrument created specifically for this study's purpose.

The purpose of the present study will examine the following research questions:

- 1) Are there significant differences in the degree of focus on academic skills in the referral question and background information between discrepancy reports and RTI reports, as measured by the Psychological Report Survey?
- 2) As measured by the Psychological Report Survey, do the discrepancy and RTI and reports differ significantly in their inclusion of exclusionary factors and data to support them?
- 3) Is there a difference in the use of empirically supported interventions and discussion of intervention results between the two types of reports?
- 4) Are there significant differences in the manner assessment results are used to support future steps?

- 5) Is there a significant mean difference between discrepancy and RTI reports on the Psychological Report Survey in their use of evidence-based or pragmatic recommendations to IEP teams?

It is hypothesized that due to the nature of RTI reports, with the emphasis of using data to support decision making, as well as evidence based interventions and monitoring students' response to intervention, that they will show significantly higher means for each of these questions than the discrepancy reports.

Method

Design

In order to compare the two SLD eligibility processes, reports were used as the products of the process that school psychologists completed in order to arrive at their conclusions. School psychologists wrote the psychoeducational reports as part of an individualized assessment for students referred for possible placement in special education. School-based professionals were contacted in order to collect unidentified psychological reports from schools using the discrepancy model or RTI for eligibility. School psychologists or district directors of special education were contacted by email, in order for the researcher gain permission to collect reports.

In total, 40 school psychological reports were analyzed, through use of a constructed Likert rating scale, for content and inclusion of necessary aspects that comprise a comprehensive evaluation of SLD.

Participants

Five school districts across California provided unidentified psychological reports with all identifying information removed. Two districts were located in suburban, high social economic status (SES) areas (5% and 2% free and reduced lunch), two districts were located in urban areas (82% and free 21% and reduced lunch), and one district was located in a rural area (42% free and reduced lunch). All of the reports were written by district employed, masters or specialist level school psychologists. The reports were composed as part of an elementary student's (K- 5 or 6 depending on the school) initial (n=30) or triennial (n=10) evaluation for SLD classification.

Twenty assessments were conducted through the use of a discrepancy model. These reports typically use an intelligence test, a standardized achievement test, and a test of perceptual or memory processing. The measures most commonly used in the discrepancy reports included the Woodcock-Johnson-III Normative Update Tests of Cognitive Abilities (WJ-III COG; Woodcock et al., 2007) or the Wechsler Intelligence Scale for Children-Fourth Edition (WISC-IV; Wechsler, 2004) to assess IQ, the Wechsler Individual Achievement Test (WIAT-III; Wechsler, 2009) or the Woodcock-Johnson-III Normative Update Test of Achievement (WJ-III ACH; Woodcock et al., 2007) to assess achievement, and the Beery-Buktenica Developmental Test of Visual-Motor Integration 6th Edition (VMI; Beery, Buktenica, & Beery, 2006) and the Test of Auditory Processing Skills, Third Edition (TAPS; Martin & Brownell, 2005) to assess processing deficits (See Table 1).

The other 20 assessments were conducted through the use of an RTI model. These reports typically included intervention and progress monitoring data, a standardized

achievement test, and a test of processing. The measures most commonly used in the RTI reports included DIBELS NEXT (Dynamic Indicators of Basic Early Literacy Skills; Good & Kaminski, 2002) probes to assess screening and progress monitoring, the WIAT-III (Wechsler, 2009) or the WJ-III ACH (Woodcock et al., 2007) to assess achievement, and the Comprehensive Test of Phonological Processing (CTOPP; Wagner, Torgesen, & Rashotte, 1999) to assess processing deficits.

Instrumentation

The Psychological Report Survey (PRS), a 30 question, Likert rating scale (see Appendix A) was constructed to analyze each report's content in five areas: 1) Referral Question and Background Information, 2) Exclusionary Factors, 3) Intervention Results, 4) Assessment Results, 5) Conclusions and Recommendations. Responses to the PSR statements were rated on a 4-point scale ranging from *Never* (1), *Some what* (2), *Mostly* (3), or *Completely* (4). The scale developed for this study is consistent with the current literature in the area, as well as legal and ethical concerns in the field. The first draft of the scale was evaluated by a university faculty member and graduate level research team. It was then revised, and then re-examined by the faculty and team members. After the second revision, the scale was sent to 5 experts in the field, including 3 professors and 2 practitioners. Two of the 5 experts provided feedback. Once the feedback was integrated into the scale, it was deemed as appropriate for use in this study.

