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What is the Effect of Single Mothers with Depression on Child Development among
Children with Mental Health Diagnoses?

Submitted by Alyssa J. Youngquist
May 14, 2012

MSW Clinical Research Paper

The Clinical Research Project is a graduation requirement for MSW students at St. Catherine University/University of St. Thomas School of Social Work in St. Paul, Minnesota and is conducted within a nine-month time frame to demonstrate facility with basic social research methods. Students must independently conceptualize a research problem, formulate a research design that is approved by a research committee and the university Institutional Review Board, implement the project, and publicly present their findings. This project is neither a Master's thesis nor a dissertation.

School of Social Work
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Abstract

The purpose of this research study is to explore whether the participating mothers were able to identify if an increase in their child's behavior has a connection with their depressive symptoms. Using a quantitative design, thirty two mothers were surveyed on their depressive symptoms in the previous two weeks as well as their child's behavior problems exhibited in the previous two weeks. All of the mothers surveyed have children who attend a therapeutic day program for school-aged children with a mental health diagnosis. Data was analyzed using frequency, correlations, T-tests and one-way ANOVA. The findings indicated that mothers who felt increased depressive symptoms were likely to have children with increased behavior problems. Also significant in the data is that mothers in this study who had suicidal thoughts had children who are also likely to have recurring thoughts of death or suicide. These findings highlight the need for increased programs to support families, mothers with depression, and increased access to mental health resources.

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Introduction

Depression is a growing mental health concern in our society today. Single mothers are influential role models for their children, and children of single mothers may be affected in the short and long-term future. Depression is defined as involving at least five of these eight symptoms: depressed mood most of the day, diminished interest in pleasure in activities, significant weight loss or gain, insomnia or hypersomnia, psychomotor agitations or retardation, fatigue or loss of energy, feelings of worthlessness or excessive or inappropriate guilt, diminished ability to think or concentrate, or recurrent thoughts of death (DSM-IV, 1994).

In the United States there are currently almost thirteen million single mothers (She Cares Foundation, 2010). Of these single mothers, forty-one percent of their families live at or below the level of poverty, according to She Cares Foundation (2010). According to Ricciuti (2004), the majority of single parents tend to be female, less educated, in poverty, and more likely to experience racial discrimination than a woman does in two-parent families. The stress of single parenting, working to make ends meet financially, and providing for the emotional and psychosocial needs of multiple children can justifiably be overwhelming. Along with the stressors of being a single mother, many of these women suffer from clinical depression.

A number of research studies have linked single mothers and single mothers with depression or other mental health disorders in relation to poor outcomes for their children's health (Wagner, 2006; Martin, 2010), educational achievements (Bradley & Caldwell, 1984), and an increased likelihood of suffering from a mental health disorder as well (Talati, 2007).

Social workers and other professionals who work with children and families will benefit from further research on children's behavior and how it is affected by their parent's depression severity. If more light is shed on the relationship between a child's wellbeing and their parent's mental health, there may be more proof for the need to implement additional services and programs to benefit families.

This study explores the behavior and development of school-aged children, ages five through ten, whose single mothers suffer from depression. The purpose of this research study is to explore whether the participating mothers were able to identify if an increase in their child's behavior has a connection with their depressive symptoms. The research question is "What is the effect of single mothers with depression on child development among children with mental health diagnoses?" This study seeks to gain further understanding of family relationships and the influence of a parents' mental health on their children.

Literature Review

Throughout the literature there are several common themes in journal articles regarding children and influences on their mental health and wellbeing. Many variables come in to play, such as their cultural and socioeconomic background, family dynamics, and the abilities of their caregiver. The literature surrounds children's behavior, children with mental health diagnoses, and single mothers with depression. The specific themes are post-partum depression, single parenting, children's mental health disorders, and the long-term effects of children raised by depressed parents.

Postpartum depression is a psychiatric disorder gaining more attention and exposure in the last decade due to publicity received from well-known mothers in the media who have spoken about their experiences after child birth. This disorder has been also known as "the baby blues", or Maternal Postnatal Depression (PND), as discussed in Murray's article (2006). This study examined ninety-one mother-child pairs in the postnatal period, and again after thirteen years. Specific attention was given to the child's development and attachment in infancy, and the level of postpartum depression experienced by their mothers. Murray discussed the fact that there are many studies that have been conducted showing the negative effects of development of infants and school-aged children whose mothers have maternal postnatal depression (PND). School-aged children show more problem behaviors, particularly boys, and girls were shown to internalize their symptoms. However, less is known about the development of children in adolescence among those whose mothers suffered from PND. Overall, girls exposed to PND showed more emotional sensitivity than those not exposed. This emotional sensitivity was linked with having an insecure attachment to the mother in infancy. Boys

exposed to PND showed slightly less emotional sensitivity, but not significantly.

Children who were shown to have emotional sensitivity at age five also exhibited this at age thirteen. Higher social maturity in girls adolescence was connected with a secure adult attachment style with the mother and with the mother's PND (Murray, 2006).

Murray theorizes that a reason for the differences between the developments of girls versus boys in adolescence could be because mothers form very different kinds of relationships with their daughters versus their sons. Adolescent girls were shown to spend more time in the family than boys (Montemayor, 1983), and mothers spend more time discussing feelings and emotions.

