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Evaluating the Implications of Parental Mental Illness for Children Using an Ecological Perspective

Jessica Elizabeth-Rose Carroll
Walden University

Walden University

College of Social and Behavioral Sciences

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Jessica Carroll

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Review Committee
Dr. Timothy Lionetti, Committee Chairperson, Psychology Faculty
Dr. Virginia Salzer, Committee Member, Psychology Faculty
Dr. Penny McNatt Devine, University Reviewer, Psychology Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

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Abstract

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MS, Capella University, 2008

BA, Benedictine College, 2003

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Researchers have extensively studied the experiences and potential consequences of being a child whose parent has a mental illness (COPMI). However, there is no consensus on the best way to support these children, in general or in schools. The purpose of this quantitative study was to examine the effects of parental mental illness on children by using an ecological approach. Researchers have used ecological theory to illustrate the importance of internal characteristics, skills, and supports for children to enhance resiliency. This study looked at whether COPMI differed significantly from the children of parents of parents with no current or past mental illness (NonCOPMI) on the Developmental Assets Profile (DAP). The study also looked at whether there was a significant difference in the change in DAP scores for the COPMI compared to the NonCOPMI over time. A secondary data analysis of DAP survey results was performed and SPSS v.23.0 (IBM, 2015) software was used to complete one-way and two-way repeated measures ANOVA on DAP scores. COPMI reported lower DAP levels than NonCOPMI, and this difference was statistically significant in some areas of Internal Assets and Social and Community contexts. These findings suggest that COPMI may be challenged in these areas and are in line with previous findings regarding the challenges that COPMI may face and supports the continued use of ecological theory. By utilizing the DAP survey, specific areas where COPMI may benefit from additional supports can help professionals promote resilience among children. Proactive efforts like this, especially in schools, where increasing attention is being paid to mental health education, may contribute to positive social change.

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Dedication

To my husband, Royal, for encouraging me to see this through to the end.

To my children, Aislinn, Ailidh, and JohnPatrick, for their patience while Mom worked diligently on her computer for countless hours on weekends while at swim meets, soccer games, and rugby matches; without which this may have been finished years ago.

And to the countless unnamed children of adult clients whom I have worked with in the past and the child clients I currently work with every day. I truly believe these children can overcome any challenge life throws at them with the right supports and people who care.

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Last but not least, I'd like to thank my family for their patience and encouragement throughout the years that I have spent working towards this goal. Thank you, Royal, for your understanding when I became almost intolerable during this process, for taking the children out of the house for hours at a time so I could work without interruption and for being my cheerleader when I become discouraged. To my children, who have heard me talk for years about finishing my dissertation and will finally see me accomplish a goal – I hope they will learn from my example and strive to achieve their dreams, despite the obstacles they may encounter along the way.

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Chapter 1: Introduction to the Study

Introduction

When a parent suffers from a mental illness, professionals tend to focus on the adult's health and well being and rarely consider the needs of the children unless they are maltreated or they begin to exhibit emotional or behavioral problem of their own (Bee, et al., 2014). However, waiting until a problem persists is not in children's best interest as the children of parents with mental illness (COPMI) have been found to have higher rates of depression and anxiety (Knutsson, Medin, Edlund, & Ramklint, 2007) and these children also tend to have higher rates of self-harm behaviors and/or suicide attempts (Weissman, et al., 1986). These children also may display problems in school and exhibit difficulties with attention or self-regulation (Byrne, et al. 2006; Knuttson, Medin, Edlund, & Ramklint, 2007) and poor parental mental health has also been linked to children's antisocial behavior (Kim-Cohen, Moffitt, Taylor, Pawlby, and Caspi, 2005). Children affected by parental mental illness also risk family disruption due to parent's hospitalization or the involvement of child welfare services (Evenson, Rhodes, Feignenbaum, & Solly, 2008; Morrell & Murray, 2003). The challenge, however, is determining when and how to intervene. Very few evidence-based preventative practices exist specifically for COPMI (Bee et al., 2014).

Parental mental illness (PMI) affects more than just the parent-child dyad. Ecological theory proposes complex interactions between not only parent and child, but also each individual's interactions with his or her respective environments (Bronfenbrenner, 1979) and PMI can directly and indirectly influence these interactions (Nicholson, 2009). According to Pedersen and Revenson (2005), researchers should use an

ecological approach when trying to understand the effects of PMI on children. Reupert and Mayberry (2010) also advocate this approach as a way to best meet the needs of COPMI and promote resilience - the positive adjustment by children in spite of conditions of risk or adversity (Luther & Zelazo, 2003). The use of ecological theory to guide research allows for the exploration of how PMI impacts children in a variety of environments and relationships.

One ecological approach to understanding resilience in children is the Developmental Assets Profile framework, which has been used in schools across the United States since 1990 (Benson & Scales, 2009; Benson, Scales, & Syvetsen, 2011; French, et al., 2001). These assets are comprised of both internal characteristics and external supports that, when present, enhance important developmental outcomes and protect against risk factors (Leffert, Benson, Scales, Sharma, Drake, & Blyth, 1998). Children with a higher number of assets display fewer risk behaviors and are more likely to report positive outcomes (Scales, Benson, Leffert, & Blyth, 2010).

I did not find evidence, while reviewing the literature, that researchers have used the Developmental Assets framework when working with COPMI. To address this gap in research, I decided to compare COPMI to NonCOPMI in terms of Developmental Assets. I also wanted to investigate whether COPMI are being adequately supported in school settings. Researchers view schools as being an excellent venue for supporting COPMI and helping them become more resilient (Lee, Cheng, & Kwong, 2012; Theron, Liebenberg, Malindi, 2014). This is primarily because schools are where children spend a great deal of their time and because schools are often seen as less stigmatizing than other social agencies

(Reupert & Mayberry, 2010). With my research, I sought to promote greater understanding of mental health issues and the development of coping skills and support networks for COPMI. Positive social change may result from reducing the stigma that often accompanies mental health challenges.

In this chapter, I provide background information regarding the challenges that COPMI face and how they may be supported. I also discuss the purpose of my study and how my research questions will be addressed. Ecological theory is also discussed. Finally, I cover the various definitions that will be used throughout the study as well as the assumptions, scope and delimitations, and the limitations of my research.

Background

Previous research on parental mental illness has identified that COPMI are often isolated, confused about their parent's condition haven taken on roles beyond their years, and are subjected to stigma which can hinder their ability to access support (Gladstone, Boydell, & McKeever, 2006; Hetherington, Baistow, Katz, Mesie, & Trowell, 2002). Although not all COPMI have adverse outcomes (Mowbray et al., 2004), some may develop mental health problems of their own and more than 15-27% children display disruptive behavior (Mowbray et al., 2004). Fifteen to twenty-seven percent may not seem high until one considers that approximately 15 million children have a parent affected by PMI (England & Sim, 2009). Furthermore, COPMI are likely to experience disruption in their lives and anxieties about their own future mental health (Hetherington, Baistow, Katz, Masie, & Trowell, 2002). Therefore, COPMI would likely benefit from supports to help them address the various challenges they may face in their lives.

COPMI supports have taken various forms. Initially, supports focused primarily on the parents, and resulted in some change in the child's behavior noted (Modell et al., 2001; Verdeli, Wickramaratne, Greenwald, Blanco, & Weissman 2004; Weissman, Piowsky, Wickramaratne, & Talati, 2006;). Other programs have worked with the family unit, aiming to educate families about mental illness and increasing parents' awareness of their ability to promote resiliency in their children (Beardslee, Versave, Van de Velde, Swatling, & Hoke, 2002; Finkelstein, et al., 2010; Gould et al., 2005;). One new approach is to work directly with children in either psychoeducational programs and/or peer support programs. In these programs, clinicians focus on helping COPMI develop mental health literacy, coping strategies, social resources, and a sense of connectedness (Besla, 2007; Fraser & Pakenham, 2008; Grove, Reupert, & Mayberry, 2013; Haymen, 2009; Pitman & Matthey, 2004; Riebschleger, Tableman, Rudder, Onaga, Whalen, 2009).

The focus of clinicians using these approaches is on the affected parent, family unit, or child. Researchers have found, however, that one of the best ways to foster resilience in children, regardless of risk factor, is a strong connection with a significant adult (Fitzgerald, 2001). Involvement in positive extracurricular activities and setting goals to focus their energy and provide guidance and structure also promotes resilience (Fitzgerald, 2001). Clinicians who use approaches not based on ecological theory risk not considering all of the factors that influence children's development.

In fact, the environment in which children are raised may play an even larger role in development than personal factors (Ungar, 2011). Therefore, in situations where it may not be possible to decrease the number of risk factors a child is exposed to, such as in the case

of parental mental illness, it is even more essential to boost supports to enhance protective factors that foster resilience (Werner, 2000). Although not yet applied specifically to the area of COPMI, the Developmental Assets may be worth further research. Using an ecological approach, Developmental Assets Profile (DAP) researchers have identified 40 (20 internal and 20 external) assets that foster resilience in children. These assets include internal characteristics of the individual as well as the external environments and supports available to the child and the DAP research has shown that youth with higher asset levels tend to report that they are able to overcome adversity more easily (Scales, Bensen, Leffert, & Blyth, 2010).

Problem Statement

A common finding of research on COPMI is that services that address these children's particular questions and needs are lacking (Mayberry & Reupert, 2009). A recent systematic review of interventions for children and families affected by PMI found a dearth of studies that examine child-centered interventions: Of the 43 interventions that researchers identified, only nine included children, and only three were targeted towards children themselves (Bee, et al., 2014). Despite favorable results in Australia and the United Kingdom, intervention programs for children are available but have not been widely tested within the United States (Goodyear, Cuff, Mayberry, & Reupert, 2009; Foster, McPhee, Fethney, & McCllloughen, 2004; Hargreaves, Bond, O'Brien, Forer, & Davies, 2008; Hayman, 2009; Pittman & Matthey, 2004). Furthermore, no program is currently available to these children in Hawaii, although the state branch of Mental Health America has given some recognition to COPMI with its Invisible Children's Project (Mental Health

America of Hawai'i, 2015) but the scope of the project appears to be limited to a video and information for professionals.

Purpose of the Study

The purpose of this quantitative study was to examine the effect of parental mental illness on children by using an ecological approach. Developmental Assets Profile (DAP) scores of children whose parents reported a history of parental mental illness or a high level of poor mental health (COPMI) were compared to the scores of children whose parents did not report a history of parental mental illness or a high level of poor mental health (NonCOPMI). COPMI and NonCOPMI scores were compared to determine if there was a significant difference in the number of Developmental Assets each group possessed as a higher number of assets corresponds to lower risk for adverse outcomes. DAP scores at two time points were also compared to determine whether school-based programming is adequate in supporting the children of parents with mental illness..

Research Questions and Hypotheses

RQ1: Do children of parents who have reported a current diagnosis or history of parental mental illness or that their mental health was "not good" for 14 or more days in the previous 30 days differ significantly from children of parents who have not reported parental mental illness or elevated symptomatology on the DAP?

$H_0$1*:* DAP scores do not differ significantly between COPMI and NonCOPMI.

H_a1: DAP scores differ significantly between COPMI and NonCOPMI.

RQ2: Was there a significant difference in the change in the DAP scores for the children of parents who reported parental mental illness or reported '14 or more days' of

"not good" mental health within the previous 30 days (COPMI), compared to children whose parents did not report a history of parental mental illness or elevated symptomology (NonCOPMI), over time?

$H_0$2*:* The change in DAP scores for COPMI is not significantly different from the change in DAP scores for NonCOPMI.

H_a2: The change in DAP scores for COPMI is significantly different form the change in DAP scores for NonCOPMI.

Theoretical Framework for the Study

This research was guided by an expansion of Bronfenbrenner's (1979) ecological theory and primarily followed the Developmental Assets research (Leffert et al., 1998) According to ecological theory, development is a complex interaction between a developing person and his or her environment and that the environment includes not just the immediate setting but connections between settings and external influences from larger surroundings (Bronfenbrenner, 1979). In regards to the children of parents with mental illness, ecological theory could be used to explain the importance of promoting understanding in children, highlights the benefit of building support networks, and illustrates how skill-building and supporting the child positively influences every system level.

My research on the Developmental Assets in COPMI versus NonCOPMI was informed by the research traditions of resilience and the role of communities in development; including the work of Bronfenbrenner, Jessor's sociocultural influences on adolescent behavior, and Lerner's developmental contextualization (Leffert, Benson,

Scales, et al., 1998). My literature review as well as personal communication with Dr. Peter Scales, one of the developers of the Developmental Assets Profile survey, confirmed that no research to date has examined the effect of parental mental illness on the Developmental Assets. However, parents play an important role in building each of the forty assets. Some of the assets relate directly to family life and parenting while parents also play an indirect role via modeling, advocating for their child, and making positive opportunities available to them (Roehlkepartain, Scales, & Roehlkepartain, 2002). According to Scales, Bensen, Leffert, and Blyth (2010), the Developmental Assets framework provides evidence for the benefits of accumulation of positive environmental features across multiple developmental contexts and has been found to help explain positive youth outcomes.

Nature of the Study

Taking a quantitative approach, I conducted a secondary data analysis of school-based programming which was targeted to children in fourth through six grade. Data for my secondary analyis also included a questionnaire, which was completed by children's parents or guardians. I used questionnaire data to classify children as COPMI or NonCOPMI. For RQ1, the independent variable was parental mental health status (i.e., having a mental health diagnosis or reporting mental health as "not good" for 14 or more days in the past 30 days). The dependent variable was the total score on DAP. For RQ2, the independent variable was time while the dependent variable was the total score on DAP. The moderating variable was the presence of parental mental health diagnosis or elevated symptoms. To determine whether there were significant differences in DAP scores between

the COPMI and NonCOPMI groups, I analyze data using a one-way ANOVA for RQ1 and two-way repeated measures ANOVA for RQ2.

Definitions

Developmental Assets: Twenty Internal and 20 External Assets comprised of individual characteristics an individual possesses well as environmental supports available to the individual, respectively. The Developmental Assets include four categories: Support, Empowerment, Boundaries and Expectations, and Constructive use of Time (External) and Commitment to Learning, Positive Values, Social Competence and Positive Identity (Internal) and five contexts: Personal, Social, Family, School, and Community (Scales, Benson, Leffert, & Blyth, 2010). The scores of each category and context are all considered as individual dependent variables in this study

Mental illness: A diagnosable mental, behavioral, or emotional disorder (excluding developmental and substance use disorders), which is of sufficient duration to meet DSM-IV diagnostic criteria (Mark, Wier, Malone, Penne, & Colwell, 2015).

Resilience: Positive adjustment by children in spite of conditions of risk or adversity (Luther & Zelazo, 2003).

Assumptions

Given the challenges that children of parents with mental illness face, it was assumed that children whose parents reported a mental health diagnosis and/or elevated symptoms of depression and/or anxiety reported a lower number of Developmental Assets. Because children spend a great deal of time in the school setting, it is an ideal venue for psychoeducational interventions and socioemotional learning that can benefit not only the

children of parents with mental illness, but also all children. However, it was also assumed that barriers to accessing many of the Developmental Assets may be unique to the children of parents with mental illness and the research may show that they require more specific, intensive supports that may still be provided in the school setting. Therefore, it is assumed that the children gave an accurate report on the DAP survey and the parents gave an accurate report of their mental health history and/or mental health concerns. It was necessary to assume this in order to determine the results of this study.

Scope and Delimitations

The Developmental Assets Profile (DAP) has been utilized with thousands of children across the county but the effect of parental mental illness on DAP scores has not been explored. A delimitation of this study is that it focused on students in grades 4-6 at a public school in rural Hawaii. This study utilized secondary data and these are the individuals that completed the Developmental Assets Profile (DAP) survey. The incident of parental mental illness was gathered via parental self-report to support comparisons. Parental mental health diagnosis was not confirmed and was limited to self-report. Therefore parental mental health may include a formal diagnosis, as reported by the parent, or an elevated report of poor mental health within a specific time period.

The potential generalizability of this study may be somewhat limited as the number of subjects was limited. However, given the location of this study, the study has the potential to fill a gap in the COPMI research, which tends to focus primarily on Caucasian, middle-class children.

Limitations

This study was limited to secondary data analysis and therefore the conditions of the school-based programming, including the administration of the Developmental Assets Profile (DAP) survey, could not be controlled. Given that the DAP survey is a self-report, deception and/or response error was a possibility. Furthermore, the parental data was gathered via survey from a population where there is tendency towards low parent engagement due to economic and cultural barriers. Parental mental health diagnosis was limited to self-report and was not verified via diagnostic measures and was limited to either a report of a history of mental health diagnosis and/or a report of elevated symptoms within a specified time period.

Significance

This research has the potential to bridge a gap between what is known about how parental mental illness affects children and how best to support COPMI by taking an ecological approach and applying the Developmental Assets Profile as a vehicle for not only examining in what ways these children are affected, but how they can also be supported. In addition, this research will contribute to the literature by providing information about an ethnic population that is not currently well represented in the existing COPMI literature. Furthermore, this research can contribute to the literature pertaining to programs that provide psycho-educational and socialization programs to all children, regardless of parental diagnosis in a venue accessible to all children. Many of the programs available have focused solely on the children of parents with mental illness and many child participants rated those programs as helpful but continued to remark that they still did not

know how to talk to their non-affected friends about mental illness (Gladstone, 2010). Educating children about mental health and focusing on coping skills and developing support netowrks may prevent affected children from feeling isolated or confused. Furthermore, helping children to understand mental health issues may alleviate some of the stigma often associated with mental illness, leading to positive social change.

Summary

The needs of children of parents with mental illness (COPMI) are often overlooked (Hetherington, Baistow, Katz, Masie, & Trowell, 2002; Gladstone, Boydell, & McKeever, 2006) despite the evidence that many of these children struggle (Mayberry & Reupert, 2009) but can also benefit from interventions geared at increasing their awareness of mental health issues, coping skills, and building support networks (Grove, Reupert, & Mayberry, 2013; Hargreaves, Bond, O'Brien, Forer, & Davies, 2008; Hayman, 2009; Goodyear, Cuff, Mayberry, & Reupert, 2009). By applying the Developmental Assets to the area of COPMI, insight into how these children differ from their non-affected peers in terms of factors that have been identified as important for optimal development should provide guidance for enhancing resilience in children of parents with mental illness.

The next chapter contains an extensive literature review detailing the history of COPMI research. I survey research on how parental mental illness affects children and what supports are currently available to affected individuals. Chapter 2 also explores ecological theory and its applicability to COPMI research and support services. My discussing also includes consideration of the potential use of DAP in this area.

Chapter 2: Literature Review

Introduction

Approximately 25% of the U.S. population is suffering from a mental illness at any one point in time (SAMSHA, 2013). Many of these individuals may be parents. The majority of the interventions and services currently available are limited to the adult; consideration is rarely given to the children (Hetherington, Baistow, Katz, Masie, & Trowell, 2002). This is largely due to the compartmentalization of healthcare in the United States, with clinicians focusing on the individual as the client and rarely inquiring about the individual's family and roles (Nicholson & Biebel, 2002). Researchers have found that mental health providers often forget the needs of children of PMI, (Garley, Gallop, Johnston, & Pipton, 1997; Gladstone, Boydell, & McKeever, 2006).

PMI can have significant long-term effects on the development and socioemotional well being of children. These children may have more school problems and difficulties with attention or self-regulation (Nicholson, Albert, Gershenson, Williams, & Biebel, 2009). They may also have emotional or behavioral problems and may have a mental health diagnosis themselves (Nicholson et al., 2009). They may be more isolated from their communities (Cogan, Riddell, & Mayes, 2005). Families with a parent with mental illness may also suffer from the adverse effects of stigma which can decrease self-esteem, damage family relationships, and be a risk factor for self-stigmatization, isolation, and shame (Marsh & Johnson, 1997). The poor social skills of the afflicted parent can contribute to this isolation and the child himself, especially if he has no other models of social behaviors. Children may emulate these behaviors, which can result in the child being ostracized even

more (Corrigan, 2000). Because mental illness is so stigmatized, children may learn early on to keep it a secret in order to protect their family (Gladstone, Boydell, & McKeever, 2006). Self-harm and suicide rates also tend to be higher in these children (Knutsson, Medin, Edlund, & Ramklint, 2007; Ferguson, 2011; Wietzman, Rosenthal, & Liu, 2011). Werner (1993) and Mowbray et al. (2004) have found evidence, however, that many such children do not develop psychosocial problems as adults. However, while some children do not develop problems later in life, seminal research in the field of resilience (Werner, 1993) found that nearly two-thirds of the children did develop problems later in life. Furthermore, all children with a parent with mental illness are likely to experience disruption of their lives and experience anxieties about their own future mental health (Hetherington, Baistow, Katz, Masie, & Trowell, 2002).

