Net resiliency: A study of risk and protective factors in single and two-parent families

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Net resiliency: A study of risk and protective factors in single and two-parent families

Abstract
The main goal of this study was to discover how family makeup affects net resiliency scores of children. This quantitative study uses Two-Tailed t-tests, and Pearson correlation to uncover any relationships between net resiliency and living in a single or two-parent household. A sample of 91 children ranging from eleven to eighteen years old was utilized for the study’s data collection. Their net resiliency scores, risk factors, protective factors, and family makeup were analyzed to discover any potential relationships between them. The analysis of these factors showed children living in single-parent families have: lower net resiliency scores, fewer protective factors, and more risk factors than their two-parent family cohorts.

Keywords
Psychology, Counseling, Sociology, Individual and Family Studies
NET RESILIENCY: A STUDY OF RISK AND PROTECTIVE FACTORS IN SINGLE AND TWO-PARENT FAMILIES

BY

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B.A., University of New Hampshire, 2011

THESIS

Submitted to the University of New Hampshire in Partial Fulfillment of the Requirements for the Degree of Master of Arts in Counseling

May, 2011
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DEDICATION

This thesis is dedicated to my parents, Bill and Esther DePasquale. With their love, support, and motivation over the years, I was able to accomplish my goal of higher education. I thank them both for encouraging me to pursue my dreams and without them; this study would not have been possible.
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To my parents, for allowing me this opportunity to grow and discover myself. Your support and guidance was the motivation I needed to get through those six years; thank you for all that you have done for me.
# TABLE OF CONTENTS

**DEDICATION** ........................................................................................................ iii

**ACKNOWLEDGEMENTS** ......................................................................................... iv

**ABSTRACT** ............................................................................................................. vii

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Research Question</td>
<td>1</td>
</tr>
<tr>
<td>Rationale</td>
<td>1</td>
</tr>
<tr>
<td>Limitations</td>
<td>5</td>
</tr>
<tr>
<td>Implications</td>
<td>5</td>
</tr>
<tr>
<td>Hypothesis</td>
<td>6</td>
</tr>
<tr>
<td>Definition of Terms</td>
<td>7</td>
</tr>
<tr>
<td>II REVIEW OF THE LITERATURE</td>
<td>9</td>
</tr>
<tr>
<td>Introduction</td>
<td>9</td>
</tr>
<tr>
<td>Theory Base</td>
<td>10</td>
</tr>
<tr>
<td>Related Research</td>
<td>13</td>
</tr>
<tr>
<td>Trends</td>
<td>13</td>
</tr>
<tr>
<td>Risk Factors</td>
<td>14</td>
</tr>
<tr>
<td>Resiliency</td>
<td>19</td>
</tr>
<tr>
<td>Resiliency Scales</td>
<td>23</td>
</tr>
<tr>
<td>Cross-Culture Similarities</td>
<td>24</td>
</tr>
<tr>
<td>Father</td>
<td>26</td>
</tr>
<tr>
<td>Time</td>
<td>28</td>
</tr>
<tr>
<td>Parent Education</td>
<td>29</td>
</tr>
<tr>
<td>Substance Use</td>
<td>31</td>
</tr>
<tr>
<td>Positive Influences</td>
<td>33</td>
</tr>
<tr>
<td>Summary</td>
<td>37</td>
</tr>
<tr>
<td>III ANALYSIS OF DATA</td>
<td>40</td>
</tr>
</tbody>
</table>
ABSTRACT

NET RESILIENCY:

A STUDY OF RISK AND PROTECTIVE FACTORS IN SINGLE AND TWO-PARENT FAMILIES

by

Chad E. DePasquale

University of New Hampshire, May, 2011

The main goal of this study was to discover how family makeup affects net resiliency scores of children. This quantitative study uses Two-Tailed t-tests, and Pearson correlation to uncover any relationships between net resiliency and living in a single or two-parent household. A sample of 91 children ranging from eleven to eighteen years old was utilized for the study’s data collection. Their net resiliency scores, risk factors, protective factors, and family makeup were analyzed to discover any potential relationships between them. The analysis of these factors showed children living in single-parent families have: lower net resiliency scores, fewer protective factors, and more risk factors than their two-parent family cohorts.
CHAPTER I

INTRODUCTION

Research Question

Is there a significant difference in Net Resiliency scores of children from Single-Parent Families as compared to children from Two-Parent Families?