Reliability.

Internal consistency. One of the most commonly used indicators of internal consistency, Cronbach's alpha coefficient (Pallant, 2010), was used to calculate the

internal consistency of the scale. Ideally the Cronbach's alpha of the scale should be above .7 (DeVellis, 2003 as cited in Pallant, 2010), however, for research purposes, the recommended reliability coefficient should be at least .6 (Salvia, Ysseldyke, & Bolt, 2007). The full Psychological Report Survey scale was examined, in addition to each individual subscale. The resulting internal consistency of the full scale was .95, indicating very high reliability. The subscales' internal consistency ranged from .76 - .97.

Inter-rater. The author analyzed each of the forty reports. Twenty percent of the reports were randomly selected and analyzed by a fellow graduate student to determine the rate of agreement as an index of interrater reliability. Both of the assessors followed the same sequence: familiarization with the rating scale, read a report, then read the report again while completing the rating scale. The percent agreement was 97%, with a variance ranging from 87-100%, across the observation codes. A Kappa Measure of Agreement, which is a more robust measure of agreement and takes into account the agreement occurring by chance, yielded a score of .75 ($p < .0005$), which represents good agreement (Pallant, 2010).

Results

Group Differences

To address the 5 research questions, independent *t*-tests were conducted for each subscale. The two independent groups included the two types of eligibility model and the dependent variables were the scores received on the scale. Because multiple *t*-tests were conducted, a Bonferroni adjustment was conducted in order to control for Type 1 error, as such, the significance level that was used in this study was 0.01. Because the test statistic

is robust to violations of assumptions, slight variations in this sample's homogeneity of variance and normality remain valid for interpretation.

Question 1

The Referral Question and Background Information subscale was created by combining Questions 1-5. With respect to the first research question: significant differences in the degree of focus on academic skills in the referral question and background information between discrepancy reports ($M=16.10$, $SD=1.59$) and RTI reports ($M=19.95$, $SD=0.22$; $t(38)= 10.76$, $p=0.000$) were found as measured by the Psychological Report Survey. The magnitude of the differences in the means (mean difference= 3.85, 95% CI [3.10, 4.60]) was large ($d=1.49$; Cohen, 1988 as cited in Pallant, 2010). The hypothesis that RTI reports would have significantly greater mean scores ($M=19.95$) as compared to the discrepancy reports ($M=16.10$) was confirmed (See Tables 2 and 3).

Question 2

Each of the exclusionary factors had a representative question on the scale (Questions 7-13), as well as an overall question pertaining to the report's use of data to support the exclusionary factors (Question 6). These 8 questions were combined and analyzed statistically to create the Exclusionary Factor subscale. The t -test results indicated that the hypothesis was supported, in that significant differences between the means of the discrepancy reports ($M=21.5$, $SD=4.64$) and RTI reports ($M=30.5$, $SD=3.98$, $t(38)= 6.91$, $p =0.000$) were found as measured by the Psychological Report Survey. The

magnitude of the differences in the means (mean difference= 9.45, 95% CI [6.68, 12.22]) was large ($d= 2.19$; Cohen, 1988 as cited in Pallant, 2010). See Tables 2 and 3.

Question 3

The Intervention Results subscale was created by combining Questions 14- 18. The third research question sought to discern whether differences existed between the models' use of empirically based interventions and intervention results. The results indicated that significant differences do exist between the discrepancy reports ($M=6.95$, $SD=1.50$) and RTI reports ($M=20.0$, $SD=0.00$, $t(38)= 38.82$, $p =0.000$) were found as measured by the Psychological Report Survey. The magnitude of the differences in the means (mean difference= 13.05, 95% CI [12.35, 13.75]) was very large ($d =12.3$; Cohen, 1988 as cited in Pallant, 2010). The hypothesis that RTI reports will evidence significantly higher usage of evidence-based interventions, and will also report intervention results more frequently than discrepancy reports was confirmed. See Tables 2 and 3.

Question 4

For the fourth research question, Questions 19-23 were combined to create the Assessment Results Subscale. This research question addressed whether significant differences existed between the models' use of assessment results to inform future interventions. The results indicated that significant differences do exist between the discrepancy reports ($M=13.40$, $SD=1.10$) and RTI reports ($M=20.00$, $SD=0.000$, $t(38)= 26.94$, $p =0.000$) as measured by the Psychological Report Survey. The magnitude of the differences in the means (mean difference =6.60, 95% CI [6.09, 7.11]) was very large (d

= 8.52; Cohen, 1988 as cited in Pallant, 2010). Again, the hypothesis that the RTI reports would have a significantly greater mean score ($M=20.00$) than the mean score of the discrepancy reports ($M=13.40$) was confirmed (See Tables 2 and 3).