In this chapter I provide an overview of the search strategy used to review the current literature. I highlight the effects of PMI on families and children and review the research on coping and child resilience. Furthermore, I discuss ecological theory, the Developmental Assets Profile, and how this applies to resilience and COPMI. I conclude the chapter by reviewing approaches to supporting COPMI.

Literature Search Strategy

In this review, I used databases and search engines such as EBSCOHost through the Walden University library and Google Scholar to gather relevant literature. The search terms initially used included *children of parents with mental illness*, *COPMI*, *mental illness*, *maternal depression*, *paternal depression*, *parental depression*, and *parental mental illness*. No date restrictions were used during the preliminary search as COPMI research

came about only within the last three decades (Beardslee, Versage, & Gladstone, 1998). I decided to forego date restrictions in order to review seminal research and gain a better understanding of the background of the studies.

I located additional articles by searching the reference lists of articles found in the preliminary search, as well as identified additional key terms. I conducted new database searches using the following search terms: *resilience, 40 Developmental Assets, Developmental Assets profile, programs for children of parents with mental illness,* and *interventions for children of parental mental illness*. I also attended the Third International World Congress on Children of Parents with Mental Illness in Vancouver, British Columbia in 2012, where I exchanged contact information with other researchers in this area. I then attended a symposium of nearly two dozen international researchers in the area of COPMI and selected graduate students in Prato, Italy in December of 2013. At this gathering, researchers shared the latest findings and identified gaps in the research. This meeting helped me locate additional resources, which included articles written by symposium participants that I had not already obtained and the GEMs ("Gateways to Evidence that Matters) website, which provides summaries to recent Australian and international research in the area of parental mental illness. Finally, to update my literature review as I prepared my research proposal, I conducted an additional search using the Google Scholar search engine, limiting the research to 2010-2015. I used the following terms for this search: *resilience, children of parents with mental illness*, and *parental mental illness*. This final search was completed to ensure that I was presenting the most up-to-date research in the area of PMI and COPMI.

Theoretical Framework

Although researchers have considered a variety of theories in regards to PMI and COPMI, there is no one unifying theory and this often cited in the literature as a limitation of the research (Domitrovich & Greenberg, 2000; Slominski, 2010). The impact of parental mental illness was originally thought to follow a unidirectional path, in terms of direct effects from parent to child. However, parental mental illness can lead to other problem more recent studies have utilized Bronfenbrenner's (1979) ecological theory as it allows for multiple paths of influence and processes (Nicholson, 2009). Ecological theory can be used to explain the importance of promoting understanding in children, highlights the benefits of building support networks, and illustrates how skill-building and supporting the child positively influences every system level. Ecological theory proposes that development is a complex interaction between the developing person and his or her enviornment (Bronfenbrenner, 1979). Ecological theorists assert that the environment is not a single, immediate setting; rather, they view it as encopassing the connection between settings and external influences from larger surroundings (Bronfenbrenner, 1979). A main component of Bronfennbrenner's theory is that "the capacity of a dyad to serve as an effective context for human development is the presence and participation of third parties" (p. 5, Bronfennbrenner, 1979). Previous research has found that life outcomes of children of parents with mental illness is less the result of the parental psychopathology and more the result of the and the presence of a quality contact person or perceived social support (Mowbray & Mowbray, 2006).

Influenced by Lewin's theories of interconnectedness and Piaget's construction of reality of the child, Bronfenbrenner (1979) proposed an ecological perspective of human development by placing the developing person in the center of the three successive systems; the microsystem, the mesosystem/exosystem, and the macrosystem. The microsystem is comprised of the interactions between the developing person and significant others such as parents, siblings, and peers. Interactions between individuals that comprise each microsystem can be influenced by the mesosystem (e.g.; situation within the home influencing behavior at school) or the exosystem (e.g.; situation at parent's work influencing his or her involvement in the child's school). The macrosystem then encompasses all of these mesosystems, exosystems, and microsystems and exerts its influence via culture, economic status, or social status. Bronfenbrenner (1979) proposed that it is not the processes of perception, motivation, thinking, learning, themselves that influence development but the content; 'what' is perceived, desired, feared, thought about, or acquired and how the nature of this changes as a function of one's exposure to and interaction with the environment. "Development is defined as the person's evolving conception of the environment and his relation to it, as well as the persons' growing capacity to discover, sustain, or alter its properties," (p.9, Bronfenbrenner, 1979). In other words, the developing person is in a reciprocal relationship with his or her environment and the environment is not a single immediate setting but extends to connections between settings and external influences from larger surroundings. The individual person could be seen as developing within the context of a 'three-legged stool' where each level of the system was essential and therefore breakdowns in one area could topple the entire process

of development (Bronfenbrenner, 1979). Applying his ecology of human development directly to the family, Bronfenbrenner (1979) identified three environmental system models that serve as external influences on the family. In the mesosystem model, the processes that operate in each different setting are not independent of each other. Examples of research associated with this model include twin studies that examine the influence of genetics versus environmental interaction or studies that look at the influence of peers. The exosystem model proposes that child development is influenced not only by what happens in his/her own environment, but also by what happens in his/her parent's environment. This model helps to explain how the parents' workplace and social networks, as well as community influences, can all influence family functioning. According to this model, external stressors can become internalized, first for the parents and then for the children. Finally, the chronosystem model examines not only individual changes in a person over time, but also the way that simultaneous changes and continuities within the environment influence the individual's development. For example, how the effect of parental divorce, the birth of a sibling, or the illness and/or death of a parent influences development. Bronfenbrenner's model of development proposes that behavior can only be understood in context. Stormshak & Dishion (2002) expanded upon this perspective, proposing that in some circumstances, the context can redefine socialization and child and family outcomes, and the culture and community settings influence the impact of socialization practices. The influence of parenting on behavior is widely documented in the research, suggesting that the patterns of interaction learned in the context of parent-child exchanges are then

generalized to the peer group and school settings and can lead to the development of later problems (Stormshak & Dishion, 2002).

Bronfenbrenner's theory also fits well in researcher's explanations for children's behavior and emotions. For example, Cummings & Davies (1995) proposed that a child's emotional security doesn't come from parent-child interactions alone, but also from other parental influences such as marital influences or parental depression. They proposed that the focus should include processes and the relationship between those processes including microscopic, or the direct influence of the parents' on the child's behavior, and macroscopic; the interrelations between the dimensions of parental behavior (i.e.; marital conflict, employment, etc.) and the role of behavior in a broader context. Sheridan, Eagle, and Dowd (2005) also assert that child outcomes are mediated by parental attachment, family adaptability, parenting style, and community involvement. In fact, family psychosocial processes have been found to predict adaptation among children of parents with mental illness beyond that predicted by the parent's symptoms and functioning (Tebes, Kaufman, Adnopoz, Racusin, 2001). Tebes and colleagues (2001) found that a distressed parent-child relationship or parental distress alone was predictive of all measures of child problem behaviors and symptomatology as well as behavioral competence and self-esteem. In their study of family functioning and children's adjustment, Low and Stocker (2005) found that father's depressed mood was linked to their children's internalizing problems indirectly through father-child hostility and father's depressed mood was directly linked to children's externalizing problems. As for mother's depressed mood, marital hostility may be indirectly linked to children's internalizing symptoms as well and

marital hostility, in general, was linked to children's externalizing symptoms. This link between marital hostility and depressed mood is likely bidirectional and impacts all family members (Low & Stocker, 2005). A child's emotional security, therefore, is believed to come from not only parent-child interactions, but also other parental influences such as marital conflict and parental depression. A child learns to derive appraisals – internal representations of events – based on family relationships. When a child is emotionally secure, he or she is better equipped to function both inside and outside the family. However, when a parent is ill and there is distress within the family, the child's emotional security can be jeopardized, appraisals negatively influenced, and therefore the child may have difficulty with self-regulation and coping (Cummings, 1995).

Pedersen and Revenson (2005) expanded on Bronfenbrenner's theory and proposed a family ecology framework with four basic principles as well as meditational and moderational pathways. Not only is individual behavior to be understood only within the social context - and that social context can be influenced by the culture and the community (Stormshak & Dishion, 2002) - but individuals exist within a number of interdependent systems and contexts and reciprocal relationships between individuals and the social systems with which they interact. Therefore, it is necessary to understand these complex relationships to fully understand development and adaptation. In addition, variables beyond the level of individual attributes must be included to come to a full understanding. For example, individual family member's appraisals of and reactions to parental mental illness must be considered. The effect that parental mental illness has on an individual is mediated by the characteristics of the illness (such as individual symptoms and their severity) as well

as proximal effects such as threats to the family (stigma, loss), the child's own individual stress response, and the redistribution of family roles; and distal effects such as family cohesion, parenting behavior, and youth behavior. It is important to note that these mediating factors influence one another (Pedersen & Revenson, 2005). Moderating factors of parental mental illness occur at various levels: At the individual level, they include the child's developmental age, the parent's age at the onset of illness, the parent's gender as well as his or her family role, the youth and the parent's individual coping styles, and the other resources the child or parent may have available to them. At the dyadic and family level, moderating variables include whether there is parent-child gender congruence, the quality of the marital relationship, the family's coping style and attachment style. Finally, societal moderating factors include the amount and types of social support available, the cultural norms, and the access to care (Pedersen & Revenson). The child's temperament can also interplay with the parent's diagnosis (Manning & Gregoire, 2006). Feldman (2007) found that the effects of maternal emotional distress on both the parent-child relationship and the family were specific to reciprocity. If the child had difficulty with regulation and/or high levels of negative affect, intrusiveness by the parents tended to be higher and family rigidity increased. The family unit has specific needs beyond those of the parent-child relationship with the most important of these being communication and family cohesion (Reupert & Mayberry, 2007). Family cohesion correlated with higher parental sensitivity, higher infant involvement, and higher mother/child or father/child reciprocity. In addition, the involvement of the father "buffered" the effects by decreasing the mother's distress, which, in turn, increased family cohesion. "Research on parental illness conducted

within a family ecology framework requires a greater understanding of how aspects of the family's experiences may alter the effects of the illness on family and youth well-being" (p.414, Pedersen and Revenson, 2005).

Families affected by parental mental illness are sometimes isolated as family life is often limited to the condition of the sick parent. In addition, children may isolate themselves for fear of being bullied by other children or the risk of embarrassment (Polkki, Ervast, & Huupponen, 2004). This is unfortunate because social support has been found to be extremely important for these families as it has direct and indirect or 'buffering' effects on mental health outcomes. While family distress reflects an imbalance between demands and resources, social networks can alleviate some of this burden and therefore alleviate some of the distress (Saunders, 2003). Family resilience requires an ecological perspective and consideration must be given to individual characteristics of each family member, interactions within the family, and interaction of family members with the community (Sheridan, Eagle, & Dowd, 2005).

It is clear that effects of parental mental illness on child development come about via a complex pathway. Researchers have identified family environment, genetics, the quality of parenting and maternal stress, and secondary effects of parental mental illness as mechanisms by which parental mental illness affects children (Hunstman, 2008) and proposed that the intergenerational transmission of psychopathology involves genetics, biological neuroregulatory systems, cognitive and interpersonal processes, family functioning, and environmental factors (Elgar, McGrath, Waschbusch, Stewart, & Curtis, 2006). Therefore, using an ecological framework to guide this research is important

because identifying risk factors and targeting protective factors is not enough to support the children of parents with mental illness. It is important to understand the complexity of the factors and the mutual relationships that influence the child's development in order to promote resiliency (Luther & Zelazo, 2003; Ungar, 2011).

History of Research in Children of Parental Mental Illness

According to Gladstone, Boydell, and McKeever (2006), the parent status of individuals with a mental illness historically was not taken into consideration as those with severe mental illness tended to reside in institutions and did not have children and/or many of the older medications had detrimental effects on fertility. However, as the practice of institutionalization was abandoned and medications began to have fewer side effects related to fertility, more individuals experiencing mental illness became parents. As more individuals who experienced mental illness became parents, more attention has been given to the role of the patient as parent. Despite the attention given to the patient's role as parent, the children of these parents often remained invisible (Gladstone, Boydell, & McKeever, 2006).

Children are often overlooked because many mental health professionals simply do not ask about their consumer's role as a parent (Boursnell, 2007). In addition, professionals often try to keep clear boundaries regarding whom the identified patient is and may be uncertain about what is reasonable in terms of working with the family (Aldridge, 2006). While providers may be in favor of supporting children, they may not feel it is their role to do so (Slack & Webber, 2008). Providers may erroneously assume a high incident of custody loss and/or may feel that parenting issues should be left to child welfare services or

child mental health services (Nicholson, Biebel, Katz-Leavy, & Williams, 2002). Furthermore, the lack of attention to children may stem from a focus on crisis rather than prevention (Mayberry & Reupert, 2009). Some parents with mental illness may not talk to their mental health professionals about their children for fear that their parenting ability may be judged and their children may even be taken away (Boursnell, 2007; Anderson, Robins, Greeno, et al., 2006). Other parents may be in denial of the illness and/or the effects it has on their children, or they may simply be unaware of the potential effects (Mayberry & Reupert, 2006). Thomas and Kalucy (2003) reported that many parents have little insight into how their illness affects their children; parents may not understand the impact the illness has on their child or they may not know how to communicate to their child about it (Nicholson et al., 2001). Children may also be overlooked because they are inaccessible or are reluctant to talk about the illness and there is also a lack of resources available to COPMI and their mentally ill parents in general (Mayberry & Reupert, 2006). Mental health policy administrators have acknowledged the lack of family services for parents with a mental illness, which is often due to the stigma surrounding mental illness and the misconception that affected individuals are too impaired to function as parents (Barrow, Alexander, McKinney, Lawinski, & Pratt, 2014).

Challenges for Parents with Mental Illness

Stigma is identified as the most pervasive factor that prevents parents from seeking treatment; parents fear that people do not understand their illness or what they need and they may be too ashamed to admit they need help (Handley, Farrell, Josephs, Hanke, & Hazelton, 2001). Parents often do not seek out mental health treatment because they fear

being judged incapable of fulfilling the parenting role and may be at risk of losing their child (Boursnell, 2007). If, however, parents do seek treatment, they may not follow through with treatment recommendations if they conflict with their role as parent (Nicholson et al., 2001) and sometimes support services are simply too difficult to get to (Finkelstein et. al, 2005; Handley et. al, 2001). Some parents with mental illness may not trust their own judgment or they may see misbehavior or distress in their children as "their fault" (Nicholson, Biebel, Hinden, Henry, & Stier, 2001). Parents may go out of their way to hide their illness, worrying not only about the stigma associated with mental illness, but also concerned that others may judge them or consider them 'selfish' for having children and risk passing the illness on. Many parents feel that the mental health system does not appreciate the impact of parenting on their mental health (Boursnell, 2007). Anderson, Robins, Greeno, et al. (2006) found in their ethnographic analysis that many of the mothers who brought their children in for treatment were also distressed, but did not seek treatment for themselves because they attributed their distress to external causes such as poverty or negative life stressors, or they feared being labeled 'unfit' and potentially losing custody of their children. Parents are often reluctant to obtain help because they feel the mental health system is punitive and they fear being judged an unfit parent and losing their children (Hendrick & Daly, 2000). This may be a legitimate fear as women with serious mental illness are three times more likely than those without mental illness to have involvement with child welfare services (CWS) (Park, Solomon, & Mandrell, 2006). Furthermore, mothers who have had inpatient psychiatric treatment are approximately twice as likely as mothers without such an episode to be involved in child welfare services and nearly three

times as likely to have their children placed in out-of-home care (Park, Solomon, & Mandrell, 2006). The percentage of mothers with serious mental illness who had lost custody of their children has been found to be four times higher than mothers without such a disorder (Park, Solomon, & Mandrell, 2006) and mothers with a history of inpatient psychiatric care are more likely to lose custody than those who have not been hospitalized for mental health reasons (Cook, Steigman, & Jonikas, 2014).

Of course managing the symptoms of the mental illness is only one challenge that affected parents may experience. Other challenges include family disruptions or conflict, parenting as a single parent, social isolation, and poverty (Oyserman, Mowbray, Meares, & Firminger, 2000). Parents struggling with mental illness often face socioeconomic challenges, regardless of gender (Lund, C., Myer, L., Stein, D.J., Williams, D.R., & Flisher, A.J., 2013). Mowbray and colleagues (2001) found that the majority of their study participants fell below the poverty line despite the participants comprising a variety of educational levels. In their study, they found that less than a quarter of the women were working, although about 90% had some employment history. Nicholas, Biebel, Katz-Leavy, and Williams (2002) found in their study utilizing the National Comorbidity Survey data for the lifetime prevalence of psychiatric disorders that the average age and education level of mothers with and without a psychiatric diagnosis was nearly identical, but more mothers with mental illness lived below the poverty line.

Parenting in general can be a challenge for someone diagnosed with a serious mental illness; it may affect the way that the parent interacts with his or her child and may disrupt the parent-child relationship (Kane & Garber, 2004). For example, a diagnosis of

depression may mean a parent is self-focused and has a lack of awareness regarding his or her responsibility to the emotional needs of the child (Lee & Gotlib, 1989). Parents may feel that their own distress is harmful to their child and therefore they may isolate themselves from the child (Stolorow & Atwood, 1992). In addition, the parent may negatively handle aversive exchanges between family members (Lee & Gotlib, 1989). Campbell, Cohn, and Meyers (1995) found that women who were chronically depressed were less positive with their babies during face-to-face interactions, were significantly less competent when observed feeding their babies, and showed less positive affect during toy play. Furthermore, studies have found that mothers who are depressed may provide a less optimal environment for their child to develop social skills because they tend to have less social synchronization with their infant. (Oyserman, Mowbray, Meares, & Firminger, 2000). Cousins (2004) found that many parents are not malicious and do not consciously choose to harm their children, rather they are attempting to parent, but their own trauma or mental health issues may be interfering with their ability to do so. Parents may be unaware of the implications that their own issues may have for their children but when made aware of these, parents tend to express a desire to change. Unfortunately they may not know how to do this. In their 2001 study of the life circumstances of mothers with serious mental illness, Mowbray and colleagues found that nearly 65% of the women were mothers before the onset of their illness. Forty-three percent of the women said that they received little or no help related to parenting needs from their mental health service providers and 20% of the women interviewed reported that there were services that they wanted, but they were not receiving them. Nicholson and colleagues (1999) had asked their cohort of mothers and

fathers in the Massachusetts mental health setting about which services they desired. Their participants identified skills training and parent support groups as being the most needed service. Mothers specifically also requested childcare respite.

In addition, as the children of parents diagnosed with a mental illness face their own adversities and possibly develop their own emotional and/or behavioral challenges, they can become more difficult children to parent. This can lead to a cycle of challenging parent-child interactions that can increase both parent and child stressors (Elgar, McGrath, Waschbusch, Stewart, & Curtis, 2006). In their study of the relationship between daily maternal mood and disruptive child behavior, Elgar and colleagues (2004) found a clear interrelationship between mother's distress level and the child's behavior. Maternal depression, low activity level, anger, and anxiety were found to predict child inattentive, impulsive, and overactive behavior while maternal confusion and anxiety predicted child oppositional and defiant behavior. Children may mirror their parent's behavior in an effort to feel a connection to their parent and a cycle of negative parent-child interactions may be set into motion (Focht-Birkerts & Beardslee, 2000). Conversely, parents may feel so guilty about possibly passing the illness on to their child that they may become hypervigilant, which can disrupt the parent-child relationship as well; especially if that child is an adolescent in the midst of their own identity development (Beardslee, Swatling, Hoke, et. al, 1998). Boursnell (2011) found that a significant number of parents felt their parenting was impacted by their own parent's mental illness as well as experiences of violence, abuse, and neglect. As some parents have gone through their own family histories, they have identified generations of depression – sometimes undiagnosed – and this discovery

was found to be helpful to some as they judged themselves less harshly and modified the attributions towards their own parent's past behavior (Beardslee, Swatling, Hoke, Rothberg, Van de Velde, Focht, Podorefsky, 1998).

