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AN EXAMINATION OF THE UTILITY AND ACCEPTABILITY OF
STRENGTH-BASED ASSESSMENT IN THE SCHOOLS

A Dissertation

Submitted to the School of Education

Duquesne University

In partial fulfillment of the requirements for
the degree of Doctor of Philosophy

By

Kaleigh N. Bantum

August 2014

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Kaleigh N. Bantum

2014

DUQUESNE UNIVERSITY
SCHOOL OF EDUCATION
Department of Counseling, Psychology, and Special Education

Dissertation

Submitted in partial fulfillment of the requirements
for the degree
Doctor of Philosophy (Ph.D.)

School Psychology Doctoral Program

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June 25, 2014

AN EXAMINATION OF THE UTILITY AND ACCEPTABILITY OF
STRENGTH-BASED ASSESSMENT IN THE SCHOOLS

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ABSTRACT

AN EXAMINATION OF THE UTILITY AND ACCEPTABILITY OF STRENGTH-BASED ASSESSMENT IN THE SCHOOLS

By

Kaleigh N. Bantum

August 2014

Dissertation supervised by Kara E. McGoey, Ph.D.

The current literature on strength-based assessment in the field of school psychology is limited. Although arguments have been made for its use, research on the applicability of strength-based data in schools is needed. The present study chose to focus on the perceived acceptability and utility of strength-based data by teachers. Data was collected from general and special education teachers in both urban and suburban school districts in western Pennsylvania through the use of surveys and focus group interviews. Quantitative analyses revealed that teachers, regardless of their individual characteristics, found strength-based data acceptable for potential use in the classroom practices. Qualitative findings provided further insight around the integration and potential barriers of strength-based data into the school setting. The present study contributes and expands the current literature by examining teachers' perspectives of this data. A mixed methods

approach was utilized, which also provides a unique contribution to the literature in the field.

DEDICATION

This dissertation is lovingly dedicated to my husband, Terry Jackson, my parents, John and Lori Bantum, my sister, Kristen and my brother, Dylan. Their faith in my abilities has always been a cornerstone of my educational career.

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CHAPTER I

INTRODUCTION

The World Health Organization defines mental health as, “a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community” (2001). Individuals then, develop mental health difficulties when they struggle to cope with life’s challenges. These difficulties are influenced by a variety of factors, and can include both biological and environmental influences. Individuals may fluctuate along the continuum of mental health on any given day. Children and adolescents are not immune to the development of mental illness. Research indicates mental health problems may affect one in every five young people at any given time (Department of Health and Human Services, 2009). Children and adolescents can face a wide range of factors in their lives that impact their mental health. These factors can include things such as parental discord, poverty, attachment relationships, and community violence. In the presence of risk factors, children and adolescents are faced with the potential for detrimental impacts, which may manifest in a variety of ways. One area in which a child or adolescent may be affected is school functioning. Externalizing behaviors, absenteeism, academic failure, or bullying are a few examples of potential difficulties that may be observed within a school setting (Armistead, 2009).

Likewise, positive development can also impact school functioning. For instance, emotional competence, self-regulation, and positive relationships are examples of healthy outcomes that have been linked to mental health and school success (U.S. Department of Health and Human Services, 1999). Further, children and adolescents spend the majority

of their time in the school environment, making it a logical setting for promoting healthy development. In fact, students who receive social-emotional support and prevention services have better academic achievement (Greenberg, Weissberg, O'Brien, Zins, et al., 2003; Welsh, Parke, Widaman, & O'Neil, 2001; Zines, Bloodworth, Weissberg, & Walberg, 2004). With developmental competence being integral to academic competence (Masten, Roisman, Long, Burt, et al., 2005), improving mental health services in the United States is a necessity for our youth. Reform efforts to provide such services are on the rise with the most recent implementation of legislation such as the Patient Protection and Affordable Care Act (2010), which expands access to healthcare, including mental health services, for Americans.

Prevention is not a new concept in the field of school psychology. For decades it has been argued that school psychologists should move away from the deficit-based model of refer-test-place to a more positive approach to providing service delivery within the schools (Nickerson, 2007; Reschly, 1976, 1988). This positive approach emphasizes the enhancement of existing factors as a way of preventing the development of difficulties. Jimerson and colleagues (2004) published a special issue in *The California School Psychologist*, which highlighted the need for school psychologists to move in the direction of strength-based assessment as a way of promoting this positive approach. Despite this, a positive approach to practice as yet to be fully integrated into the field of school psychology.

The Role of Resilience

Resilience is a concept that arose approximately four decades ago from an interest in understanding how people adapt despite facing adverse conditions in their lives

(Masten, 2007). Pioneers of this field felt there was a need to better comprehend the development of people who face significant stressors, but yet, yield positive outcomes. Some of these pioneers included psychologists, E. James Anthony, Emory Cowen, Norman Garmezy, Lois Murphy, Michael Rutter, and Emmy Werner, each of who was particularly interested in high-risk populations and their ability to overcome emotional, developmental, economic, and environmental challenges. Historically, being a member of a high-risk population was associated with the development of psychiatric problems. These pioneering psychologists sought to better understand the etiology of psychopathology (Masten & Wright, 2009). In researching this etiology, they found surprising outcomes of positive development in some individuals in high-risk populations, despite having faced concerns such as psychiatric history or environmental stressors. This launched an exploration that continues today around building competence and preventing adverse outcomes for children and adolescents.

Research in resilience is rooted in two theoretically perspectives: developmental and transactional-ecological. From the developmental perspective, resilience is defined as the ability of a child to meet *normal developmental goals* despite facing adversity in his or her development. Therefore, an understanding of typical child development is important in understanding resilience. Developmental expectations change with age, warranting a need to comprehend how risk and protective factors interact over time as expectations fluctuate. Some developmental tasks are universal milestones, while others may vary based on age, ethnicity, or gender. For example, within the domain of physical development, walking is a task that generally occurs around the same age for most children, whereas, puberty may vary. Overall, achieving developmental expectations is

more than just an absence of problems, but rather, positive development in a state of internal (e.g. psychological well-being) and external (e.g. success in school) functioning. Having effective functioning in these areas has come to be defined broadly as competence (Masten & Coatsworth, 1998).

More over, resilience studies have indicated that children face different vulnerable and protective experiences throughout their development (Masten et. al, 1990). Particularly, research has shown how children and adolescents can face multiple variables that may act as a risk or protective variable (Garmezy, 1985; Masten, 2001). These variables can have varying effects depending on the context of the child's development. For example, as an infant, a child is susceptible to the characteristics of their caregivers. However, once a child reaches school age, the context shifts, and peers serve as the primary influence on their development. Again, showing how a developmental framework provides a means for examining when and how risk and protective variables impact a child's outcomes.

The second theoretical perspective related to understanding resilience among children takes a broader focus. Rather than focusing only on the individual, contextual variables like the family and the community relationships are considered. Here, the focus is on the interactions between a child and his or her environment (Wright & Masten, 2006). This model, introduced by Arnold Sameroff and Michael Chandler (1975) is known as the transactional model of development. From this, research designs have focused on the interactions between individuals and their families, communities, cultures, and societal time periods. Drawing from Bronfenbrenner's Ecological Systems Theory

(1979), the various levels of these systems are examined to see how they interact with the child to shape development and adaptation over time.

Taking these systems into account, this perspective highlights the importance of understanding the patterns and reciprocity that take place to influence these environmental systems over time (Sameroff, 2000). Specifically, Sameroff (2000) believed that individuals influence their environment and the environment influences the individual in a shared relationship with development. This model of conceptualizing child development exemplifies the need to understand the child's history of interactions with each of these environmental systems to understand how they have influenced development. Sameroff (2009) states that, "children are neither doomed nor protected by their own characteristics or the characteristics of their caregivers alone," but rather transactions between the two "opens up the possibility for many avenues of intervention" (p.19). The importance of environment and the interactions that take place within the environment are highlighted throughout the research in resilience, and can be demonstrated in the intricate nature of these interactions and how research has moved towards building interventions that address these areas.

Waves of Resilience Research

Research within the field of resilience has occurred in three waves over the last four decades. The first wave sought to conceptualize resilience by providing a clearer understanding of the construct and the terminology associated with its study. The second wave moved from the "what" to the "how;" seeking to understand the process of resilience. Finally, the third wave of research has focused on how resilience can be addressed through intervention. These waves have not had definitive beginnings or ends,

but rather are continually evolving as new considerations and interests of the construct of resilience arise, creating an ebb and flow of research in the area.

The first wave of research on resilience aimed to define resilience and understand the criteria that could be utilized to operationalize the construct. The idea of resilience is abstract; therefore, researchers sought to better define the construct so that it could be appropriately measured and interpreted within the field. Before coining the term resilience, individuals who appeared to do well despite facing challenging conditions were considered 'invulnerable' (Anthony, 1974, 1987). This wording was misleading in that it implied a condition that was absolute (Toland & Carrigan, 2011). Masten, Best, and Garnezy (1990) suggested that resilience is much more dynamic in nature, and that positive development is relative to the number, type, and degree to which one is exposed to adverse situations. Hence, they suggested the term of resilience as a more adequate description of this positive development. Luthar, Cicchetti and Beker (2000) define resilience as, "a dynamic process encompassing positive adaptation within the context of significant adversity" (p. 543). This definition implies that two conditions must be true in order to consider one resilient: 1) There must be (or have been) some exposure to an adverse event; and 2) Achievement must have taken place in terms of positive adaptation despite that adversity. Therefore, one is not considered resilient if he or she has not experienced a threat to his or her development (Toland & Carrigan, 2011).

The second wave of research in resilience focused on embedding resilience within developmental and ecological systems. This was a shift in previous efforts; moving the focus to a more complex examination of the processes that lead to resilience. This theorized by Wyman (2003) stating that, "resilience reflects a diverse set of processes

that alter children's transactions with adverse life conditions to reduce negative effects and promote mastery of normative developmental tasks" (p. 308). With this, research began to address the complexities of resilience in development, and how it resulted from many processes, rather than secluded factors (Cicchetti, 2006). In examination of resilience within a process framework, four distinct pathways of resilience development have been identified: resistance, recovery, normalization, and transformation (Roberts & Masten, 2004).

In addition to these pathways of resilience, Garnezy, Masten, and Tellegen (1984) and others (Brook, Brook, Gordon, Whiteman, & Cohen, 1990; Masten et al., 1988; Moran & Eckenrode, 1992; Rutter, 1985; Wolin & Wolin, 1995) have proposed four models of resiliency: the compensatory model, the risk-protective model, the protective-protective model, and the challenge model. Each of these models offers different explanations for the relationship between risk and protective factors and the prediction of outcomes. Regardless of which pattern of adaption among individuals one may agree with, one thing is certain—the role of protective factors is a crucial one. There may be multiple pathways and models of resilience development, but central to each is the importance of positive aspects of a child's environment, and the integration of those attributes in combating the risk that he or she may also face in their lives. This is an important concept of resilience research that guides the need for understanding these positive characteristics, or strengths, in children and adolescents and one that can be seen as the discussion of the third wave of research is introduced.

The third wave of research in resilience involves testing the theories around the factors and processes of resilience through prevention and intervention. Here, studies

focus on deliberately altering the course of development. Most of this type of work has focused on promoting protective processes, while reducing risk. Preventative early childhood programs such as Head Start (Zigler & Valentine, 1979), the Perry Preschool Project (Berrueta-Clement, Schweinhart, Barnett, Epstein & Weikart, 1984), the Houston Parent-Child Development Center Program, (Johns, 1988), and the Yale Child Welfare Project (Seitz, Rosenbaum, & Apfel, 1985). These programs target children's cognitive and social competence as well as parenting behaviors, family interactions, and social support. Results of programs such as these have yielded that promotion of such behaviors can have long-term cumulative protective effects. Projects such as these supports the view of enhancing competence as well as problem reduction in order to best support the needs of at-risk children. Overall, preventative efforts seen in this wave of resilience research highlights how strength-based models focused on competence can be coupled with the typical deficit-oriented perspective in order to foster development for youth.

A Strength-Based Approach

Positive psychology seeks to promote a movement away from the traditional deficit-based models of understanding functioning to a model that places an emphasis on positive factors, or strengths, in individuals. This view advocates for promoting strengths rather than repairing deficits in order to prevent difficulties in functioning (Seligman, 2002). As previously mentioned, an ecological perspective is one that reflects the idea that people function within a variety of systems that influence development. Based in Bronfenbrenner's perspective that a child's psychological well being is determined by a variety of systematic and individual factors (see Huebner, Gilman, and Furlong, 2009), positive psychology is about "what goes right in life" as it relates to these factors

(Peterson, 2006, p. 4). This idea of understanding of “what goes right in life” is very much the glue that binds researchers in resilience with those who are interested in positive psychology.

Protective Factors

Several pioneers in resilience outlined protective factors that are used when considering the strengths in children and adolescents. Norman Garmezy is a founding researcher known for his work in the area of vulnerability and the Project Competence Study, which aimed to examine factors associated with competence and risk in elementary students. From this data, Garmezy (1987) was able to identify crucial factors in the development of resilience in children. These factors included characteristics such as a cohesive family, a supportive person in the child’s environment, and other individual characteristics that allowed the child the ability to cope well.

Monumental work relevant to understanding protective factors came from the Kauai Study by Emmy Werner and Ruth Smith (1971). These researchers contributions to the research on resilience were extraordinary because of the significance of data they compiled. The Kauai study followed all births that occurred on the island of Kauai across a nearly two-decade period with data collected occurring when participants were ages 2, 10 and 18 years of age. From their analyses, Werner & Smith (1982/1998) found: (a) rules and structure in the household; (b) supportive relationships with family and friends; (c) number of siblings; (d) presence of alternative caregivers such as fathers and grandparents; (e) maternal employment; (f) age of parent; and (g) sufficient attention as an infant as factors to contributing to competent development in high-risk children. Gender was also identified as a mitigating factor in later when they found that women

were more resilient than men (Werner & Smith, 1992). This study exemplifies the importance of recognizing protective factors in addressing the needs of children and adolescents as the impact of their significance spans well into adulthood.

Michael Rutter was a key proprietor in developing the Additive model of resilience. With his work in understanding the cumulating impacts of risk factors, Rutter also examined patterns of positive influences. Using the same sample from his epidemiological work of 1975, Rutter (1979) followed a cohort of children for seven years during secondary school to examine the influence of schools on delinquency. He concluded that good schools can have an important protective effect on children's development. Characteristics with social environment of the school such as the teacher-student interactions during lessons and the availability of rewards and incentives were identified as positive factors for competent outcomes. This work highlighted the importance of other systems in influencing development; particularly, the importance of the school in providing support as a protective mechanism.