Question 5

The purpose of the fifth research question was to determine whether significant differences existed between the two types of reports in their inclusion of conclusions and recommendations, and whether the recommendations were feasible for teachers to implement. Questions 24- 30 were combined to create the Conclusions and Recommendations subscale, which was analyzed in order to discern whether differences between the two models of reports exist. The results of the t -test indicated that on this scale there were no significant differences between the mean scores of the discrepancy reports ($M=13.65$, $SD=3.96$) and RTI reports ($M=16.65$, $SD= 6.79$, $t(38)= 1.71$, $p =0.098$). The magnitude of the differences in the means (mean difference= 3.00, 95% CI [-.59, 6.59]) was medium ($d =.53$; Cohen, 1988 as cited in Pallant, 2010). The mean score for the RTI reports was slightly larger ($M=16.65$) than the mean score of the discrepancy reports ($M=13.65$), however the differences were not statistically significant. Therefore, the hypothesis that the RTI reports would have a larger mean score on this subcategory was not confirmed (See Tables 2 and 3).

Discussion

The purpose of this study was to investigate whether significant differences existed between school psychological reports from two models of SLD eligibility in terms of the information collected and provided to IEP teams in making qualification

decisions, as measured by the Psychological Report Survey. This study examined initial and triennial psychoeducational reports gathered from five school districts across California. The results indicated that significant differences did exist between the two models for four of the five subsections of the Psychological Report Survey. The results of this study present fairly compelling evidence that suggests one model of SLD determination provides the IEP teams with more information that research has demonstrated to be useful and informative of future interventions and appears to encourage increased use of intervention data (Batsche et al., 2008; Harvey & Struzziero, 2008; Salvagno and Teglassi, 1987).

Referral Question and Background Information

The first finding of this study suggests that the RTI reports, on average, provided significantly more specific, objective, information that was pertinent to the assessment with regard to the Referral Question and Background Information sections. This result confirmed the hypothesis and was expected. Because the process of RTI emphasizes the collection of data that are closer to the problem, in order to support the decision making process (Burns, Appleton, & Stehouwer, 2005; Fuchs et al., 2003; Fuchs & Young, 2006; VanDerHeyden, 2010), it was expected that the RTI reports would provide referral questions and background information that are measurable, relevant, and could be answered using the proposed assessment tools. Since the referral question states the purpose of the subsequent assessment, it is ideal for it to be stated in explicit and objective terminology (Lichtenberger et al., 2004; Tallent, 1993). The RTI model reports typically used problem solving as a means to identify the specific the student's area(s) of

weakness and how he or she previously responded to evidence-based interventions. The use of previous response data prompt the referral questions to be focused on the specific areas of concern that the student exhibited.

Additionally, the RTI reports, on average, contained specific data regarding the student's current levels of performance in their naturalistic setting. The information regarding present levels of performance in the discrepancy reports were, on average, discussed anecdotally and lacked data to support the statements. Therefore, the RTI reports provided more concrete data, which would allow their teams to make decisions based on objective, rather than subjective data.

The RTI reports, on average, discussed the present and past instructional programs, as well as their effect on the student's academic experience. The discrepancy reports, however, presented very little, if any, information regarding instruction. It is important for team members to be aware of the impact of the instructional programs, as well as data to support these statements, in order to discern whether this student's lack of academic progress was due to the lack of instructional exposure or quality, or whether it was due to the presence of a disability. Additionally, the law requires that IEP teams provide data showing that the student was provided adequate instruction prior to inclusion in special education (IDEA, 2004). Overall, the RTI reports in this study were consistent with research, in that they used objective data when making statements regarding students' present levels (Burns, Appleton, & Stehouwer, 2005; Fuchs et al., 2003; Fuchs & Young, 2006; VanDerHeyden, 2010).