Parental mental illness can also mediate the way that parents interact with other systems (Nicholson, Biebel, Hinden, Henry, Stier, 2001). For example, parental involvement in the school tends to result in positive outcomes for children (Stormshak & Dishion, 2002), however, parents struggling with mental health challenges may be less inclined to be actively involved in their child's schooling. Affected parents can also have difficulty advocating for their children and navigating the system. In addition, they may not trust service providers (Nicholson, Biebel, Hinden, Henry, & Stier, 2001). Anderson and colleagues (2006) cited a mismatch between the clinician's and the parent's worldview as another reason why some mothers do not engage with the formal mental health care system. They also do not always believe that those in the mental health field fully understand how the demands of parenting impact their mental health (Boursnell, 2007).

Effects of Parental Mental Illness on Children

The environmental effects of having a parent with mental illness can include decreased warmth, restricted cognitive stimulation, isolation, and exposure to bizarre behavior (Manning & Gregoire, 2006). The research has shown that parental mental illness can have significant long-term effects on the socioemotional well-being of children. Children affected by parental mental illness may have more school problems and difficulties with attention or self-regulation. The rates of major depression, anxiety disorder, and any diagnosis has been found to be significantly increased in the children of

parents with mental illness (Knutsson, Medin, Edlund, & Ramklint, 2007) and these children also had a higher rates of self-harm behaviors and/or suicide attempts (Weissman, et al., 1986). For example, Nicholson and colleagues (2009) found in their study of mothers with mental illness that 60% of their children qualified for special education services, 56% had emotional/behavioral problems, 48% had a mental health diagnosis, 89% had experienced family violence, and 78% of the participants reported involvement with Child Protective Services. Mowbray and Mowbray (2006) found in their interviews with 61 adult children of mothers with mental illness that 25% were exposed to domestic violence, 40-50% reported child abuse and/or substance abuse in the family, 7% reported the death of a parent before they turned eighteen, and 14% had a disability of their own as a child. In addition to these challenges, some children take on parenting roles and some have reported experiencing physical and emotional pain (Mowbray & Mowbray, 2006). In addition to caretaking responsibilities, lower family cohesion and poorer communication, families affected by parental mental illness are more likely to experience crises such as hospitalization of a parent or acute episodes of the illness as well as chronic and traumatic stress, struggling whether to support the individual or make him or her take some personal responsibility, and a general lack of understanding (Reupert & Mayberry, 2007). When children do not understand what is going on with their parents, they can experience fear, confusion, and uncertainty. Many blame themselves or feel embarrassed, they may experience increased conflict with their siblings or within the family unit, and many fear that they too will get the parent's illness (Handley, Farrell, Josephs, Hanke, & Hazelton, 2001). When children do not receive complete information, they may come to their own –

often inaccurate – conclusions, which can exacerbate their fears. Although adults may think they are protecting children by withholding details about a parent's illness, this silence can actually lead to misinformation and do more harm than good (Mordoch, 2010). Often children grow up never understanding their parents' behavior and how it was related to a mental illness until they are seeking treatment for their own mental health issues (Beardslee, Swatling, Hoke, Rothberg, Van de Velde, Focht, Podorefsky, 1998).

One of the research approaches used to determine the effects of parental mental illness on children has been to assess the adult children of parents who had a diagnosis of mental illness by measuring their level of adjustment in adulthood and/or to gain insight into their earlier childhood experiences. For example, Mowbray and Mowbray (2006) found in their interviews of adult children of parents with mental illness that as adults, these individuals reported life satisfaction only slightly above the mid-range but, on average, had little to no difficulty managing relationships and their day-to-day lives. More than one quarter of participants reported a criminal justice history and 38% reported using some type of adult mental health services. Thirty four percent did not graduate high school or obtain a GED and 38% were currently unemployed. However, 34% achieved education beyond high school. A high number of participants in this particular study reported high levels of social support and positive family experiences. In addition, childhood outcomes were positively related to a supportive family, perceived social support, and knowledge about the mother's mental illness. Overall, it was determined that it was not the mother's clinical factors that determined the outcome for the child but rather the risk and protective factors at play (Mowbray & Mowbray, 2006).

Adults Recollection of Their Childhood Experiences of PMI

Studies utilizing information provided by the adult children of parental mental illness have found several common themes in the experience of parental mental illness including unpredictable and sometimes frightening behavior or embarrassing situations in public or instability in the home environment (Fitzgerald, 2001; Foster, 2010); not understanding – knowing something wasn't "right" with the parent but did not always associating it with mental illness - and lack of information (Foster, 2010); worry about the parent's condition or the situation at home (Knutsson, Medin, Edlund & Ramklint, 2007); concern about inheriting the illness (Foster, 2010); unmet needs (O'Connell, 2003); disrupted relationships and changed parent-child relationships including feelings of overprotectiveness of the parent and/or being uncomfortable when the parent behaved strangely (Knutsson, et al., 2007); role reversal and increased responsibilities (Knutsson, et al. 2007; Fitzgerald, 2001; Foster, 2010); the need for balance - looking for ways to escape or care for themselves when the parent was not well as a way to gain a sense of control (Foster, 2010); negative emotions including shame, depressed mood, fear of conflicts, loneliness or feelings of abandonment, and anger or envy of peers (Knutsson, et al., 2007); and isolation and feelings of shame (O'Connell, 2003; Knutsson, et al., 2007). Foster (2010) found that many of these individual were unsure of how they fit into the social world and often felt lonely as they had difficulty relating to peers and/or were ostracized or teased by peers as a result of the parent's illness.

In addition to having difficulty connecting to their peers, these individuals also reported difficulty connecting to their ill parent and the subsequent emotional toll on the

child that often resulted in trust issues that carried from their childhood into adult relationships (Fitzgerald, 2001). Many adult participants reported living in families where the parental mental illness was generally kept a secret and thus these children "struggled to make sense of a chaotic, unpredictable world at home" (Fitzgerald, 2001, p. 82). These children may not have had their needs adequately or consistently met, even if there was a well parent within the home, because the well parent had to take care of the ill parent and siblings often took on the caretaking roles for each other. Furthermore, like the individuals in Fitzgerald's (2001) study, Foster (2010) found that many of the participants reported making attempts to obtain information from the mental health professionals who cared for their but felt that they did not get the recognition they felt they deserved. O'Connell (2003) found that the average age when individuals learned of the parent's mental illness was 14.9 years although the range varied from 4 to 48 years. While there appeared to be no significant difference in well-being based on the age when the child learned of the parental mental illness, individuals who were under the age of 15 when their mother was diagnosed were more likely to qualify as currently depressed. That study also found that when the mother was diagnosed prior to age 31, the family experienced more problems and conflict as opposed to when the mother was diagnosed after age 31. In addition, first-born children tended to fare better than subsequent children and the researchers suspected this could be due to the child having had early years with the mother free of the parental mental illness and with an intact two-parent family, as well as receiving more attention from extended family members. The first-born children may have also learned more effective problem solving due to their early responsibilities, which ultimately led to more effectiveness in

adulthood. The difficulty with forming meaningful relationships in adulthood is a common theme in the research with the adult children of parents with mental illness. Children tended to be reluctant to introduce their peers to their family out of fear of rejection by their peers or they felt that their peers would not understand (Cogan, Riddell, & Mayes, 2005). Adult children of parents with mental illness have also reported isolation from the community, usually due to stigma or shame, which tended to be reinforced by the parents, as many were unable to maintain their own social contacts (Fitzgerald, 2001). In addition, the general lack of awareness of their parent's condition contributed to their inability to access to systems of support. These individuals may feel humiliated, betrayed or rejected by the mental health professionals that worked with their parents and may harbor anger, feeling that the needs of the family were not addressed (Fitzgerald, 2001).

Children's Descriptions of Their Experiences of PMI

While interviewing the adult children of parents with mental illness has been the more common approach, other researchers have interviewed children who are currently being raised by parents with a mental illness to obtain some insight into their experiences. The themes that these children identify are similar to the findings in the interviews with adult children of parental mental illness. For example, the experience of fear due to the often-unpredictable nature of the illness is very common in both the reports of children currently living with parental mental illness (Gladstone, 2010) and the reports of adult children reflecting on their childhood experiences (Fitzgerald, 2001; Foster, 2010). However children currently living with parental mental illness also report positive aspects

of their relationships with their parents (Gladstone, 2010), just as the adult children were able to recall some positive family experiences (Mowbray & Mowbray, 2006).

Mordoch and Hall (2008) conducted qualitative interviews with children between the ages of six and sixteen and found that the children were acutely aware of the shifts in their parent's behavior and recognized how these shifts changed the household environment and influenced their relationships outside the family as well as how they viewed the world. They found that the children tended to monitor and adjust to their parents' behavior so they could maintain connection to the parent and achieve some sense of family stability while also working to create a safe distance between themselves and their parents to preserve their sense of self. The children's individual ability to adapt fluctuated over time and was influenced by the child's developmental level and what they understand about the illness as well as how ill their parent was at any given time. Younger children adapted to parental behavior by getting out of the way or finding someplace else in the house while older children tended to look for ways to comfort or distract the parent and/or help out around the house to alleviate some of the parent's burden. Like the adult children in Foster (2010) and Fitzgerald's (2001) studies, the children that Mordoch and Hall (2008) interviewed reported having difficulty fitting in with other children but reported being good at hiding their own distress because it helped them to manage their situations better. These children engaged in some selective sharing with trusted others in an effort to gain validation and decrease feelings of isolation but many children reported reluctance to sharing with those outside the family because they did not want to be seen as different from their peers. Some children were able to distance themselves from the

situation in a way that allowed them to preserve their own identity, better manage their emotions and increase connections while others reported feeling more consumed by the parental illness and felt as though they could not develop their own lives. These individuals often felt disconnected from others and some children reported coping with the parental illness by cutting themselves off not only from the ill parent but the well parent. In addition, some children reported engaging in risky behaviors such as drug and/or alcohol use, truancy, or school-drop-out. The experience of conflicting emotions - fear, love, and confusion –was also common and older children reported more opposing feelings of care and concern for their parent along with anger, sadness, guilt, and bitterness.

Gender of Parents and Children and the Experience of PMI

The effects of parental mental illness on children may be similar regardless of whether it is the father (paternal illness) or the mother with the diagnosis (maternal illness), but maternal illness appears to have more of an effect than paternal illness and maternal and paternal illness may affect the child in different ways. For example, paternal depression has been found to affect male children with no child-to-parent affects while maternal depression has been found to affect both male and female children with some possible child-to-parent effects such as child temperament predicting later maternal depression (Hanington, Ramchandani, & Stein, 2010). Studies have also found that male and female children may be affected by parental mental illness differently. For example, Morrell and Murray (2003) found that maternal emotional dysregulation at nine months predicted later child conduct disorder symptoms. For male children, the pathway was indirect and mediated by maternal hostility and the absence of positive maternal interactions while for

females the indirect pathway was mediated through coercive parenting. Davies and Windle (1997) also found a link between maternal depression and adolescent depressive symptoms, delinquent activities, alcohol problems, and academic difficulties for female children but not male children. They found that measures of family discord predicted both male and female psychological problems six months later but the form of symptoms exhibited was different by gender. Ramchandani, Stein, Evans, & O'Connor (2005) also found evidence of parental depression affecting male and female children differently, with the association between paternal depression and later behavior problems to be stronger in boys than in girls. Depression in fathers was also found to be associated only with raised levels of hyperactivity and conduct problems, as opposed to emotional challenges. However, other studies have found that paternal depression can lead to internalizing problems in children, but this may develop later in life (Flouri, 2010). The study by Ramchandani, et al. (2005) measured children's emotional and behavioral development at ages three to five years, where it would be more likely for externalizing behaviors to be more evident than internalizing symptoms and boys tend to display such behaviors more frequently than girls. It is possible that the effects of paternal depression on female children do not surface until the child reaches adolescence and then surfaces as internalizing symptoms. It has been proposed (Ramchandani, 2009) that paternal disorders pose a greater risk to male children while maternal mental health challenges are associated with a greater risk for children of both genders (Weitzman, Rosenthal, & Liu, 2001) propose. However, the field has only begun to look more closely at the effects of paternal mental health challenges.

Prenatal Effects of PMI

The research has also found that the effects of exposure to maternal mental illness can begin in the womb whether it is exposure to medications or higher cortisol levels due to the mother's increased stress (Huntsman, 2008). In their longitudinal study of maternal depressive symptoms and child well-being, Luoma and colleagues (2001) found that prenatal depressive symptoms were a strong predictor of child behavior at 8 to 9 years of age. They postulated that this could be the result of physiological effects on the child, environmental factors, and mother's feelings towards the child that developed prenatally and influenced the parent-child relationship once the child was born. Conversely, DiPietro, Novak, Costigan, Atella, and Reusing (2006) found that maternal anxiety, depression, or nonspecific stress during pregnancy did not appear to threaten child development, but they did find that women who appraised their pregnancy as more negative than positive showed slower psychomotor development and poorer emotional and attentional regulation. They too concluded that mother's attitudes regarding her child or pregnancy could potentially predict subsequent mother-child interactions. Diego, Jones, Field, et al. (2006) found that maternal psychological distress was significantly related to increased maternal cortisol and prenatal cortisol was a significant predictor of fetal weight. The relationship between stress and cortisol applies for children exposed to maternal stress post-natally as well. A 2002 study by Essex, Klein, Cho, and Kalin found that preschool children who were exposed to high levels of maternal stress (both in infancy and more recently) had significantly higher levels of cortisol compared to children exposed to moderate or low stress levels. Furthermore, preschool children with high cortisol levels were found to show greater

internalizing and externalizing symptoms by the end of the first grade. These findings were found even when controlling for low socioeconomic status, a common predictor of stress in children, and maternal depression was found to be the only stress domain during infancy that was a significant independent predictor of later cortisol levels. Thus it is likely that this altered mother-child relationship is secondary to the mother's increased stress level and depression mediates the effect on the child's cortisol level and subsequent behavior (Essex, Klein, Cho, & Kalin, 2002).

Prenatal and postpartum depression symptoms have been associated with problem behaviors and lower competencies in male children and the quality of mother-infant interactions have been found to predict problem behavior in female children (Carter, Garrity-Rokous, Chazan-Cohen, Little, & Briggs-Gowan, 2001). Infants and children of mothers with depression have been found to be fussier, have lower scores on measures of intelligence and motor development, have more difficult temperaments and less secure attachments, reacted more negatively to stress, delayed development of self-regulation, have low levels of self-esteem and tend to have a higher level of behavior problems (Goodman & Gotlib, 1999). Hays and colleagues (2001) looked at the intellectual problems shown by 11-year old children whose mothers had a diagnosis of postnatal depression and found that children whose mothers were depressed at three months postpartum had significantly lower IQ scores and were more likely to have special education needs. This effect was more common in boys and was not mediated by parental IQ and was not accounted for by measures of social disadvantage or any later mental health challenges of the mother.

PMI and Child Maltreatment

Parental mental illness has also been associated with child maltreatment. Although it is likely a minority of parents with mental illness who maltreat their children, higher rates of mental illness have been found in maltreating parents compared to sociodemographically similar controls as well as the published rates of mental illness in the general population (De Bellis, Broussard, Herring, Wexler, Moritz, & Benitez, 2001). However, of those maltreating parents who had a mental health diagnosis, a co-occurring substance abuse diagnosis was also common and the male counterparts were found to have higher rates of substance abuse as well as violent behaviors (De Bellis, Broussard, Herring, Wexler, Moritz, & Benitez, 2001). In fact, when parents lose contact with their children as a result of involvement in the child welfare system, substance abuse is more often the cause than psychological symptoms and an increase in substance abuse does not appear to be mediated by the worsening of psychological symptoms (Jones, Macias, Gold, Barreira, & Fisher, 2008). Still, mental illness has been linked to maltreatment: Depression has been linked to abuse and substance abuse disorders have been linked to both abuse and neglect. Parents with depression have been found to be 3.45 times more likely to initiate physical abuse than non-depressed parents when other factors (number in household, socioeconomic status) were controlled (Chaffin, Kelleher, & Hollenberg, 1996). In their study of the psychiatric co-morbidity in caregivers and children involved in maltreatment cases, DeBellis and colleagues (2001) found that maltreatment constituted both acts of commission (usually committed by males) and acts of omission (more common for females). The authors suggested that certain symptoms of untreated mood and anxiety

disorders, such as hopelessness, low self-worth, and dissociation may make these mothers more likely to engage in omission. As for acts of commission, it is possible that irritability and the helplessness experienced by parents with depression can make them more likely to engage in abuse behaviors when stressors escalate (Chaffin, Kelleher, & Hollenberg, 1996). Ostler (2010) also assessed parenting risk in a sample of mothers with serious mental illness who had lost custody of their child and found that based on the Child and Adult Relational Experimental (CARE)) Index, an observational measure of parenting behavior, 61% of the mothers were rated as being at high risk for maltreatment, 25% rated at moderate risk and 14% were low risk. While the index score was not related to mother's age, education level, ethnicity, or diagnosis; the mother's scores on the CARE Index were found to be associated with child behavior with maternal hostility and/or intrusiveness linked to difficult child behavior, maternal sensitivity linked to cooperative child behavior, and unresponsive maternal behavior associated with passive child behavior. Ostler (2010) also found that higher insight into mental illness was associated with a lower risk of maltreatment. Insight into the illness is a better predictor of positive outcomes such as better adherence to medication and therapy as well as better vocational and psychosocial functioning, including functioning as a parent, and insight may be an important protective factor among mothers with mental illness who are at risk of child maltreatment (Mullick, Miller, & Jacobsen, 2001).

Effects of PMI on Child Behavior and Adjustment

Maternal depression has also been linked to child antisocial behavior. Preski and Shelton (2001) found that while exposure to community violence was the strongest

predictor of criminal activity (an odds ratio of 4.43), maternal mental illness resulted in a similar level of increased risk with an odds ratio of 4.29. Kim-Cohen, Moffitt, Taylor, Pawlby, and Caspi (2005) found a significant dose-response relationship to the number of mother's depressive episodes and the child's antisocial behavior by age 7. A parental history of antisocial personality behavior disorder (ASPD) symptoms did account for approximately one-third of these association but maternal depression continued to account for two-thirds of the association. The greatest risk, however, is a combination of maternal depressive and ASPD symptoms. Some possible explanations for the link between maternal depression and subsequent child antisocial behavior disorder include the finding that depressed females are significantly more likely to have comorbid ASPD symptoms and maternal ASPD is associated with poorer parenting, thus giving way to both a genetic and environmental influence. Females with depression have also been found to be more likely to partner with males with ASPD, again, giving way to a genetic influence (Marmostein, Malone, & Iocono, 2004). O'Connor and colleagues (1998) found that slightly less than 45% of the correlation between depressive symptoms and antisocial behavior can be attributed to genetic influences, 30% to shared environmental influences, and 25% to non-shared or individual-specific experiences. In other words, genetics influence antisocial behavior in a way that is independent of the genetic influence on depressive symptoms and there are shared as well as non-shared environmental influences that are unique to antisocial behavior. 50% of the variance in depressive symptoms can be explained by genetics while 66.56% of the variance in antisocial behavior can be explained by genetics. The gender differences in the prevalence of major depressive disorder versus conduct

disorder have been found to be significant. In their study of psychiatric disorders among offspring of mothers with depression, Marmostein, Malone, and Iacono (2004) found that 8%, or 49 out of 578 male children, met diagnostic criteria for major depressive disorder and 34% percent, or 198 out of 578 male children, met the diagnostic criteria for conduct disorder. Out of 675 female children in their study, 16% met diagnostic criteria for a major depressive disorder and 10% met diagnostic criteria for conduct disorder. They too found that children with either a mother with depression or a father with antisocial personality behavior disorder are at an increased risk for major depression and/or conduct issues. As previously discussed, this can be the result of genetic influence but can also be related to family risk factors. For example, parents with antisocial behavior patterns are more likely to divorce, have financial difficulties, and engage in negative parenting styles. Mothers with depression may be tired and withdrawn putting the child at risk for conduct problems or antisocial behaviors while fathers with antisocial personality behavior may be in trouble with the law which can be embarrassing or upsetting for the child, putting him or her at risk for depression (Marmostein, Malone, & Iacono, 2004). Children of depressed mothers are frequently exposed to low mood, irritability, confusion, helplessness and hopelessness, and the mother may be frequently unavailable. Depression has also been found to affect parent's disciplinary practices, often resulting in inconsistent and/or ineffective disciplinary practices (Elgar, McGrath, Waschbusch, Stewart, & Curtis, 2006). When children are exposed to inconsistent parenting responses, they may act out as a way of coping with the stress of unpredictability. In addition, children learn to model the behaviors displayed by their parents. For example, teenage girls have been found to model the low mood and

speech patterns of depressed mothers. However modeling cannot be the only explanation for such behaviors as these behaviors can also be normal in adolescent females and doesn't explain why some children of depressed mothers engage in hyperactive, aggressive, and/or impulsive behaviors (Elgar, McGrath, Waschbusch, Stewart, & Curtis, 2006). However, depression may decrease how often a parent interacts with their child and this in turn may socialize the child to resolve interpersonal conflict with coercion or withdrawal. In other words, children may learn the coercive value of distress by seeing the way that a parent's mood 'controls' the family (Downey & Coyne, 1990). Boursnell (2011) found that the behaviors associated with mental health symptoms may be accepted as normal by the child and affected children adopt these dysfunctional behavioral patterns as their own.