Rationale

A significant number of school children face major life adversities. A child is exposed to many negative as well as positive life situations. Divorce is one example of those life situations. “As parents move in and out of intimate relationships, their children are exposed to the changes, challenges, and stresses associated with multiple family transitions.” (Luthar, 2003, p. 182) Divorce rates are now over 50%, and there are more children than in previous years who have only one parent to raise them. In 2007 there were nearly 14 million single-parents raising children in the United States. In that same year, there were about 80 million children who were under the age of 21. Twenty-Two million of the 80 million children were being raised in a single-parent household. The split of female and
male headed single-parent families is 83% and 17%, respectively (Thadani, 2010).

The statistics become more worrisome when looking at employment and poverty levels. For instance, 54% of single-parent households have a head of family that is employed full time (Thadani, 2010). The statistic drops to 28% when looking at a single-parent household head that is employed part-time. The remaining 18% of single-parents do not work at all. When looking at poverty level of single-parent families, 25% live below the poverty level set by the federal government. This statistic is very worrisome, as the United States as a whole reports only 12% of the general population living below the poverty level (Thadani, 2010).

One parent running the household can mean less time at home with the children and less income compared to two-parent households (Weitoft, Hjern, & Rosen, 2004). A single-parent often has to make up for limited income by working multiple jobs, or extra hours in the workplace. These factors can lead to single-parents being less involved in their child’s life because of the need to bring in money and provide for their children. Whether this limited involvement is intentional or unintentional, it has been shown to have negative effects on a child’s intellectual ability. This unavailability of parents in a single-parent household has been associated with lower intelligence (Bacete and Rodriguez, 2004), and poor
achievement motivation and academic motivation (Milne & Plourde, 2006).

In past research, there seems to be a correlation between single-parent homes and low school performance by the child (Hampden-Thompson & Pong, 2005; Meece, 2002). The biggest factors seem to be money and the time a parent spends with their child, and the absence of both in most single-parent families. Meece (2002) also talks about how the child’s emotional health suffers after a divorce. Her research indicated that a child who recently experienced the divorce of his or her parents has a more negative attitude, shows signs of depression, and is angry. All three factors can play a major role in the drop of academic achievement.

“Resiliency is the term applied to children exposed to severe risk factors, such as poverty, who nevertheless thrive and excel.” (Leckman & Mayes, 2007, p. 221). Resiliency is a construct that manifests itself through people overcoming adversities in their life. Children are facing threats to their stability and well being from many different areas in their life such as school, friends, family, or even self-assessment; a child can quickly be swept up in a world of adversities. Overcoming these adversities and moving on with life can be characterized by being “resilient”. The question of “Why are some children more resilient than others?” is an interesting one that this study is intended to shed some light on.
A substantial amount of the research has focused on factors in the child’s life and home environment that contribute to their poor academic performance. The current study will explore the effect of living in a single-parent household on a child’s net resiliency. This will primarily be done by using an assessment tool known as New Heights Resiliency Assessment, which can be found in Appendix A. This assessment is proprietary to the institution of New Heights and aims to assess both risk and protective factors of all the children who enroll in their programs. The end result of the assessment is a score, of net resiliency. A high score indicates high levels of resiliency and conversely a low score indicates low levels of resiliency.