Mothers with depression are revealed to have a more accurate perception of their child's behavior. In the study of Conrad & Hammen (1989), mothers with a diagnosis of depression and mothers without a diagnosis of depression were studied in their perception of their child's behavior. Conrad & Hammen (1989) provided both groups of mothers with the Beck Depression Inventory, and children were rated by their own reports and ratings from teachers. The depressed mothers appear to be more accurate than non-depressed mothers when rating the behavior and symptoms of their children. Although depressed mothers display more criticism and negative reactions to their children's behavior, they are more accurate in their reports of problems of their children.

A study by Talati (2007) explored the role of a mother's depression on children's mental health symptoms. The study also examined whether the mother and child pairs had a father figure in the household or whether the depressed mothers were single mothers as well. At the beginning of this study, all mothers were diagnosed as clinically depressed, with seventy-two having severe depression. Thirty-four percent of their

children also met the criteria for a psychiatric disorder (most notably disruptive behavior, anxiety, or depressive disorders). After three months of treatment for the mothers, thirty-four percent had reached remission of their depression. The children of these mothers also showed significantly fewer behavior and psychiatric symptoms. Talati then explored whether this pattern was consistent when there was a male figure in the household. It was shown that a father's presence in the household was the "strongest single predictor of maternal remission, with mothers in two-parent households three times as likely to remit as single mothers." Talati states that providing individual or group psychotherapy to single depressed mothers may increase the chances of a positive outcome and more successful treatment of their depression, including case management services, and targeting problems that occur in single-parenting households.

Another study conducted by Miranda (2003) showed that case management and support services achieved better outcomes and success in treating depression than with only standard psychiatric treatment. Thus, it can be said that with better support from a partner and better case management and psychiatric treatment for depressed mothers, the psychiatric symptoms and behavioral problems of their children will also be reduced. Miranda's study did not differentiate between depressed mothers with a partner or those who were single mothers.

The number of children being raised in single-parent households has continued to rise in recent years. According to Ricciuti (2004), the majority of single parents tend to be female, less educated, in poverty, and more likely to experience racial discrimination than a woman does in two-parent families. Also, in 1998, the median income for single mothers with children under the age of eighteen was \$16,236, meaning that forty-seven

percent of these families fell below the poverty line in the United States. Besides these statistics, it is common knowledge that children in single-parent households are less likely to have resources for education, less likely to have adequate emotional support, and are less likely to access proper health care. All of these factors can be devastating to a family and its children. In Ricciuti's article, the author's focus is to investigate whether negative effects of single parenting emerge in adolescence. Ricciuti used data from the National Longitudinal Study of Youth (NLSY) to explore whether White, Black, and Hispanic students ages six to seven and from single-parent families showed negative achievement and school readiness scores. In each ethnic group, there was no variation or patterns detected to suggest a correlation between low achievement scores and a child from a single-parent household. In Ricciuti's follow-up study, he sought to determine whether any adverse effects of growing up in a single-parent household would emerge at age twelve or thirteen. Ricciuti found "little or no systemic evidence of adverse effects" of single parenting with children in adolescence. This study is promising and suggests that simply being raised in a single-parent household versus a two-parent household does not correlate with low school achievement scores. Ricciuti also discusses his recommendation that access to parenting resources can greatly reduce or eliminate the risks that children face when growing up in a single-parent home and the likelihood of poverty, decreased education, and poor health.

Given that single-parent households are more prevalent, it is likely that children in a single-parent household may lack the support given in a household with two caregivers. In a study from New Zealand in 2010 (Martin, 2010) the health of children in single-parent households was studied in comparison to children in a household with two

caregivers. This survey sampled the 2006-2007 New Zealand Health Survey, which sampled five hundred and two children ages five through fourteen with single mothers, and one thousand, two hundred and eighty one children in households with two caregivers. It was shown that there was only a weak negative association between sole-parenting and child physical health. There was a stronger association with child mental health and single parent households. This journal article advocates for the improvement and access to mental health services for single mothers and their children.

Children of depressed mothers are more likely to be diagnosed with depression themselves. As discussed by Wagner (2006), statistics show that among mothers with moderate to severe depression, 34% of their children had been diagnosed with psychiatric disorder. These psychiatric disorders include disruptive behavior, anxiety, and depressive disorders. Also, a child's risk of having a depressive disorder multiplied when the mother had a history of suicide attempts. A psychiatric disorder tended to be diagnosed in these children before the age of twelve. Why are children more likely to suffer from psychiatric disorders if their parents have had a diagnosis? The answer could be genetic or environmental, resulting from trauma or other exposure in childhood. As social workers and advocates for people, it is imperative to lobby for increased access to mental health services for children to end this cycle.

There are long-term effects for children whose parents have moderate to severe depression. Children whose parents have a depression diagnosis have a risk three times higher to be diagnosed with depression themselves versus children whose parents do not have a diagnosis of depression. The offspring who are diagnosed with a depressive disorder also have an earlier onset, between age fifteen and twenty years old,

predominantly in females. Children of depressed parents were more likely to have cardiovascular problems and other physical health problems. Given these facts, it is not surprising that the offspring of parents with depression have a higher mortality rate (Wagner, 2006). Much research and work is needed to create support systems for offspring of parents with mental health diagnoses to promote a healthy upbringing and health maintenance.