Robbie Gilligan (1997) of the Children's Centre at the University of Dublin has reviewed much of the work completed by these pioneering resilience and concluded that protective factors are essentially tied to three foundational building blocks. These are: (a) having a secure base, where there is a sense of security and belonging; (b) having self esteem, where there is an internal sense of worth; and (c) having self efficacy, where there is a sense of control and mastery.

Another more recent project aimed at examining at protective factors within an international context is known as the International Resilience Project. This project was based on understanding how different cultures promote resiliency. It involved gathering

data in 22 different countries on the factors and behaviors that were being used in dealing with adversity from 1993 to 1994. Data from families, service providers, and children were gathered from over 5,000 respondents. Grotberg (2000) concluded that every country has commonalities among factors that build resilience in children and adolescents. These commonalities were organized into: external supports, inner strengths, and interpersonal and problem solving skills. Grotberg (2000) noted that the promotion of resilience in children depended more on the adults in the child's life, rather than the child him or herself. The behaviors of the adults that the child interacted with played a crucial role regardless of cultural background. From this, Grotberg (2000) concluded that resiliency does not develop in a vacuum, but in context. An important context or ecological system that interfaces with children and adolescents on a daily basis is the school.

Similarly, Rutter (1979) and Luthar (1991) also indicated in their work that favorable school experiences lessen the effects of stressful home environments. For example, Rutter (1979) identified school characteristics to serve as protective factors. Likewise, Luthar (1991) cited social skills promotion as a possible school-based program to promote the appropriate development of social skills based on the contribution social expressiveness had on serving as a protective mechanism in resilience. These early efforts, then, were some of the first assertions of the importance that schools play in developing competence, particularly for those students who are at risk. This identifies schools as being in the ideal position to support and build protective factors in children so that they can foster resilience.

Integrating a Strength-Based Approach

School psychologists are in the position to facilitate the integration of mental health services in the school setting as outlined by their standards of practice. The National Association of School Psychologists (NASP) emphasizes the importance of addressing the barriers that may result in children and adolescents inability to fully benefit from their educational experience. Further, NASP advocates for the provision of mental health services in the school setting that address competence enhancements and prevention of mental health problems (2008). However, several issues arise one of them being the need for reliable measures of strengths. Measures that rely on a deficit-oriented assessment model have been validated within the field of school psychology. These tools have proven useful in identifying problem behaviors in children as well as competencies in terms of their adaptive functioning, however, they lend little information with regards to the child's individual strengths that may be used for treatment planning. The following has been utilized in conceptualizing strength-based assessment:

Strength-based assessment is defined as a measurement of those emotional and behavioral skills, competencies, and characteristics that create a sense of personal accomplishment; contribute to satisfying relationships with family members, peers and adults; enhance one's ability to deal with adversity and stress; and promote one's personal, social, and academic development. (Epstein & Sharma, 1998, pp.3)

Various tools exist that have been used by researchers in an attempt to validate strength-based measures and measure children's strengths. Examples of tools that encompass these ideals include: (a) Child and Adolescent Strengths Assessment Scale (CASA) (Lyons et al., 1998); (b) the Strengths and Difficulties Questionnaire (SDQ)

(Goodman, 1997); (c) the Devereux Early Childhood Assessment Program (DECA) (LeBuffe & Nagilieri, 1998); (d) the Resiliency Scales for Children and Adolescents (RSCA) (Prince-Embury, 2005, 2006); (e) the Behavioral and Emotional Rating Scale, Second Edition (BERS-2) (Epstein, 2004); and the Social-Emotional Assets and Resilience Scales (SEARS) (Merrell, 2011).

Although efforts are being made to document the use of these tools as a means of assessing positive competencies in children, the question remains as to the critical needs for their integration. As summarized by Nickerson (2007), several arguments have been made in the literature to address such a question. Such arguments include: (a) empowerment and motivation for the students (Epstein, Hertzog, Reid, 2001; LeBuffe & Sharpio, 2004); (b) more positive relationships among children, families, and school personnel (Epstein, Dakan, Oswald, Yoe, 2001; Epstein, et al., 2003; LeBuffe & Sharpio, 2004); (c) acceptability of service provision (Epstein et al., 2003; Walrath, Mandell, Holden, & Santiago, 2004); and (d) stronger treatment or intervention plans (Epstein, 1999; Rhee et al., 2001); and (e) consideration of social context as supportive resources (Jimerson, Sharkey, Nyborg, & Furlong, 2004). However, little empirical support exists to examine such proclaimed arguments for the use of strength-based approaches, particularly in school psychology.

Changing Perspective

Edward Rawana and Keith Brownlee of Lakehead University have proposed a framework of strength-based assessment, intervention, and treatment in clinical work with children, adolescents, and their families (2009). Recognizing the need to operationalize the assessment and intervention process for working with children and

adolescents, they developed a model to guide such practice. They begin by defining strength as, “a set of developed competencies and characteristics that is valued by the individual and society and is embedded in the society” (Rawana & Brownlee, p. 256, 2009). Their model includes the following key components: (a) engagement, (b) exploration, (c) expansion, and (d) evolution. Each of these components is intertwined, and although they are noted individually through interactions with children and their families in the model, they are by not restricted to this sequence.

Brownlee and colleagues (2012) emphasize how this model is not only applied at the individual level, but also to school-wide initiatives by encouraging a strength-based culture in the schools. In creating a school culture focused on strengths they describe how students, staff, and families become immersed in the strength-based culture and everyone “speaks the same language” to assess and treat in the school setting. They further explain that the strengths perspective aligns school personnel with students and families and demonstrates how educators value children, while encouraging students to achieve. Creating such environments allows for schools to serve as protective mechanisms in child’s lives (Cefai, 2007).

Purpose of Study

As evidenced, expanding the literature on strength-based assessment and its benefits to the practice of school psychology is warranted. Psychoeducational evaluations that include the assessment of a child’s strengths intuitive; however, evidence to support these practices is limited. The National Association of School Psychologists outlines a primary goal of schools psychologists is to, “enhance the learning and mental health of all children and youth” as well as “promote wellness and resilience” (NASP, 2010, p. 6).

Surprisingly, however, much of the research and practice in psychology is focused on psychopathology, as outlined by Huebner and Gilman (2003), with 90% of article abstracts devoted to these deficits, rather than positive aspects of mental health (Myers, 2000). Strength-based assessment provides an opportunity for school psychologists to integrate a more positive approach to their provision of services, allowing for them to better meet the vision of the field. Furthermore, taking this step toward an incorporation of positive psychology may provide more comprehensive services to all individuals, rather than only those with psychopathology. This would allow school psychologists to expand their impact in the schools, and further enhance their needs as critical personnel in the school system.

Creating change in perspective on how school psychologists provide services in the school is not an easy task. As outlined in the strength-based model proposed by Rawana and Brownlee (2009) there are several steps in moving towards this approach to practice. Although there is potential for this application in the school setting, moving towards this perspective will be complex as there are multiple personnel involved in implementing such practices. It is the hope that taking the steps to understand the uses of strength-based assessment and how it can assist school psychologists in promoting wellness and resilience will open the doors for further expansion of integrating positive psychology into the field. School psychology has already begun to recognize the benefits of prevention over remediation (Terjesen, Jacofsky, Froh, and DiGiuseppe, 2004), therefore, lending itself to a positive approach that is aimed at understanding strengths in children's development and how those strengths allow children to succeed despite facing adversity.

This study, then, aims to expand the literature by examining the benefits of strength-based assessment that have been theoretically argued throughout the literature. In utilizing the model from Rawana and Brownlee (2009), this study will explore how to engage school personnel so that assessment of strengths can become a part of typical practice as school psychologists alone will not change the culture of practices within a school system. In order to do so, this study will investigate the potential utility and acceptability of strength-based data in the school systems. It is the belief of the researcher that if school personnel can begin to see the benefits of using this data in their practices, then they are more likely to become engaged in a strength-based approach to practice.

Specifically, teachers will be asked to provide their thoughts with regards to the use and acceptability of strength-based data in their everyday classroom practices. School psychologists work closely with teachers, with much of their work aimed at supporting teachers through assessment and consultation. Therefore, if teachers find strength-based data to be a practical application in their classroom, school psychologists can begin to support them by including strength-based assessments in their practices. By beginning with this, school psychologists will have a starting point towards systemically changing the traditional deficit-based approach taken in our schools.

Research Questions and Hypotheses

The following research questions related to the utility and acceptability of strength-based data by teachers will be examined:

Research Question 1

Is strength-based data useful in guiding teaching practices in the school setting?

Hypothesis 1. Teachers find strength-based data useful in their teaching practices in the school setting

Hypothesis 2. Teachers' characteristics, specifically classroom context (i.e. general education versus special education), are related to their utility of strength-based data.

Hypothesis 3. Teachers' characteristics, specifically type of school district they are currently employed (i.e. urban vs. suburban), are related to their utility of strength-based data.

Research Question 2

Do teachers in the school setting accept strength-based data for use?

Hypothesis 4. Teachers accept strength-based data for use in the school setting.

Hypothesis 5. Teachers' characteristics, specifically classroom context (i.e. general education versus special education), are related to their acceptability of strength-based data.

Hypothesis 6. Teachers' characteristics, specifically type of school district they are currently employed (i.e. urban vs. suburban), are related to their acceptability of strength-based data.

CHAPTER II

LITERATURE REVIEW

This section reviews two primary areas of research: resilience and strength-based assessment. This review will begin with the development of resilience research and a discussion of the theoretical perspectives guiding much of the work within the literature. Then, research in the area of resilience will be summarized across its three waves of occurrence. Through discussion of the third wave of research, a strength-based approach will be addressed. Here, the role of the school psychologist within resilience research will be emphasized, specifically through the integration of a strength-based approach to practice. Finally, the need for further research within the realm of a strength-based approach will be discussed as a means of understanding the purpose of this study.

History of Resilience

Resilience is a concept that arose approximately four decades ago from an interest in understanding how people adapt despite facing adverse conditions in their lives (Masten, 2007). Pioneers of this field felt there was a need to better comprehend the development of people who face significant stressors, but yet, yield positive outcomes. Some of these pioneers included psychologists, E. James Anthony, Emory Cowen, Norman Garnezy, Lois Murphy, Michael Rutter, and Emmy Werner, each of who was particularly interested in high-risk populations and their ability to overcome emotional, developmental, economic, and environmental challenges. Historically, being a member of such high-risk populations was associated with the development of psychiatric problems. These pioneering psychologists sought to better understand the etiology of psychopathology (Masten & Wright, 2009). In researching this etiology, they found

surprising outcomes of positive development in some individuals in high-risk populations, despite having faced concerns such as psychiatric history or environmental stressors. This launched an exploration that continues today around building competence and preventing adverse outcomes for children and adolescents.

Theoretical Perspectives Associated with Resilience Research

A Developmental Perspective

From the developmental perspective, resilience is defined as the ability of a child to meet normal developmental goals despite facing adversity in his or her development. Therefore, an understanding of typical child development is important in understanding resilience. Developmental expectations change with age, warranting a need to comprehend how risk and protective factors interact over time as expectations fluctuate. Some developmental tasks are universal milestones, while others may vary based on age, ethnicity, or gender. For example, within the domain of physical development, walking is a task that generally occurs around the same age for most children, whereas, puberty may vary. Overall, achieving developmental expectations is more than just an absence of problems, but rather, positive development in a state of internal (e.g. psychological well-being) and external (e.g. success in school) functioning. Having effective functioning in these areas has come to be defined broadly as competence (Masten & Coatsworth, 1998).

Competence has been used to measure resilience in many studies (Masten & Powell, 2003; Werner & Smith, 1982, 1992). Although variations exist from study to study, children are viewed as resilient if they have met the normal developmental tasks for their age. Another core component related to competence that draws from child development literature is the presumption that competence creates competence. In other

words, meeting developmental expectations builds one's ability to be competent in other tasks in the future, whereas the opposite is true for those who do not meet developmental demands. For example, Masten, Burt and Coatsworth (2006) cite how outcomes in adulthood can be impacted by the unmet expectation of graduating from school. Specifically, they provide evidence regarding the way in which school dropout has significant negative consequences in adult life, such as antisocial behavior and inadequate parenting. This concept will continue to be highlighted as the literature around the importance of protective factors is outlined. Resilience research is rooted in understanding developmental trajectories and how different trajectories result in different outcomes, or different levels of competence, for individuals. Masten and Coatsworth (1995) summarize this best in emphasizing how developmental trajectories cannot be fully understood without an integrated focus on pathology and competence.

A developmental perspective has guided the research of resilience. Resilience studies have indicated that children experience different vulnerability and protective experiences throughout their development (Masten et. al, 1990). Particularly, research has shown how children and adolescents can face multiple variables that may act as a risk or protective variable (Garmezy, 1985; Masten, 2001). These variables can have varying effects depending on the context of the child's development. For example, as an infant, a child is susceptible to the characteristics of their caregivers. However, once a child reaches school age, the context shifts, and rather than their caregivers serving as the primary influence on their development, their peers become integral players in shaping a child's development. Overall, this developmental framework provides a means for examining when and how risk and protective variables impact a child's outcomes.

An Ecological-Transactional Perspective

The second theoretical perspective related to understanding resilience among children takes a broader focus. Rather than focusing only on the individual, contextual variables like the family and the community relationships are considered. Here, the focus is on the interactions between a child and his or her environment (Wright & Masten, 2006). This model, introduced by Arnold Sameroff and Michael Chandler (1975) is known as the transactional model of development. From this, research designs have focused on the interactions between individuals and their families, communities, cultures, and societal time periods. Drawing from Bronfenbrenner's Ecological Systems Theory (1979), the various levels of these systems are examined to see how they interact with the child to shape development and adaptation over time.

The Ecological Systems Theory (1979) examines a child's development within the context of systems of the child's environment. Bronfenbrenner (1979) believed a child develops within an environmental structure composed of the following systems: (a) the microsystem is the context in which the child is closest and has direct contact, which may include the family or school; (b) the mesosystem is the connection between the microsystem structures such as the connection between parents and teachers; (c) the exosystem is the larger societal system with which the child does not have direct contact, but functions within and includes aspects such as the parents' occupation; (d) the macrosystem is the outermost layer of the child's environment and includes aspects such as beliefs, values, customs, and laws that govern the society in which the child develops; (e) finally, the chronosystem considers the dimension of time within a child's environment. It is the temporal dimension of the theory that recognizes that in any given

environment, circumstances change over time that may impact a child's development. For example, a child growing up within a "digital age" will experience her environment differently as technology advances over time. Similarly, this dimension considers the child's age, and how the interaction between age and environment can be different depending on that chronological variable. For instance, a death of a parent at a young age will significantly influence a child differently than it would if the death occurred during adulthood (Siegler, Deloache, & Eisenberg, 2006).