While research has focused on maternal depression and child adjustment, some studies have looked at the various effects of other mental health diagnoses on children. In their review paper, Manning and Gregoire (2006) found that parental depression was the most likely to be associated with an increased risk of abuse while parental bipolar disorder was associated with child impulsivity than any other disorder. Children whose parents had a diagnosis of dysthymia had significantly higher scores on conduct, hyperactivity, and emotional symptoms (Byrne, et al. 2006). Children of parents diagnosed with antisocial personality disorder were the most likely to be at a higher risk for oppositional defiant disorder and/or conduct disorder and the children of mothers diagnosed with anxiety frequently demonstrated an exaggerated startle response and had a higher incidence of anxiety in childhood. As for parents diagnosed with schizophrenia, their children were found to have abnormalities in social development and were more isolative while others

exhibited behavioral challenges. They found that these effects were shown consistently in the literature, even when children were raised apart from the biological ill parent (Manning & Gregoire, 2006).

Of course it is not the diagnosis itself that can predict the child's adjustment, but rather the diagnosis can be related to subsequent parenting behavior. For example, the parenting for bipolar disorder is largely related to the parents' difficulty in forming stable intimate relationship for their own children while the parenting risk for depression is more commonly related to interactions with the child and negativity/negative attributions of the child's behavior. The parenting risk in psychosis can include factors that compromise parenting such as medication side effects, adversity, and possible child welfare services involvement (Morrell & Murray, 2003). In their quest to understand the impact of maternal mental illness on parenting and the effect of maternal diagnosis versus the effects of other clinical variables, Mowbray and colleagues (2002) found that mothers with a diagnosis of schizophrenia were significantly less nurturing with their children than mothers with depression or bipolar disorder. They also found that mothers with a major depressive disorder with psychotic features were significantly more satisfied in their relationships with their children those with either major depressive disorder or schizoaffective disorder. After controlling for chronicity, current symptomatology, and community functioning, the differences across diagnosis on the parenting variables were reduced but diagnosis and chronicity did make a significant contribution to parenting stress. Mothers with more severe symptoms reported more stress as parent. It would follow that mothers who were less stressed were likely more satisfied in their relationships with their children and the

researchers also found that the average number of mental health hospitalizations per year were positive associated with satisfaction (Mowbray, Oyserman, Bybee, & MacFarlane, 2002). This is important because hospitalizations disrupt the family, preventing the parent from fulfilling parenting roles and can have a significant effect on child well-being (Evenson, Rhodes, Feignenbaum, & Solly, 2008).

Gewirtz, DeGarmo, Plowman, August, & Realmuto, (2009) examined child adjustment in relation to parental mental health in a sample of 107 families that resided in supportive housing in a Midwestern city, higher levels parental distress and child maladjustment were found compared to the general population. Observed parenting (discipline, prosocial parenting, problem solving) and parental mental health symptoms were found to directly affect children's adjustment. However, even in this high-risk population, a range of functioning was apparent and the general pattern was determined to be that the lower the parent's distress level, the higher the child's level of adjustment. Indicators of higher adjustment included individual child strengths, an absence of psychological symptoms in the parent, and strong parenting. Parents who were rated more positive, less coercive, and better at problem solving had more positive parent-child interacting and therefore their children were rated with more strengths and less emotional and behavioral symptoms. In addition, parents who had more positive perceptions of their children's behavior also tended to have children with higher scores of adjustment (Gewirtz, DeGarmo, Plowman, August, & Realmuto, 2009).

Children of parents with mental illness may also be at an increased risk of suicide (Preski & Shelton, 2001). In a population-based study, Christoffersen, Poulsen, and Nielsen

(2003) found that the risk of suicide was four times higher for victims of violence, sexual abuse, and/or neglect in childhood, twice as high for those children who had been in foster care, and one and a half times higher if one of the parents had been hospitalized for psychiatric symptoms, suicide attempt, or violence or if a parent had attempted or committed suicide, been convicted of violence, or if the mother had a long-term unemployment during the previous year. The risk of suicide jumped to five times higher if the youth had been hospitalized for psychiatric symptoms him or herself. Ferguson (2011) interviewed 40 children regarding their lived experience with parental mental illness and found that 6 or 15% of the children in his study reported self-harm and/or suicide attempts, a rate about double the Center for Disease Control and Prevention's figure of 7.8% of all adolescents who attempted in 2011 (Eaton, Kahn, Kinchen, et al., 2012).

Another possible effect of having a parent with mental illness is 'parentification' of the child or role reversal (Hetherington, Baistow, Katz, Masie, & Trowell, 2002). Factors that influence whether or not a child takes on a caregiving role include the child's gender, with female children more likely to take on caregiving duties, and if the mother is the one with the mental illness and she is a lone parent with no other means of support, including employment (Aldridge, 2006). While caregiving duties can in some ways be beneficial for the child - it can give him or her a sense of purpose and potentially boost resiliency as well as can reinforce the parent-child bond – childhood development can be adversely affected if the caregiving is long-term and disproportionate to the child's developmental level of emotional maturity and understanding (Aldridge, 2006). In addition, "parentification" – the child taking on adult roles when the parent is not well -- may not be simply role reversal,

but could be viewed as an actual attachment disorder (Chase, 1999 in Aldridge, 2006). Taking on caregiving duties can also be a source of resentment towards the parent (Foster, 2010).

Children of parents with a mental illness may develop disorders of their own either in childhood or later in life. In fact, the rates of psychiatric disorders among the children of parents with depression, for example, are estimated to be two to five times above normal. The rates of major depressive disorder in children have been found to be: 26% for children of parents with an affective disorder; 14% for children of parents with a non-affective diagnosis, and 10% for children of parents with no mental health disorder (Beardslee, Keller, Lavori, Staley, & Sacks, 1993). Risk estimates for common psychiatric disorders are derived mainly from empirical data based on family studies and therefore these estimates are only general as the precise risk of illness for a specific individual or family cannot be determined. For example, if a child has one parent with a diagnosis of schizophrenia, the child has a 13% change of developing it himself. If both of the child's parents have a diagnosis of schizophrenia, however, the risk rises to 45%. If a child has one parent affected by bipolar disorder, the child has an 8.8% risk for developing unipolar depression and an 11.4% risk of developing bipolar disorder (Scourfield & McGuffin, 1999). The risk of developing mental health problems may also depend on whether the child's mother or father is the ill parent. Weitzman, Rosenthal, and Liu (2011) found that paternal mental health challenges were associated with a 33-70% increased risk for mental health challenges in children while maternal mental health challenges were associated with a 50-350% increased risk. Of course if both parents are affected the risk is even higher;

25% of the children living in such homes were found to have emotional and/or behavioral challenges (Weitzman, Rosenthal, & Liu, 2011).

Three hypotheses identified by Byrne and colleagues (2006) for why these children may develop disorders are: 1) genetics – an inherited predisposition towards mental health challenges; 2) the ill parent's relationship may be jeopardized and results in problems in the child; and 3) an mental illness in the parent can affect the environment in which the family lives which can lead to subsequent family and child problems. Early explanations for the effects of parental mental illness on children stemmed from attachment theory. Mothers with a lifetime diagnosis of depression have been found to have less optimal mother-infant interactions and insecure infant attachments and this pattern is found even when taking socioeconomic status into account (Carter, Garrity-Rokous, Chazan-Cohen, Little, & Briggs-Gowan, 2001). Research has found that child outcomes are mediated by the affective nature of parent-child interaction; the responsiveness of the parent affects child functioning, as does parenting style. Positive parent-child interactions and authoritative parenting styles have been associated with more positive child outcomes compared to negative parent-child interactions and authoritarian or permissive parenting styles (Sheridan, Eagle, & Dowd, 2005).

Mothers with mental illness may also have a higher prevalence of exposure to violence or trauma and therefore the symptoms associated with trauma can interfere with parenting. For example, often times these adults learn to cope via detachment and have a difficult time trusting others. In addition, the child can trigger flashbacks and potentially contribute to parental anxiety and depression (Nicholson, Biebel, Hinden, Henry, & Stier,

2001). The research has also shown that warmth and responsiveness has been linked to positive child outcomes such as sociability, self-regulation, prosocial behaviors, and self-esteem (Suchman, McMahon, DeCoste, Castiglioni, & Luthar, 2008). Therefore, from the attachment theory perspective, if mothers display low levels of responsiveness and/or withdrawal, which is common in depression, insecurely attached children may make attempts to regulate the parent's behavior, such as acting out to obtain attention (aggressive, inattentive, and/or hyperactive behaviors) or withdraw themselves (Feldman, 2007). While these behaviors may be adaptive for the child within the home, they can be problematic in other settings and environments. For example, 'opting out', the result of a child finding that that he or she can simply take no more and cutting him or herself off from the parent, and possibly engaging in risky activities, has been likened to insecure-avoidant attachment (Mordoch, 2008).

While children who are emotionally secure tend to have better compliance and behavior in general, kids with insecure attachment are said to lack emotional security (Cummings & Davies, 1995). Furthermore, maternal perceptions of children's emotional and behavioral problems are strongly linked to maternal perceptions of attachment insecurity (Cunningham, Harris, Vostanis, Oyebode, & Blissett, 2004). That being said, children may not necessarily inherit their parent's illness, but rather the parent may influence the child's ability to respond to – or his or her sensitivity to - social stressors (Naglieri & LeBuffe, 2005). Aspects of the parent-child bond, such as the parent's feelings of detachment of the child or the child's feelings of being cared for, have been found to be a useful predictor of child competence and disruptions to this bond have been associated

with child intelligence, self-esteem, and behavioral competence (Tebes, Kaufman, Adnopoz, Racusin, 2001). Siefer and colleagues (1996) found in their longitudinal study of mothers with mental illness that multiple risk factors affected Social Competence, but none as much as attachment. Poorer maternal functioning ultimately contributed to poorer child functioning, however, the authors concluded that rather as attachment as a whole, the components of attachment behavior might influence the child's emotional processing. The diagnosis itself did not directly affect the child's Social Competence; instead, dimensional measures of the illness predicted the child's behaviors. Consideration of contextual risk factors was determined to be essential to understanding the intergenerational transmission of mental illness (Siefer, et al., 1996). Waters and Cummings (2000) proposed suggested placing Bowlby's theory of attachment within the broader perspective ecological development.

Coping, and Resilience

Resilience is the term that has been used to describe the process of positive child adjustment despite conditions of risk or adversity (Luther & Zelazo, 2003; McGloin & Widom, 2001; Patterson, 2002) while resiliency is a personality trait (McGloin & Widom, 2001). Resilience is different from the process of recovery and it has multiple unexpected pathways (Mancini & Bonanno, 2006; Tebes, Kaufman, Adnopoz, & Racusin, 2001). What's more is resilience is quite common and while individual characteristics do play a key role, resilience can be achieved despite adversity (Beardslee & Podorefsky, 1988; Werner, 1993). Protective factors can change and children have the power to change their

environment, however, they need support to do so (Werner, 2000). The more that children are seen as resilient, the better their mental health (Ungar, 2004).

One of the largest, well-known studies in the area of resilience was completed in the state of Hawaii on the island of Kauai. Werner (1993) followed 201 "high risk" children born in 1955 into adulthood. The high risk factors identified, in addition to living in poverty, were chronic discord within the family, parental alcoholism or substance abuse, poverty, parental mental distress, and/or moderate to severe perinatal stress. While Werner began the study by looking at vulnerability, the study moved to resiliency and the identification of what protective factors aided them. Follow-up interviews were conducted when the participants reached age 32 and Werner found that while two-thirds of the children did develop problems later in life, one-third were identified as resilient. Looking back at the individual characteristics of these resilient individuals, Werner found that even as infants, these children elicited positive attention from family members and strangers and were typically described as "good natured" or "easy to deal with" children. In elementary school these children got along better with their peers, demonstrated higher academic achievement, and engaged in extracurricular activities. By high school these individuals demonstrated a positive self-concept and were described as responsible with an achievement-oriented attitude. The families of these resilient children tended to be smaller in size with less than four children, supportive siblings and emotional support from the primary caregiver, structure and expectations for responsibility. The educational experiences of resilient children were found to have the following characteristics: Supportive teachers, competent peers, successful school experiences, and the presence of

mentors. The individual protective factors Werner identified were low distress/emotionality, active/alertness, sociability, easy temperament, average to above average intelligence, the ability to distract oneself, impulse control, and internal locus of control, strong achievement motivation, special talents or hobbies, a positive self-concept, and planning or foresight. These factors were similar regardless of ethnicity or social class and had more of an impact than the stressful life events that the children experienced (Werner, 1993). Fitzgerald (2001) found that those adults who exhibited resilience found escape in the form of extracurricular activities or sports, obtained support via a strong bond with another significant adult, and set goals which provided a way to channel their energy and provided guidance and structure.

How a child copes with adversity goes hand-in-hand with resilience. For example, research has shown that higher intelligence is a protective factors in children whose mothers have a mental illness (Fergusson and Lynskey, 1996). It is suggested that this higher intelligence makes them better equipped to cope with adverse life events and they may have better problem-solving skills (Tiet, Bird, Hoven, Wu, Moore, Davies, 2001). Martel and colleagues (2007) implied a two-way relationship between executive functioning and resilience with early resiliency contributing to later executive functioning by allowing for successful coping so problem-solving skills could be strengthened and early executive functioning supporting resiliency by enhancing coping skills.

Sommers (2007) found that withdrawal from the parent with mental health challenges was also a common coping mechanism. However, this method may have negative consequences in the long run (Mayberry, Ling, Szakacs, & Reupert, 2005). For

example, disengagement has been linked to negative adjustment, as evidenced by increased depression and increased behavioral and/or emotional problems as well as isolation (Fraser & Pakenham, 2009). Avoidance coping was also significantly correlated to socially inadequate behavior (Do Boo & Wicherts, 2009). On the other hand, longitudinal research suggests that successful coping may be the result of a delicate balance as Werner (1993) found that individuals who were able to distance themselves from the family in healthy, productive ways were found to be the most successful later in life.

The findings regarding avoidance coping are in line with a 1996 four-factor model of coping proposed by Ayers, Sandler, West, and Roosa. The four coping strategies identified in this model include active, distraction, avoidant, and support-seeking. However, DeBoo and Wicherts (2009) expanded on the four-factor model by adding a fifth factor: positive cognitive restructuring, a more advanced form of problem solving. They found that prosocial behavior correlated positively with all five coping dimensions, suggesting that sociable children are more flexible in their use of coping strategies and the strongest correlations were in direct problem solving and positive cognitive restructuring. Therefore, cognitive restructuring enhances resilience by raising a child's self-confidence, decreasing irrational interpretations and thoughts, and increasing support-seeking strategies (DeBoo & Wicherts, 2009).

Children cope with stress in many different ways, both cognitively and behaviorally (DeBoo and Wicherts, 2009), but a study of 768 children aged 9-17 found that there are some common strategies that are used by and that these strategies can vary by age. The most common strategies identified in this study were wishful thinking, problem solving,

emotional regulation, cognitive restructuring, distraction, social support, social withdrawal, blaming others, resignation, and self-criticism. The most frequently used by the children in the study were wishful thinking, problem solving, and emotional regulation; blaming others, self-criticism, and resignation were used the least. The older children tended to use more of the ten identified coping strategies than the younger children. In addition, those children who were coping with family stressors found wishful thinking to be less effective compared to efficacy ratings for other types of stressors. Patterns of coping differed the most when comparing sibling stressors and peer stressors, which suggest that children cope with interpersonal stressors differently, based on whether they occur inside or outside the family. While this research is important for determining which coping strategies may be best for a child to utilize based on a particular stressor, the study did not compare the coping patterns used to child outcomes, therefore the efficacy of these strategies were only based on the child's self-report but not on the child's actual well-being (Donaldson, Prinstein, Danovsky, & Spirito, 2000).

Bourke (1998) found that an increased understanding of mental health enhances coping and promotes resiliency in children. Slominsky (2010) measured adult children's perceptions of growing up in a family where a parent was diagnosed with a mental illness. He proposed that it was not necessarily the experiences themselves that shaped the individual, but rather the way the individual made sense of those experiences. Individuals who reported more positive perceptions of family narratives were found to have better mental health, higher socioeconomic status, and more stable relationships than those who held negative perceptions. Furthermore, Slominsky (2010) found that children's attribution

for their parent's mental health problems changed as they aged and as these attributions changed, so did the child's level of functioning. This is in line with Bourkey's (1998) findings; those who tended to attribute the mental health problems of the parent to himself had more coping issues but if the attributions hinted at predictability, external causes, and biological underpinnings, then the child exhibited better psychological and emotional well-being.

Considering that children cope both cognitively and behaviorally, cognitive restructuring can help children cope by increasing self-confidence and help reduce the number of irrational thoughts while increasing the rational thoughts and help-seeking strategies the child utilizes (De Boo & Wicherts, 2009). From an ecological perspective, communication is key. Increased communication decreases parent's guilt and increases child understanding and parents improve their focus on the child which results in improved outcome for parent and child functioning (Beardslee, Solantaus, Morgan, Gladstone, & Kowalenko, 2012). Children need to know that it is okay to seek information if they do not understand and adults - parents and professionals - need to know that the children want and need this information. In fact, communication may even be thought of as an additional protective factor (Greeff, Vansteenweggen, & Ide, 2006). Fitzgerald (2001) found that the cognitive themes in his research that set the resilient participants apart from others were transitions from anger and frustration to understanding and empathy, as well as acknowledging turning events in their perception of life and personal power.

Although the focus has been on the resilience of the child, family resiliency also plays a large role in child outcomes. Greeff and colleagues (2006) looked at resiliency in

families where a member had a psychological disorder and confirmed that mental illness exerts an effect not only at the individual level, but also on the family as a whole. Factors that enhanced recovery within the family were family and environmental supports, participation in recreational activities, hope, and shared family experiences. The family unit is responsible for supporting the children, promoting cohesion, and fostering a positive attitude, however, families often need support to do this. In fact, social support was found to be the most important factor in coping for relatives of individuals with a mental illness. Social support gives children the opportunity to practice their skills and develop their identity as resilient (Ungar, 2004). Finally, the presence of a risk factor does not necessarily mean the family is dysfunctional but it can decrease the probability of resiliency. However, the presence of protective factors can decrease the influence of these risk factors and increase resiliency (Greeff, Vansteenwegge, & Ide, 2006). Children can achieve resilience when there is a balance between adverse events and protective factors. If the balance is thrown off, it is necessary to restore balance by decreasing adversity and increasing protective factors (Werner, 2000). Of course it may not always be possible to decrease adversity and therefore it is essential to boost supports to enhance those protective factors. In fact, Ungar (2011) proposed a definition of resilience that emphasizes the environmental antecedents of positive growth and suggests that under stress, a child's social and physical ecology likely account for more of the variance in developmental pathways than those accounted for by personal factors.