There is a strong correlation found between an infant's home environment and their later academic performance, according to Bradley and Caldwell (1984). The previous studies were based on middle-class white children. Bradley and Caldwell used the Home Observation for Measurement of the Environment (HOME) scores in relation to achievement tests in school and mental test performances within varied racial backgrounds. Thirty-seven children in first grade and their families were the sample group. Eighty-six percent of the children were African American, sixty percent were male. All families were given the HOME Inventory infant version when the children were twelve months old, and again at twenty-four months old. This inventory assessed the quality of stimulation available to the child at home. Later, when the child reached three years old, each family was given the preschool version of the HOME inventory. The preschool version of the HOME inventory is adjusted for age-appropriate developmental milestones. Besides the HOME inventory, a number of other tests were given to the children to test their development and intelligence levels. The Mental Development scale (MDI) was provided at age one, the Stanford-Binet Intelligence Test was given at age three, and the SRA Achievement Test battery was given in first grade. Resulting from this study, Bradley & Caldwell (1984) were able to prove that there is a

strong relationship between stimulating materials in a home environment and a child's strong mental and achievement test performance. The authors indicate that an important component in this study was that the toys and materials in a child's home needed to be developmentally appropriate and stimulating. The authors also indicate that as a child ages, the home environment may not remain as important to their development, for example, during later school years or adolescence when extracurricular activities and peer relationships become more of a developmental focus. Given these results, it would be important to focus on a child's home environment and access to age-appropriate toys and materials in order to lessen the possible negative impacts of an environment with a single parent or mother with depressive symptoms.

Children were found to have better intelligence scores and behaviors among mothers with who are employed, have a higher level of self esteem, and less depressive symptoms. Jackson & Scheines (2005) conducted a study which explored the relationship between single mothers' employment, self-efficacy beliefs, depressive symptoms, and parenting behaviors with children's cognitive and behaviors in early their elementary school years. The sample group was one hundred seventy-eight African American single mothers and their young children. They were first examined when the young children were between ages three and five, and again when the young children were between ages five and eight. This research found strong correlations between positive support and personal self-efficacy on behalf of the single mother along with positive school achievement and behavior from their children. A single mother's employment was of great influence on a mother's perceived higher self-efficacy, which also was related to lower depressive symptoms. As the single mother felt higher self-

efficacy, she was able to have more positive contact with the child's father and provide more adequate and supportive parenting. These positive attributes found in single mothers were directly related to the child's intelligence scores and positive behavioral records in early elementary school.

Although this research may seem obvious, it is a further reminder of why policies should be implemented to provide more jobs, higher wages, and more focus on helping to support families in poverty, as it has a direct effect on families and children's daily lives, and in turn, the emotional and developmental wellbeing of children in our public schools and these children's futures.

Conceptual Framework

This research study will be conducted using the theory of “Structural Functionalism”, which focuses on the nuclear family as the ideal formation. According to Boss (1993), “The function of the family is to procreate, be socialized and conform for the greater good of society.” Structural functionalism focuses on traditional families with specific gender roles. In the case of a family headed by a single mother, structural functionalism also asserts that “society is threatened when roles are not clearly acted upon.” Thus, structural functionalism places high importance on families with a father as the ultimate head of household, a mother providing a supporting role, and children who are subordinate to their parents. Single mothers and their children face this bias as they go through life and navigate society’s norms, implied rules, and expectations. Although single families may not be ideal according to the viewpoint of structural functionalism, they are very prevalent in the United States and around the world, and do provide for the greater good of society as well as nuclear families.

Children with mental health diagnoses are in great need of nurturing and mentoring in order to facilitate a healthy development. Developmental psychology is a framework based on psycho-social stages, the attachment theory, social interaction with parents, and parenting patterns (Boss, 1993). The attachment theory is based on the thought that children must have a caregiver that consistently provides for them and will act as a strong role model. It is important for all children to receive time and attachment from a caregiver so they may form a secure attachment. Without this fundamental element, it is thought that children are at risk for problem behavior as a child and throughout life (Boss, 1993). According to Bowlby’s theory of attachment, children

without a secure attachment are at a higher risk for being diagnosed with mental health diagnoses such as oppositional-defiant disorder, conduct disorder, or post-traumatic stress disorder. As an adult, a child without a secure attachment to a caregiver is also at risk for having difficulty with maintaining relationships (Boss, 1993).

Children who are raised in a family with a single parent as well as children with a mental health diagnosis are even more in need of encouragement and attention as they develop. The developmental theory focuses on stages of the life cycle and transitioning through life stages. It is of vital importance that our society develops programs and policies to support families with a single parent and children with a mental health disorder. Our society will in the future depend on the support and guidance that we provide to children and families.

Methods

The research question of this research study is “What is the effect of single mothers with depression on child development among children with mental health diagnoses?” The independent variable in this question is single mothers with depression, and the dependent variable is child development among children with mental health diagnoses. Child development is the variable that this study will be exploring for further understanding.

Research Design

The research design for this study included a written survey to seek information about the participant’s thoughts regarding their depression and their children’s behaviors and development. A survey was given that contained quantitative questions using descriptive structured scales. The design will be cross-sectional, meaning that the survey will be administered only one time to the participants. The subjects of this research project were provided with a voluntary survey from the LICSW contact at the day treatment program. The survey was voluntary and anonymous. This writer received approval from the agency and LICSW contact, and also received approval from the St. Thomas Institutional Review Board to meet all ethical requirements.