Taking these systems into account, the Ecological-Transactional perspective highlights the importance of patterns and reciprocity in influencing these environmental systems over time (Sameroff, 2000). Specifically, Sameroff believed that individuals influence their environment and the environment influences the individual in a shared relationship with development. This model of conceptualizing child development exemplifies the need to understand the child's history of interactions with each of these environmental systems in order to understand how they have influenced the child's development. It is further influenced by the interplay of processes in the individual's context over time. Sameroff (2009) states that, "children are neither doomed nor protected by their own characteristics or the characteristics of their caregivers alone," but rather transactions between the two "opens up the possibility for many avenues of intervention" (p.19). The importance of environment and the interactions that take place within the environment will be seen in the next discussion of the waves of resilience research. The understanding of the complex processes and the "how" of resilience will demonstrate the intricate nature of these interactions and how research has moved towards building interventions that address these areas.

Waves of Resilience Research

Research within the field of resilience has occurred in three waves over the last four decades. The first wave sought to conceptualize resilience by providing a clearer understanding of the construct and the terminology associated with its study. The second wave moved from the “what” to the “how;” seeking to understand the process of resilience. Finally, the third wave of research has focused on how resilience can be addressed through intervention. These waves have not had definitive beginnings or ends, but rather are continually evolving as new considerations and interests of the construct of resilience arise, creating an ebb and flow of research in the area. In general, today there appears to be a substantive understanding of the definition of resilience, while the nature of how resilience develops is still being explored. Some of this research uses statistical modeling with longitudinal data, while other efforts have moved towards practice and understanding intervention. Overall, each wave continues to contribute conceptual ideas to the ongoing efforts to understand the complexity of resilience.

First Wave of Resilience Research

The first wave of research on aimed to define resilience and understand the criteria that could be utilized to operationalize the construct. The idea of resilience is abstract; therefore, researchers sought to better define the construct so that it could be appropriately measured and interpreted within the field. Before coining the term resilience, individuals who appeared to do well despite facing challenging conditions were considered ‘invulnerable’ (Anthony, 1974, 1987). This wording was misleading in that it implied a condition that was absolute (Toland & Carrigan, 2011). Masten, Best, and Garmezy (1990) suggested that resilience is much more dynamic in nature, and that

positive development is relative to the number, type, and degree to which one is exposed to adverse situations. Hence, they suggested the term of resilience as a more adequate description of this positive development. Luthar, Cicchetti and Beker (2000) define resilience as, “a dynamic process encompassing positive adaptation within the context of significant adversity” (p. 543). This definition implies that two conditions must be true in order to consider one resilient: 1) There must be (or have been) some exposure to an adverse event; and 2) Achievement must have taken place in terms of positive adaptation despite that adversity. Therefore, one is not considered resilient if he or she has not experienced a threat to his or her development (Toland & Carrigan, 2011). In addition to defining the overall construct of resilience, the initial wave of research noted that the definition was associated with other key terms that would be instrumental in quantifying resilience.

Key Terminology in Resilience Research. The foundation of resilience is rooted in understanding what allows some individuals to prosper in the face of adversity. Resilience research draws heavily on a developmental perspective in that this idea of “prospering” comes from the ability of one to achieve competence. The term, competency, has been explained as how well a person is doing in life, or how effective that person is functioning across various domains (cognitive, social, physical, emotional). This functioning is often contextualized around a variety of criteria such the presence or absence of pathology or a person’s overall state of well-being. The other associated criterion of resilience, then, is adversity. Adversity is a term that describes the environmental conditions that interfere with or threaten the accomplishment of age-appropriate developmental tasks (Wright & Masten, 2005).

As mentioned, a variety of variables play a role in facilitating or hindering progression through developmental tasks. In general, risk is when there is an elevated probability of having an undesirable outcome. A risk factor can be defined as a measurable characteristic that predicts a negative outcome. Examples of risk factors include premature birth, poverty, or parental divorce (O'Dougherty & Wright, 1990). Risk can further be explained in terms of its relationship to the person who is experiencing the risk. Proximal risk is when the risk factor is experienced directly, whereas distal risk is risk that comes from a context and is experienced at a more indirect level. Risk can also be cumulative in nature. Individuals may experience multiple risk factors concurrently; experience the same risk factor on several occasions, or may face an accumulation of negative effects due to ongoing adversity (Masten & Wright, 1998).

Assets, also known as promotive factors, are positive factors that are generally associated with desirable outcomes regardless of the level of risk involved. These are factors such as good parenting or high cognitive skills (Garmezy, Masten & Tellegen, 1984). Protective factors, then, are the characteristics either of the person or the context that predict better outcomes. These factors seem to be particularly important when there is risk involved. Protective factors are unique in that they are associated with positive adaptation despite one's exposure to adversity (Rutter, 1979). Similar to risk factors, protective factors can also be cumulative in nature, and individuals can have multiple protective factors in their lives. It should be noted that distinguishing between assets and protective factors has proven to be a difficult task. As Wright and Masten (2006) explain, good parenting is an asset to development, however, when faced with adversity it is often times the case that the person who expressed good parenting also has the ability to react

to adversity in a way that becomes protective in nature. Therefore, there can be instances where these two concepts intersect. Similarly, high IQ scores are associated with generally positive outcomes, but have also been found to serve a protective role when risk is present (Masten et al., 1999).

Second Wave of Resilience Research

The second wave of research in resilience focused on embedding resilience within developmental and ecological systems. This was a shift from previous efforts, and moved the focus to a more complex examination of the processes that lead to resilience. This theorized by Wyman (2003) stating that, “resilience reflects a diverse set of processes that alter children’s transactions with adverse life conditions to reduce negative effects and promote mastery of normative developmental tasks” (p. 308). With this, research began to address the complexities of resilience in development, and how it resulted from many processes, rather than secluded factors (Cicchetti, 2006). In examination of resilience within a process framework, pathways of resilience development have been identified.

Pathways of Resilience. At least four distinct patterns of resilience development have been described in the literature. The first pathway is resistance. Resistance is when positive adaptation occurs in a steady pattern in the presence of significant threats. An example of resistance would be a child who has achieved adequate functioning across developmental milestones, despite having faced threat, such as poverty, that could impact development. Recovery is a second pathway to resilience that implies that a person’s functioning declines as a result of adversity, but then returns to a more favorable level. Bonanno (2004) cites how this pattern of behavior occurs when normal functioning gives

into the threshold of psychopathology for a period of several months, typically as a result of some stressor, and then returns to pre-event levels. The pattern identified as normalization is seen when individuals begin their lives in adverse conditions, but conditions improve, and as a result development “catches up” to a normal trajectory. For instance, a child may begin their life in an adverse environment, such as an orphanage, but then the child is adopted, and conditions improve, resulting a regulated pattern of development that is compensatory to a normal developmental pattern. The final pathway is transformation. Transformation is when functioning shows improvement from previous levels after faced with adversity, without a decline in functioning ever taking place. This type of pattern may be seen after a child experiences a traumatic event where they are faced with adversity, but the result is more of an “enlightening” experience, and therefore, results in improved outcomes. Each of these patterns reflect the observance of resilience over time, and its overall conceptualization as a developmental process, supporting the notion of an emphasis on processes over factors of resilience (Roberts & Masten, 2004).

Models of Risk and Protective Factors. In addition to these pathways of resilience, Garmezy, Masten, and Tellegen (1984) and others (Brook, Brook, Gordon, Whiteman, & Cohen, 1990; Masten et al., 1988; Moran & Eckenrode, 1992; Rutter, 1985; Wolin & Wolin, 1995) have proposed four models of resiliency: the compensatory model, the risk-protective model, the protective-protective model, and the challenge model. Each of these models offers different explanations for the relationship between risk and protective factors and the prediction of outcomes.

The first model of these interactions is the Additive Model or Compensatory Model. Here, risk and protective factors are cumulative. Within this model, the number of factors involved is more important than the type of factors. Therefore, this model suggests that with each additional risk factor, the odds for a negative outcome increases. Similarly, with each additional protective factor, these odds are decreased (Garmezy, 1993). Garmezy (1993) outlines the research that cites numerous examples of the effects generated by cumulative risk that exist in the literature. One such study is the work from Michael Rutter (1979). Michael Rutter, from the United Kingdom, has been said to be the “father of child psychology.” Rutter’s work was critical in moving toward a perspective of vulnerability that included multiple factors, rather than single causal agents. Particularly, Rutter (1979) chose to examine a sample of Isle of Wight (England) and inner London children who have experienced multiple stressors such as parental marital discord, low socioeconomic status, large family sizes, parent criminality and maternal psychiatric disorder. Rutter’s goal in examining these factors was to evaluate John Bowlby’s (1951) maternal deprivation hypothesis. Bowlby proposed the children must experience a warm and continuous relationship with their mother, and that not doing so would have significant, irreversible mental health implications. Rutter believed that there were several mechanisms that played a role in influencing mental health, and that one causal factor was an inappropriate way of conceptualizing the development of competence in children. Rutter (1979) examined a sample of 10 year old children from Isle of Wight (England) and inner London epidemiological studies (see Rutter, 1975). Here, he identified six variables associated with child psychopathology: (a) severe marital discord, (b) low socioeconomic status, (c) large family size, (d) paternal criminality, (e)

maternal psychiatric disorder, and (f) foster home placement were assessed. Using the Isle of Wight and inner London epidemiological data, he found that these variables, when cumulated, were significantly associated with an increased likelihood of psychiatric disorder in offspring. Specifically, a single stressor produced a 1% increment in psychopathology in children; two stressors 5%; three stressors 6%; and four or more stressors accounted for a 21% increment in the rate of psychopathology. He concluded that a single stressor did not have a significant impact, as Bowlby had suggested, but rather combinations of two or more stressors diminished the likelihood of positive outcomes for these children. He concluded that the stresses potentiated each other in that the combination of factors provided much more detrimental effects on the children than when the factors were considered singly. Rutter's conclusions illustrate how the Additive model predicts outcomes with each variable having a direct and independent effect on such outcomes.

Another proposed model is the Interactive Model or Risk-Protective Model. This model believes that protective factors matter only when there are risk factors present. Therefore, protective factors are viewed as buffers that prevent or interrupt the impact of risk (Rutter, 2000). Rutter (2000) believed that protective factors should not be viewed solely as the opposite of a risk factor. For example, he cites the work of Garmezy (1985), and his identification of protective factors such as family cohesion. Although, this factor is associated with resilience in the sense of it serving as a protective factor, it is merely the opposite of a factor that poses a risk (i.e. family discord versus family cohesion). Rutter (2000) proposed then, that just the existence of these factors in positive form did not result in resilience because these types of factors are often present in typically

functioning people. Rather, resilience was about how these factors interacted with the other characteristics in a child's environment to buffer risk factors. In doing so, he describes his work with Quinton (1988) in examining institutionalized youth. Here, Rutter (2000) found that planning skills played a significant role in the positive outcomes for these youth, and how the existence of positive experiences in school were responsible for the development of such planning skills in youth from high-risk background that otherwise would not have developed such skills. From this, Rutter (2000) concluded that careful consideration needed to be made in understanding resilience, particularly in how protective effects of particular factors may only arise when there is a lack of resources in other domains. As can be seen, this model is an interaction model. It is based in the idea that the relationship between risk and outcome will depend on the presence of protective factors.

The Protective-Protective Model is another model in understanding factors associated with resilience. Here, both the presence and the number of factors are critical to reducing risk. This model is similar to the previous, in that the presence of a protective factor weakens the relationship between risk and outcome. However, this model also states that the strength of the relationship between risk and outcome will decrease as the presence of protective factors increases. Therefore, the presence of multiple protective factors would serve as "more protective" than of a single protective factor. This model is similar to the Compensatory Model, however, rather than neutralizing risk, protective factors interact with a risk factor to reduce the probability of a negative outcome (O'Leary, 1998).

The Challenge Model proposes that moderate levels of risk are important because they promote adaptation, and therefore, challenge one to thrive to attain resilience. Rutter (1987) describes protection as developing not from evading risk, but from successfully engaging in it. Particularly, this model believes that a certain amount of risk actually reduces the likelihood of a negative outcome because risk stimulates the development of coping and strengthening of protective factors. If an adverse situation is successfully faced, then it helps to prepare one for another difficulty that may arise. Forest (1991) demonstrated this using life course analysis of how women handle depressive symptoms. Forest found that women who had experienced stressful life situations in childhood, like a death of a loved one or divorce, were less likely to respond to stressful situations as an adult with depressive symptoms. The Challenge Model coincides with the process of transformation seen in resilience. As O'Leary (1998) further expands on this model, stating that when a person faces a challenge, they may respond in three manners: survive, recover, or thrive. This process of thriving goes beyond typical functioning and offers an opportunity for change and to developmentally flourish. This idea is based in the Challenge Model.

Each of these conceptualizations contribute a unique way of understanding the complex nature of risk and protective factors and help to better relate to the pathways of developing resilience. However, research shows that no one model is superb over the other, but rather each model represents a different perspective and pathway resilience development that is unique to the individual. For example, Hollister and colleagues (2001) examined the applicability of the four models of resilience in an evaluation of an adolescent dating violence prevention program in 14 different middle and high schools.

The risk factor for this study was the exposure to violence. Protective factors included closeness to an adult, importance of religion, self-esteem, relationship competence, constructive communication and constructive anger. Data collected through surveys, indicated that the models of resilience varied by gender. Particularly, the Protective-Protective Model and the Challenge Model were supported for female students. None of the models were supported for male students (Hollister, Foshee, & Jackson, 2001). The researchers concluded that these differences may be attributed to gender socialization differences among the students. Particularly, in our society males generally receive more reinforcement for aggressive behavior compared to their female counterparts. Therefore, males may experience protective factors differently from females. For instance, although they may have a close relationship with an adult (a protective factor), if this adult is also a male, they may hold similar gender-related values that place an emphasis on masculinity and aggression. Another cautionary example in understanding these models is the differences that may lie between correlation and causal impacts. As illustrated in the models, both instances of direct effects as well as interactive effects have been outlined, therefore, mistakes can be made in associating attributes to the development of resilience. Further research is needed to better understand the differences in these effects so that intervention can be directed appropriately. Regardless of which pattern of adaption among individuals one may agree with, one thing is certain—the role of protective factors is a crucial one. There may be multiple pathways and models of resilience development, but one similarity can be seen throughout and that is the importance of positive aspects of a child’s environment, and the integration of those attributes in combating the risk that he or she may also face in their lives. This is an important concept of resilience research that

guides the need for understanding these positive characteristics, or strengths, in children and adolescents and one that can be seen as the discussion of the third wave of research is introduced. It is without a doubt that the strengths of children and adolescents, both internally and externally, will become an integral part in developing intervention and prevention strategies.