If data from the assessment show that there is a negative effect on net resiliency, then the study will explore residual areas of the child’s social/demographic life that may be affected by the divorce of living with a single-parent. If a child is living in a single-parent family and has a high net resiliency, then protective factors will be explored to try and tease out resiliency factors. Does living in a single-parent household automatically mean that a child will be at-risk, and if that is true, are there any resiliency factors that can negate these risk factors? If there is a correlation between divorce and children becoming at-risk, then it would be helpful to explore if that negative effect of divorce can be nullified by any other
outside factors (resiliency factors); that is what this study intends to explore.

**LIMITATIONS**

One limitation of this study is the lack of diversity in the after school program populations chosen for this research. The after school program’s demographic is mostly Caucasian, and middle class. If there are significant findings they cannot be definitively generalized to other socio-economic classes or races. Another limitation is that the study only involves children ages eleven to eighteen who attend an after school program. Factors involving risk and resiliency may change with age. Children younger than eleven may be affected differently by the same factors that affect eleven to eighteen year old children. Finally, when children respond “no” to living in a single-parent family it is unspecified whether the child is living in a traditional family unit (husband and wife) or a nontraditional family unit (homosexual parents, single-parent and significant other who are not married, grandparents, or any other combination of non single-parents).

**IMPLICATIONS**

The purpose of this study is to investigate how family, social, and demographic factors can add to or detract from a child’s net resiliency. It is important to conduct this study because a significant number of children are facing many risk factors in present time, such as divorce. The
results may lead to new insights into what factors contribute to and detract from a child’s ability to overcome significant life adversities. If the study uncovers some factors that play a major role in the decline or maintaining of net resiliency, then it will assist professionals in serving children and adolescents. This study may uncover factors that take the blame off the child for negative behaviors and recognize vulnerabilities in their environment. Not blaming the child directly for being at risk may help boost a child’s low self-esteem and motivate them to seek out more resilient factors. Also, if the research uncovers resiliency factors that help a child with many risk factors overcome life’s adversities, then those factors can be applied to those children who are identified as being less resilient through the presence of risk factors and lack of protective factors.

**HYPOTHESIS**

**H$_1$:** It is hypothesized that children living in a single-parent family will have lower net resiliency score as compared to the net resiliency scores of children living in two-parent families

**H$_2$:** It is hypothesized that children living in a single-parent family will have fewer protective factors as compared to the number of protective factors present in children living in two-parent families.
**H3:** It is hypothesized that children living in a single-parent family will have more risk factors as compared to the number of risk factors present in children living in two-parent families.

**H4:** It is hypothesized that risk factors will have a stronger correlation with net resiliency as compared to protective factors.

**Definitions of Terms**

**Single-parent home** means only one head of household living at home.

**Two-parent home** means there are two identified head of households living at home.

**Child** refers to a child between the ages of 11-18.

**Net Resiliency** refers to the total protective factors scored on the New Heights Resiliency Assessment, subtracted from the total number of risk factors scored on the resiliency assessment. The higher the net resiliency score, the more likely the child is able to cope with stressful changes in his or her life. The lower the net resiliency score, the more likely the child will be unable to cope with stressful changes in his or her life.

**Protective Factors** refers to the traits one possesses that promote successful coping with stressful life situations. Two examples from the New Heights Resiliency Assessment are: “I feel loved and cared for at home.” “I have close and positive relationships with adults outside my family.”
**Risk Factors** refers to the traits one possesses that promotes unsuccessful coping with stressful life situations. Two examples from the New Heights Resiliency Assessment are: “I get into physical fights with other kids.” “I am struggling academically.”

**Resiliency** is overcoming adversity in one’s life.
INTRODUCTION

The rise of single-parent homes has become more and more of a reality in not only the United States, but around the world. This reality has some negative implications that go along with it, mainly that children are unwillingly subjected to the negative effects that single-parent homes can cause. There has been some research conducted to investigate these effects. The research points to income level, involvement of the parent, and attachment style as all being factors in the ability of the child in a single-parent family to perform successfully in school as well as life.