Exclusionary Factors

IDEA (2004) requires that prior to qualifying a student as eligible under SLD, IEP teams must provide evidence to support that the underachievement is not due to any of the exclusionary factors (i.e. cultural factors, environmental or economical disadvantages, limited English proficiency, visual, hearing or motor disability, Intellectual Disability, Emotional Disturbance, or lack of appropriate instruction). The results from this study confirmed the hypothesis that the RTI reports would present statistically significantly more of the exclusionary factors. The psychologists that wrote the RTI reports, on average, provided more data to support each of these exclusionary factors, as well as specifically mentioning them in the report. The psychologists that wrote the discrepancy reports, on average, provided evidence of some of the exclusionary factors, but infrequently specifically mentioned the factors prior to drawing their conclusions regarding special education eligibility.

Additionally, none of the discrepancy reports included evidence that student's academic struggles were not due to a lack of appropriate instruction. Conversely, because of the nature of the RTI process, not only did most of these reports explicitly cover this exclusionary factor, but they also provided evidence through the use of empirically based interventions. The RTI model reports, in this study, provided more information regarding instruction, which is assumed to be a result of the models' use evidence-based interventions and the process involved in matching instruction to students' skill levels.

Intervention Results

Intervention data provides information regarding how the student responds to specialized academic instruction and can be used to inform future decisions and

instructional approaches (Fuchs & Fuchs, 1986). The results from this study indicate that the RTI reports included significantly more information regarding students' responses to intervention than the discrepancy reports. Although some discrepancy reports indicated the use of previously attempted interventions, these reports frequently lacked information regarding whether the interventions were evidence based, the frequency and duration that the interventions were used, and progress monitoring data.

As discussed previously, researchers have found that the use of progress monitoring leads to improved outcomes for students (Fuchs & Fuchs, 1986), therefore, with the inclusion of this information, the RTI reports give the IEP teams specific, objective data that they can further base their decisions upon. Additionally, with the modifications of IDEA, stronger emphasis was placed on intervention response prior to referral for special education (IDEA, 2004). Furthermore, the RTI reports include more objective data that can be used by IEP teams to make eligibility and instructional decisions, in addition to adhering to the law's requirements.

Assessment Results

According to previous research, it is important for psychological reports to draw a clear link between the assessments and the referral question, and to use assessment data that will provide information that will be useful in the decision making process and inform future instruction (Batsche et al., 2008). Additionally, previous research revealed that IEP teams find report data that are clear, understandable, and specific to be most informative (Brenner, 2003; Harvey, 2006; Pelco et. al, 2009; Tallent, 1980, 1993).

The RTI reports had significantly higher mean ratings in their use of assessment results to inform intervention. Again, the hypothesis for this research question was confirmed. On average, both types of reports linked the assessments to the referral question and refrained from including technical jargon, however, the RTI reports produced information that could lead to instructional changes in the classroom setting, as well as discussed the results in terms of a student's academic skills, which could be improved. Additionally, the RTI reports included information from curriculum or skill-based assessments, which, according to research, helps for inform future instruction (Fletcher & Vaughn, 2009; Fuchs & Fuchs, 1986). The RTI reports, thus, presented the assessment results ways that are consistent with what research considers to be best practice, as well as what teachers and IEP teams consider to be most useful (Batsche et al., 2008; Tallent, 1993).

Conclusions and Recommendations

It was predicted that the RTI reports, on average, would yield significantly higher mean ratings on the Psychological Report Survey in terms of the inclusion of feasible, evidence-based recommendations in the conclusion and recommendation section of the reports, as the RTI process emphasizes the use of evidence based interventions and using that data to guide future practice (Batsche et al., 2008). However, the results revealed that there were no significant differences between the two types of reports on this construct. On closer inspection, it became clear that the reports written through an RTI model for eligibility rarely included any recommendations. Although these reports stated students' strengths weaknesses in terms of academic skills that could be improved upon and

included conclusions that were clearly linked to the assessment and intervention results, the RTI reports did not include recommendations that teachers could implement in their classrooms. The discrepancy reports, however, frequently included recommendations in their conclusion sections, however these recommendations were vague, general, and lacked empirical support. These recommendations included statements such as, such as “move seat closer to the front” and “use a multi-modality approach to learning.”

This result is consistent with the previous research. Research in the area has found that teachers are often dissatisfied with psychological reports because they lack useful, pragmatic information that can be used in guiding future instructional practice (Batsche et al., 2008; Brenner, 2003). It is unfortunate that, in this study, neither type of report provided valuable information in this area. Previous research has found that IEP teams view the recommendation sections as the most important and useful part of the psychological report because of the information provided that can guide the decision making process (Brenner, 2003; Salvagno & Teglassi, 1987). Unfortunately, in this study, that type of information was not superior in either of the model’s reports. Additionally, current best practice emphasizes the inclusion of pragmatic recommendations that will help guide IEP teams in making their eligibility and instructional decisions (Batsche et al., 2008, Brenner, 2003). Results from this study demonstrate that neither model for eligibility provided teams with superior recommendations that could be used in decision-making situations. Furthermore, this study adds to the literature in that both RTI and discrepancy reports lack useable, informative recommendations that teachers and IEP teams can use and implement in the classroom setting.