Third Wave of Resilience Research

The third wave of research in resilience involves testing the theories around the factors and processes of resilience through prevention and intervention. Here, studies focus on deliberately altering the course of development. Three approaches typically take place when conducting resilience research aimed at prevention and intervention (Yates & Masten, 2004). The first being risk-focused methods. These methods aim to reduce or prevent risks, such as premature birth. The second method takes the opposite approach, in that it is asset-focused. Here, the emphasis is placed on the resources that enable adaptive functioning to counteract adversity. These can include improved access to health care or parent education. Finally, process-focused approaches aim to protect, activate or restore fundamental adaptational systems in order to support positive development; for instance, strengthening and creating positive, long-term relationships for children. These process-focused models are more complex; rather than focusing on reducing risk characteristics or improving a specific set of skills, the focus is on a more elaborate set of skills that can be seen across a variety of developmental contexts (Masten & Coatsworth, 1999). The process-focused approaches are representative of the preventative intervention research.

Most of this type of work has focused on promoting protective processes, while reducing risk. Preventative early childhood programs such as Head Start were designed to

promote success for at-risk children by providing high quality preschool training and family support services (Zigler & Valentine, 1979). Other examples include the Perry Preschool Project with low-income African American families (Berrueta-Clement, Schweinhart, Barnett, Epstein & Weikart, 1984), the Houston Parent-Child Development Center Program with low-income Mexican American families (Johns, 1988), and the Yale Child Welfare Project (Seitz, Rosenbaum, & Apfel, 1985). These programs target children's cognitive and social competence as well as parenting behaviors, family interactions, and social support. Results of programs such as these have yielded that promotion of such behaviors can have long-term cumulative protective effects. Each of these programs targets multiple systems in a child's life in order to increase positive factors, while reducing risk. Projects such as these supports the view of enhancing competence as well as problem reduction in order to best support the needs of at-risk children. Additionally, research in this area supports the possibility of altering development. Overall, preventative efforts seen in this wave of resilience research highlights how strength-based models focus on competence can be coupled with the typical deficit-oriented perspective in order to foster development for youth, while offering hope for improving conditions for children faced with adverse conditions.

A Strength-Based Approach

There has been an increased interest in positive psychology within the past decade (Jimerson, Sharkey, Nyborg, and Furlong, 2004). This area of study draws heavily from resilience research. Positive psychology seeks to promote a movement away from the traditional deficit-based models of understanding functioning to a model that places an emphasis on positive factors, or strengths, in individuals. This view advocates for

promoting strengths rather than repairing deficits in order to prevent difficulties in functioning (Seligman, 2002). As previously mentioned, an ecological perspective is one that reflects the idea that people function within a variety of systems that influence development. Positive psychology draws from Bronfenbrenner's work that emphasizes that individuals', and more specifically children's, psychological well being is determined by a variety of systematic and individual factors (see Huebner, Gilman, and Furlong, 2009). Positive psychology, then, is about "what goes right in life" as it relates to these factors (Peterson, 2006, p. 4). This idea of understanding of "what goes right in life" is very much the glue that binds researchers in resilience with those who are interested in positive psychology.

Protective Factors

Several pioneers in resilience outlined such positive factors that are used when considering the strengths in children and adolescents. Norman Garmezy is a founding researcher known for the Project Competence Study. Garmezy's initial work focused on understanding the consequences of being born into families with a history of mental illness, particularly schizophrenia, as well as those who faced economic and social disadvantages. In this work, he discovered that approximately half these children experienced no negative symptoms despite having faced such adverse conditions. From this, he decided to explore what caused children to be what he coined "invulnerable" to high-risk factors in their lives. This launched the Project Competence study, a study based at the University of Minnesota and funded by the National Institute of Mental Health. This study aimed to examine factors associated with competence and risk in elementary students.

The sample of 150 students in this study consisted of different cohorts in grades 3 to 6. Different cohorts were used to reflect the different types of stress that a child could experience. For example, some children came from single-parent homes, while others had survived a life-threatening heart defect, while others held a physical disability. Across cohorts, the majority of students came from working class families with 40% of the students having a minority background. Data collected from these cohorts included questionnaires, such as the Deveraux Elementary School Behavioral Rating Scale (Spivack and Swift, 1967), aimed at gathering information on work/academic competence, motivational/attitudinal patterns, and social competence. Additionally, stress was measured using a modified form of the Social Readjustment Rating Scale for Children (Coddington, 1972). Mothers were also interviewed across three two-hour interviews. This interview aimed to establish context for their reported experiences of stressful events. Finally, children were interviewed in one two-hour session on subjects such as school, chores, home, money, and friends. From this data, Garmezy (1987) was able to identify crucial factors in the development of resilience in children. These factors included a cohesive family situation, a supportive person in the child's environment, and other individual characteristics that allowed the child the ability to cope well. He also identified factors associated with risk such as mother's education level, chronic family discord, and prenatal complications.

Monumental work relevant to understanding protective factors came from the Kauai Study by Emmy Werner and Ruth Smith (1971). These researchers contributed significantly to the research because of the significant amount of data they compiled. Specifically, the Kauai study followed all births that occurred on the island of Kauai

across a nearly two-decade period. The study began with an assessment of the reproductive histories and the physical and emotional status of the mothers from the fourth week of gestation until delivery. It then continued with an evaluation of cumulative stress and quality of family life across physical, intellectual, and social domains of development. Data was collected at ages 2, 10 and 18 years of age.

Children from the Kauai study were identified as high-risk based upon their belonging to households that fell at or below the poverty level, showed instability within the family, and had a presence of parental mental illness. In evaluating these particular children at age 18, Werner and Smith (1977) found that two-thirds of these children displayed life difficulties, while the remaining one-third were competent adults. This led to the question of what made a difference, which guided further examination of protective factors of this group. Werner & Smith (1982/1998) concluded the following: (a) rules and structure in the household; (b) supportive relationships with family and friends; (c) number of siblings; (d) presence of alternative caregivers such as fathers and grandparents; (e) maternal employment; (f) age of parent; and (g) sufficient attention as an infant to contribute to competent development in these high-risk children. Gender was also identified to play role in that women were more resilient to risk than men (Werner & Smith, 1992). These results are only a minute portion of the information gathered in their work. Additional detailed outlines of each evaluation period of these children are available (Werner & Smith, 1971, 1977, 1982). Examination of the longitudinal impact of protective factors provided an irreplaceable contribution to the resilience literature. The data gathered exemplifies the importance of recognizing protective factors in addressing

the needs of children and adolescents as the impact of their significance spans well into adulthood.

As discussed earlier, Michael Rutter was a key proprietor in developing the Additive model of resilience. With his work in understanding the cumulating impacts of risk factors, Rutter also examined patterns of positive influences. Using the same sample from his epidemiological work of 1975, Rutter (1979) followed a cohort of children for seven years during secondary school, assessing behavior through observations in the schools, teacher ratings, police records, school attendance, and interviews with the children themselves. Utilizing this information, Rutter wanted to examine the influence of schools on delinquency. Based on the risk factors associated with his sample, the expected delinquency rate was between 11-18%. However, the observed rate ranged between 0-35%. From this, he concluded that schools have an important protective effect on children's development. Rutter questioned, then, what makes a school protective in nature, and moreover, what can schools do to ensure the facilitation of normal development of at-risk children. In looking at the characteristics of the schools, he found it was not factors such as the size of the school or the pupil teacher ratio, but rather, it was the characteristics within the social context that mattered. Such things as the teacher-student interactions during lessons and the availability of rewards and incentives served as positive characteristics in fostering development. Additionally, Rutter found that scholastic attainment appears to have a protective effect for children coming from disadvantaged environments, which he believed was associated with the development of a high-self esteem. Rutter's work highlighted the importance of other systems in

influencing development, particularly, the nature of how a school system can serve as a protective mechanism.

Utilizing the Additive/Compensatory conceptualization, Suniya Luthar of Yale University studied a sample of 144 adolescents enrolled in 10th grade at an inner city public school in Connecticut. Data was collected on these students that included: measurements of stress and positive life events utilizing measures such as the Life Events Checklist (Johnson & McCutcheon, 1980); demographic variables including family size and parents' education; measures of competences such as the Teacher-Child Rating Scale (Hightower et al., 1986); and measures of social skills using peer ratings and the Social Skills Inventory (Riggio & Throckmorton, 1986). Additional data was collected on locus of control, ego development, and depressive tendencies as well. These measures were given to students during three class periods across three consecutive days. Hierarchical multiple regression was then used to examine the relation between stress, competence, and other potential moderator variables.

Results yielded various factors to be responsible in creating a protective process for these children. Social expressiveness was found to be significant in protecting against stress, supporting the argument for the inclusion of social skills training in school-based programming. Intelligence also appeared to serve as a protective variable in that those who have higher levels of intelligence tend to be sensitive to their environments, which may account for response to stress in these children. Locus of control also contributed. Internal locus of control, or the belief that forces shaping one's life are largely in one's own control, was found to be involved in protective processes; whereas external locus of

control showed greater declines in functioning when their stress levels increased (Luthar, 1991).

Robbie Gilligan of the Children’s Centre at the University of Dublin further proposed a means of organizing these protective factors. In his review of the literature in resilience, which included founding researchers such as Rutter (1979) and Luthar (1991), Gilligan (1997) concluded that protective factors are essentially tied to three foundational building blocks. These are: (a) having a secure base, where there is a sense of security and belonging; (b) having self esteem, where there is an internal sense of worth; and (c) having self efficacy, where there is a sense of control and mastery. Gilligan further explains how these building blocks contribute to six domains that can be used to understand the impact of various areas on a child’s resilience. These domains include: (a) secure base, (b) education, (c) social competencies, (d) positive values, (e) talents and interests, and (f) friendships. A summary of protective factors from this review of the literature can be found in Table 1.

Table 1

Protective Factors Associated with Resilience

Internal Characteristics	Family Characteristics	External Characteristics
<ul style="list-style-type: none"> • High cognitive ability • Social skills • Willingness to seek support • Problem solving skills • Empathy • Self control • High self esteem • Goal setting skills • Positive physical development • Emotional self regulation 	<ul style="list-style-type: none"> • High socioeconomic status • Cohesive family • Stable family (little family discord/distress) • Attentive caregivers • Affectionate family • Good parental mental health • Educated mother • Parental supervision • Consistent discipline 	<ul style="list-style-type: none"> • Caring relationships with adults outside of the home (teachers, coaches) • Sense of belonging and/or community • Structured environments • Positive peer relationships • Access to supplemental services (healthcare) • Strong home-school relationships

Another more recent project was the International Resilience Project. This project was based on understanding how different cultures promote resiliency. It involved gathering data in 22 different countries on the factors and behaviors that were being used in dealing with adversity from 1993 to 1994. Data from families, service providers, and children were gathered from over 5,000 respondents. Grotberg (2000) concluded that every country has commonalities among factors that build resilience in children and adolescents. These commonalities were organized into: external supports, inner strengths, and interpersonal and problem solving skills. Grotberg (2000) simplified the sequence used for the common factors into three labels: I HAVE, I AM and I CAN items. Things that fell under the I HAVE group of factors focused upon the presence of people who care for a child unconditionally. These people provide for the basic needs of the child as well as provide encouragement and guidance. Examples of I HAVE items were things such as, "I HAVE one or more persons in my family I can trust and who love me without reservation" and "I HAVE limits to my behavior." I AM factors, then, are based around the child's emotional competence, particularly how well the child can express their emotions. Being respectful, taking responsibility, and showing optimism in one's life also fell in this group of factors. An example of this type of item would be "I AM a person most people like." Finally, I CAN factors are based in the child's social skills such as problem solving, communication, and self-control. "I CAN reach out for help when I need it" and "I CAN manage my behavior."

Grotberg (2000) noted that the promotion of resilience in children depended more on the adults in the child's life, rather than the child him or herself. The behaviors of the adults that the child interacted with played a crucial role regardless of cultural

background. From this, Grotberg (2000) concluded that resiliency does not develop in a vacuum, but in context. An important context or ecological system that interfaces with children and adolescents on a daily basis is the school. Similarly, Rutter (1979) and Luthar (1991) also indicated in their work that favorable school experiences lessen the effects of stressful home environments. For example, Rutter (1979) identified school characteristics to serve as protective factors. Likewise, Luthar (1991) cited social skills promotion as a possible school-based program to promote the appropriate development of social skills based on the contribution social expressiveness had on serving as a protective mechanism in resilience. These early efforts, then, were some of the first assertions of the importance that schools play in developing competence, particularly for those students who are at risk. This identifies schools as being in the ideal position to support and build protective factors in children so that they can foster resilience.

Role of School Psychologists

For several decades it has been argued that school psychologists should move away from the deficit-based model of refer-test-place to a more positive approach to providing service delivery within the schools (Nickerson, 2007; Reschly, 1976, 1988). Jimerson and colleagues (2004) published a special issue in *The California School Psychologist*, which highlighted the need for school psychologists to move in the direction of strength-based assessment. The strength-based approach that taken throughout the field of resilience (Anthony, 1987; Cowan, Cowan, & Schultz, 1996; Kaplan, 1999; Masten, Best & Garmezy, 1990; and Rutter, 1990) is one of the examples provided by Jimerson and his colleagues (2004) in their argument for why a marrying of

school psychology and resilience research is need in adapting a positive approach to practice.

Despite Jimerson and colleagues' (2004) argument the utilization of a strength-based approach exists, an examination of the different human service fields reveals that implementation of the approach varies. For example, strength-based approaches can be seen in practices that integrate wraparound service models, family systems frameworks, or solution-focused cognitive behavioral therapy (Johns, 2003; McDonald, Boyd, Clark, & Steward, 1995). Here, it seems the strength-based approach is one that is conceptualized by integration of multiple systems, rather than a unified method in working with children and families. Due to the unique applicability of the approach in different fields, complication arises in identifying a "best practice" method for a strength-based approach. Because of this, it is difficult for school psychologists to merely adapt an applicable model of practice. Rather, school psychologists would be required to create their own model of utilizing a strength-based approach to their practice and examine its utility in the provision of their services to children and their families.

Another issue when implementing a strength-based approach within the field of school psychology is the lack of assessment measures that are designed to measure strengths. Given that school psychologists spend much of their time working in the area of assessment, a focus within this particular aspect of a strength-based approach is of no surprise. School psychologists are considerate in assessing strengths, and usually do so through means of an interview, however, the lack of formal measures that can be used in assessment provides reason to remain apprehensive around integrating such an approach. Until recently, there were virtually no measures in existence. Fortunately, in more recent

attempts to infiltrate a strength-based approach, efforts have been made that attempt to address this lack of measures available to assess strengths. Many of these measures aim to identify the previously discussed protective factors and provide hope that a shift toward using these in assessment may be on the rise.