Sample

The population to be studied is single mothers. These single mothers all have children who have a mental health diagnosis and are participating in a day treatment program run by a nonprofit human services organization in St. Paul, Minnesota. This study focuses on a day program for school-aged children ages five through ten. All children who attend this day program have a diagnosed mental health disorder. The

children participate in groups, social skills exercises, and life skill classes. The day program is run by a nonprofit human services organization and is located in St. Paul, Minnesota. The day program is directed by a licensed independent clinical social worker (LICSW).

The sample of participants used was by convenience of using single mothers of children from this day treatment program. The limits of this sampling plan include the fact that not all mothers are single, or the possibility of not having enough single mothers available for an adequate survey result. Also, the population sampled was from one day program, meaning they will most likely all be from similar neighborhoods in an urban setting. This population sample is not appropriate to generalize across other areas of the United States or with rural areas.

Protection of Human Subjects

Because the target population for the survey was single mothers, they were not a vulnerable group. The day program Director and LICSW was recruited to participate in this research study and provide access to mothers of children in the day program. All mothers who wish to participate were first given a cover letter which details the purpose of the research study, the risks and benefits, and informed consent (Appendix B). There were no known benefits to participation, and no known risks, but the cover letter did explain that the nature of this study involves a survey on mental health and children's behavior. The cover letter explained that participation in this research study is completely voluntary and confidential, and it would not have any affect on any participant's current or future relationship with Canvass Health. Contact information was also given for the faculty advisor and chair of the University of St. Thomas Institutional

Review Board for further questions. Lastly, the completion and return of the survey provided informed consent by participants.

The cover letter of the survey also requested that the participant does not include their name and requested only minimal demographic information in order for participants to remain anonymous. The participants were requested to complete the survey and return it within seven days to the LICSW and Director of the day treatment program inside an envelope provided. The LICSW will return all completed surveys to the researcher seven days after being given to participants.

Data Collection

Participants in this study completed a survey based on their symptoms of depression as well as their child's behaviors (Appendix C). Firstly, this research study evaluated mothers' depression symptoms and severity using the PHQ9, which is a nine question survey for adults to rate the severity of their depression symptoms over the last two weeks. The participants are asked to rate their depression under the categories labeled "0-1 Days," "2-6 Days," "7-11 Days," or "12-14 Days." The participants were also asked to check a box to describe whether their depressive symptoms began "Before having children" or "After having children."

Secondly, the research study evaluated the mother's opinions of their child's behavior and functioning using the Behavior Problem Checklist. The Behavior Problem Checklist was been modified to include questions aimed at a child's behavior, ability to follow direction and rules, and social and emotional wellbeing. The Behavior Problem Checklist was answered by mothers indicating how many times in the last two weeks

their child had exhibited a certain behavior. For each behavior described, the participant marked a box labeled “0-2 times,” “3-5 times,” “6-9 times,” or “10+ times.”

Data Analysis

Responses from each survey were analyzed to identify trends and significant responses. Descriptive and inferential statistics were conducted. Data was analyzed using frequency, correlations, T-tests and one-way ANOVA tests.

Strengths and Limitations

The survey given to participating mothers was valuable to gain their feelings about their current level of depressive symptoms, as well as their understanding of their children’s behavior. The participating mothers had the ability to tell the researcher how the child functions at home and in the community. Also, this survey was valuable in gaining specific information that cannot be observed or seen. The research results were helpful in examining whether a child’s behavior was possibly connected with their mother’s level of depression.

Some limitations of this study include a possible bias or inaccurate reporting from a participating mother. There is the chance that the mothers may not want to be accurate in their reporting of their symptoms of their child’s behavior, due to a concern about confidentiality or trust in this research study. Also, there is a limitation because of the limited amount of participants surveyed in this study; forty surveys were provided to participants for their insight. All mothers given the survey have children who attend the same day treatment program for school aged children, and presumably live in the same area of the metro in St. Paul, Minnesota. It could be presumed that women living in the same geographic region may also have similar feelings about parenting and what child

behavior is considered “normal.” More research will need to be conducted in order to gain further knowledge regarding the causes of a child’s behavior and the influence of their caregiver’s mental health.

Results

Descriptive Analysis

The present study aims to investigate the effect of single mothers with depression on the development of children with mental health diagnoses. In the survey, the first demographic variable measures the respondents' ages. The participant is requested to write in their age. The research question for the study is: What are the ages of mothers in the sample? The findings of this study in Table 1 show that the average age of respondents is 36.03 (S.D. = 9.12).

Table 1. *Mothers' Age*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15-19	1	3.1	3.4	3.4
	20-29	5	15.6	17.2	20.7
	30-39	13	40.6	44.8	65.5
	40-52	10	31.3	34.5	100.0
	Total	29	90.6	100.0	
Missing	System	3	9.4		
Total		32	100.0		

The next demographic variable examined is mothers' marital status. This variable is operationalized with the item: "Marital Status:" The response options are "Single", "Married", "Divorced", "Widowed", or "Domestic Partnership". The research question for the study is: How many respondents are single, married, divorced, widowed, or in a domestic partnership? The findings of this study in Table 2 show that fourteen respondents (43.8%) are single, five respondents (15.6%) are married, ten respondents (31.3%) are divorced, two respondents (6.3%) are widowed, and zero (0%) are in a domestic partnership. These findings show that the large majority of the sample is single mothers.