Single-parent families can arise from three different situations. The first is when a child loses their parent to death. The second is when the child loses their parent to separation. The third reason, and the one that is of most interest to the study, is through divorce. Each reason for the loss of a parent at home comes along with specific troubles and hardships that not only the family has to deal with, but the children as well. For the purposes of the study, divorce will be the only single-parent family composition that will be explored through research.
In a country where about 20 million children are living in single-parent homes, and 25% of those children are living below the federal government's poverty level, there is a clear and present need to discover ways to help these children (Thadani, 2010). It is important to not only identify factors that have a negative impact on children's lives in single-parent families, but also to look at factors that have a positive impact. It seems that research has been skewed to focus just on the negative factors that affect children in these non-traditional homes, but it is equally important to find ways to help children recover and become resilient to the possible burdens that some single-parent families contain. Common trends in divorce rates, risk factors of single-parent children, cultural similarities of single-parent households, impact of the father, time the single-parent spends at home, impact of parent education, levels of substance abuse, and resiliency factors will be explored in the following review.

**Theory Base**

There are two prevalent models as to why children from single-parent families seem to face such turmoil and hardship in their developmental years. The first theory is called the Crisis Model (Weitoft, Hjern, & Rosen, 2004). This model considers the emotional state of the family just after a divorce has taken place. The children tend to have emotional problems, and the divorce has a negative impact on the
family’s emotional well-being. Also, the model takes into account the conflict that can arise when couples divorce. The children living at home directly and indirectly experience inter-parental conflict. The direct impact is when the child actually sees their parents fighting and arguing. The indirect impact is when the parents use the children as pawns in attempts to get back at one another. The children could be subjected to one parent speaking negatively of another parent. This conflict can weaken the parent-child relationship with both parents, and in turn lead to a child who feels helpless and hopeless (Weitoft, Hjern, & Rosen, 2004).

The other theory is called the Parental-Absence Perspective (Weitoft, Hjern, & Rosen, 2004). This takes an objective look at why single-parent households have a negative impact on a child’s life. Realizing that now only one parent is heading the household and bringing in money, it is easy to say that one parent cannot make as much money as two parents working together. This is seen through the many federally funded assistance programs that help supplement incomes of the missing parent. There is also child support that is paid by one parent to the other parent who has legal custody of the child. The added stress of having to raise a family on a single income that may not be adequate enough to provide fully for a family is the main basis behind the parental-absence perspective.
The second part of the theory is that, if the parent who has the higher education decides to leave, this may have some impact on the child’s educational attainment. If there is no one motivating the child to reach for a higher education, then that child may just give up on becoming educated.

Finally, the third point of this approach states that, because the income level has now dropped, the head of the household will have to work hard to raise more money to support the family. Working harder almost always entails longer hours away from the home. These longer hours have an effect on the parent-child relationship because the head of household is no longer home as much as they use to be. They cannot share as much quality time together, and their relationship with their child may start to stagnate and deteriorate (Weitoft, Hjern, & Rosen, 2004).

One controversy that is brought up has to do with potential differences in the way children develop when comparing single-parent families to two-parent families. One study investigated single-parenthood, achievement, and problem behaviors among White, Black, and Hispanic children. His results found, “… no consistent relationships between children’s behavior at 12 to 13 years of age and their experience in single- or two-parent-families” (Ricciuti, 2004, p. 6). This study has refuted what others have uncovered in their studies, which means that there may be
some factor out there that has more of an effect on children's school performance and behavior than living in single or two-parent families.

**RELATED RESEARCH**

**TRENDS**

There has been a large shift in the structure of family life since the early 1930's. What used to be taboo and stigmatized is now commonplace in the American culture; divorce. A study of Chicago families conducted in 1932 revealed the absence of divorce back in that time period. The study looked at 23,373 families, and out of those only one-seventh of them were “broken.” Broken meaning that one parent was absent for one reason or another. The study goes further to separate out those broken families into three categories: death, separation, and divorce. Out of the 23,373, families a large majority (82%) were broken because of a death. The next largest percentage (12%) was due to separation. The least likely cause of a broken home in Chicago in 1932 was divorce, which was only 6% of the families (Monroe, 1932).