The Developmental Assets Profile

Many of the factors that have been identified as key to resilience are important developmental factors for all children. Leffert and colleagues (1998) identified 40 Developmental Assets that, when present, enhance important developmental outcomes and protect against risk factors. The Developmental Assets Profile is the result of an extensive review of the literature and was informed by the research traditions of resilience and the role of communities in development; including the work of Bronfenbrenner, Jessor's sociocultural influences on adolescent behavior, and Lerner's developmental contextualization Leffert et al., 1998). The Developmental Assets include four categories: Support, Empowerment, Boundaries and Expectations, and Constructive Use of Time (External Assets) and Commitment to Learning, Positive Values, Social Competence and Positive Identity (Internal Assets) and five contexts: Personal, Social, Family, School, and Community (Scales, Benson, Leffert, & Blyth, 2010). The survey instrument used to measure the Developmental Assets has been utilized throughout the country and the research has found that 20% of youth have 0 to 10 assets, 42% have 11 to 20 assets, 30% have 21 to 30 assets, and 8% have 31 to 40 assets (Scales, Benson, Leffert, & Blyth, 2010). Furthermore, the higher number of Developmental Assets one possesses, the fewer number of risk behaviors displayed and the more likely he or she will report positive outcomes (Scales et al., 2010). These patterns have been found to be applicable regardless of age, gender, maternal education or ethnic group (Leffert et al., 1998; Scales et al., 2000). However, to date no research has looked at whether parental mental health status influences the number of assets a child possesses (Scales, 2014).

Although no research has looked at the influence of parental mental illness on the Developmental Assets, parents play an important role in building all forty assets. In some cases, the assets relate directly to family life and parenting, but parents also play an indirect role via modeling, advocating for their child, and making positive opportunities available (Roehlkepartain, Scales, & Roehlkepartain, 2002), For example, eleven parenting actions measured by Roehlkepartain and colleagues (2002) were found to be related to each of the eight categories of Developmental Assets. These behaviors included showing love and affection for the child, encouraging other trusted adults to spend time with the child, encouraging the child to help other people by volunteering, getting to know the child's friends, ensuring the child participated in sports, the arts, or other recreational or educational activities outside of school, ensuring the child is active in a religious organization, helping a child with their schoolwork, teaching the child basic values such as equality, honesty, and responsibility, teaching the child social skills and how to get along well with people of other backgrounds, and helping the child feel that he or she is good at doing something. The study also confirmed that family dynamics could contribute to parent's challenges (Roehlkepartain, Scales, & Roehlkepartain, 2002).

According to Scales, Bensen, Leffert, and Blyth (2010), the Developmental Assets research provides evidence for the benefits of accumulation of positive features of the environment across multiple developmental contexts and have been found to help explain positive youth outcomes including school success, leadership, helping others, maintenance, delay of gratification, and valuing diversity. In addition, youth with higher asset levels

tend to report they are able to overcome adversity more easily (Scales, Bensen, Leffert, and Blyth, 2010).

Supporting the Children of Parents with Mental Illness

As the mental health field began to recognize more mental health consumers as parents, interventions and supports were developed. However, many of these supports have focused primarily on the parents. For example, Modell and colleagues (2001) found that mothers reported significant improvements in their child's behavior following outpatient treatment for their maternal depression. Following an average decrease of 53% on the mother's Beck Depression Inventory, child behavior scores on the Conner's Parent Rating Scale decreased from a mean score of 36 at baseline to a mean score of 26 at follow-up. Because the researchers did not find any significant association between mother's satisfaction or time with the reported behavior change, they concluded that the improved child behavior was not simply a function of time or the mother's perceptual change, a common hypothesis for why reports of child behavior improve upon improvement of parental symptoms (Modell et al., 2001). Likewise, Weissman, Piowsky, Wickramaratne, and Talati (2006) found that of the 114 mothers who took part in the Sequenced Treatment Alternatives to Relieve Depression (STAR*D) trial, 38 met remission at three-month follow-up. The children of the remitted mothers had a clinically significant decrease in the rate of diagnosis, but of the children who already had their own diagnosis at baseline, the difference between child remission for those whose mothers remitted and those whose mothers' diagnosis remained was not significant. Therefore, reduction in parental depression may reduce the stress in the environment, which may reverse symptoms for

children who are genetically vulnerable. However, programs that target only the parent's symptoms have had mixed results as not all studies have found improvements in child symptomatology or behavior following maternal treatment (Verdeli, Ferro, Wickramaratne, et al., 2004; Verduyn, Barrowclough, Roberts, Tarrier, & Harrington, 2003). For example, the use of a short-term, psychotherapy with mothers who had depression was found to only decrease the parent's level of parenting stress but had no effect on her child's level of attachment, behavior problems, and temperament. Furthermore, the mother's negative perception of her child remained even after treatment. It is possible that the mother's negative perception of the child did not change because the treatment did not target the mother-infant relationship, but it could also indicate the persistence of parental perceptions (Forman et al., 2007). While it would follow from an ecological theory that improving the symptoms and functioning of the parent would have some benefit for the child, as children tend to develop problem behavior in response to parental distress and disturbances in parenting style (Modell et al., 2001), it may not have a substantial impact on child adaptation unless there is also a change in parenting performance, strengthening of the parent-child bond, and a reduction in family stress (Tebes, Kaufman, Adnopoz, & Racusin, 2001).

Other programs aim to support the family unit in an effort to prevent the transmission of mental illness from one generation to the next. Key elements of these programs are to not only educate the family about the illness, but to increase parent's awareness of their ability to help their children develop resiliency (Beardslee, Swatling, Hoke, Rothberg, et. al, 1998; Beardslee, Versave, Van de Velde, Swatling, & Hoke, 2002).

While some approaches entail a lecture-based model in which parents are educated about the issues and are expected to communicate with their children and families at home, clinician-facilitated programs have been found to be much more beneficial in effecting change in parents' child-related behaviors and improving attitudes over time (Beardslee, Gladstone, Wright, & Cooper, 2003). In Finland, for example, the Effective Child and Family program has run since 2001 in an effort to study and implement effective preventive child mental health interventions. Solantus and colleagues (2010) evaluated the effectiveness of two family-based psychoeducation programs aimed at facilitating an open discussion within the family. They found that both interventions successfully decreased maladaptive behaviors in the children of parents with depression as well as decreased symptoms of anxiety and hyperactivity and improved social behavior. Focht-Birketts & Beardslee (2000) assessed the Preventive Intervention Project, which was a short-term family intervention that educated the family about the risk factors associated with the parent's illness and the characteristics of resilient children. In six to ten sessions, a clinical worked with parents to evaluate the risk and resilient factors for their children and plan a family meeting. Once the initial family meeting was held, the family continued to engage in an on-going dialogue and a follow-up interview was held at the end of the program and clinicians then followed-up annually with the families to provide ongoing consultation. Although the child participants initially exhibited avoidance, they gradually opened up and were able to describe their reactions to the parent's illness. As adolescents, the children were able to better understand their parent's illness and exhibited critical thinking skills (Focht-Birketts & Beardslee, 2000). Another intervention, conducted by Finkelstein and

colleagues (2005), addressed the needs of children and their mothers who had not only mental illness, but also a co-occurring substance use disorder. Children ages five to ten participated in ten children's sessions focused on coping skills through structured interviews, resource coordination and advocacy, and skill-building groups and taught children to verbalize their feelings and model emotions and included psychoeducation and the development of a safety plan. The family was also linked to resources within the community and two booster sessions, 30 days and 60 days after the initial 10 sessions, were held. Post treatment evaluation found 73% of parents reported a positive change in the child and reported improved communication, changes in attitude and behavior, and increased knowledge and skills related to safety, coping, addiction, and recovery (Finkelstein et al., 2005). The family-based interventions provided support for the hypothesis that promoting protective factors increases prosocial behavior and results in better problem solving and strengthens relationships (Solantus, Paavonene, Toikka, Punamaki, 2010). A small study, conducted in the United States, evaluated a parent-based case-management style intervention. The key principles of the intervention were that it was family–centered and driven, strengths-based, and focused on recovery and resiliency. Family coaches met with the families weekly for 12 to 18 months and focused on engagement and relationship building, Empowerment, and providing access to services and advocacy. Six months into the study, significant improvements were found in social support and there was a significant decline in the need for services (Nicholson, Albert, Gerhenson, Williams, & Biebel, 2009).

Within the last decade, programs targeting the children of parents with mental illness specifically have been developed. Interventions that target resilience in the children of parents with mental illness tend to focus on mental health literacy, social connectedness, and coping strategies (Fraser & Pakenham, 2009; Fudge & Mason, 2004). Social connectedness is important because it plays a role in adjustment (Fraser & Pakenham, 2009) while mental health literacy is linked to the way the child understand the illness, the attributions he or she makes to the cause, and gives the child a more realistic perspective regarding their role in the family (Beardslee & Podorefsky, 1988; Beardslee, Gladstone, & Wright, 2003; Fraser & Pakenham, 2009; Gladstone, 2010). The focus on coping strategies is important because these children may not have had the best role models for appropriate coping and participation in a program can help them develop more positive coping mechanisms and thereby increase resiliency (Fraser & Pakenham, 2009). Researchers have utilized qualitative approaches to determine not only what issues children of parents with mental illness face, but also what they look for in terms of support. Fudge and Mason (2004) utilized focus groups and peer interviews for children and adolescents between the ages of 7 and 20 and found that children identified a need for universal education and decreased stigma, financial and emotional support, having fun things to do together with the family, and flexibility in schools. Things the children identified that had helped them were supportive adults, being active and having time away from their situation, and having someone to confide in. In their interviews with children to obtain child needs related to parental mental illness, Handley and colleagues (2001) found that many children reported that had they had more information and emotional support, they would have been better

able to manage their feelings. If children are not educated about mental illness, they are more likely to internalize their feelings such confusion, and blame themselves: "…when silence is the major means of dealing with parental mental disorder, children are highly likely to form their own opinion and views, learning at the same time that the issue is too dangerous to 'touch' (p. 405, Hinshaw, 2004). Studies have found that children want information about mental illness but are often reluctant to talk about it (Gladstone, 2010). However, coping becomes more difficult when children are not told anything and especially when they are given conflicting information (Beardslee et al., 1998; Luntz, 1995). The research suggests that children's attributions can change significantly and that this change is not the result of maturity alone but also the amount of information and supports outside the family made available to them (Beardslee et al., 1998; Bourke, 1998; Gladstone, 2010; Luntz, 1995). In addition, children's level of adjustment is correlated with whether they believe their parent has control over their illness (Beardslee, Versave, Van de Velde, Swatling, & Hoke, 2002). Therefore better information and understanding can influence not only the child's perception of and causal attributions for the illness, but also his or her adjustment (Wuhib, 2007; Scherer, Melloh, Buyck, Anderson, & Foster, 1996). Furthermore, study after study has found that children request more information (Cogan, Riddell, & Mayes, 2005). "Children have the right to get and share information that is not damaging to them or to others; to voice and have their opinions heard…" (p. 24, Mordoch, 2010). When asked what they would find the most helpful, the children tend to respond that they need better information as well as support for their family; that they need more understanding from those around them, and that they need counseling and/or support

groups. Parents also identified the lack of understanding as a problem and voiced concerns related to their role as parents as well as the impact of their illness on their children and other family members (Handley, Farrell, Josephs, Hanke, & Hazelton, 2001). When Handley, and colleagues (2001) asked mental health professionals what concerns they had regarding the children of parents with mental illness, they felt that children have a difficult time understanding the parent's illness and how to cope with the symptom in addition to the disruptive effect that mental illness can have on parenting including a decreased awareness of the child's needs. When asked what would benefit the children of parents with mental illness, the providers identified the need for programs to support the development of personal competencies, social, emotional, and developmental support for the affected children such as peer support groups, camps, and training mental health workers to help parents and children understand mental illness more fully (Handley et al., 2001).

Studies have looked at the benefits of psychoeducational programs for children, such as the Kids in Control Program (Besla, 2007), the Positive Connections Program (Orel, Groves, Shannon, 2003) or KAP, Koping Adolescent Program, (Fraser & Pakenham, 2008). These programs are short-term, resilience-based and focus on boosting protective factors in an effort to decrease the effect of adverse life events. They have been found to increase functioning and improve behavior and attitudes, improve self-esteem, and increase willingness to talk about their feelings and challenges (Fraser & Pakenham, 2008; Orel, Groves, & Shannon, 2003;). Another example of a psychoeducation program, the YES program (Riebschleger, Tableman, Rudder, Onaga, & Whalen, 2009), entailed six sessions

which provided information about the prevalence of parental mental illness, the causes of illness, mental health treatment, stigma, coping, and hope for recovery and treatment. While this program was found to increase mental health knowledge, it was not found to change coping ability. The authors concluded that more than six sessions might be necessary to result in change. In addition, the authors noted that the sample size was quite low and a macro anti-stigma program for children may help increase participation in such a program as well (Riebschleger, et al., 2009). One of the more recent psychoeducation programs was completed in Australia (Grove, Reupert, & Mayberry, 2013) and utilized a program on DVD that children could watch at home with or without their parents and included a questionnaire to complete prior to viewing the film and another to complete upon finishing the DVD. Over half of the participating families also consented to follow-up telephone interviews. The study found a significant increase in mental health knowledge upon viewing the DVD but no increase in help-seeking behavior. The children reported that the program helped them to better understand their parent's illness, show more empathy towards their parent, and made them feel more comfortable talking to their parent about it. However, the children were reluctant to talk to anyone else about their parent's illness and none of the children were open to viewing the program at school for fear that their parents would find out and they would be bullied. The authors pointed out that the absence of change in regards to help-seeking behavior may be due to the fact that the DVD was viewed at home, thus giving the impression that mental illness needs to remain a 'family secret.' The limitations of this study are that there was a small sample size and relied on self-report which can be difficult with this group of children as they may feel

uncomfortable sharing information about their parents' illness. They suggest that future research to include follow-up studies to determine if knowledge is retained and to also look at behavior change, coping, and address stigma to determine secondary outcomes that may come as a result of the increased understanding of mental illness (Grove, Reupert, & Mayberry, 2013).

Researchers have also looked at peer support programs such as the Paying Attention to Self (PATS) program, an Australian program for children ages 12 to 18 year old (Hargreaves, Bond, O'Brien, Forer, & Davies, 2008); Kids with Confidence, an Australian program for children ages 7 to 18 years old (Hayman, 2009); CHAMPS, a children's school holiday program offered in Australia that incorporates a children's group, a parent's group, and a playgroup, (Goodyear, Cuff, Mayberry, & Reupert, 2009),; ON FIRE , a strengths-based peer-support program for children ages 8 to 17 years old in Australia, (Foster, McPhee, Fethney, & McCLloughen, 2004); and SMILES ("Simplifying Mental Illness + Life Enhancement Skill), a program developed in Australia for children ages 8 to 16 years of age (Pittman & Matthey, 2004). The aim of these programs is to connect affected children with their peers, increase support, increase mental-health knowledge, promote strategies to deal with stigma, and encourage healthy attitudes, communication and leadership skills as well as Empowerment (Foster, McPhee, Fethney, & McCLloughen, 2004; Goodyear, Cuff, Mayberry, & Reupert, 2009; Hargreaves et al., 2008; Hayman, 2009; Pittman & Matthey, 2004). Individual experiences are normalized through the process of sharing with similar peers and evaluation of these programs have indeed found increased self-esteem, problem-focused coping, social support coping, and increased

connections within the family (Goodyear, Cuff, Mayberry, & Reupert, 2009). Results from these programs are certainly mixed, while the majority do report improvement in attitudes and behaviors, the method of evaluation changes by study with some relying on participant report and others relying on parent or other adult's observations. One of the more recently evaluated programs, the ON FIRE program (Foster, McPhee, Fethney, & McCllloughen, 2004), found that 43% of the parents considered their child's behavior to have changed while nearly 55% reported no change. The adolescent participants, on the other hand, reported nearly 82% improvement in their problems while 18% reported no change. Only 7% of the parents found the program helpful while almost half of the adolescents found the program to be helpful. Connections outside the family were found to have significantly increased by four-month follow-up but no changes were found in emotional symptoms, conduct, hyperactivity, peer problems, or prosocial behavior. However, this was a small study that did not have the numbers available to detect statistical significance (Foster, McPhee, Fethney, McCllloughen, 2004) and illustrates the need for more research into the area of peer support, psychoeducational programs. While the youth who attend these programs typically form friendships that last beyond the program and they learn to engage with others in socially acceptable ways, (Hayman, 2009), one downside of this approach is that by grouping children in this way, it may increase affiliation with similar peers and decrease interactions with non-affected youth (Hargreaves et al., 2008). In fact, participant feedback from other peer-support programs have included comments by children who stated that while they found the program helpful in terms of understanding and facilitating communication within their family and with similar peers, they wished they would have

learned how to talk to their non-affected peers (Gladstone, 2010). Other, less researched approaches include online interventions and bibliotherapy. While online interventions have been shown to have some success, they are typically geared towards adolescents and young adults as younger children may misinterpret or misunderstand the information (Reupert et al., 2012). Furthermore, while bibliotherapy may help children to normalize their situation and gain insight into problem-solving techniques of the various characters in the books, there is no evidence for the efficacy of this approach in the children of parents with mental illness (Reupert et al., 2012).

Summary

Parental mental illness affects the entire family and should be viewed from an ecological perspective to both fully understand its effects as well as provide effective support. The children of parents with mental illness may face a multitude of risk factors and are at an increased risk of developing mental health challenges themselves. However, there are no absolutes; children do have the power to overcome obstacles and become resilient. The consensus is that resilient individuals are socially competent, exhibit problem-solving skills, are autonomous, and have a sense of purpose and the individual's environment can enhance these factors by being care and supportive, have positive expectations, and provide ongoing options for participation (Bernard, 1993). The population-specific priorities that have been identified in the research include alleviating parental mental health symptoms, improving the child's problem-based coping skills, and increasing mental health literacy (Bee, Berzins, Calam, Prymachuk, & Abel, 2013). However, one of the biggest challenges in the area of supporting the children of parents

with mental illness is the compartmentalization of mental health services and the lack of communication between child and adult services (Nicholson & Biebel, 2002). Some countries, like Australia, have made major efforts in the last decade to overcome this and preliminary research has found that collaboration between agencies increases communication, made the work easier, and ultimately increased the likelihood of improved outcomes for children (Clark & Smith, 2009; Morson, Best, De Bondt, Jesson, & Meddick, 2009). In Europe, Child and Adolescent Mental Health Services (CAMHS) has developed the Strength to Strength program; a package of services to increase resilience in children by focusing on child resources, family education and interaction, and community resources and support. Evaluation of this program has found that families report more balanced interactions and children increase their social networks and exhibit greater social functioning as a result of this support (Place, Reynolds, Cousins, & O'Neill, 2002). In the United States, however, progress in this area has not been nearly as expeditious and in Hawaii, no specific services for the children of parents with mental illness exist (Hendrick & Daly, 2000; Gambs, 2010). Some of the programs available in the United States include family outreach, family therapy, parenting skills classes, and family case management (Hendrick & Daly, 2000). Hinden and colleagues (2006) conducted a survey of programs available for parents with mental illness and their children and found that the programs available reflected two main areas: Those to serve adults with mental illness who were also parents and those to enhance child development and prevent developmental delay for children whose parents have mental illness. The majority of the programs identified fit into the first category while the remaining few tended to be limited to early intervention (0-5

years) and child welfare services. In other words, many families and children's needs are not being adequately met. In addition, the services available include little coordination between services, parenting skills are not always evaluated and even when they are, services may not be available, and stigma prevents parents from obtaining support (Hendrick & Daly, 2000). Therefore the school is an ideal venue for helping to build resiliency in children (Luther & Zelazo, 2003; Reupert & Mayberry, 2010). In his research, Fitzgerald (2001) found that the participants frequently cited school as a source of normalcy and structure while professionals were viewed as having failed them. Furthermore, Reupert and Mayberry (2010), upon evaluating the programs available to children and families affected by parental mental illness, cited the need for an ecological approach to intervention and recommended the school as an appropriate setting as schools tend to be seen as less stigmatizing as other social agencies. Schools could help the children of parents with mental illness by implementing school-wide efforts to increase awareness of socio-emotional challenges and increasing supports for affected children (Fudge & Mason, 2004). The research has shown that when schools are supportive in encouraging pro-social youth action and constructive choices, promote children's future dreams, and help children address challenges, youth resilience is promoted (Theron, Liebenberg, Malindi, 2014). However, to date, there is a dearth of studies on the impact of school and school personnel on the children of parents with a mental illness. The aim of this study is to contribute to the knowledge base by examining the impact of broad, school-wide socio-emotional interventions on the children of parents with mental illness by looking at the presence of and potential change in the Developmental Assets.