Table 2. *Mothers' Marital Status*

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Single	14	43.8	45.2	45.2
Married	5	15.6	16.1	61.3
Divorced	10	31.3	32.3	93.5
Widowed	2	6.3	6.5	100.0
Total	31	96.9	100.0	
Missing	1	3.1		
Total	32	100.0		

Another focal scales in this study measures the respondents' level of depression. Each variable in this scale is operationalized with the question: "In the past two weeks, how often have you been bothered by the following problems?" For each symptom of depression listed, the possible response options range from 0 – 14 days. Answer options are "0-1 days", "2-6 days", "7-11 days", or "12-14 days". The level of depression in respondents ranges from a minimum level of eight to a maximum level of twenty four. Higher scores of depression mean more depressive symptoms of mothers. As shown in Table 3, the mean level of depression is 14.19, with a standard deviation of 4.60.

Table 3. Mothers' *Depression Scale*

		Frequency	Percent
Valid	8.00	2	6.3
	9.00	3	9.4
	10.00	3	9.4
	11.00	4	12.5
	12.00	1	3.1
	13.00	3	9.4
	14.00	3	9.4
	15.00	1	3.1
	16.00	3	9.4
	17.00	2	6.3
	18.00	1	3.1
	19.00	2	6.3
	20.00	1	3.1
	23.00	1	3.1
	24.00	2	6.3
	Total	32	100.0

	N	Minimum	Maximum	Mean	Std. Deviation
Depression	32	8.00	24.00	14.1875	4.58214
Valid N (listwise)	32				

The next scale has twenty two items in this study, and measures respondent's perceptions of their child's problematic behaviors. This variable is operationalized with the question: "In the last two weeks, my child has:" For each behavior problem listed, the possible response options range from 0 – 14 days. Answer options are "0-2 times", "3-5 times", "6-9 times", or "10+ times". The minimum level of child behavior problems provided by the respondents was twenty two, and the maximum child problem behavior level was seventy. Higher scores mean more frequent problematic behaviors of children. The mean level of child behavior problems is 44.13, with a standard deviation of 13.51.

Table 4. *Childrens' Problem Behavior Scale*

	N	Minimum	Maximum	Mean	Std. Deviation
Behavior Problem Scale	32	22.00	70.00	44.1250	13.51164
Valid N (listwise)	32				

Inferential Analysis

Depression and behavior problems. The first research question for the study is: What is the relationship between mothers' level of depression and their children exhibiting problem behaviors? The research hypothesis for the study is: There is a relationship between respondents' level of depression symptoms and their children's problem behaviors. The null hypothesis is: There is no relationship between mothers with depressive symptoms and their children exhibiting problem behaviors.

Table 5 shows the inferential statistics of the relationship between the two variables, relationship between mothers' level of depression and their children's behavior problems. The calculated correlation ($r = .62, p < .000$) indicates a strong, positive correlation. Therefore, among mothers who show an increased level of depression, their children's problem behaviors are also shown to increase. Since the p-value ($p < .000$) is less than .05, we reject the null hypothesis. Therefore, the results of this study support the hypothesis that there is a significant relationship between respondents' levels of depression and their children's problem behaviors.

Table 5. *Relationship between Mothers' Level of Depression and their Children's Behavior Problems*

		Depression	Behavior Problems
Depression	Pearson Correlation	1	.618**
	Sig. (2-tailed)		.000
	N	32	32
Behavior Problems	Pearson Correlation	.618**	1
	Sig. (2-tailed)	.000	
	N	32	32

** . Correlation is significant at the 0.01 level (2-tailed).

Pre- and post-depression and behavior problems. The present study also examines the association between mother's depressive symptoms before or after having children and children's problematic behavior. The nominal variable measures whether mothers' depressive symptoms began before having children, or after having children. This variable is operationalized with the item: "When did you first notice depressive symptoms?" The response options are "Before having children" or "After having children."

The research question for the study is: Is there a difference between mothers' level of depression and their children who exhibit problem behaviors among mothers who first noticed depressive symptoms before having children and mothers who first noticed depressive symptoms after having children? The research hypothesis for the study is: There is a difference between respondents who first noticed depressive symptoms before having children and respondents who first noticed depressive symptoms after having children. The null hypothesis for the study is: There is no difference between respondents who difference between respondents who first noticed depressive symptoms before having children and respondents who first noticed depressive symptoms after having children.

Table 6 shows the results of the t-test comparing the children's problem behaviors with mothers' depression before or after having children. The respondents with depression before having children had a mean scale score of 46.00 in the children's behavior problems. The respondents with depression after having children had a mean scale score of 43.27 in the children's behavior problems. Therefore, the difference between these mean scale scores was 2.73 points.

The p-value for this T-test was .621. Since the p-value is more than .05, the results of this data are not statistically significant, and we can accept the null hypothesis that there is no difference between respondents who first noticed depressive symptoms before having children and respondents who first noticed depressive symptoms after having children. Therefore, respondents who have experienced depressive symptoms after having children are not more likely than respondents who have experienced depressive symptoms before having children to have children with problem behaviors.