Limitations

Limitations of this study are associated with characteristics of the sample and the quality of the Psychological Report Survey. Primarily, due to the small sample size (N=40), the study's power in detecting statistical significance was limited. A power analysis revealed that given an effect size of .80 (which is considered to be a large effect size, Cohen, 1988 as cited in Pallant, 2010), an alpha level of .05, and a recommended desired power of .80 (Cohen, 1988 as cited in Pallant, 2010), the total sample size should have been 52 (26 reports in each group). Although this study has an N=40 and the power to accurately discriminate differences might have been compromised, differences were still identified.

Additionally, the sample was limited in that the reports utilized in this study were gathered through convenience methods. Districts with connections to a state-wide pilot contacted and asked to participate in this study. Although the resulting participants came from 5 districts in California, overall the study lacks generalizability because of the small sample size and lack of random collection.

Although the reports were gathered from different school districts in California, each of these districts may have different types of report requirements. As such, setting-specific suggestions or requirements related to the districts' legal teams or intermediate agencies present a confounding factor in interpreting the differences between RTI and discrepancy-based reports in this sample. Additionally, it is possible that some of the desired information was included in reports presented by other team members at the IEP meeting. Despite these possible limitations, results indicate that the discrepancy and RTI

reports were very similar across districts, which could be interpreted as a strength of this study.

Additionally, a psychologist effect may have played a role, as well. Because all of the identifying information was removed prior to the collection of the reports, the researchers did not have access to the authors of the reports. Therefore, the same psychologists may have written some of the reports.

Another limitation of this study is the lack of data regarding the Psychological Report Survey. Because there are no other known tools similar to this scale, it is unknown how the scores on this scale would relate to scores on a different scale (construct validity). Additionally, although the scale was created based on research and was reviewed by experts in the field, it is unknown as to whether this survey is truly representative of the domains included in psychological reports.

Future Directions

Future research examining the differences between psychological reports conducted through either an RTI or discrepancy approach should be conducted with a larger, randomized sample. A larger, more representative sample may allow researchers to discover greater differences in the information provided to IEP teams and to better understand the purposes of psychological reports in the schools.

Future project directions of this study may include adding teacher and parent rating scales to determine whether these parties find psychological reports useful and/or understandable. Because teachers prefer reports that include specific recommendations (Salvagno & Teglassi, 1987), future studies may want to explore differences in teacher

satisfaction with psychological reports between schools that use a discrepancy approach and an RTI approach. Additionally, future research may want to tie in school psychologists' roles at schools using RTI and discrepancy approaches to discover if there are differences in the amount of time they spend writing reports varies as a function of the eligibility model. Finally, these results present implications for practicing school psychologists, as well as trainees. This study demonstrates the necessity for psychologists to re-examine how to include data in their reports. Most importantly, this study shows that neither reports the RTI nor the discrepancy reports presented significantly clearer recommendations to their IEP teams, and therefore, school psychologists should be particularly vigilant in working on improving this area in their reports.

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Table 1

Percentage of Discrepancy or RTI Reports that Used Each Measure

	<u>IQ Measures</u>			<u>Achievement Measures</u>			<u>Processing Measures</u>			
	WJ-III COG	WISC -IV	Other	WJ-III ACH	WIAT- III	Other	VMI	TAPS	CTOPP	Other
Disc	5	70	25	75	25		65	70		55
RTI				25	60	15			55	

Note. Disc=Discrepancy Reports, RTI=Response to Intervention Reports

Table 2*Descriptive Statistics for Subscales*

Variable	Model	<i>n</i>	<i>M</i> (SD)
RQBI	RTI	20	19.95 (.22)
	Disc	20	16.10 (1.57)
EF	RTI	20	30.50 (3.98)
	Disc	20	21.05 (4.64)
IR	RTI	20	20.00 (.00)
	Disc	20	6.95 (1.50)
AR	RTI	20	20.00 (.00)
	Disc	20	13.40 (1.10)
CR	RTI	20	16.65 (6.79)
	Disc	20	13.65 (3.96)

Note. RQBI = Referral Question and Background Information, EF =Exclusionary Factors, IR = Intervention Results, AR =Assessment Results, CR = Conclusions and Recommendations
Disc = Discrepancy Reports, RTI = Response to Intervention Reports.