Chapter 3: Research Method

Introduction

The primary purpose of the study was to examine the effects of PMI on children using ecological theory. I also sought to determine the effectiveness of generalized, school-based interventions for these children. First I conducted a one-way ANOVA to compare the DAP scores of COPMI and NonCOPMI students to address the first research question. I then conducted repeated-measures ANOVA to determine if there was a change in DAP scores over time and if this difference was significant between the COPMI and NonCOPMI groups. In this chapter, I provide a detailed overview of the sample population and discuss the research approach to address each hypothesis in detail. I also discuss possible threats to validity and ethical procedures.

Research Design and Rationale

To study the effect of PMI on the Developmental Assets, I used a quantitative approach utilizing secondary data. A quantitative method was deemed appropriate given the focus on internal characteristics and External Assets that have been shown to have a beneficial effect on development. Furthermore, the online, self-administered survey design utilized by the Developmental Assets Profile produces interval data that is normally distributed and can best be analyzed utilizing quantitative methods. Finally, this research builds on previous work in the area of both COPMI and the Developmental Assets, for which a quantitative approach is more appropriate than a qualitative approach because the work is no longer exploratory in nature. Secondary data analysis was selected to address the research questions because of the sensitive nature of the research topic including a

focus on children and parents who may possibly have a mental illness. In addition, time constraints influenced my decision to use secondary data as obtaining necessary approval and accessing the sample population would take considerable time and may have seriously delayed my completion of the study. On research question one, the independent variable was parental mental health status (mental health diagnosis or reporting mental health as "not good" for '14 or more days' in the past 30 days) and the dependent variable was the total score on the Developmental Asset Assets Profile (DAP). On research question two, the independent variable was time and the dependent variable was the total score on the DAP while the moderating variable was the presence of parental mental health diagnosis or elevated symptoms.

Methodology

Population

I utilized secondary data obtained from an elementary school population in the Ka'u district on Hawaii Island. The population of the entire K-12 student population at the school was 560. According to 2013-2014 school demographic data, 43.2% of the students are of Native Hawaiian decent, 26.8% are Filipino, 9.8% are Caucasian, and 8.7% are Micronesian. 2.8% are Japanese, 2.8% are Hispanic, 2.2% are Portuguese, 1.1% are Samoan, .4% are African American, .7% are Chinese, and .7% are of Native American decent. Approximately 15% of the student population classified as English-language learners; 85% qualify for free or reduced school lunch (Hawaii State Department of Education, 2015). This increased poverty, as evidenced by the large percentage of students who qualify for free or reduced lunch, is typical for this area of Hawaii. Nearly 1 in 5

(18.4%) of Hawaii Island residents at or below 100% of the federal poverty level; the rate is 9.1% for the island of Oahu. More than one third of Hawaii Island's population is at or below 200% of the federal poverty level. The districts of Hawaii Island with the highest poverty rates are Ka'u, Puna, and South Hilo; here, 45-55% of the population is at or below 200% of the federal poverty level (NHOP, 2012).

Sampling Procedures

The archival data set was comprised of all students in Grades 4-6 at an elementary school in the Ka'u district of Hawaii Island. While DAP has been used with over 600,000 students (Search Institute, 2016), my search of the literature as well as personal communication with Dr. Peter Scales (2014), one of the DAP developers, indicated that no studies to date have looked at the impact of parental mental illness on the Developmental Assets.

DAP data, as well as the parent information, were gathered by my study school's School-Based Behavioral Health Department as part of its ongoing efforts to strengthen student supports and provide behavioral health programming. I obtained consent from the school to access and use these data (Appendix B) and IRB approval for the study was obtained February 23, 2016. The school obtained ownership of the data with their purchase of the licenses to administer the DAP, and therefore separate permission from The Search Institute, the publisher of the DAP, was not necessary.

For data analysis purposes, I planned to divide student test takers into two groups but ended up with a third group based on the parent survey data. The first group consisted of students whose parents reported a history of mental illness or self-reported that their

mental health was “not good” for 14 or more days within a 30-day period (COPMI). The second group consisted of those students whose parents reported no history of mental illness or who reported 13 or fewer days of poor mental health (NonCOPMI). The third group was comprised of students for whom parental survey data was not available (Unknown PMI).

School-Based Programming and DAP Survey Administration

The study school administered the DAP survey at the end of the first semester (T1) and then again at the end of the second semester (T2) of the 2014-2015 school year. During the time between T1 and T2 administrations of the survey, all children in the study sample completed weekly lessons from the “Mind-Up” curriculum, which is a research-based program for children that uses lessons based in neuroscience to teach children self-regulation skills, perspective taking, empathy, and problem-solving skills (Hawn Foundation, 2015). In addition to this curriculum, the teachers focused on improving Tier 1 supports by implementing three strategies from the 16 Proactive Classroom Management Strategies (see Cook & Wright, 2012). The three strategies implemented that school year were: Greeting students at the door, smiling, and using five positive statements for every one correction or critique. In addition, in an effort to increase supports to students in need, teachers completed the Brief Externalizing and Internalizing Screener for Youth (BEISY) universal screener (Wright & Cook, 2014).

Instrumentation

Developmental Assets Profile. The Search Institute has administered DAP to more than 600,000 children between the ages of 8 and 18 (Search Institute, 2016). DAP measures

assets that have been found to support positive child development in eight categories: Support, Empowerment, Boundaries and Expectations, and Constructive Use of Time (External Assets) and Commitment to Learning, Positive Values, Social Competencies, and Positive Identity (Internal Assets). DAP also explores children's perceptions of supports and strengths across five contexts including Personal Assets, Social Assets, Family Assets, School Assets, and Community Assets (Scales, Benson, Leffert, & Blyth, 2010).

After purchasing access to the online survey via The Search Institute, the study school administered the DAP survey to students at the end of the first semester and again at the end of the second semester. The survey begins by asking students for demographic information, which includes their age, gender, and race. Following this section are 58 questions that explore the presence of each characteristic, feeling, or support in the individual's life within the past 3 months. Students are given the following directions: "Below is a list of positive things that you might have in yourself, your family, friends, neighborhood, school, and community. For each item that describes you now or within the past 3 months, check if the item is true: Not at all or Rarely; Somewhat or Sometimes; Very or Often; Extremely or Almost Always." Overall DAP scores then fall into one of four categories: Challenged (a score of 0-29), Vulnerable (30-41), Adequate (42-51), and Thriving (52-60). Scores for each of the eight asset categories as well as the five contexts are also given and fall into one of the same four categories: Challenged (0-14), Vulnerable (15-20), Adequate (21-25), and Thriving (26-30).

The internal consistency for the DAP survey has been found to be .81 for the eight Asset Category scales and .88 for the five Context scales. The internal consistently is .93

for the Internal Assets, .95 for the External Assets, and .97 for the Total Assets. Test re-test reliability was found to be an average of .79 for the eight Category scales, .86 for the Internal Assets, .84 for the External Assets, and .87 for the Total Assets. Concurrent validity was measured against the Attitudes and Behaviors Survey, which measures forty assets and has been used with more than 3.5 million youth. Concurrent validity for Total Assets was found to be $r = .82$, $p < .001$ and showed a strong linear relationship; as the number of assets increased from 0 to 40, the mean score on the DAP also increased systematically. Concurrent validity was also found for level of asset, high risk behaviors, thriving indicators, and asset categories (Search Institute, 2013).

Parent Questionnaire. A brief questionnaire, created and administered by school staff, was sent home with all students in grades 4 through 6. The form explained that the school was trying to determine what sorts of programs may further benefit the socioemotional development of the children, and requested some information from the parent or guardian. The questionnaire had seven total items and asked for: 1) the respondent's age and relation to the child; 2) number of individuals in the household; 3) how many days during the previous month that they would rate their mental health "not good;" 4) if the respondent had ever been diagnosed with and/or treated for a mental health condition, not including a substance use disorder; 5) if any other adult in the home had ever been diagnosed with and/or treated for a mental health condition, not including a substance use disorder; and 6) if the biological parent is not present in the child's home, if the child's biological parent was ever diagnosed with and/or treated for a mental health condition, not including a substance use disorder (yes, no, or unknown). The survey also asked if the respondent

believed that his or her child would benefit from learning about various social and emotional challenges as well as ways to cope with stressors and how to enhance his or her own social and emotional well being or mental health. A copy of this survey can be found in Appendix A. No personal identifying information was given or asked for on the questionnaire.

Data Analysis Plan

Overview. As the students completed the online survey, results were sent directly to The Search Institute who compiled all the data into a school-wide report as well as a raw data file. The raw data files for the pre and post intervention were utilized for the data analysis. Mean scores for overall DAP, as well as each context and category were calculated for the overall sample as well as mean DAP scores (overall, context, and category) for the children of parents who reported a history of mental illness / increased symptomatology (COPMI) and for those children whose parents did not report a history of mental illness / no increased symptomatology (NonCOPMI groups).

A positive history of respondent diagnosis and/or treatment for a mental health condition or diagnosis and/or treatment history for another caregiver in the home resulted in the child being identified as a COPMI. Furthermore, if a respondent reported that his or her mental health was “not good” for ‘fourteen or more days’ within the past 30 days, the child was placed in the COPMI group. A negative history of respondent diagnosis and/or treatment for a mental health condition or the absence of a diagnosis and/or treatment history for another caregiver in the home resulted in the child being identified as a NonCOPMI. Furthermore, if a respondent reported that his or her mental health was “not

good" for 'none,' '1-6,' or '7-13' days within the past 30 days, the child was placed in the NonCOPMI group. Parental Mental Health (PMH) status was denoted on the data file with a "1" for COPMI and "2" for NonCOPMI. For respondents that did not have corresponding parental survey data, the Unknown PMI group, the PMH status was denoted on the data file with a "3" for Unknown.

SPSS v.23.0 (IBM, 2013) software was used for data analysis. One-way ANOVA on Research Question 1 and two-way repeated measures ANOVA on Research Question 2 was used to determine if there were significant differences in DAP scores between the COPMI and NonCOPMI groups.

RQ1: Do children of parents who report a current diagnosis of or history of parental mental illness, or reported that their mental health was "not good" for '14 or more days' in the previous 30 days (COPMI), differ significantly from the children of parents who do not report parental mental illness or elevated symptomatology (NonCOPMI) on the Developmental Assets Profile (DAP)?

H_o1: COPMI scores do not differ significantly from NonCOPMI scores on the Developmental Assets Profile.

H_a1: COPMI scores differ significantly from NonCOPMI scores on the Developmental Assets Profile.

RQ2: Was there a significant difference in the change in the DAP scores for the children of parents who reported parental mental illness or reported '14 or more days' of "not good" mental health within the previous 30 days (COPMI), compared to children

whose parents did not report a history of parental mental illness or elevated symptomology (NonCOPMI), over time?

H_o2: The change in DAP scores for COPMI is not significantly different from the change in DAP scores for NonCOPMI.

H_a2: There change in DAP scores for COPMI is significantly different form the change in DAP scores for NonCOPMI.

Threats to Validity

Children completed the Developmental Assets Profile independently, although support was offered to those children who needed help reading the questions. However, the measure was dependent on children answering honestly. Furthermore, the classification of COPMI and NonCOPMI was dependent upon the parent's self-report of a history of mental illness or current symptomatology, and was also dependent on the parents answering honestly.

Ethical Procedures

I completed the National Institutes of Health (NIH) Web – based training course "Protecting Human Research Participant's" course to ensure that the data was handled appropriately.

Confidentiality was protected throughout the data collection and reporting process. Although the DAP asked students for their names, all students responded with only their first name. The Search Institute compiled the survey results and a school-wide report (no individual data) and the raw data files were sent to the school. Each child was then assigned random identification number that was used on the parent survey and put in place of the

child's name on the data file. No personal identification information was listed on the data spreadsheet that I received. The master key listing the student names and assigned identification numbers is stored in a locked file cabinet in the School-Based Behavioral Health office.

Consent was obtained from the school to utilize the data collected in their administration of the Developmental Assets Profile. In their purchase of licenses to utilize the DAP, the school has the ownership of the data; separate permission from The Search Institute to utilize the data was not necessary. Because the responses to the parent questionnaire were anonymous, completion of parent questionnaire was considered to signify that the individual consented to the utilization of their responses. A copy of the questionnaire can be found in the Appendix.

Summary

In Chapter 3, I discussed the research design and methodology of the current study. I utilized secondary data comprised of DAP survey scores of students in grades four through six at a public elementary school in rural Hawaii and parent questionnaire completed by their parent or guardian. Respondents were grouped into COPMI, NonCOPMI, or Unknown groups based on the results of the school-administered parent survey responses and SPSS v.23.0 (IBM, 2015) was used to conduct data analysis; I conducted a one-way ANOVA to compare DAP scores on RQ1 and two-way repeated measures ANOVA to compare the change in DAP scores over time on RQ2. The results of this study will be discussed in detail in Chapter 4.

Chapter 4: Results

Introduction

The purpose of this quantitative study was to examine the effect of parental mental illness on children using an ecological approach. Two research questions were addressed, the first question was whether the DAP scores of children whose parents reported a current diagnosis of or history of parental mental illness, or reported that their mental health was "not good" for '14 or more days' in the previous 30 days (COPMI), differed significantly from the DAP scores of children whose parents did not report parental mental illness or elevated symptomatology (NonCOPMI). The second research question examined whether there was a significant difference in the change in DAP scores for the COPMI group compared to the NonCOPMI group over time. In Chapter 4 I present the results of my investigation. I discuss my data collection and analysis procedures and, then, present my research findings. < How do you conclude the chapter?

Data Collection

I used secondary data analysis of DAP survey results and parent survey results for students in the fourth through sixth grades at a public elementary school in rural Hawaii. DAP data, as well as parent information, were gathered by the school's School-Based Behavioral Health Department. No personal identifying information was included on study data.

Walden University's IRB approved my study on February 23, 2016 (IRB Approval #02-23-16-0026557). I received the data from the study school on March 14, 2016. I received DAP survey data for 74 students, and parent survey data for 34 of these 74

students. The school data was in a Microsoft Excel spreadsheet, which included a unique code for each participant as well as participant age, gender, grade, date of birth, and the raw scores for each category of the DAP survey, internalizing and externalizing category subtotals, context scores, and Total Assets scores. I was also granted access to the school-issued parent surveys and cross-referenced the responses to the data set by the unique participant codes.

Gender was coded in the data set, with 1 = Male and 2 = Female. I added a column to the Excel spreadsheet to code for PMI status. If a parent reported a present or past diagnosis of mental illness for him or her self or another parent, I entered 1 for the participant to indicate COPMI status. I also entered 1 if the parent reported feeling that his or her mental health was "not good" for 14 or more days during the previous 30 days. If the parent did not report a mental health condition (past or present) for self or another parent or reported that his/her mental health was "not good" for thirteen or less days during the previous 30 days, the participant was coded as 2 = NonCOPMI. If a respondent did not have corresponding parent survey data, I coded the PMI status as a 3 = Unknown.

Results

Descriptive Statistics

Seventy students completed the DAP survey. However only 43 of these students completed the survey at both time points. Therefore, I will address the data analysis for each research question separately because RQ1 pertained simply to differences in DAP scores between groups and it was determined that the data from all 70 participants would benefit the strength of the statistical analysis. However, I limited the analysis for RQ2 to

only the 43 cases for which Time 1 and Time 2 data was available. My sample sizes are in line with my power analysis, which indicated that I should use a sample size of 68 for the first research question and a sample size of 16 for the second research question.

Research Question 1. The sample group (n = 70) was comprised of 21 females (30%) and 48 males (69%); gender was missing for one respondent. Of the 70 participants, 10 (14%) were COPMI, and 20 (28%) were NonCOPMI). PMI status of 40 (58%) participants is unknown.

I used descriptive statistical analysis for demographic information and additional identifying categories. (See Table 1 for a summary of participant's characteristics [RQ 1].)

Table 1

Summary of Participant Characteristics (n = 70) for RQ1

PMH Status	*N*	Male	Female
COPMI	10	7	3
NonCOPMI	20	13	7
Unknown	40	28	11

Note. The gender of one participant in the Unknown PMI group was missing from the data set.

The null hypothesis on RQ1 stated there would be no differences on DAP scores between COPMI and NonCOPMI. A one-way ANOVA was conducted to determine if DAP scores (total Assets as well as individual category and context scores) were different for groups of students based on reported parental mental health status. Participants were classified into three groups: COPMI (n = 10) for students whose parent/guardian reported

past or current parental mental health diagnosis or current poor mental health; NonCOPMI (n=20) for students whose parent/guardian reported no past or current parental mental health diagnosis or current mental health concerns, and Unknown (n = 40), for students who did not have parent survey data available. Outliers, as assed by boxplot, were found in the areas of Family (1 outlier), Positive Identity (1), Constructive Use of Time, (1) Empowerment (2), and Support (2) for the COPMI (3) and Unknown (3) groups. However, I determined via data analysis, both including and then excluding these outlying variables, that these outliers did not have a significant effect on the overall results and therefore I included the outliers in the data set. Data was normally distributed, as assessed by Shapiro-Wilk test (p > .05), for the COPMI group in all areas; for the NonCOPMI group in all areas except Support, Boundaries and Expectations, Commitment to Learning, Family Assets, and School Assets; and the Unknown group was not normally distributed, except in the area of Personal Assets. The assumption of homogeneity of variances, as assessed by Levene's test of homogeneity of variances (p = .120), was met. Data is presented as mean ± standard deviation; the higher the mean, the more Developmental Assets possessed. DAP scores were found to be statistically significantly different between groups in the area of Empowerment, $F(2, 67) = 3.26$, $p < .05$; and approaching significance in the areas of Family, $F(2, 67) = 3.076$, $p = .053$ and Community, $F(2, 67) = 2.993$, $p = .057$. Although the difference in Total Assets was not statistically significant, there is some suggestion of higher level of assets for the NonCOPMI group compared to the COPMI group. The mean Total Asset DAP score was highest for the Unknown group (M=47.68, SD, 9.20), followed by the NonCOPMI (M=44.70, SD = 7.83), while the COPMI group had the lowest mean

Total Asset DAP score (*M* = 40.20 *SD* = 12.65). This trend (COPMI having the lowest mean scores followed by the NonCOPMI and then the Unknown group) is consistent for each of the DAP categories and context scores. The mean for the External Assets total (which is comprised of the categories including Support, Empowerment, Boundaries and Expectations, and Constructive Use of Time) was lowest for the COPMI group (M = 21.40, SD = 5.82) compared to the NonCOPMI (M = 22.85, SD = 4.65) group and the mean for the Internal Assets total (which is comprised of the categories including Commitment to Learning, Positive Values, Social Competence, and Positive Identity), was also lowest for the COPMI group (M = 18.20, SD = 7.24) compared to the NonCOPMI (M = 21.25, SD = 5.44) group. Tukey post hoc analysis of the Empowerment area yielded no statistically significant results.

The group means were not statistically significant different ($p > .05$) for any of the DAP scores, with the exception of Empowerment, but it was impossible to determine if the significant difference was between COPMI and NonCOPMI. Therefore, the null hypothesis is accepted. However, because it was impossible to determine if the statistically significant difference in the area of Empowerment (and approaching statistically significance in the areas of Family and Community) was between the COPMI and NonCOPMI groups, or if the differences were due to the third group (Unknown), a second one-way ANOVA analysis was carried out with a modified data set to address research question one. The modified data set removed the Unknown group. Furthermore, mean scores (Time 1 and Time 2) were utilized if the individual completed the measure at the two different time

points and the same scores were utilized as in the first analysis if the participant only took the DAP survey one time.