Table 6. *Relationship between children's problem behaviors and mothers' depression before or after having children*

	Depression	N	Mean	S.D.	T	<i>p</i>
Behavior Problems	Before	14	46.00	15.26	.502	.621
	After	11	43.27	10.78		

Age and depression. The research question for the study is: What is the relationship between respondents' age and respondents' level of depressive symptoms? The research hypothesis for the study is: There is a relationship between respondents' age and respondents' level of depressive symptoms. The null hypothesis is: There is no relationship between respondents' age and respondents' level of depression.

Table 7 shows the inferential statistics of the relationship between the two variables, Relationship between mothers' ages and level of depressive symptoms. The calculated correlation ($r = -.065$, $p < .737$) indicates a weak, negative correlation. Therefore, as participants' are older in age, their level of depression decreases, although this correlation is not considered significant. Since the p-value ($p < .737$) is more than .05, we accept the null hypothesis. Therefore, the results of this study support the hypothesis that there is not a significant relationship between age and their level of depressive symptoms.

Table 7. *Relationship between mothers' ages and level of depressive symptoms*

		Age	Depression
Age	Pearson Correlation	1	-.065
	Sig. (2-tailed)		.737
	N	29	29
Depression	Pearson Correlation	-.065	1
	Sig. (2-tailed)	.737	
	N	29	32

Age and behavior problems. The next question is about the association between mothers' age and their children's level of problem behaviors? The research hypothesis for the study is: There is a relationship between respondents' age and their children's level of problem behaviors. The null hypothesis is: There is no relationship between respondents' age and their children's level of problem behaviors.

Table 8 shows the inferential statistics of the relationship between the two variables, mothers' age and children's problem behaviors. The calculated correlation ($r = -.051$, $p < .795$) indicates a weak, negative correlation. Therefore, as participants' age increases, their children's level of problem behaviors decreases. Since the p-value ($p < .795$) is greater than .05, we accept the null hypothesis. Therefore, the results of this study support the null hypothesis that there is not a significant relationship between respondents' age and their children's level of problem behavior.

Table 8. *Correlation between mother's age and children's problem behaviors*

		Age	Problem Behaviors
Age	Pearson Correlation	1	-.051
	Sig. (2-tailed)		.795
	N	29	29
Problem Behaviors	Pearson Correlation	-.051	1
	Sig. (2-tailed)	.795	
	N	29	32

Suicidal thoughts between mothers and children. This present study also examines the association of suicidal thoughts between mothers and children. The first variable measures mothers' thoughts of suicide. This variable is operationalized with question number 8: "Thoughts that you would be better off dead or of hurting yourself in some way?" The possible response options range from "0-1 days", "2-6 days", "7-11 days", or "12-14 days". The second variable in this association measures respondents' children's thoughts of suicide. This variable is operationalized with question number 22: "Has recurring thoughts of death or suicide?" The possible response options are "0-2 times", "3-5 times", "6-9 times", "10+ times".

The research question for the study is: What is the relationship between mothers who have suicidal thoughts and their children's suicidal thoughts? The research hypothesis for the study is: There is a relationship between respondents' suicidal thoughts and their children's suicidal thoughts. The null hypothesis is: There is no relationship between respondents' suicidal thoughts and their children's suicidal thoughts.

Table 9 shows the inferential statistics of the relationship between the two variables, Respondents' thoughts of suicide and their children's thoughts of suicide. The calculated correlation ($r = .470$, $p < .007$) indicates a strong, positive correlation. Therefore, as respondents' report thoughts of suicide, their children are also more likely to have thoughts of suicide. Since the p-value ($p < .007$) is less than .05, we reject the null hypothesis. Therefore, the results of this study support the hypothesis that there is a significant relationship between respondents' thoughts of suicide and their children also having thoughts of suicide.

Table 9. *Respondents' thoughts of suicide and children's thoughts of suicide*

		Mothers' suicidal thoughts	Childrens' suicidal thoughts
Mothers' suicidal thoughts	Pearson Correlation	1	.470**
	Sig. (2-tailed)		.007
	N	32	32
Childrens' suicidal thoughts	Pearson Correlation	.470**	1
	Sig. (2-tailed)	.007	
	N	32	32

** Correlation is significant at the 0.01 level (2-tailed).

Marital status and depression. The next comparison uses an ANOVA test to see the relationship between a mother's level of depressive symptoms and marital status. A one-way ANOVA test was done to find the mean level of depressive symptoms among single mothers, married mothers, divorced mothers, and widowed mothers. As seen in Table 10, widowed mothers had the highest level at 16.0 (mean score), single mothers had the next highest level at 14.64 (mean score), divorced mothers were next with an average level of 15.2 (mean score), and married mothers showed the lowest level of depressive symptoms at 11.2 (mean score). Therefore, this table shows us that single mothers are the most likely to have depressive symptoms, and married mothers are the least likely to have depressive symptoms.

Table 10. *Depression level and marital status*

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Single	14	14.6429	4.37839	1.17017	12.1148	17.1709
Married	5	11.2000	2.94958	1.31909	7.5376	14.8624
Divorced	10	15.2000	5.45283	1.72434	11.2993	19.1007
Widowed	2	16.0000	2.82843	2.00000	-9.4124	41.4124
Total	31	14.3548	4.55740	.81853	12.6832	16.0265

In an ANOVA test examining the relationship between a mothers' level of depression and marital status, the p-value ($p < .399$) is more than .05, we can conclude that the relationship is not significant. Therefore, as seen in table 11, marital status is not indicative of whether a mother is more likely to have depressive symptoms.