Strength-Based Assessment

Measures that rely on a deficit-oriented assessment model have been validated within the field of school psychology; for instance, the Child Behavior Checklist (Achenbach, 1991) and the Behavior Assessment System for Children, Second Edition (Reynolds & Kamphaus, 2004). These tools have proven useful in identifying problem behaviors in children as well as competencies in terms of their adaptive functioning, however, they lend little information with regards to the child's individual strengths that may be used for treatment planning. Therefore, tools that are aimed at assessing these protective factors in individuals, their families, and their external environments begin to provide a methodology for school psychologists to integrate a strength-based approach. This has led to a movement towards developing tools that will guide strength-based assessment. The following has been utilized in conceptualizing strength-based assessment:

Strength-based assessment is defined as a measurement of those emotional and behavioral skills, competencies, and characteristics that create a sense of personal accomplishment; contribute to satisfying relationships with family members, peers and adults; enhance one's ability to deal with adversity and stress; and promote one's personal, social, and academic development. (Epstein & Sharma, 1998, p.3)

Various tools exist that have been used by researchers in an attempt to validate strength-based measures and measure children's strengths. According to Epstein and colleagues (2003) work on these tools is founded in these principles: (a) all children have strengths; (b) focusing on children's strengths instead of weaknesses may result in enhanced motivation and improved performance; (c) failure to demonstrate a skill should be viewed as an opportunity to learn rather than a problem; and (d) service plans that focus on strengths are more likely to involve families and children in treatment.

Examples of tools that encompass these ideals include, but are not limited to the: (a) Child and Adolescent Strengths Assessment Scale (CASA), which is an assessment measure designed to assess a child or adolescent's status on 30 potential strengths. These strengths are assessed in six domains: family, school/vocational, psychological, peer, moral/spiritual, and extracurricular. Raters are asked to indicate the level of presence of each of the potential strengths in child's life (Lyons et al., 1998); (b) the Strengths and Difficulties Questionnaire (SDQ) is a brief screening tool for 3 to 16 year olds. This tool asks about twenty-five different attributes, both positive and negative, across five scales: emotional problems, conduct problems, hyperactivity/inattention, peer social relationships, and prosocial behavior (Goodman, 1997); (c) the Devereux Early Childhood Assessment Program (DECA) The DECA is a nationally normed behavior rating scale that evaluates protective factors in preschool children ages 2 to 5 years old. The DECA is designed to identify children with low protective factors, generate classroom profiles to guide classroom design and instruction, and screen for children with emotional and behavioral concerns. It consists of 37 items organized into four subscales: initiative, self-control, attachment, and behavior concerns (LeBuffe & Naglieri, 1998);

(d) the Resiliency Scales for Children and Adolescents (RSCA) is a measure for use with children and youth from ages 9 to 18 years old. It measures personal attributes related to resilience, particularly focusing on strengths as well as symptoms of vulnerability. Its subscales include: sense of mastery (optimism, self-efficacy, adaptability), sense of relatedness (trust, support, tolerance), and emotional reactivity (sensitivity, recovery, impairment) (Prince-Embury, 2005, 2006); (e) the Behavioral and Emotional Rating Scale, Second Edition (BERS-2) measures personal strengths and competencies of children and adolescents in five areas and can be used to assess children ages 5 to 18. Its constructs include interpersonal strength, involvement with family, intrapersonal strength, school functioning, and affective strength. There are a total of 52 items across the following formats: self-report, parent report, and teacher or other professional report (Epstein, 2004); and the Social-Emotional Assets and Resilience Scales (SEARS) focuses on children's strengths measuring constructs such as self regulation, responsibility, social competence, and empathy. It can be used for children and adolescents ages 5 to 18 years old and includes self, parent, and teacher versions (Merrell, 2011).

Why a Strength-Based Approach?

Although efforts are being made to document the use of these tools as a means of assessing critical positive competencies in children, the question that still begs asking is why these types of assessments should be integrated into the practice of school psychology? As summarized by Nickerson (2007), several arguments have been made in the literature to address such a question. Such arguments include: (a) empowerment and motivation for the students (Epstein, Hertzog, Reid, 2001; LeBuffe & Sharpio, 2004); (b) more positive relationships among children, families, and school personnel (Epstein,

Dakan, Oswald, Yoe, 2001; Epstein, et al., 2003; LeBuffe & Sharpio, 2004); (c) acceptability of service provision (Epstein et al., 2003; Walrath, Mandell, Holden, & Santiago, 2004); and (d) stronger treatment or intervention plans (Epstein, 1999; Rhee et al., 2001); and (e) consideration of social context as supportive resources (Jimerson, Sharkey, Nyborg, & Furlong, 2004). Other perspective shifts are also argued for as a benefit of strength-based assessment. For instance, a movement toward prevention and wellness promotion (LeBuffe & Shapiro, 2004) or the belief that even the most difficult students have strengths that can be used as well as focused upon in treatment (Epstein, 1999; Rhee, et al., 2001). Finally, the overarching argument that strength-based assessment expands the information gathered during an evaluation and helps to paint a more holistic view of the child is seen throughout (Epstein, Ryser, & Pearson, 1999; Clonan, Chaouleas, McDougal, & Riley-Tillman, 2004; Rhee, Furlong, Turner, & Harari, 2001). Little empirical support exists to examine such proclaimed arguments for the use of strength-based approaches, particularly in the school setting.

The BERS (and BERS-2) is one of the most well researched strength-based assessment tools. Research exists that supports its validation as well as its use as a tool to evaluate programs that take a strength-based approach. For example, the tool was used to assess individual and family change after participation in the Fostering Individualized Assistance Program (FIAP), a program designed to utilize strength based assessment, wraparound services, and case management to improve outcomes of youth in the foster care system (Clark et al., 1996).

Donovan and Nickerson (2007) examined the impact of including strength-based data on the perspectives of a multidisciplinary team members' perspective of students

with emotional and behavioral disorders. The sample included 150 participants employed at state-approved day and residential schools for student with emotional and behavioral disorders from across the United States. Participants included administrators (44%), special education teachers (28%) and psychologists (19.3%). Here, participants in the study either received a traditional report containing deficit-oriented behavior rating scale data, specifically the Achenbach System of Empirically Based Assessment (ASEBA) (Achenbach & Rescorla, 2001), or a combined report, which included this traditional data as well as the supplemental strength-based data from the Behavioral and Emotional Rating Scales- Second Edition (BERS-2) (Epstein, 2004). Additionally, the reports differed with regards to their presentation, interpretation, and discussion based on the traditional or combined data. No recommendations were included in either of the reports. Using this information, participants in the study were asked complete a series of questions in a survey format that included forced-choice, closed-ended items. These questions related to both short-term and long-term predictions about the students' outcomes across various domains. They were also asked to make an educational placement for the child. Results of the study revealed that the participants who received the combined report predicted more positive academic, social, and overall outcomes than those who received the traditional report.

Furthermore, investigation of the benefits of strength-based assessment in children with emotional and behavioral difficulties has been seen. For example, Cox (2006) examined the benefits of using a child's positive characteristics in achieving treatment goals in a sample of eighty-four youth who were receiving psychotherapy services from a public mental health agency in Northern California. Participants in the

study were both male and female, ranging in age from 5 to 18 years old who all held at least one mental health diagnosis included in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 1994). Participants were divided into control and experimental groups, with the experimental group receiving strength-based assessment using the Behavioral and Emotional Rating Scales (BERS). The therapists, then, were given the results from the BERS assessments and encouraged to integrate the results in intervention formulation. Results revealed that child functioning outcomes were significantly better for youth who received BERS-guided assessment versus the usual deficit-based assessment protocol. These results, though, were seen only when the treating therapist reported an orientation that reflected highly strength-based attitudes and practices. Furthermore, the strength-based assessment protocol was associated with significantly higher parent satisfaction with services and lower rates of missed appointments (Cox, 2006).

LeBuffe and Sharpio (2004) also detail their work that utilized the *Devereux Early Childhood Assessment* (DECA) to compare the advantages of strength-based approaches to assessment. Three studies are presented in their paper, each outlining how measuring a child's strength can provide psychometrically sound and useful information. Specifically, the DECA was able to discriminate between preschool students with and without emotional and behavioral difficulties, indicating the use of an assessment that examines protective factors is as effective at predicting emotional and behavioral problem as an assessment of risk. From this, the authors imply that the DECA, or another similar strength-based assessment, can guide intervention to the same extent as assessment that measure deficits in functioning. Using this, then, supports the holistic

approach of working in early intervention.

Cosden, Panteleakos, Gutiertez, Barazani, and Gottheil (2004) were concerned with how traditional assessment procedures paint a picture of children and youth that is extremely negative, particularly for those who are experiencing severe behavioral problems. Therefore, they sought to examine two methods of using strength-based assessment with adolescents involved in drug use and delinquent behavior. The first study presented by the authors analyzed the predictive strength of a battery of assessments on the outcomes for these youth. Utilizing a sample of 215 adolescents participating in Juvenile Drug Court treatment program, data was collected using the following measures: the Adolescent Addiction Severity Index (AASI; 2000), the Youth Self-Report (YSR; Achenbach, 1991b), and the Family Adaptability and Cohesion Scales-II (FACES-II; Olson, Portner, & Bell, 1982). Additionally, the Child Behavior Checklist (CBCL, Achenbach, 1991a) and the FACES-II were administered to the youths' parents. These measures were administered prior to participation in the treatment program, and again, 12 months later, following the treatment period. They found that strengths, particularly family support, school functioning and personal strengths, were associated with successful completion of the treatment for their drug use. Results such as these were then used to refocus the efforts of the treatment program, increasing family involvement and school engagement. Additionally, strength-based protocols were added to the data collection process so that individualized strengths could be assessed and integrated into individual treatment plans for the program.

The second study in this paper, then, examined the inclusion of such strength-based protocols in the individuation of treatment in the program. One of the youth in the

program, a 17-year-old Caucasian male, was used to illustrate how the strength-based assessment could be used in treatment planning. Strengths that were identified included a strong relationship with his father, desire to achieve future goals (graduation from high school), and clear thinking. The youth also did not identify himself with his drug-using peers, and was currently achieving success in school. He appeared to be the “leader” in his peer group. Using this information, the treatment team, which included a school psychologist, outlined a plan that suggested integrating the youth’s father in supervising the youth’s pursuit of a college education. The school was also made aware of the potential leadership skills, and how those skills may be redirected in the school atmosphere to a more appropriate leadership role outside of his drug-using peer group.

Both studies presented illustrate support for the identification and integration of strengths to guide individualized treatment plans. Study 1 cited how various measures can be used to identify strengths in youth, even those measures that may typically be used to identify deficits, such as the CBCL (Achenbach, 1991a). Rather than focusing on the difficulties such measures identify, this study outlined how these measures can be utilized in a more comprehensive manner to identify both deficits and competencies. Although, study 2 did not report the outcomes from utilizing the integration of strengths in treatment planning, the authors were able to exemplify the way in which strengths can be connected to treatment planning with very little effort. Of course, this does not ensure that these strengths will be carried out in intervention, particularly for educators who may not be interested in thinking “outside of the box.” However, with the guidance of personnel, such as the school psychologist, this practice shows potential to increase desired outcomes of treatment.

Cultural Shift

As previously outlined, there is currently not a comprehensive model of “best practice” for implementing a strength-based approach to practice, which serves as a barrier for its implementation with the field of school psychology. Edward Rawana and Keith Brownlee of Lakehead University have proposed a framework of strength-based assessment, intervention, and treatment in clinical work with children, adolescents, and their families (2009) that may be useful. Recognizing the need to operationalize the assessment and intervention process for working with children and adolescents, they developed a model to guide such practice within the field of social work. Their model includes the following key components: (a) engagement; (b) exploration; (c) expansion; and (d) evolution. Each of these components is intertwined, and although they are noted individually through interactions with children and their families in the model, they are by not restricted to this sequence.

The first component of the model is engagement. Drawing from the strength-based literature in the field of social work, Rawana and Brownlee (2009) identify, engagement as forming a relationship, establishing rapport, or developing trust with a given client. With a strengths perspective, the model emphasizes creating engagement that is positively oriented in resolving difficulties. Here, the conversation between clinician and the family is that strengths will be woven into through their interactions, and that despite difficulties positive attributes of the child and family exist (Myers et al., 2002). Here, it is important to note that although engagement is an essential beginning component to assessment and intervention, once it is established, it is not to be forgotten, as this type of relationship should be ongoing throughout the process.

Exploration is the component of the model where strengths in the individual and the family begin to be discovered. Emphasizing the identification of strengths in a variety of contexts, Rawana and Brownlee (2009) recommend a comprehensive assessment of strengths in areas such as home, school, community, and peers that includes both structured questionnaires such as the BERS-2 (Epstein, 2004) and interview questions allow for deeper exploration. By assessing strengths across contexts, organization of these strengths can then be organized into domains. Rawana and Brownlee (2009) suggest domains that can be categorized into two areas: contextual and developmental. Contextual factors include strengths in school, employment, and family, whereas development factors include strengths in personality and culture. This type of organization helps to better understand which areas of the child's life are developing in a typical fashion as well as the areas that may require attention. A final note from Rawana and Brownlee (2009) is that exploration not only requires identification of strengths by the child, but careful reflection and awareness of these strengths by the family and other people in the child's environment.

In the expansion component of the assessment, intervention, and treatment model proposed by Rawana and Brownlee (2009), the clinician focuses on taking the assessed strengths and guiding the client through how those strengths can be used to address difficulties. "Expansion encourages a shift in awareness, not just for the child, but also for the people around the child as they reflect on the child's strengths" (p. 258). This component of the model emphasizes possibilities, recognizing that the client has personal agency to utilize their strengths across domains to better their functioning. Finally, evolution, is the point where the strengths intervention process becomes active in

producing change. Specifically, this is where the client is challenged to use their strengths in productive ways (Brownlee, Rawana, MacArthur, 2012).

Brownlee and colleagues (2012) emphasize how this model not only applies at the individual level, but also to school-wide initiatives by encouraging a strength-based culture in the schools. In creating a school culture focused on strengths they describe how students, staff, and families become immersed in the strength-based culture and everyone “speaks the same language” to assess and treat in the school setting. They further explain that the strengths perspective aligns school personnel with students and families and demonstrates how educators value children, while encouraging students to achieve. The majority of individuals who receive mental health services to support healthy development, receive those services within the school (Rones & Hoagwood, 2000). Therefore, creating such supportive environments allow for school systems to serve as protective mechanisms in child’s lives (Cefai, 2007).

Moving Forward

Although school psychologists are in the position to administer strength-based assessments and support intervention planning, applicability in the day-to-day activities within a school cannot rely solely on the adaptation of this approach by school psychologists. This is further emphasize by Rawana and Brownlee (2009) in their concept of expansion and integrating a culture that is strength-based. Therefore, in order for school psychologists to move towards a culture that utilizes a strength-based practice the consideration of other school personnel and their role is crucial. One group of personnel that is particularly important to effective application of this approach is teachers. Teachers play a significant role in supporting school psychologists’ application

of mental health services in the schools. Teachers have identified themselves in the primary role of intervention implementation, while school psychologists tend to conduct the screening and assessment procedures that guide these interventions (Reinke, Stormont, Herman, Puri, & Goel, 2011). In order to truly moved towards a strength-based approach to practice, school psychologists will not merely need to assess strengths, but also integrate them into the classroom and school-wide activities that create a positive school environment.