I conducted a second one-way ANOVA with this modified data to determine if DAP scores (Total Assets as well as individual category and context scores) were different for groups of students based on reported parental mental health status. Participants were classified into two groups: COPMI (n = 10) and NonCOPMI (n=20). Outliers, as assessed by boxplot, were not present; data was normally distributed for each group, as assessed by Shapiro-Wilk test ($p > .05$), with exception of the NonCOPMI group in the areas of Support, Commitment to Learning, Family, and School; and there was homogeneity of variances, as assessed by Levene's test of homogeneity of variances (p = .120). Data is presented as mean ± standard deviation. DAP scores were found to be statistically significantly different between groups in the area of Positive Values, $F(1, 28) = 5.164$, $p < .05$, $\eta_p^2 = .08$; Social Competence, $F(1, 28) = 4.598$, $p < .05$, $\eta_p^2 = .06$; Internal Assets, $F(1, 28) = 4.324$, $p < .05$, $\eta_p^2 = .07$; Social Assets, $F(1, 28) = 4.679$, $p < .05$, $\eta_p^2 = .05$; and Community Assets, $F(1, 28) = 5.225$, $p < .05$, $\eta_p^2 = .08$; and approaching significance in the areas of Commitment to Learning, $F(1, 28) = 3.959$, $p = .056$, $\eta_p^2 = .06$; and Total Assets, $F(1, 28) = 4.061$, $p = .054$, $\eta_p^2 = .07$. Total asset DAP scores increased from the COPMI (M = 38.40, SD = 10.57) to the NonCOPMI (M = 45.60, SD = 8.51) group. This trend of increasing DAP scores from the COPMI to the NonCOPMI group is consistent for each of the DAP categories and context scores. The mean for the External Assets total (which is comprised of the categories including Support, Empowerment, Boundaries and

Expectations, and Constructive Use of Time) increased from the COPMI (M = 20.30, SD = 4.70) to the NonCOPMI (M = 23.17, SD = 4.59) group. The mean for the Internal Assets total (which is comprised of the categories including Commitment to Learning, Positive Values, Social Competence, and Positive Identity), also increased from the COPMI (M = 18.10, SD = 6.21) to the NonCOPMI (M = 22.32, SD = 4.72) group. The group means were statistically significantly different ($p < .05$) in the areas of Positive Values, Social Competence, Internal Assets, Social Assets, and Community Assets. Therefore, the null hypothesis can be rejected and the alternative hypothesis – that parental mental illness status does influence DAP scores, at least in terms of Positive Values, Social Competence, Internal Assets, Social Assets, and Community Assets – can be accepted. However, while approaching statistical significance, the difference on Total Assets between COPMI and NonCOPMI was not statistically significant (p = .054) and therefore the null hypothesis (no difference exists between COPMI and NonCOPMI) must be accepted in terms of Total Assets on the DAP. (See Table 2 for the frequency of DAP category scores by group for all participants [RQ1].)

Table 2

Frequency of Developmental Assets Profile Category Scores by Group

	Challenged (0-29)		Vulnerable (30-41)		Adequate (42-51)		Thriving (52-60)	
	n	%	n	%	n	%	n	%
Total Assets								
COPMI (n =10)	2	20%	3	30%	3	30%	2	20%
NonCOPMI (n = 20)	1	5%	5	25%	10	50%	4	20%
Unknown (n = 40)	1	2%	8	20%	15	37%	16	40%

	Challenged (0-14)		Vulnerable (15-20)		Adequate (21-25)		Thriving (26-30)	
	n	%	n	%	n	%	n	%
External Assets								
COPMI (n =10)	2	20%	3	30%	4	40%	1	10%
NonCOPMI (n = 20)	1	5%	7	35%	5	25%	7	35%
Unknown (n = 40)	1	3%	8	20%	11	27%	20	50%
Internal Assets								
COPMI (n =10)	2	20%	5	50%	0	0%	3	30%
NonCOPMI (n = 20)	1	5%	7	35%	7	35%	5	25%
Unknown (n = 40)	3	8%	8	20%	15	37%	14	35%
Personal Assets								
COPMI (n =10)	2	20%	5	50%	2	20%	1	10%
NonCOPMI (n = 20)	1	5%	10	50%	7	35%	2	10%
Unknown (n = 40)	3	8%	11	27%	16	40%	10	25%
Social Assets								
COPMI (n =10)	1	10%	4	40%	3	30%	2	20%
NonCOPMI (n = 20)	1	5%	6	30%	7	35%	6	30%
Unknown (n = 40)	4	10%	6	15%	13	33%	17	42%
Family Assets								
COPMI (n =10)	1	10%	3	30%	3	30%	3	30%
NonCOPMI (n = 20)	1	5%	3	15%	6	30%	10	50%
Unknown (n = 40)	0	0%	4	10%	10	25%	26	65%
School Assets								
COPMI (n =10)	2	20%	2	20%	3	30%	3	30%
NonCOPMI (n = 20)	0	0%	6	30%	5	25%	9	45%
Unknown (n = 40)	1	2%	8	20%	8	20%	23	58%
Community Assets								
COPMI (n =10)	3	30%	3	30%	2	20%	2	20%
NonCOPMI (n = 20)	1	5%	9	45%	2	10%	8	40%
Unknown (n = 40)	5	13%	8	20%	12	30%	15	37%

Research Question 2. The sample group (*n*=43) was comprised of 14 females (33%) and 29 males (67%). Of the 43 participants, 6 (14%) were classified as children of parents with mental illness (COPMI), 14 (33%) were classified as children of parents without mental illness (NonCOPMI), and the parental mental health (PMH) status of 23 (53%) participants was unknown. As mentioned in the introduction of this section, Time 1 and Time 2 data was not available for all participants and therefore only the participants who had DAP survey data available at both time points were utilized for the analysis of data to address Research Question 2. Although the number of participants for research question two was lower than the number of participants for research question one, the composition of the samples is similar in terms of gender and parental mental health (PMH) status.

Descriptive statistical analysis was utilized for demographic information and additional identifying categories. (See Table 3 for a summary of participant's characteristics [RQ 2].) .

Table 3

Summary of Participant Characteristics (n=43), Research Question 2

PMH Status	*n*	Male	Female
COPMI	6	3	3
NonCOPMI	14	9	5
Unknown	23	17	6

The second null hypothesis stated that the change in DAP scores for COPMI is not significantly different from the change in DAP scores for NonCOPMI. I conducted a two-way repeated measures ANOVA for each DAP category and context – as well as Total Assets score - to determine if a significant change in DAP scores occurred over time based on parental mental health status. The analysis of each DAP area is addressed individually as each analysis of the dependent variables (DAP scores including Total Assets as well as asset categories and contexts) had to be carried out separately in SPSS v.23.0 (IBM, 2015). The External Assets categories are comprised of the Support, Empowerment, Boundaries and Expectations, and Constructive Use of Time and the Internal Assets categories are comprised of the Commitment to Learning, Positive Values, Social Competence, and Personal Identity categories. However, no significant interaction effects were found for any of the individual categories, so the categories are addressed in terms of External and Internal Assets only. The results of each individual context (Personal, Social, Family, School, and Community) analysis are also presented. The mean and standard deviation, as well as mean change between T1 and T2, for each Developmental Assets Profile (DAP) score. (See Table 4 for a summary of Total Assets and Context Assets over time [RQ2].)

Table 4

Mean DAP Score – Total Assets and Context Asset - Change Over Time

	Mean ± SD: Time 1	Mean ± SD: Time 2	Mean Change
Total Assets			
COPMI	44.3 ± 13.5	38.3 ± 11.8	- 6.0
NonCOPMI	50.5 ± 5.09	45.7 ± 16.2	- 4.8
Unknown	46.0 ± 9.29	48.0 ± 8.92	+ 2.0
Personal Assets			
COPMI	20.5 ± 6.47	18.0 ± 5.25	- 2.5
NonCOPMI	22.7 ± 4.23	21.7 ± 9.22	- 1.0
Unknown	22.5 ± 5.39	23.3 ± 3.72	+ 0.8
Social Assets			
COPMI	21.7 ± 9.00	18.3 ± 6.92	- 3.4
NonCOPMI	26.7 ± 3.08	22.5 ± 8.73	- 4.2
Unknown	23.3 ± 6.15	24.0 ± 4.29	+1.7
Family Assets			
COPMI	24.3 ± 4.27	20.8 ± 6.49	- 3.5
NonCOPMI	26.5 ± 2.07	24.5 ± 3.40	- 2.0
Unknown	25.0 ± 3.10	25.2 ± 4.21	+ 0.2
School Assets			
COPMI	23.2 ± 7.57	19.2 ± 7.65	- 4.0
NonCOPMI	25.5 ± 3.94	22.0 ± 9.74	- 3.5
Unknown	24.7 ± 5.20	24.2 ± 5.74	- 0.5
Community Assets			
COPMI	21.3 ± 7.53	19.3 ± 7.69	- 2.0
NonCOPMI	25.0 ± 4.47	22.7 ± 6.98	= 2.3
Unknown	20.0 ± 6.07	22.3 ± 6.65	+ 2.3

Total Assets. Analysis of the studentized residuals showed that there was normality, as assessed by the Shapiro-Wilk test of normality, with the exception of the NonCOPMI group at Time 2 (p = .036); no outliers, as assessed by no studentized residuals greater than ± 3 standard deviations, and there was sphericity for the interaction term, as assessed by Mauchly's test of sphericity ($p > .05$). The two-way repeated measures ANOVA found no statistically significant interaction between parental mental illness status and time on the Total Assets score of the DAP, $F(2, 10) = 9.19$, $p = .430$. The main effect of parental mental illness status did not show a statistically significant difference in Total

Assets DAP score over time, $F(2, 10) = .926$, $p = .428$. The main effect of time showed that there was not a statistically significant difference in Total Assets DAP scores between time points, $F(1, 5) = 1.022$, $p = .358$.

External Assets. Analysis of the studentized residuals showed that there was normality, as assessed by the Shapiro-Wilk test of normality, no outliers, as assessed by no studentized residuals greater than ± 3 standard deviations, and there was sphericity for the interaction term, as assessed by Mauchly's test of sphericity ($p > .05$). The two-way repeated measures ANOVA found no statistically significant interaction between parental mental illness status and time on the External Assets category score of the DAP, $F(2, 10) = .851$, $p = .456$. The main effect of parental mental illness status did not show a statistically significant difference in External Assets DAP score over time, $F(2, 10) = .977$, $p = .410$. The main effect of time showed that there was not a statistically significant difference in External Assets DAP score between time points, $F(1, 5) = 1.384$, $p = .212$.

Internal Assets. Analysis of the studentized residuals showed that there was normality, as assessed by the Shapiro-Wilk test of normality, with the exception of the COPMI group at Time 1 (p = .048); no outliers, as assessed by no studentized residuals greater than ± 3 standard deviations, and there was sphericity for the interaction term, as assessed by Mauchly's test of sphericity ($p > .05$). The two-way repeated measures ANOVA found no statistically significant interaction between parental mental illness status and time on the Internal Assets category score of the DAP, $F(2, 10) = . 807$, p = .473. The main effect of parental mental illness status did not show a statistically significant difference in Internal Assets DAP score over time, $F(2, 10) = .810$, $p = .472$. The main

effect of time showed that there was not a statistically significant difference in Internal Assets DAP scores between time points, $F(1, 5) = 1.384$, $p = .212$.

Personal Assets. Analysis of the studentized residuals showed that there was normality, as assessed by the Shapiro-Wilk test of normality, no outliers, as assessed by no studentized residuals greater than ± 3 standard deviations, and there was sphericity for the interaction term, as assessed by Mauchly's test of sphericity ($p > .05$). The two-way repeated measures ANOVA found no statistically significant interaction between parental mental health status and time on the Personal Assets context score of the DAP, $F(2, 10) = .426$, $p = .664$. The main effect of parental mental illness status did not show a statistically significant difference in Personal Assets DAP score over time, $F(2, 10) = .850$, $p = .456$. The main effect of time showed that there was not a statistically significant difference in Personal Assets DAP scores between time points, $F(1, 5) = .321$, $p = .596$

Family Assets. Analysis of the studentized residuals showed that there was normality, as assessed by the Shapiro-Wilk test of normality, with the exception of the NonCOPMI group at Time 2 (p = .008); no outliers, as assessed by no studentized residuals greater than ± 3 standard deviations, and there was sphericity for the interaction term, as assessed by Mauchly's test of sphericity ($p > .05$). The two-way repeated measures ANOVA found no statistically significant interaction between parental mental illness status and time on the Family Assets context score of the DAP, $F(2, 10) = .455$, $p = .647$. The main effect of parental mental illness status did not show a statistically significant difference in Family Assets DAP score over time, $F(2, 10) = 1.119$, $p = .364$. The main

effect of time showed that there was not a statistically significant difference in Family Assets DAP scores between time points, $F(1, 5) = 1.206$, $p = .322$.

Social Assets. Analysis of the studentized residuals showed that there was normality, as assessed by the Shapiro-Wilk test of normality, with the exception of the COPMI group at Time 1 (p = .015); no outliers, as assessed by no studentized residuals greater than ± 3 standard deviations, and there was sphericity for the interaction term, as assessed by Mauchly's test of sphericity ($p > .05$). The two-way repeated measures ANOVA found no statistically significant interaction between parental mental illness status and time on the Social Assets context score of the DAP, $F(2, 10) = 1.239$, $p = .331$. The main effect of parental mental illness status did not show a statistically significant difference in Social Assets DAP score over time, $F(2, 10) = 1.136$, $p = .359$. The main effect of time showed that there was not a statistically significant difference in Social Assets DAP scores between time points, $F(1, 5) = 1.209$, $p = .322$.

School Assets. Analysis of the studentized residuals showed that there was normality, as assessed by the Shapiro-Wilk test of normality, no outliers, as assessed by no studentized residuals greater than ± 3 standard deviations, and there was sphericity for the interaction term, as assessed by Mauchly's test of sphericity ($p > .05$). The two-way repeated measures ANOVA found no statistically significant interaction between parental mental illness status and time on the School Assets context score of the DAP, $F(2, 10) = .565$, $p = .585$. The main effect of parental mental illness status did not show a statistically significant difference in School Assets DAP score over time, $F(2, 10) = .671$, $p = .533$.

The main effect of time showed that there was not a statistically significant difference in School Assets DAP scores between time points, $F(1, 5) = 1.857$, $p = .231$.

Community Assets. Analysis of the studentized residuals showed that there was normality, as assessed by the Shapiro-Wilk test of normality, no outliers, as assessed by no studentized residuals greater than ± 3 standard deviations, and there was sphericity for the interaction term, as assessed by Mauchly's test of sphericity ($p > .05$). The two-way repeated measures ANOVA found no statistically significant interaction between parental mental illness status and time on the Community Assets context score of the DAP, $F(2, 10) = .812$, $p = .471$. The main effect of parental mental illness status did not show a statistically significant difference in Community Assets DAP score over time, $F(2, 10) = .785$, $p = .482$. The main effect of time showed that there was not a statistically significant difference in Community Assets DAP scores between time points, $F(1, 5) = .317$, $p = .597$.

Total asset DAP score decreased for the COPMI group between Time 1 ($M = 44.3$, $SD = 13.5$) and Time 2 (38.2, DS = 11.8). Total asset DAP score also decreased for the NonCOPMI group between Time 1 (M = 50.5, SD = 5.09) and Time 2 ($M = 45.7$, $SD = 16.2$). The Total asset DAP score increased for the Unknown group between Time 1 (M = 46.0, SD = 9.29) and Time 2 (M = 48.0, SD = 8.92).

The mean for the Internal Assets total (which is comprised of the categories including Commitment to Learning, Positive Values, Social Competence, and Positive Identity), decreased for the COPMI group between Time 1 (M = 21.0, SD = 8.05) and Time 2 (M = 18.7, SD = 6.56) and also decreased for the NonCOPMI group between Time 1 (M = 25.0, SD = 3.23) and Time 2 (M = 22.3, SD = 9.03) while the mean score for the

Unknown group increased between Time 1 (M = 22.5, SD = 5.68) and Time 2 (M = 23.7, SD = 4.13). (See Table 5 for a summary of internal categories mean change over time by group [RQ2].)

Table 5

Mean DAP Score – Internal Subtotal & Internal Assets Categories - Change Over Time

	Mean ± SD: Time 1	Mean ± SD: Time 2	Mean Change
Internal Assets			
COPMI	21.0 ± 8.05	18.7 ± 6.56	- 2.3
NonCOPMI	25.0 ± 3.23	22.3 ± 9.03	- 2.7
Unknown	22.5 ± 5.68	23.7 ± 4.13	+ 1.2
Commitment to Learning			
COPMI	21.5 ± 9.59	17.0 ± 7.69	- 4.5
NonCOPMI	24.5 ± 5.17	22.2 ± 10.1	- 2.3
Unknown	22.3 ± 7.06	24.3 ± 4.59	+ 2.0
Positive Values			
COPMI	20.5 ± 8.09	18.5 ± 6.95	- 2.0
NonCOPMI	24.7 ± 3.56	22.2 ± 7.22	- 2.5
Unknown	20.5 ± 7.00	23.2 ± 5.53	+ 2.7
Social Competence			
COPMI	20.3 ± 8.36	18.8 ± 7.41	- 1.5
NonCOPMI	24.8 ± 4.35	22.0 ± 8.88	- 2.8
Unknown	24.0 ± 6.54	24.2 ± 3.31	+ 0.2
Positive Identity			
COPMI	21.0 ± 6.93	19.2 ± 6.55	- 1.8
NonCOPMI	25.0 ± 4.15	20.8 ± 10.1	- 4.2
Unknown	22.8 ± 4.87	23.0± 4.19	+ 0.2

This trend of decreasing DAP scores between Time 1 and Time 2 for the COPMI and NonCOPMI groups, and increasing DAP scores between Time 1 and Time 2 for the Unknown group, is consistent for each of DAP category and context scores, with the exception of the School context and the Empowerment and Boundaries and Expectations categories. The mean for the External Assets total (which is comprised of the categories including Support, Empowerment, Boundaries and Expectations, and Constructive Use of

Time) decreased for the COPMI group between Time 1 (M = 23.3, SD = 5.71) and Time 2 (M = 19.7, SD = 5.39) and also decreased for the NonCOPMI group between Time 1 (M = 25.5, SD = 2.88) and Time 2 (M = 23.3, SD = 7.37) while the mean score for the Unknown group increased between Time 1 (M = 23.5, SD = 4.46) and Time 2 (M = 24.3, SD = 4.97). (See Table 6 for a summary of external categories mean change over time by group [RQ2].)

Table 6

Mean DAP Score – External Subtotal & External Asset Categories - Change Over Time

	Mean ± SD: Time 1	Mean ± SD: Time 2	Mean Change
External Assets			
COPMI	23.3 ± 5.71	19.7 ± 5.39	- 3.6
NonCOPMI	25.5 ± 2.88	23.3 ± 7.37	- 2.2
Unknown	23.5 ± 4.46	24.3 ± 4.97	+ 0.8
Support			
COPMI	24.5 ± 4.59	20.5 ± 9.05	- 4.0
NonCOPMI	28.8 ± 1.47	23.7 ± 8.41	- 5.1
Unknown	24.0 ± 5.02	24.3 ± 4.59	+ 0.3
Empowerment			
COPMI	21.83 ± 8.13	18.7 ± 5.61	- 3.13
NonCOPMI	24.0 ± 4.00	24.0 ± 8.67	0
Unknown	24.5 ± 5.93	23.7 ± 5.89	- 0.8
Boundaries & Expectations			
COPMI	25.7 ± 5.24	20.0 ± 8.10	- 5.7
NonCOPMI	27.5 ± 2.59	22.8 ± 8.18	- 4.7
Unknown	24.8 ± 2.64	23.0 ± 5.37	- 1.8
Constructive use of Time			
COPMI	20.7 ± 6.77	19.0 ± 8.32	- 1.7
NonCOPMI	21.0 ± 8.27	22.8 ± 6.37	- 1.8
Unknown	20.0 ± 8.37	25.5 ± 5.43	+ 5.5

No statistically significant interactions between parental mental illness status and time on DAP scores were found; therefore the null hypothesis is accepted. No significant change over time occurred in DAP scores for any of the groups and therefore the change in

DAP scores for COPMI was not significantly different from the change in DAP scores for NonCOPMI.

Summary

The purpose of this study was to determine if parental mental health status affected the child's scores on the DAP survey and if school-based programming adequately supported the children of parents with mental illness by comparing the differences in DAP scores at two time periods.