Table 11. *Depressive symptoms and marital status*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	63.482	3	21.161	1.021	.399
Within Groups	559.614	27	20.726		
Total	623.097	30			

Marital status and behavior problems. Another comparison was conducted with an ANOVA test to examine the relationship between the respondents' marital status and their children's level of problem behaviors. As seen in table 10, the p-value ($p < .544$) is more than .05, meaning that this relationship is not significant. We can conclude that a mother's marital status is not a strong determining factor in whether a child will have a higher level of problem behaviors.

Table 12. *Marital status and children's problem behaviors*

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Single	14	41.7143	12.03475	3.21642	34.7656	48.6629
Married	5	44.2000	16.20802	7.24845	24.0751	64.3249
Divorce	10	45.3000	14.89258	4.70945	34.6465	55.9535
Widow	2	57.0000	18.38478	13.00000	-108.1807	222.1807
Total	31	44.2581	13.77671	2.47437	39.2047	49.3114

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	426.178	3	142.059	.728	.544
Within Groups	5267.757	27	195.102		
Total	5693.935	30			

Discussion

According to this study there are significant key findings. Single mothers with depression are more likely to have children that exhibit behavior problems. Also, single mothers with suicidal thoughts are more likely to have children that also express suicidal thoughts.

This study's findings coincide with previous literature discussed in the literature review. A study by Talati (2007) explored the role of a mother's depression on children's mental health symptoms. Among mothers who were all diagnosed as clinically depressed, thirty-four percent of their children met the diagnostic criteria for a psychiatric disorder. Talati's 2007 study supports the findings of this research study in that mothers who have depressive symptoms are more likely to have children who also exhibit depressive symptoms.

A study by Murray (2006) states that among mothers diagnosed with maternal postnatal depression, school-aged children show more problem behaviors, particularly boys, and girls were shown to internalize their symptoms. Murray's findings supports the findings of this research study in that mothers who have depressive symptoms are more likely to have children who exhibit problem behaviors.

In 2003, a study by Miranda showed that case management and support services achieved better outcomes and success in treating depression than with only standard psychiatric treatment. Miranda's study supports the need for increased access and thoroughness of mental health care for mothers and their children.

In 2005, Jackson and Scheines conducted a study which explored the relationship between single mothers and their employment status, self-efficacy beliefs and depressive

symptoms in relation to their children's behaviors and intelligence scores. Jackson and Scheines' study found that among mothers who were employed, have a higher self esteem, and less depressive symptoms, their children were shown to have higher intelligence scores and to exhibit less problem behaviors. This supports the study's findings mothers with depression are more likely to have children who exhibit problem behaviors and depressive symptoms.

Strengths. This research study provides valuable information regarding the emotional levels and behaviors of mothers and their children. As discussed in the results section, it is very important to note that along with the higher the depressive symptoms reported by mothers, there are higher levels of problem behaviors shown by their children. Also, the results were significant in that mothers who reported suicidal thoughts in the past two weeks also reported that their children had recurring thoughts of death or suicide.

This data provides social workers and policy makers with more reasons why supporting mental health funding and programs for supporting healthy families is so important. Children who grow up in homes with caregivers who are depressed are more likely to have depressive symptoms at a young age.

Limitations. This research study had limitations, because of its design and its scope. In the survey instrument used, there were clarifications that could have been made in order for it to be completely understood by the participants. For example, there was one participant who stated "7" for age, which suggests that this is the age of her child. To make the survey more clear, in the future the question could be restated as "Mother's Age" instead of "Age".

Also, there were some participants who wrote comments on the survey outside of the questions listed. One participant wrote “Husband works second shift”, and another wrote her child’s name at the top. Along with the survey instrument, a letter was included stating that this survey is intended to be anonymous and confidential, however, it would be beneficial in the future to place another disclaimer on the survey instrument instructing participants to answer only the questions listed and to not elaborate with further comments.

This research study examined mother’s level of depression along with their child’s level of behavior problems. It does not delve into the reasons for the mother’s level of depression or whether their depression has worsened because of their children’s behavior problems. There is a question that asks “When did you first notice depressive symptoms?” The participants can circle one of two options to answer, either “Before having children” or “After having children.” As discussed in the results section, the mothers’ indication of depressive symptoms both before and after having children did not have an effect on their level of children’s behavior problems. This data was not statistically significant, meaning that mothers who had experienced depressive symptoms after having children are not more likely than respondents who had experienced depressive symptoms before having children to have children with problem behaviors.

The results of this study are based on mothers’ perceptions of their child’s behavior problems. Mothers’ perceived behavior problems of their children could be different from their actual problematic behaviors.

This research study used a small sample size and utilized one agency in St. Paul, Minnesota. These results cannot be generalized to the population as a whole, due to the potential for unique circumstances of the participants, and limited number of participants.

Implications for social work practice. After reviewing results from this study, it is important to note that further research is needed to evaluate single mothers with depression and their children's behaviors in a larger context. Research would be beneficial to look at children's behaviors as they age and become adults, and if there are further trends among children of depressed single mothers. This research study confirms that increased programs are needed to support single mothers, access to mental health services, preventative mental health services, as well as educational and socio-emotional programs for children. Existing programs, such as day treatment programs for children with mental health diagnoses, and mental health screening for mothers at health clinics during prenatal and postnatal visits should be continued and supported.