CHAPTER III

METHODOLOGY

After analysis of the existing literature base on strength-based assessment, research examining the applicability of strength-based data in the school setting was warranted. This is an exploratory study examining the utility of strength-based assessment in the school systems. The goal of this study was to gather information regarding the utility and acceptability of this type of data from teachers as a preliminary step in moving towards the integration of a strength-based perspective in school psychology practice. This chapter describes the methodology of the current research study including participants, instruments, procedure, and data analysis.

Participants

Teachers were recruited from urban and suburban K-12 school districts in the western Pennsylvania area. Total sample size for this study was 58 participants. A total of 36 (62%) participants indicated that they were currently working in an urban school district, with the remaining 22 (38%) participants employed in a suburban district in Pittsburgh. This was a convenience sample based on proximity and accessibility to the researcher. Only educators who were currently teaching in a public school system were included in the sample. No other variables of exclusion were indicated.

Participants for this study included general education (62%) and special education (21%) teachers across elementary (74%), middle (12%), and secondary (12%) grade levels. The sample included 8 males and 50 females between the ages of 23 and 64. Of the participants, 93% identified themselves as Caucasian and 5% of participants identified themselves as African American. Years of teaching experience among the

sample ranged from less than 1 year to 34 years. With regards to their highest obtained education degree, Bachelor's level degrees were held by 28 participants, 28 participants held master's degrees, and 2 participant's reported holding a doctorate degree. Fields reported by the sample included: Elementary Education, Special Education, Dual (both elementary and special education), Secondary Education, and Other (including non-education fields).

From the total sample of 58 teachers, one group of 5 teachers participated in a focus group interview. The teachers who chose to participate in this additional study method were Caucasian, females (ages 23-48) working in a suburban setting. All 5 teachers held degrees in Special Education. Each of the teachers had been working in the field for less than 5 years. Two of the teachers served primarily elementary age students, 2 teachers served primarily secondary age students, and 1 teacher served middle and secondary age students.

Measures

Demographic information. A demographic sheet was used to collect data about participants' grade(s) and subject(s) taught; years of experience; highest degree held/area of concentration; and work setting (regular vs. special education). Additional demographic information was also collected regarding gender, age, and ethnicity. The complete demographic sheet can be found in Appendix A.

Strength-Based Vignette. The researcher developed a vignette that reflected a typical data summary following strength-based assessment. This summary was delineated from sample data summaries of strength-based data provided in two common strength-based measures: the Behavioral and Emotional Rating Scale- 2nd Edition (BERS-2)

(Epstein, 2004) and the Social-Emotional Assets Rating Scales (SEARS) (Merrell, 2011). The vignette includes additional information that a school psychologist may include in a typical psychoeducational evaluation such as referral and background information. The vignette that was provided to the participants is provided in Appendix B.

Evaluation of Strength-Based Data Survey. The Evaluation of Strength-based Data Survey was developed by the researcher to measure perceptions of the utility and acceptability of strength-based data in teaching practices. The survey consists of 18 items that addresses potential impressions regarding the utility and acceptability of this type of data. For this study, utility is defined as the overall usefulness of the data provided. Likewise, acceptability is related to the quality in which the data meets the teacher's needs. There are 9 items that relate to the utility of the data and 9 items regarding its acceptability. The survey is rated on a Likert-type scale. Responses range from 1 (*Strongly Disagree*), to 5 (*Strongly Agree*). Question topics include appropriateness of the data for understanding student functioning, the clarity of the presentation of the data, usefulness of the data, and willingness to use the data in the classroom. The Evaluation of Strength-Based Data Survey was used to gain an understanding of the participants' perspective on the specific strength-based data report that was provided in this study. Review of overall readability and general structure of the survey took place by the dissertation committee. Further review was made following the submission to the Institutional Review Board (IRB). The survey used for this study is available in Appendix C.

Focus Group Interview Questions. When conducting focus group interviews there are five general types of questions that should be utilized: (a) opening questions; (b)

introductory questions; (c) transition questions; (d) key questions; (e) and ending questions (Krueger & Casey, 2000). Using the suggestions of Kruger and Casey (2000), the researcher developed 6 questions to guide the focus group interview. Questions were designed to gain further insight into teacher perception of strength-based data. These questions are available in Appendix D.

Research Design

Both quantitative and qualitative analyses were utilized to answer the proposed research questions. Descriptive statistics were examined to determine the general utility and acceptability of strength-based data. Non-experimental differential research design was used for the various between group comparisons. This design was used because the groups were compared across characteristics that existed prior to this study, and there will be no manipulation of the independent variables. Characteristics of teachers (group differences) are the independent variables and the dependent variables are the mean scores for utility and acceptability of each group on the Evaluation of Strength-Based Data Survey. Although this design allows for comparison of groups on preexisting variables, there are disadvantages. Primarily, confounding variables, specifically in the form of individual characteristics may impact the results on the dependent variable. Additionally, generalizability may be more difficult given the individual differences that may exist within the groups. However, given this is an exploratory study, this design will be best suited for answering the research questions.

In order to provide more in depth exploration of the study topic, qualitative methods were administered in the form of focus group interviews. Using the suggestions of Kruger and Casey (2000), the researcher developed 6 questions to guide the focus

group interview. Focus groups are a means of collecting information from members of a clearly defined target audience, which in this case will be teachers currently working in a school setting. Advantages to qualitative methods include their flexibility in terms of methodology as well as their ability cover a broader scope in terms of data collection. However, qualitative methods cannot be analyzed statistically and there are various methods that exist in terms of coding qualitative data. These designs are unique and therefore, cannot be replicated.

Procedures

Permission to conduct this study was obtained from the Institutional Review Board (IRB) at Duquesne University. Participants were recruited from school districts in the western Pennsylvania area. Permission to recruit participants was obtained from superintendents of each school district. Individual principal permission was also obtained at the school building level. Teachers were provided with a brief description of the study, both verbal and written, and the consent to participate form. Informed consent was obtained from the teachers at each school.

Survey Completion. Participants were asked to read the Strength-Based Vignette (Appendix B) that includes a description of strength-based data for a fictional student. They were then asked to complete the Evaluation of Strength-Based Data Survey (Appendix C) based on the vignette provided. The vignette appeared first in the packets, followed by the survey. The demographic sheet (Appendix A) was attached at the end of the packet. Participants placed all completed materials in an envelope and returned the full packet to the researcher. Total participation time took approximately 15-20 minutes.

Focus Group Interview. In the initial informed consent and study information, teachers were asked to provide their contact information on the provided consent sheet if they were interested in additional participation through a focus group interview. If teachers indicated their interest beyond completion of the survey, follow-up arrangements were made by the researcher and the participant to conduct the interview. Informed consent was obtained for participation and audio recording purposes. The focus group interview was conducted on site at the school setting where participants were located. The interview took place in a private classroom with the participants and researcher present. The researcher lead the interview soliciting responses from the participants using the interview questions developed prior to the study. Participants took turns answering the questions and contributing additional perspectives related to the questions. The interview was audio recorded for later review and analysis by the researcher. The interview lasted approximately 45-60 minutes.

Data Analysis

This study sought to examine the utility and acceptability of strength-based data as a source of information in guiding teaching practices in the school setting. A mixed methods approach will be utilized for data analysis to answer the following research questions:

Research Question 1

Is strength-based data useful in guiding teaching practices in the school setting?

Hypothesis 1. Teachers find strength-based data useful in their teaching practices in the school setting

Hypothesis 2. Teachers' characteristics, specifically classroom context (i.e. general education versus special education), are related to their utility of strength-based data.

Hypothesis 3. Teachers' characteristics, specifically type of school district they are currently employed (i.e. urban vs. suburban), are related to their utility of strength-based data.

Research Question 2

Do teachers in the school setting accept strength-based data for use?

Hypothesis 4. Teachers accept strength-based data for use in the school setting.

Hypothesis 5. Teachers' characteristics, specifically classroom context (i.e. general education versus special education), are related to their acceptability of strength-based data.

Hypothesis 6. Teachers' characteristics, specifically type of school district they are currently employed (i.e. urban vs. suburban), are related to their acceptability of strength-based data.

Quantitative Data Analysis. Survey responses and demographic information were entered into the IBM software, SPSS Statistics 22. The sample's descriptive statistics data were reviewed to determine the overall utility and acceptability. Comparisons of group differences were made between the following groups: teachers working in urban vs. suburban setting and teachers working in general education vs. special education settings. These comparisons were made using independent-samples *t* tests. Assumptions for these methods of comparison were tested prior to data analysis. These assumptions included: (a) normality, which asserts that the populations from which the samples are drawn are

normally distributed. This was tested using the Kolmogorov Smirnov non-parametric test; (b) homogeneity of variances, which indicates that the standard deviations of the populations should be equal. This was tested using the Levene's test of Homogeneity of Variances; and (c) the sample has been randomly drawn independent of each other. Based on data collection procedures, independence is assumed. A p value of less than .05 was required for significance for results of the t -tests.

Qualitative Data Analysis. Focus group interviews were audio recorded by the researcher. The interview was then transcribed into Microsoft Word for further analysis. Any identifying information regarding the speaker in the interview was removed during the transcription process. Thematic analysis was used to interpret the focus group interview data.

Thematic analysis is a method of data analysis that is used for identifying and reporting patterns or themes seen in data (Boyatzis, 1998). The researcher chose this method because it does not require a pre-determined theoretical orientation that is required for other approaches to analysis (i.e. ground theory). Additionally, this method is recommended for researchers who are early in their qualitative research career (Braun and Clarke, 2006). Generally speaking, the transcribed interviews are grouped by themes using a selective reading approach. This means that statements are highlighted and isolated and can then be grouped with similar statements in other passages from transcripts. Open coding breaks the data down through analysis, comparison, and categorization. Description, opinions, interpretations, and events are grouped together by theme through constant comparison. Through triangulation repeated themes can be observed.

The thematic analysis procedure that was used in this study followed the six-phase analysis described by Braun and Clarke (2006). The first phase of thematic analysis involved familiarization with the data. During this phase, the data is transcribed, read and re-read, and initial ideas are noted. The second phase initial codes were generated. Codes refer to, “the most basic segment, or element, of the raw data or information that can be assessed in a meaningful way” (Boyatzis, 1998, p. 63). The researcher utilized a preferred method (i.e. track changes in Microsoft Word) to identify the segments of data being coded.

The search for potential themes took place in the third phase. Here, the codes were examined and organized under potential themes. This refocuses the data analysis to a broader level. Codes that did not fall into any type of organization were categorized into a miscellaneous theme category for consideration at a later point. This phase concluded with a collection of themes where all codes were organized related to these themes. During the fourth phase of analysis, the themes were reviewed. The goal of this phase was to have a fairly accurate picture of what the themes of the data were, how the themes fit together with one another, and what the themes reveal about the overall interpretation of the data. The fifth phase of analysis requires the researcher to define and name the themes. For each theme, an identifier was given, and a written detailed description was formulated. Finally, the interpretation of the data’s themes and illustrations of the conclusions were made in a summarized format.

CHAPTER IV

RESULTS

Results of all analyses conducted to evaluate the proposed research questions are presented in this section. Preliminary analyses and primary analyses' results to each individual research question will be outlined. Both quantitative and qualitative results are interpreted.

Preliminary Quantitative Data Analyses

The present study conducted independent-samples *t* tests to analyze the quantitative data provided through survey. This analysis procedure was chosen given our desire to evaluate the differences between the means of two independent groups. Prior to these analyses, the following assumptions were examined: (a) normality, which asserts that the populations from which the samples are drawn are normally distributed; (b) homogeneity of variances, which indicates that the standard deviations of the populations should be equal; and (c) the sample has been randomly drawn independent of each other. Results of these preliminary analyses indicated no concerns with assumption violation. Normality and homogeneity of variances were tested using the Kolmogorov Smirnov non-parametric test and the Levene's test of Homogeneity of Variances. Based on data collection procedures, independence is assumed.

Primary Quantitative Data Analyses

This study sought to examine the utility and acceptability of strength-based data as a source of information in guiding teaching practices in the school setting. A mixed methods approach will be utilized for data analysis to answer the following research questions:

Research Question 1

Is strength-based data useful in guiding teaching practices in the school setting?

Hypothesis 1. Teachers find strength-based data useful in their teaching practices in the school setting.

Results. An examination of descriptive statistics revealed the perceived utility of strength-based data by teachers in the sample. The survey items are rated on a Likert-type scale. Responses range from 1 (*Strongly Disagree*), to 5 (*Strongly Agree*). In examination of the mean scores, the maximum score possible was 45. To achieve this, all 9 items measuring utility would need to be rated 5 (*Strongly Agree*). The average score reported fell near this maximum score (M=38.70), indicating that participants generally rated items in this domain as 4 (*Agree*) or 5 (*Strongly Agree*). Table 2 presents the descriptive statistics for utility scores in the overall sample.

Table 2

Descriptive Statistics for Utility Scores

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Utility	58	28.00	45.00	38.7069	4.42088

Hypothesis 2. Teachers' characteristics, specifically classroom context (i.e. general education versus special education), are related to their utility of strength-based data. Table 3 presents the descriptive statistics for these groups.

Table 3

Descriptive Statistics for General Education and Special Education Groups (Utility)

Variable	Classroom Context	N	Mean	Std. Deviation	Std. Error Mean
Utility	General Ed	36	38.0278	4.10217	.68369
	Special Ed	21	40.0476	4.77992	1.04306

Results. *T*-test results indicated that there were not statistically significant group differences in utility scores for teachers who taught in general education setting (M=38.02, SD=4.10) versus teachers who taught in special education settings (M=40.04, SD=4.78), $t(55) = -1.68, p = 0.10$. Table 4 presents these results.

Table 4

Group Differences in General vs. Special Education (Utility)

Variable	t-value	df	Sig.	Mean Difference
Utility	-1.687	55	.097	-2.019

* $p < .05$

Hypothesis 3. Teachers' characteristics, specifically type of school district they are currently employed (i.e. urban vs. suburban), are related to their utility of strength-based data. Table 5 presents the descriptive statistics for these groups.

Table 5

Descriptive Statistics for Urban and Suburban Groups (Utility)

Variable	District	N	Mean	Std. Deviation	Std. Error Mean
Utility	Urban	36	38.0278	4.48162	.74694
	Suburban	22	39.8182	4.18201	.89161

Results. *T*-test results indicated that there were not statistically significant group differences in utility scores for teachers who work in an urban school district (M=38.02, SD=4.48) versus teachers who work in a suburban school district (M=39.81, SD=4.18), $t(56) = -1.51, p = 0.14$. Table 6 presents these results.