Table 3*Independent T-test for Subscales*

Subscale n = 40	M(SD)	<i>t</i>	<i>df</i>	<i>p</i>	Mean Difference (95% CI)
RQBI	18.03(2.24)	10.75	38	.000*	3.85 (3.10-4.60)
EF	25.78(6.41)	6.91	38	.000*	9.45 (6.68-12.22)
IR	13.48(6.70)	38.82	38	.000*	13.05 (12.35-13.75)
AR	16.7(3.43)	26.94	38	.000*	6.60 (6.09-7.11)
CR	15.15(5.70)	1.71	38	.098	3.0 (-.59-6.59)

Note. RQBI= Referral Question and Background Information, EF=Exclusionary Factors, IR= Intervention Results, AR=Assessment Results, CR= Conclusions and Recommendations.

**p* < .01

Appendix A

Psychological Report Survey

Rate the following questions based upon whether the report covers the following topics

4= Completely, 3= Mostly, 2= Some what, 1=Never

Referral Question & Background Information

- | | | | | |
|--|---|---|---|---|
| 1) The reason for the student's referral was discussed explicitly and specifically, in objective terminology that can be measured and/or addressed. | 4 | 3 | 2 | 1 |
| 2) An assessment question is present and can be answered with the assessment instruments used. | 4 | 3 | 2 | 1 |
| 3) The background information section <i>only</i> contains pertinent information that is relevant to the referral question | 4 | 3 | 2 | 1 |
| 4) The student's current level of performance was presented. | 4 | 3 | 2 | 1 |
| 5) To what extent does the report discuss the impact of present and past instructional/intervention programs and their possible effect on the present academic underachievement? | 4 | 3 | 2 | 1 |

Exclusionary Factors

- | | | | | |
|---|---|---|---|---|
| 6) Data are used to address exclusionary factors and current placement decisions. | 4 | 3 | 2 | 1 |
| 7) Cultural factors | 4 | 3 | 2 | 1 |
| 8) Environmental or economical disadvantages | 4 | 3 | 2 | 1 |
| 9) Limited English proficiency | 4 | 3 | 2 | 1 |
| 10) Visual Hearing, or Motor Disability | 4 | 3 | 2 | 1 |
| 11) Mental Retardation/Intellectual Disability | 4 | 3 | 2 | 1 |
| 12) Emotional Disturbance | 4 | 3 | 2 | 1 |
| 13) Lack of appropriate instruction | 4 | 3 | 2 | 1 |

Intervention Results

- | | | | | |
|--|---|---|---|---|
| 14) The amount/list of interventions that were attempted prior, or as part of the referral process were presented. | 4 | 3 | 2 | 1 |
| 15) Data-based and detailed descriptions of the intervention (frequency, duration, etc.) were presented. | 4 | 3 | 2 | 1 |

16) The interventions were evidence-based.

4 3 2 1

17) There a discussion in the report about the appropriateness and effectiveness of the current instructional (core or tier 1) program.

4 3 2 1

18) The student's progress was monitored after an intervention was introduced (response to the intervention).

4 3 2 1

Assessment Results

19) The assessments are directly related to the referral question.

4 3 2 1

20) The assessments produce information that will inform instruction/interventions typically used in a classroom environment.

4 3 2 1

21) Test results are discussed in "everyday" terminology, not technical jargon.

4 3 2 1

22) Data were discussed in terms of the student's skills (e.g. reading, math, language).

4 3 2 1

23) Curriculum/skill based assessments were used to inform intervention.

4 3 2 1

Conclusions and Recommendations

24) The deficit areas were discussed in terms of an academic skill that can be improved through intervention.

4 3 2 1

25) The suggested interventions/recommendations were evidenced based and appear to fit a typical classroom ecology.

4 3 2 1

26) The recommendations were clearly linked to the results of the assessment and/or intervention.

4 3 2 1

27) The recommendations are specific and appropriate.

4 3 2 1

28) Most teachers could implement the recommendations in their classrooms immediately.

4 3 2 1

29) Most teachers do not need training/consultation in order to implement the suggested recommendations.

4 3 2 1

30) The interventions are presented in such a way that makes them easy to understand and implement in the typical classroom setting.

4 3 2 1