The results of this research study confirm the need for community support services for single mothers, their mental health needs, and their children's educational and emotional needs. As discussed in the literature review, the majority of single parents tend to be female, less educated, in poverty, and are more likely to experience racial discrimination than a woman does in two-parent families (Ricciuti 2004). Children of single mothers who have depression are more likely to struggle with psychiatric disorders themselves, suicidal ideation, or suicide attempts (Wagner 2006).

Single mothers are a group already at a disadvantage due to their lack of support on a parenting and personal level. Because they are more likely to have a lower income, they are also at a disadvantage to receiving proper healthcare. Single mothers with

depression who have children with a mental health diagnosis are dealing with this loss of support, and also the challenges of raising a child with a mental health disorder. All of these stressors make this population even further disadvantaged from receiving adequate support, and consequently, will affect the lives of their children.

In order to support mothers and their children, it is very important for our society to continue funding programs that will support preventative mental health care. It could be possible that due to the stressors of their everyday life, single mothers may not realize that they are feeling depressed, or that their child's behavior problems may be an expression of their emotional health. Education is needed among professionals who surround mothers and children in order to identify the possible signs and symptoms of depression, such as daycare providers and teachers, healthcare professionals, and other community professionals.

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Appendix A

a private non-profit corporation

Helping People... Changing Lives

12/27/11

To Whom It May Concern:

This letter is to confirm that Human Services, Inc./Canvas Health, Inc. has agreed to allow Alyssa Youngquist to conduct research at the day treatment programs.

Alyssa's proposal for research has been reviewed and approved by both the supervisors and manager of the day treatment programs.

If there are any questions regarding this matter, please do not hesitate to contact me at 651-319-3818.

Sincerely,

LICSW
Program Supervisor

Appendix B
Cover Letter

Dear Participant,

My name is Alyssa Youngquist, and I am a graduate student at the University of St. Thomas and St. Catherine University joint Master of Social Work program. I am currently conducting a research project for class which is focusing on depression in mothers of children with a mental health diagnosis. With the permission of the Program Director, I am distributing these surveys to mothers of all children who attend a day program with (nonprofit human service organization).

Children who are raised in a family with a single parent as well as children with a mental health diagnosis are even more in need of encouragement and attention as they develop. It is of vital importance that our society develops programs and policies to support families with a single parent and children with a mental health disorder. Our society will in the future depend on the support and guidance that we provide to children and families. Your participation in this research study will provide more evidence for policymakers on the need to develop programs and regulations that will improve the lives of all children and families.

I have prepared a survey which explores the level of depression in mothers as well as the behaviors of children with mental health disorders. Your participation is 100% voluntary and confidential. Please do not include your name or any demographic information with the survey. All information collected in this study will be anonymous. The returned surveys will be kept in a locked cabinet and only the researcher will have access to these records. All surveys and consent forms collected for this study will be destroyed by November 15th, 2012.

Please be aware that this survey does ask sensitive questions regarding your mental health and behaviors of your child. There are no known risks or direct benefits to your participation. Your decision whether or not to participate will not affect your current or future relationship(s) with St. Catherine University, University of St. Thomas, or (nonprofit human service organization). Your completion and return of this survey implies your consent. There are no benefits to participating in this survey or choosing not to participate in this survey.

If you have any questions regarding this study you may contact my faculty advisor Evan Choi, MSW, PhD, at (507) 205-2077, or Eleni Roulis, Chair of the University of St. Thomas Institutional Review Board, at (651) 962-4405.

Please complete and return the survey no later than seven days after receiving it. Thank you very much for your time, participation, and assistance with my graduate studies. It is greatly appreciated!

Thank you,
Alyssa Youngquist
MSW Student
University of St. Thomas / St. Catherine University

During the last two weeks, my child:

	0-2 times	3-5 times	6-9 times	10 + times
1. Often loses his temper				
2. Often argues with adults				
3. Often actively defies or refuses to comply with adults' requests or rules				
4. Often deliberately annoys people				
5. Often blames others for his or her mistakes or misbehavior				
6. Is often easily annoyed by others				
7. Is often angry and resentful				
8. Is often spiteful or vindictive				
9. Worries excessively and uncontrollably, usually when there is really no problem or any realistic circumstance to cause the worry				
10. Has an excessive fear of being negatively evaluated, rejected, humiliated or embarrassed in front of others				
11. Has excessive fears that center around being lost or of something terrible happening to him or his parents				
12. Experiences anxiety in new social situations				
13. Avoids or experiences anxiety in school situations such as giving oral reports, speaking to other children, or taking tests				
14. Has frequent physical complaints such as stomachaches and headaches, often related to avoiding situations that cause anxiety				
15. Has a specific fear or phobia to the extent that his social functioning is impaired				
16. Is irritable or sad for a period of two weeks or more				
17. Doesn't find enjoyment even in his favorite things for a period of time				
18. Shows a pattern of sleep and appetite disruption when he is sad or down				
19. Is lethargic, lacking in energy often				
20. Verbalizes feelings of worthlessness, hopelessness, or inappropriate guilt				
21. Has trouble concentrating and/or has begun to do poorly in his schoolwork				
22. Has recurring thoughts of death or suicide				