Table 6

Group Differences in Urban vs. Suburban (Utility)

Variable	t-value	df	Sig.	Mean Difference
Utility	-1.513	56	.136	-1.790

* $p < .05$

Research Question 2

Do teachers in the school setting accept strength-based data for use?

Hypothesis 4. Teachers accept strength-based data for use in the school setting.

Results. An examination of descriptive statistics was use to determine the perceived utility of strength-based data by teachers in the sample. The survey items are rated on a Likert-type scale. Responses range from 1 (*Strongly Disagree*), to 5 (*Strongly Agree*). In examination of the mean scores, the maximum score possible was 45. To achieve this, all 9 items measuring acceptability would need to be rated 5 (*Strongly Agree*). The average score reported fell near this maximum score (M=37.86), indicating that participants generally rated items in this domain as 4 (*Agree*) or 5 (*Strongly Agree*). Table 7 presents the descriptive statistics for acceptability scores in the overall sample.

Table 7

Descriptive Statistics for Acceptability Scores

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Acceptability	58	31.00	45.00	37.8621	4.03688

Hypothesis 5. Teachers’ characteristics, specifically classroom context (i.e. general education versus special education), are related to their acceptability of strength-based data. Table 8 presents the descriptive statistics for these groups.

Table 8

Descriptive Statistics for General Education and Special Education Groups (Acceptability)

Variable	Setting	N	Mean	Std. Deviation	Std. Error Mean
Acceptability	General	36	37.4167	4.02403	.67067
	Ed	21	38.8095	4.00773	.87456
	Special Ed				

Results. *T*-test results indicated that there were not statistically significant group differences in acceptability scores for teachers who taught in general education setting (M=37.41, SD=4.02) versus teachers who taught in special education settings (M=38.81, SD=4.00), $t(55) = -1.26, p = 0.21$. Table 9 presents these results.

Table 9

Group Differences in General vs. Special Education (Acceptability)

Variable	t-value	df	Sig.	Mean Difference
Acceptability	-1.262	55	.212	-1.39

* $p < .05$

Hypothesis 6. Teachers’ characteristics, specifically type of school district they are currently employed (i.e. urban vs. suburban), are related to their acceptability of strength-based data. Table 10 presents the descriptive statistics for these groups.

Table 10

Descriptive Statistics for Urban and Suburban Group (Acceptability)

Variable	District	N	Mean	Std. Deviation	Std. Error Mean
Acceptability	Urban	36	37.4722	3.93146	.65524
	Suburban	22	38.5000	4.21731	.89913

Results. *T*-test results indicated that there were not statistically significant group differences in acceptability scores for teachers who work in an urban school district (M=37.47, SD=3.93) versus teachers who work in a suburban school district (M=38.50 SD=4.21), $t(56) = -0.94, p = 0.35$. Table 11 presents these results.

Table 11

Group Differences in Urban vs. Suburban (Acceptability)

Variable	t-value	df	Sig.	Mean Difference
Acceptability	-0.949	56	.351	-1.028

* $p < .05$

Qualitative Data Findings

This section presents the key findings from the focus group interview.

Demographic and procedural information for the focus group is outlined more thoroughly in previous chapters. Interview questions used are included in the appendices. The purpose of the focus group was to gather richer information around teacher perspectives’ of strength-based data. The teachers in the group had each completed the survey, and then volunteered to provide further descriptive feedback via a focus group interview. The themes discovered in the interview are presented below.

Flexibility of Special Education. The flexibility that special education teachers have over general education teachers in terms of implementing strength-based techniques was a primary topic within the group. One participant commented:

We know what you are getting at, but we also come from more specialized settings being in special education. Integrating strengths seems to be seen

more in working in special education classrooms like those for autism or other developmental needs. It's easy for us. Find what works for the kid and we use it, but we have that flexibility.

The teachers expressed that working within the special education context has allowed for them to be more flexible in individualizing their teacher practices and use the strengths of their students. Many of the teachers cited examples of how they integrate the use of strengths in their classroom now. One example stated provided from a participant:

We give them choices. Then, the students usually choose things that are more geared towards their strengths. It's an obvious option to help them learn how they want, no just what they have to or what we tell them to do.

Relationships with Students. During the interview, teachers' identified that the use of strengths would help in relationship building with the student. They felt that using a child's strengths would allow for them to build rapport and create a positive view of their classroom. As one teacher stated:

Using a child's strengths gives more opportunity to build rapport. The kids learn to trust you, and then they respect you. You know, all of that stuff. It's not punitive. The kids look forward to coming to class.

Engagement. The group believed that by using this data they'd be able to easily engage students. Creating the positive relationship would lead to a students' increased likelihood to engage with the teacher and with classroom activities and

requirements. The group felt that students recognize and appreciate when teachers make the effort to integrate their strengths. For instance, one teacher explained:

Kids like teachers that are flexible and work with them to get them to learn. They appreciate it if you make the effort in learning about them and being flexible about how they learn. Don't understand the mentality some teachers have. The, no, you have to do it my way.

Training and Support. The group identified that additional training on examples of how to integrate the strength-based data in day-to-day classroom practices would be needed. As one teacher in the group noted:

Examples of how you could integrate the strengths would be helpful. Teachers have a lot of students and the demands of the curriculum, so how do you get it in without having to think about is some much, but just make it automatic, a way you do things. Support – lots of students and other curriculum- how do you get it in? We try to do it now by seeing what the students like and what their interests are, but other ways of using the strengths would be helpful.

The group felt that to implement the use of the strength-based data as an additional classroom task would not be effective. Rather, they preferred to understand how to integrate the use of the data into the curriculum and activities they were already doing in their classroom.

Rigid Systems. While discussing barriers, the group had an ongoing theme of rigidity. They identified a variety of sources for this rigidity. For example, at the

individual level changing the way that teachers already do things would be difficult as one teacher explained:

Teachers that are set in their ways would be difficult to change, especially if they have been doing things a certain way for a long time or it's something that they don't see would benefit their teaching practices.

In addition to individual staff barriers, the group also identified larger systemic issues that may arise related to collecting strength-based data. One of teachers reiterated that importance of gaining buy-in:

Getting buy-in from administration would be tough. Rigid school districts would be a definite barrier. How can you individualize if the demands of the system are not flexible, especially within general education classrooms. I used to work in this one school district where everything was scripted, regimented, and if you weren't following the curriculum, you'd be penalized. It's a culture change, too, a different way of doing things. Changing a perspective of how things are done is never easy.

CHAPTER V

DISCUSSION

Results of the present study illustrated teacher perspectives' on the utility and acceptability of strength-based data in the schools. Utility was presented as the overall usefulness of strength-based data in classroom practice. Results indicated that teachers agreed that strength-based data could be useful in the classroom. For instance, teachers endorsed items related to the applicability of the data to conceptualizing individual students, integration into teaching practices, and its use across a range of classroom settings. Generally speaking, results supported the hypothesis regarding the usefulness of this type of data in the schools. The field of education has moved toward more data-driven decision-making, and therefore, it is likely that teachers support the utilization of this data as a way of expanding their understanding of a child's functioning.

The researcher had hypothesized potential differences in the perceived utility of strength-based data would arise depending on the classroom context (i.e. general education versus special education) and/or the type of school district currently employed (i.e. urban vs. suburban). Special education teachers were anticipated to have more exposure to individualized planning for students, and therefore, the researcher expected that this population would be more likely to find strength-based data useful. However, results indicated no significant difference between the responses of general education teachers compared to special education teachers. Depending on the district, teachers face a variety of daily stressors that impact their practice. Urban districts are commonly known to face difficulties such as a lack of resources and support. Given this, the researcher had anticipated that these teachers might view this proposed data integration as

another work demand. Additionally, the support and training to integrate this type of practice is likely to be lower in urban districts due to the lack of resources, which would make implementation difficult. Similar to the hypothesized difference between general and special education teachers, no differences were reported between teachers employed in urban districts versus those teachers who worked in a more suburban area.

Acceptability was conceptualized as the quality in which the data could meet the teachers' needs. Like the utility of strength-based data, the researcher believed that the general acceptability of teachers would exist based on its notion of supporting students' and positive perspective on considering the competencies of children. This notion was supported by the results. Moreover, the researcher had hypothesized that potential differences in the perceived acceptability of strength-based data would differ depending on the classroom context (i.e. general education versus special education) and/or the type of school district currently employed (i.e. urban vs. suburban) with expectations similar to those anticipated with regards to the utility of the strength-based data. Hypotheses with regards to group differences were again not supported. These results, both in terms of utility and acceptability, may be due to the shared goals that teachers, regardless of their specialization or district, share in supporting children's healthy development.

In further examination of the findings of this study, it could be concluded that teachers regardless of their current classroom context or school district are supportive in the integration of strength-based data into psychoeducational evaluations conducted by school psychologists. It could be assumed that teachers are willing to integrate this data into their practices and see the potential for its use in their practices. Although group differences were not supported, these results are promising in that they may indicate an

overall positive perception of strength-based data regardless of individual teacher characteristics.

Until recently, strength-based assessment measures were few and far between. This lack of formal measures has likely contributed to psychoeducational evaluation reports that focus too little on strengths and protective factors of the children assessed. Notably, one of the items on the survey that yielded more neutral results was related to the ease of understanding of the strength-based data presented. This may be a result of general education teachers' lack of exposure to psychoeducational evaluation, however, it may also coincide with the lack of the use of these assessments by schools psychologists and therefore, teachers' unfamiliarity due to their sparse inclusion in the evaluations that they see on a day-to-day basis. The vignette included data from measures such as the BERS-2 and the SEARS, which are two common strength-based assessment measures, however, the frequency of use of these measures by school psychologists is unknown.

Less formal analyses through the form of the focus group interview provided additional findings to supplement the information gathered in the survey data. Themes of the discussion that were identified by the researcher included: (a) flexibility of special education, (b) relationships with students, (c) engagement, (d) training and support, and (e) rigid systems. Further descriptions of these themes are provided in the previous chapter. This additional data proved to provide richer insight into the perceptions of teachers as well as additional consideration for further implementation of strength-based practices in the school setting.

Interestingly, teachers in the focus group all came from a special education background. Given teachers volunteered their additional participation beyond the survey,

it could be assumed that special education teachers were more willing to provide further insight than general education teachers. Moreover, the consensus among the group during the interview alluded to the notion that they believe they are more likely to find the utility of strength-based data based on their classroom context. The participants believed their individualized structure allowed more flexibility in their use of strengths in their practices. These ideas aligned with the researchers' hypothesis; however, results of the survey were contradictory. Given the small sample size of this study, results may differ with a larger, more diverse sample size. However, this contradiction is positive because despite this perceived difference between general and special education teachers, there may be more acceptability of a strength-based practice across disciplines than expected.

Thematic analysis revealed two other related themes: relationships and engagement. Teachers within the focus group felt that the utilization of strength-based data allowed for them to increase their rapport with their students, and therefore promote engagement within their classroom context. As outlined in the resilience literature discussed, external supports are a common protective factor across studies. Based on these findings, teachers understand the importance of creating positive relationships with their students, especially with regards to engaging them in the classroom; however, this also may show how the use of strengths fosters relationships that can serve as a protective factor, and thus, promote resilience.

The other themes related to training and support and rigidity of systems are not surprising. Buy-in by administration as well as support and training are ongoing obstacles that many face in their professional careers. In moving towards a strength-based practice, administration will likely need demonstration of the effectiveness of such

practices in order to encourage buy-in and long-term sustainability. Moreover, the expertise of school psychologists in integrating strength-based data into practice will be needed in moving forward with implementation in the classrooms. As identified by the teachers in the focus group, examples of how they could use the data in their practice was much desired. Therefore, it appears teachers are willing to use the data, however, consultation from school psychologists would be needed.

Contributions to the Current Literature

Nickerson (2007) summarized the arguments that have been for the use of strength-based assessment. Such arguments include: (a) empowerment and motivation for the students (Epstein, Hertzog, Reid, 2001; LeBuffe & Sharpio, 2004); (b) more positive relationships among children, families, and school personnel (Epstein, Dakan, Oswald, Yoe, 2001; Epstein, et al., 2003; LeBuffe & Sharpio, 2004); (c) acceptability of service provision (Epstein et al., 2003; Walrath, Mandell, Holden, & Santiago, 2004); and (d) stronger treatment or intervention plans (Epstein, 1999; Rhee et al., 2001); and (e) consideration of social context as supportive resources (Jimerson, Sharkey, Nyborg, & Furlong, 2004). Another argument made concludes that the inclusion of strength-based assessment expands the information gathered during an evaluation and helps to paint a more holistic view of the child is seen throughout (Epstein, Ryser, & Pearson, 1999; Clonan, Chaouleas, McDougal, & Riley-Tillman, 2004; Rhee, Furlong, Turner, & Harari, 2001). Despite these arguments, little empirical support exists to examine such proclaimed arguments for the use of strength-based approaches, particularly in the school setting. The findings gathered from this study, however, provide support for some of these arguments.

For example, in reviewing individual items related to the utility of strength-based assessment, many teachers endorsed items around promoting positive relationships with families (Epstein, Dakan, Oswald, & Yoe, 2001; Epstein, et al., 2003; LeBuffe & Sharpio, 2004) and creating a more holistic view of the child (Epstein, Ryser, & Pearson, 1999; Clonan, Chaouleas, McDougal, & Riley-Tillman, 2004; Rhee, Furlong, Turner, & Harari, 2001). Moreover, focus group findings showed a theme of relationships. Specifically, teachers felt that strength-based data would allow for the creation of stronger relationships with students, which in turn leads to engagement in classroom activities and requirements. This supports that idea in the literature that the use of strengths may motivate and empower students (Epstein, Hertzog, Reid, 2001; LeBuffe & Sharpio, 2004).

Conclusions

The importance of promoting resilience in children lies heavily on the adults in the child's life (Grotberg, 2000). This study sought to examine one group of very critical adults present in children's lives—teachers. Rutter (1979) and Luthar (1991) further outlined that favorable school experiences lessen the impact of stress in children's lives. This has made schools in the ideal position, warranting the need for an examination of how these protective factors may be fostered in the school setting. As seen in this study, teachers, too, feel that they can play a role in terms of promoting such factors. Regardless of individual teachers' characteristics, the results indicated that teachers are accepting of strength-based data and do see its potential benefit for its utilization in classroom practices. This aligns teachers, then, with the proposition made by the literature (Rutter, 1979; Luthar, 1991; Grotberg, 2000) regarding the importance of the teacher in building

resilience.