Results indicated the following:

1. COPMI were found to have lower mean scores on Total Assets as well as lower mean scores for each DAP category and context, compared to NonCOPMI.
2. Although the COPMI mean scores were lower than the NonCOPMI scores, these differences were not significant in terms of Total Assets. However, statistically significant differences between COPMI and NonCOPMI scores were found in the categories of Positive Values, Social Competence, and Internal Assets. Statistically significant differences between COPMI and NonCOPMI were also found in contexts of Social Assets and Community Assets.
3. DAP scores decreased between Time 1 and Time 2 for both COPMI and NonCOPMI, but increased for the Unknown group, with a few exceptions.
4. Although DAP scores were found to decrease for both COPMI and NonCOPMI, the change in scores over time was not significant. Therefore,

the change in DAP scores for COPMI was not significantly different from the change in DAP scores for NonCOPMI.

Overall the results indicate that parental mental illness may have some influence on the child's DAP scores and school-based programming does not appear to be any better at influencing scores for COPMI as it is for NonCOPMI. In fact, DAP scores decreased between Time 1 and Time 2 in most contexts and categories, for both groups. In Chapter 5 I discuss and interpret these findings. I will also address the limitations of the study, implications for social change, and recommendations for future study.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this quantitative study was to examine the effect of PMI on children by using an ecological approach. I used an archival data set, which I obtained from the study school. Participants included students in Grades 4-6 at an elementary school in the Ka'u district of Hawaii Island. I categorized participants into the following groups based on the results of a school-issued parent survey: COPMI (current diagnosis or history of PMI or report of poor mental health for 14 or more days in the past 30 days), NonCOPMI (no current diagnosis or history of PMI or report of poor mental health lasting 14 or more days in the past 30 days), and Unknown (no parental data available). I examined whether COPMI differed significantly from the children of parents of parents with no current or past mental illness (NonCOPMI) on the DAP (RQ1) and also explored whether there was a significant difference in the change in DAP scores for the COPMI compared to the NonCOPMI over time (RQ2). I conducted a secondary data analysis of DAP survey results using SPSS v.23.0 (IBM, 2015) software to complete one-way and two-way repeated measures ANOVA on DAP scores for RQ1 and RQ2, respectively. COPMI reported lower DAP levels than NonCOPMI on all assets, and this difference was statistically significant in some areas of Internal Assets as well as in the Social and Community contexts. No significant differences were found in DAP scores over time for either group.

Interpretation of the Findings

I conducted one-way ANOVA and two-way repeated measures ANOVA to determine the effect of PMI on DAP scores and the effect of PMI and time on DAP scores,

respectively. I conducted the first one-way ANOVA using the data set comprised of all DAP scores at the first administration, including the Unknown group. I found that DAP scores were significantly different in the area of Empowerment and approaching significance in the areas of Family and Community. However, posthoc analysis did not yield significant results and therefore I was unable to determine if the statistically significant difference was between COPMI and NonCOPMI, or if the difference was due to the presence of the third, Unknown group. Therefore, I conducted a second one-way ANOVA after I had removed the Unknown group and also used mean (Time 1 and Time 2) scores for each of the DAP survey scores if the individual completed the measure at the two different time points. If the individual had only completed the DAP survey once, I used the same scores that I had used in the first analysis. By completing this second analysis, I found that DAP scores were significantly different between COPMI and NonCOPMI in the categories of Internal Assets (specifically, Positive Values and Social Competence) and in the contexts of Social Assets and Community Assets. Although the difference in Total Assets was not significant, it was approaching significance.

These results support the null hypothesis in terms of Total Assets: COPMI do not differ significantly from NonCOPMI on Total Assets. However, the findings do support the alternative hypothesis: COPMI significantly differ from NonCOPMI in terms of Positive Values, Social Competence, Internal Assets, Social Assets, and Community Assets.

I conducted a two-way repeated measures ANOVA to address RQ2; to determine if there was a significant difference in the change in the DAP scores for COPMI compared to NonCOPMI, over time. The analyses yielded no statistically significant difference in the

change in DAP scores for either group over time. These results support the null hypothesis for RQ2: The change in DAP scores for COPMI is not significantly different from the change in DAP scores for NonCOPMI.

The lack of significant findings in this study may be explained by the following: One possible explanation is the small sample sizes used in the study. As this was a secondary data analysis, I was limited to the data that was available. The number of participants in each group varied, with the largest group being the Unknown group. I included the Unknown group scores in the initial one-way ANOVA and the two-way repeated measures ANOVA analysis to determine if the higher number of participants would have an impact on results. However, it did not. Therefore, I removed the Unknown group for the second one-way ANOVA but kept it for the repeated-measures ANOVA. However, had the response rate for the parent survey been higher than approximately 50%, more students could have been grouped as COPMI or NonCOPMI rather than Unknown, which may have affected the results. The response rate to the parent survey may have been due to the parents' or guardians' willingness to divulge information pertaining to their own mental health. However, I believe that the response rate was likely indicative of the school population's tendency towards low parent engagement due to economic and cultural barriers including language barriers, lack of resources, work schedules, limited understanding of American culture and the lack of cultural resources to become involved (Heymann & Earle, 2000; Hill & Taylor, 2004; Lopez, Scribner, & Mahitivanichcha, 2001; Yap & Enoki, 1995)

In addition, scores for the COPMI and NonCOPMI groups decreased between DAP administrations while the scores of the Unknown group increased. An increase in in DAP scores is what was expected (Scales, Bensen, Leffert, & Blyth, 2010). However, because the sample was drawn from a socioeconomically disadvantaged population in rural Hawaii, it is possible that the additional challenges - such as poverty, rural and isolated environment, and life stress – all of which have been found to adversely affect DAP scores (Scales, Bensen, Leffert, & Blyth, 2010) - play a larger role than PMI. However, the sample was largely homogenous in regards to environment and socioeconomic stressors so it may not be so much that PMI is not an important factor, but these other factors may have made the differences between groups smaller.

Despite these challenges, my study yielded some important findings: Although not statistically significant, the difference of Total Assets between COPMI and NonCOPMI was found to approach significance and it is possible this finding could potentially be more robust with larger sample sizes. NonCOPMI had higher mean scores in every context and category, as well as Total Assets. According to Scales, Benson, Leffert, & Blyth (2010), the higher number of assets a child has, the fewer number of risk behaviors he or she displays and the more likely he or she will report positive outcomes. Individuals who report higher asset levels tend to report that they are able to overcome adversity more easily (Scales et al., 2010). Furthermore, 20% of the COPMI sample fell into the "Challenged" range of the DAP while only 5% of the NonCOPMI sample was classified as "Challenged." Overall DAP scores fall into one of four ranges: Challenged (a score of 0-29), Vulnerable (30-41), Adequate (42-51), and Thriving (52-60). Scores for each of the eight asset

categories as well as the five contexts are also given and fall into one of the same four categories: Challenged (0-14), Vulnerable (15-20), Adequate (21-25), and Thriving (26-30). COPMI DAP scores were found to be lower than NonCOPMI scores in every DAP category and context. In terms of External Assets, 50% of the COPMI fell into the "Challenged" or "Vulnerable" category compared to 40% of the NonCOPMI. The larger difference, however, was in regards to the Internal Assets, where 70% of the COPMI fell into the "Challenged" or "Vulnerable" category compared to 40% of the NonCOPMI.

These findings are in line with Knutsson, Medin, Edlund, and Ramklint (2007) who found that parental mental illness could have significant effects on the socioemotional well being of children. COPMI children had significantly lower DAP scores in the Internal Assets category, which reflects internal values as well as the skills that youth need to function in the world around them (Scales, Benson, Leffert, & Blyth, 2010). COPMI were specifically lower in the areas of Positive Values and Social Competence. Positive Values include the values and skills such integrity, honesty, responsibility and restraint (World Vision International, 2015). Social Competencies include skills such as planning and decision-making, interpersonal competence, resistance skills, and peaceful conflict resolution (World Vision International, 2015). As Roehlkepartain, Scales, and Roehlkepartain (2002) stated, some of the assets relate directly to family life and parenting while parents also play an indirect role via modeling, advocating for their child, and making positive opportunities available. This is directly in line with ecological theory, which proposes that development is a complex interaction between the developing person and his or her environment (Bronfenbrenner, 1979). Not only were COPMI children found

to have statistically significantly lower scores in two of the Internal Assets categories, but their scores were also statistically significantly lower in the Social and Community contexts. Cogan, Riddell, and Mayes (2005) found evidence that the children of parents with mental illness tend to be more isolated from their community and Stormshak and Dishion (2002) proposed that the context in which one develops can redefine socialization as well as child outcomes. For example COPMI are sometimes isolated when their ill parent is unavailable to support the child's socialization (Thomas & Kalucy, 2003). Culture and community settings also influence socialization practices (Stormshak & Dishion, 2002). In other words, it would appear that parental mental illness might have some impact on socialization and community involvement. This would be in line with Sheridan, Eagle, and Dowd (2005) who asserted that child outcomes are mediated parental attachment, family adaptability, and parenting style as well as by community involvement. The lower scores in the social context and Social Competencies categories is also in line with the previous research of adult children of parents with mental illness, which found difficulty forming meaningful relationships as a common theme (Fitzgerald, 2001). Other studies have also found that COPMI report having difficulty fitting in with other children (Mordoch & Hall, 2008; Nicholson, Biebel, Hinden, Henry, & Stier, 2001; Parrot, Jacobs, & Roberts, 2008).

My second research question, which compared the change in DAP scores over time for COPMI and NonCOPMI, pertained to the support of the children of parents with mental illness in the school setting as I wanted to determine if the supports that are already available to all children are enough. However, I found no significant differences in DAP

scores within COPMI group and between the COPMI and NonCOPMI group. Therefore, it is impossible to determine if the COPMI are being adequately supported or if they require more support than the NonCOPMI children from these results. Furthermore, while not statistically significant, scores between Time 1 and Time 2 actually decreased for both the COPMI and NonCOPMI, which would be beneficial to examine in the future.

Limitations of the Study

This study had several limitations. As mentioned previously, the sample size was limited to the data that was available and therefore the sample was small so results cannot readily be generalized to the population. Furthermore, because part of the analysis depended on the response to a parent survey which had a response rate of slightly less than 50%, half of the sample could not be classified as COPMI or NonCOPMI and had remain as Unknowns, which also contributed to the small sample size of the targeted groups. In addition, the parental mental health status depended on self-report and was not verified through diagnostic measures; therefore it depended on honesty and accuracy of the self-report. Finally, not all of the participants appeared to complete the DAP survey at both times and therefore the number of participants utilized for research question two was smaller than the group in research question one. Again, as this was secondary data analysis it is difficult to account for this phenomenon, but follow-up with the school suggested that some students had moved between Time 1 and Time 2 as it is an area with a transient population.

Recommendations for Further Study

The study of the children of parents with mental illness is not an entirely new area but it is an area that has seen more attention in the past two decades and yet most existing approaches to this research area do not take an ecological approach nor consider all of the factors influencing the child's development. The Developmental Assets Profile is a widely used tool that measures a wide variety of aspects that positively influence development and is therefore an excellent vehicle for future study. Furthermore, with a nationwide focus on the importance of mental health – or as they call it in the schools, "social-emotional well-being" – schools may be the perfect venue for continued research in this area. Additional studies with a larger participant pool, with better-controlled administrations of the DAP survey, are recommended to strengthen the findings in this area. In addition, this study found that although not statistically significant, the Developmental Asset Profile scores for both the COPMI and NonCOPMI groups decreased between Time 1 and Time 2 while the Unknown group actually increased in DAP scores in most areas. Therefore, additional studies that measure the change in DAP scores between two or more time periods are recommended and ideally those studies would look at the change in the Developmental Assets of the children of parents with mental illness as well as all children in general. Additional research on school-based supports that focus on enhancing social-emotional well being for all children, is also recommended.

Implications for Social Change

The focus on mental health, or social-emotional well being, has grown rapidly in the past decade, as have mental health campaigns to decrease stigma. Therefore, the stage

may be set to bring more attention to the needs of the children of parents with mental illness (COPMI). All children benefit from the supports and characteristics assessed by the Developmental Assets Profile, but recognizing where COPMI may have more of a deficit could potentially guide supports and intervention. Previous work in the area have looked at peer support programs, education programs, and parenting support program – which are all valuable – but few have addressed COPMI from an ecological perspective. Taking such an approach has the potential to provide wrap-around support and promote resilience. The results of this study have the potential to contribute to social change because providing support and promoting resilience in childhood is crucial for lifelong development. Furthermore, the fact that approximately 48% of the parents completed the parent questionnaire and of those 29% (10 out of the 34), anonymously self-reported either a history of mental illness or current mental health concerns, suggests that individuals may be more willing to share information that has often been considered taboo in settings such as public schools. The parent surveys included one additional item at the bottom that was asked by the school so the Behavioral Support team could gauge parent support for the implementation of social-emotional learning curriculums and determine if additional student supports would be utilized: "Do you think your child would benefit from learning about various social/emotional challenges, as well as ways to cope with stressors and how to enhance his or her own social/emotional well-being/mental health?" Over 90% of the respondents selected "Yes." The support appears to be there which is already one step in the right direction. Teaching children about mental health and focusing on coping skills and developing support netowrks may prevent affected children from feeling isolated or

confused. Furthermore, helping children to understand mental health issues may alleviate some of the stigma often associated with mental illness, leading to positive social change.

Conclusion

I used secondary data analysis of results on the Developmental Assets Profile (DAP) survey and a school-issued parent survey for students in grades 4-6 at a public elementary school in rural Hawaii to address two research questions: Do children of COPMI, differ significantly from NonCOPMI on the DAP survey? Is significant difference in the change in the DAP scores COPMI compared to their NonCOPMI peers, over time? The sample population was limited and therefore the ability to make conclusions that are generalizable to the population as a whole is also limited. However, this study provided evidence that the children of parents with mental illness (COPMI) do report lower DAP Asset levels lower than children whose parents do not have a mental illness (NonCOPMI) and this difference is statistically significant in terms of some Internal Assets as well as Social and Community contexts.

The results of this study, along with continued research, provides an ecological perspective on how parental mental illness affects development and affords the opportunity to identify areas where additional supports and/or interventions can be utilized to promote resilience. Taking a proactive approach by building socially and emotionally strong children today can equip them with the skills and supports to face the challenges of tomorrow.

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Appendix A: Survey Prepared by Study School and Sent to Parents in the 2014-2015 SY

Aloha,

In an effort to better serve the children of [school name deleted] and to determine what types of programs may further benefit the social & emotional development of our students, we are requesting some information from you. Your child completed a Developmental Assets survey last December/early January and completed the 'Mind Up' curriculum during their weekly guidance lessons. Near the end of the school year, your child completed a follow-up Developmental Assets survey and this information will be used to determine if our programming has been satisfactory in meeting the needs of the students and to help us identify what areas we may be able to provide additional supports. **Your responses to this survey are completely confidential and no identifying information is necessary.** However, your participation is crucial in helping us determine how we can best support the students, so please take a moment to complete these brief questions and return this form to your child's teacher. Each student that returns a survey will receive a small token of appreciation. Again, there is no identifying information on the survey; your child's teacher will simply mark your student's name off the list on his or her envelope when the survey is returned, to confirm receipt

Your age: _____ Relation to Child: Mother / Father / Grandparent / Aunty / Uncle / Other

Number of people in your household: _____ adults _____ children

Within the past 30 days, how many days did you feel your emotional well-being/mental health was **NOT** good?

- 1-6 days
- 7-13 days
- 14 or more days

Have **you** ever been diagnosed with and/or treated for a mental health challenge, not including a substance use disorder (i.e.; depression, anxiety, bipolar disorder, schizophrenia, schizoaffective disorder)?

- Yes
- No

Has any **other adult in your household**, who provides care for your children, been diagnosed with and/or treated for a mental health challenge, not including a substance use disorder (i.e.; depression, anxiety, bipolar disorder, schizophrenia, schizoaffective disorder)?

- Yes
- No

If **you are not** the biological parent, and s/he is **not** present in the home; has the child's biological mother or father ever been diagnosed with and/or treated for a mental health challenge, not including a substance use disorder (i.e.; depression, anxiety, bipolar disorder, schizophrenia, schizoaffective disorder)?

- Yes
- No
- Unknown

Do you think your child would benefit from learning about various social/emotional challenges, as well as ways to cope with stressors and how to enhance his or her own social/emotional well-being/mental health?

- Yes
- No

Appendix B: Data Use Agreement

DATA USE AGREEMENT

This Data Use Agreement ("Agreement"), effective as of 02/01/2016 ("Effective Date"), is entered into by and between Jessica Carroll ("Data Recipient") and Pahala Elementary ("Data Provider"). The purpose of this Agreement is to provide Data Recipient with access to a Limited Data Set ("LDS") for use in research **in accord with laws and regulations of the governing bodies associated with the Data Provider, Data Recipient, and Data Recipient's educational program.** In the case of a discrepancy among laws, the agreement shall follow whichever law is more strict.

1. Definitions. Due to the study's affiliation with Laureate, a USA-based company, unless otherwise specified in this Agreement, all capitalized terms used in this Agreement not otherwise defined have the meaning established for purposes of the USA "HIPAA Regulations" and/or "FERPA Regulations" codified in the United States Code of Federal Regulations, as amended from time to time.

2. Preparation of the LDS. Data Provider shall prepare and furnish to Data Recipient a LDS in accord with any applicable laws and regulations of the governing bodies associated with the Data Provider, Data Recipient, and Data Recipient's educational program.

3. Data Fields in the LDS. **No direct identifiers such as names may be included in the Limited Data Set (LDS).** In preparing the LDS, Data Provider shall include the **data fields specified as follows**, which are the minimum necessary to accomplish the research: Raw Developmental Assets Profile data (with student names removed), School-Based Behavioral Health Parent Survey results.

4. Responsibilities of Data Recipient. Data Recipient agrees to:

   a. Use or disclose the LDS only as permitted by this Agreement or as required by law;

   b. Use appropriate safeguards to prevent use or disclosure of the LDS other than as permitted by this Agreement or required by law;

   c. Report to Data Provider any use or disclosure of the LDS of which it becomes aware that is not permitted by this Agreement or required by law;

   d. Require any of its subcontractors or agents that receive or have access to the LDS to agree to the same restrictions and conditions on the use and/or disclosure of the LDS that apply to Data Recipient under this Agreement; and

   e. Not use the information in the LDS to identify or contact the individuals who are data subjects.

5. Permitted Uses and Disclosures of the LDS. Data Recipient may use and/or disclose the LDS **for its Research activities only.**

6. Term and Termination.

   a. Term. The term of this Agreement shall commence as of the Effective Date and shall continue for so long as Data Recipient retains the LDS, unless sooner terminated as set forth in this Agreement.

   b. Termination by Data Recipient. Data Recipient may terminate this agreement at any time by notifying the Data Provider and returning or destroying the LDS.

   c. Termination by Data Provider. Data Provider may terminate this agreement at any time by providing thirty (30) days prior written notice to Data Recipient.

   d. For Breach. Data Provider shall provide written notice to Data Recipient within ten (10) days of any determination that Data Recipient has breached a material term of this Agreement. Data Provider shall afford Data Recipient an opportunity to cure said alleged material breach upon mutually agreeable terms. Failure to agree on mutually agreeable terms for cure within thirty (30) days shall be grounds for the immediate termination of this Agreement by Data Provider.

   e. Effect of Termination. Sections 1, 4, 5, 6(e) and 7 of this Agreement shall survive any termination of this Agreement under subsections c or d.

7. Miscellaneous.

   a. Change in Law. The parties agree to negotiate in good faith to amend this Agreement to comport with changes in federal law that materially alter either or both parties' obligations under this Agreement. Provided however, that if the parties are unable to agree to mutually acceptable amendment(s) by the compliance date of the change in applicable law or regulations, either Party may terminate this Agreement as provided in section 6.

   b. Construction of Terms. The terms of this Agreement shall be construed to give effect to applicable federal interpretative guidance regarding the HIPAA Regulations.

   c. No Third Party Beneficiaries. Nothing in this Agreement shall confer upon any person other than the parties and their respective successors or assigns, any rights, remedies, obligations, or liabilities whatsoever.

   d. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

e. Headings. The headings and other captions in this Agreement are for convenience and reference only and shall not be used in interpreting, construing or enforcing any of the provisions of this Agreement.

IN WITNESS WHEREOF, each of the undersigned has caused this Agreement to be duly executed in its name and on its behalf.

DATA PROVIDER

Signed: L Bolton

Print Name: Lora Bolton, Psy.D.

Print Title: SCBH Clinical Psychologist

DATA RECIPIENT

Signed:

Print Name: Jessica Carroll

Print Title: Student researcher