The literature on resilience has identified a wide range of factors that serve as protective for a child. Many of these external characteristics have the potential to take form through the classroom environment. Teachers have the potential to serve in the role of providing a caring relationship outside of the home. Teachers who are willing to talk with their children and express genuine interest in them will be viewed as understanding and nurturing. Encouragement and clear communication are also ways to build that relationship. Teachers can create environments that are structured. Structure in the classroom can be crucial to a wide range of students, rather it's a child who comes from a home environment that is chaotic or a child who has difficulty paying attention and focusing. Through the use of schedules and routines in their day-to-day activities, teachers can create a consistent environment where the child knows what to expect and what is expected of him or her. Moreover, classroom environments are like their own communities. Creating a healthy learning environment that establishes a sense of belonging and safety for the child will also serve a protective factor in promoting resilience. Establishing practices that promote prosocial behavior, peer relationships, collaboration, and problem solving by students can help create this environment.

A strong home-school relationship is another protective factor identified in promoting resilience in children, but is often a barrier for many school staff. The reason for this may be related to the way in which school staff engages with families. Too often, caregivers receive communication from the school regarding something negative. Whether it is the child's poor schoolwork or difficult behavior, caregivers typically hear from school staff when there is a problem. School psychologists are not omitted when

speaking to this. Like teachers, the interactions school psychologists share with caregivers may also carry a negative connotation. For example, school psychologists' evaluation results often focus on the deficits in functioning rather than the competencies, and in return caregivers will hear from school psychologists when they are reporting the results on how poorly a child may be doing across a variety of domains. These types of interaction then create a relationship with families that is strained and founded on negativity.

Edward Rawana and Keith Brownlee of Lakehead University (2009) proposed that the strengths perspective aligns school personnel with students and families and demonstrates how educators value children. With this in mind, one method then, for moving away from the deficit-heavy model and towards stronger home-school relationships may be through the use of strength-based assessment. Communication with families around the successes of their child and not just the failures is one way of doing this. Working with families to identify strengths both within the child and the family system also moves away from this negativity. Having a staff member recognize individual factors that serve as strengths in the classroom for the child can be extremely rewarding to hear as a caregiver. Then, to further take this information and apply to promote student success will demonstrate a teacher's commitment to the child and establish trust between the school and home.

Encouragingly, the findings of this study indicate there is a consensus among teachers towards moving away from a deficit-based model to a more positive approach to providing service delivery within the schools. This was demonstrated in their responses towards strength-based practices, and more specifically in this case, strength-based

assessment. Teachers accepted, regardless of their individual characteristics, the potential use of strength-based data in their practices. The field of school psychology has demonstrated similar perspectives towards this movement as argued for by Reschly (1988) and Nickerson (2007). Based on this, it seems that strength-based assessment is a practice that aligns with the goals of both school psychologists and teachers. Even more promising, not only did teachers endorse the acceptability and utility of strength-based data, but the findings of the study also indicated that there were no differences between different groups of teachers in terms of the utility and acceptability of strength-based data. This implies that a strength-based perspective is not limited to the realm of special education, but is fit for school-wide implementation.

The possibilities for the use of strength-based assessment in the school are abundant. At the special education level, the use of these assessments in psychoeducational evaluations will help inform intervention implementation. The use of strength-based assessment in treatment planning in clinical settings appears to be more widely used compared to the school setting. In examining this, special education teachers are already in the position to individualize the educational experience of their students, and in a way design “treatment plans” in the form of an IEP or behavioral support plan, therefore, it could be possible that similar techniques used in clinical settings may be applicable in the school environment.

As noted by the findings of the focus group, special education teachers, much like school psychologists, informally assess for strengths and interests already, but mainstreaming this practice as part of an evaluation will not only ease the burden of gathering this information from the teachers, it will also allow for a consistent data

collection practice, so that all students who receive an evaluation are assessed formally for strengths. Fostering this collaboration between teachers and school psychologists will be important to sustainability of the practices and dissemination at a larger school-wide level.

Moreover, strength-based assessment may be integrated into general education practices through the use of formative assessment. As illustrated in this study, knowing a child's strengths is not limited to the special education realm, but is a desire of teachers across disciplines. It can inform teachers around a child's individual characteristics that will allow for adaptation of their teaching practices. The use of a child's strength has the potential for improvement in student performance through engaging the child and creating a positive learning environment. Given the educational mandates related to high achievement, strength-based assessment may be a tool that can improve engagement and foster academic success.

Finally, although school psychologists are in the position to administer strength-based assessments and support intervention planning, the applicability to daily routines within a school cannot rely solely on the adaptation of this approach by school psychologists. Rawana and Brownlee (2009) outline the concept of expansion and integrating a culture that is strength-based. In order to truly move towards a strength-based approach to practice, school psychologists will not merely need to assess strengths, but also support the integration into the classroom and school-wide activities that create a positive school environment. This idea of a cultural shift was identified in the findings of this study as well. The teachers in the focus group recognized that changing perspective from a systemic level was a potential barrier for implementation of strength-based

practices due to rigidity of systems and the need for buy-in. This recognition is important as it shows insight on the behalf of teachers into the fact that strength-based assessment is not just about administering measures and gathering data, but it is a way of engaging with a child that is different from the status quo seen in school systems today.

Limitations

Although this study offers unique findings to contribute to the literature of strength-based assessment in the field of school psychology, limitations exist. Due to the small sample size, generalizing the findings to the larger population is difficult. This also limits the statistical power of the analyses and possibility for additional or more complex statistical analyses. Similarly, the sample is limited in terms of its diversity. The sample used came from the Pittsburgh area only, and was composed of mostly Caucasian, female teachers. Likewise, teachers who participated in the study primarily taught at the elementary level. In terms of the focus group, teachers who participated came from a special education context, and only one group was conducted, which also limits generalizability of those results. However, this is a unique study within the literature given its emphasis on teacher perspective and mixed methods approach, so despite the small sample size, studies with this demographic group is limited, making these findings distinctive.

Although reviewed by the dissertation and IRB committees, this study utilized a survey and vignette constructed by the researcher. This may potentially serve as a limitation given there is no established reliability or validity of the items presented in the survey. This study was conducted in schools with teachers' participating through completion of a paper survey. Although this format was beneficial in establishing rapport

for additional participation in the focus group interview, distribution of the survey may have benefitted through an electronic format such as Survey Monkey. An electronic format may have made the survey more convenient and therefore, increased participation rates.

With regards to the survey, teachers' exposure to special education evaluations may also have played a role in their understanding of the data presented in the vignette. For example, if a teacher had not seen a special education evaluation from a school psychologist, he or she may have been very unfamiliar with the format used in the vignette. Although the researcher incorporated pre-existing strength-based assessments in the vignette, general information on special education evaluations purpose and structure may have further supported this methodology by providing additional background on these types of assessments.

Recommendations for Future Research

The current study contributed uniquely to the literature base on strength-based assessment by providing insight into the applicability of such practices within a school setting. Teachers' perspectives were examined in terms of the use and acceptability of this type of data in their day-to-day classroom practices. Although the information gleaned from these findings is useful in moving the field forward, it only scratches the surface in terms of implementation of strength-based practices in schools. Opportunities for additional research related to this topic are abundant.

A larger scale study with similar methodology would provide additional information regarding the acceptability and utility of strength-based data. Expanding the sample to a national level as well as including additional school personnel such as school

counselors and administration may provide insight into implementation at the school-building level. Likewise, although the current literature supports the notion that school psychologists would support this practice, examination of their current practices using strength-based assessments may also be helpful in better understanding the strength-based approach.

Furthermore, findings gleaned from this research indicated that teachers would need additional training and support with regards to how to effectively use the strength-based data in their classrooms. Additional research is needed to see how the field could use the current literature on strength-based data's use in treatment planning, and how those similar practices may be applied to schools through things such as teaching techniques and curriculum, academic and behavioral interventions, Section 504 plans, and Individual Educational Plans (IEPs). It seems as though this practice is not one that is disagreed upon in theory, but rather its application and specificity of implementation is unclear. Once specific practices are proposed, then, research would be needed to determine to effectiveness of integrating strengths compared to typical strategies used in classroom practices.

Overall, the current study contributes to the beginning conversation around the utility and acceptability of strength-based assessment data in the school setting. As the literature has identified, much of this practice has remained outside of the school context, despite the proposed arguments for such practices to be implemented by school psychologists. This study supports the need for school psychologists to begin to use these types of benefits and explore the nature in which they can be integrated into their work with teachers. Teachers are in favor of the use of the data, but require collaboration with

the school psychologist in order for effective implementation into classroom practices. It is the hope of the researcher that this study is a movement towards a more positive approach to service provision in the schools.

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Appendix A: Demographic Information Sheet

DEMOGRAPHIC SHEET

Please respond to the follow items. Indicate which response best describes you.

What grade level(s) do you currently teach:

K 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th

What subject area(s) do you currently teach (i.e. music)?

How many years have you been teaching? _____

What is your highest degree held? Bachelor's Master's Doctorate

What was your specific major or concentration (i.e. early childhood education)?

Which if the following best describes your current working environment:

General Education Special Education

Other (Please Describe) _____

Age: _____

Gender: M F

Ethnicity:

White Black or African American American Indian or Alaska Native

Asian Native Hawaiian or Other Pacific Islander

Other (Please Describe) _____

Appendix B: Strength-Based Vignette

DIRECTIONS: Below are excerpts you may see in an evaluation report of a student. Please read this information carefully, and respond to the attached survey items.

BACKGROUND INFORMATION

John is a ten-year old boy attending Rainbow Elementary School. John is in the fifth grade in Mrs. Rain’s class. John was referred for a psychoeducational evaluation by his classroom teacher. She is concerned about John because he tends to be a “loner.” John has recently been bullied by some of the “popular kids” in her classroom. Although Mrs. Rain is making efforts to control the bullying behavior, she fears he will not adapt well when he goes to middle school next year. She believes John would benefit from social skills training, and would like to see him become more interactive in her classroom. She is worried that if John continues to struggle with his peers, his academic work may suffer. She is also concerned that John may be “holding in” his emotions, and fears he will “eventually snap.” Mrs. Rain identifies the following as potential needs:

- John shows difficulty with peer relationships, and at times seems withdrawn. John is reserved with his emotions and has a hard time connecting to peers in his classroom. He tends to keep to himself the majority of the time.
- John does not accept assistance from his peers, and prefers to figure problems out him self. He shows similar behaviors with teacher assistance.
- John is not very verbal in the classroom. When he is interacting with his peers (i.e. group work activities), he seems uncomfortable and does not talk very much.

*******USE THE SECTION BELOW TO ANSWER THE SURVEY ITEMS*******

STRENGTH-BASED DATA SUMMARY

The Social and Emotional Assets and Resilience Scales (SEARS) and the Behavioral and Emotional Rating Scale- 2nd edition (BERS-2) was administered to John, his teacher, and his mother in order to gain a better understanding of his current social-emotional functioning. Both of these assessments take a strength-based approach to understanding functioning. By this, not only do they consider a child’s potential weaknesses, but they also examine positive characteristics and assets that the child displays.

Social and emotional assets are characteristics that are important for success in school, with peers, and the outside world. Examples of characteristics such as friendship skills, empathy, problem-solving, social support, interpersonal skills, school functioning, self-management, and self-concept are measured.

Below is a summary of Johns’s evaluation results based on these assessments:

There is general agreement between his teacher and his mother when considering John's social-emotional functioning. Both reports indicate that his characteristics related to social competence and empathy (as indicated by the SEARS) are lacking. Similarly, the BERS showed weaknesses in interpersonal skills and affective strength. This is consistent with Mrs. Rain's concerns over John's sociability and lack of emotion in the classroom.

John's scores indicate that he has insight into his difficulties, citing his lack of friends at school. He reports he is not popular with his peers. John indicated "not much like me" on the following items, demonstrating his difficulty with affect: "I let people know when I like them," "When I have a problem, I talk with others about it," and "I feel close to others."

John has strong social support at home. He demonstrates strengths in the areas of family involvement. John regularly communicates with his parents about what's going on in school, although mostly academic, and gets along well with his younger brother at home. He follows rules at home and participates in activities with his family such as attending church on Sundays. He indicates that "his family makes him feel wanted" and "he gets along well with his parents."

John is able to identify his own strengths as a student, and shows enthusiasm about attending middle school next year because he will be able to have Science with Mr. Bob, who is a popular teacher in the middle school, known for his fun experiments in class. He shows self-management and direction in the classroom. He shows an excellent ability to manage time and resources in completing academic tasks. John identifies himself as a responsible person. He completes his homework regularly, and indicates that he studies for tests and listens in class. He has no record of attendance concerns, and he appears to like school. He is described as persistent when faced with challenging tasks in the classroom. John works best independently.

John's favorite hobbies include playing baseball and reading science fiction books. His best subject in school is Science. John is particularly interested in hands-on activities. He is always very interested when working on science experiments in class. The most important people in John's life are his parents and his brother. John's curiosity is one of his best characteristics.

Appendix C: Strength-Based Data Survey

Please answer each item by **checking which response best describes you**. The term “data” in the items refers to the data about the child’s strengths provided in the vignette under “Strength-Based Data Summary.”

<u>Item</u>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
This data would be acceptable for use in my teaching practices. (A)	<input type="checkbox"/>				
Most teachers would consider this data as appropriate information about a student. (A)	<input type="checkbox"/>				
This type of data would assist in better understanding a student’s functioning. (U)	<input type="checkbox"/>				
I would suggest the use of this type of data to other teachers. (U)	<input type="checkbox"/>				
Most teachers would find this type of data suitable for describing a student’s functioning. (A)	<input type="checkbox"/>				
I would be willing to use this data in my teaching practices. (U)	<input type="checkbox"/>				
The data that is presented in this vignette is easy to understand. (A)	<input type="checkbox"/>				
This data allows for a more holistic and comprehensive view of the child. (U)	<input type="checkbox"/>				
This type data would be appropriate for a variety of students. (U)	<input type="checkbox"/>				
The use of this data is consistent with my practices as a teacher. (A)	<input type="checkbox"/>				
Gathering this type of data in an evaluation of a student is reasonable. (A)	<input type="checkbox"/>				
I like having access to this type of data for a student. (A)	<input type="checkbox"/>				
Having this type of data for a student would improve communication between home and school. (U)	<input type="checkbox"/>				
Having this data in planning for this child in my classroom would be beneficial. (U)	<input type="checkbox"/>				
Having this type of data for a child would improve my understanding of the child’s functioning. (U)	<input type="checkbox"/>				
This type of data could easily be integrated into planning for this child in my classroom. (A)	<input type="checkbox"/>				
This data would allow for positive improvements in my teaching practices. (A)	<input type="checkbox"/>				

This data could be used in a variety of classroom settings. (U)	<input type="checkbox"/>				
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Appendix D: Focus Group Interview Questions

1. Tell us your name and your role within the school system.
2. What are your initial impressions of having strength-based data in the evaluation of students?
3. In what ways do you see strength-based data being utilized in your teaching practices?
4. What would you need as a teacher in order to incorporate this type of data into your practices?
5. What potential barriers do you see in terms of integrating this data into your classroom practices?
6. Any final thoughts or comments on this topic?