As this study showed, divorce was not a very common option in that area of Chicago. Usually children lived in single-parent families because of a death in the family. Jumping to present day, over half of all marriages end in divorce based on Divorce Statistics (2007). The number of divorces has increased fourfold from 1970 to 1996 according to the Census Bureau’s report on Marital Status and Living Arrangements (Saluter
and Lugaila, 1996). This increase in divorce has undoubtedly led to children becoming caught in the often less than amicable break-ups their parents go through.

The divorce process has many aspects that directly and indirectly affect the children. The child does not want to see the parent's divorce unless there has been a lot of conflict at home (Laumann-Billings & Emery, 2000). Divorce has far reaching consequences in the family: it can "... strain parent-child relationships, lead to lost contact with one parent, create economic hardships, and increase conflict between parents (including legal conflicts)" (Laumann-Billings & Emery, 2000, p. 680).

**Risk Factors**

Whether from death, separation, or divorce, the reality is that children from single-parent families are at more risk than two-parent families. In 1995, George Demko and Michael Jackson stated that children living below the poverty level in such large numbers is, "... because of the trend toward increases in the number of single-parent families. Single-parent families, which almost always means female-headed families, are the poorest group in this country," (Demko & Jackson, 1995, p. 63).

Because there is a strong relationship between female-headed households and a much lower income level, children could be at greater risk for poor academic performance. This lowered income has negative
implications for the child’s life at home and in school. Families that are poor tend to face problems such as healthcare that is not sufficient, and housing that is substandard and often in an unsafe part of the state. The worst situation arises at the end of each month when rent and bills are due, leaving little to no money to feed the family (Demko & Jackson, 1995). Poverty and low income can exacerbate the small problems that families who earn above the poverty level face. If a child is being raised in a family environment that is not safe, stable, and cannot even provide enough nourishment, it is easy to see why some children from single-parent households are on their way toward an unhealthy life. The most frustrating part is that these children usually cannot change how they live. They are dependent on their parent/s for support, and have to live the way their parent/s provides for them.

There has been a great deal of research conducted to find out what impact income and wealth have on a child’s development and academic status. One study took a different approach, looking at a child’s early education and the implications it can have on development. Early Childhood Education and Care (ECEC) were found to be very important factors in a child’s outcome (Neckerman, 2004). Since more single-mothers are entering the workforce, mothers are now needing to place their children in nonparental childcare. Babysitters, child care providers, and daycare centers are just three examples of resources that
single-parent mothers and families are using to take care of their children while they are at work.

Typically, women are the heads of single-parent households and there has been an increase in single-parent mothers entering the workforce. These women have to compensate for the lack of income from another head of household that is missing in a single-parent family. The problem intensifies if state-mandated child support is not being paid monthly. The need for money is more present in a situation when no child support is being given to the single-parent. This means longer hours of work, longer hours away from their children.

Another related study by Milne and Plourde (2006) showed that male children had poor achievement motivation and academic performance when living in a single-parent household headed by a female. There were some negative implications found relating to future employment outcomes, behavior problems, and delinquency of these children. (Milne & Plourde, 2006). With females heading 83% of the single-parent households in the U.S. in 2007, it is important to look into why this male child, female parent discrepancy occurs (Thadani, 2010).

Many children, from both single and two-parent homes, are spending more time in nonparental childcare that ever before (Neckerman, 2004). The difference is that single-parent families often cannot afford the higher quality childcare that more affluent families can.
Lower-quality childcare could lead to the child's educational level starting below those children who are in average to above average care. Neckerman (2004) found that this difference between quality of childcare plays a large role in the successful outcome of a child. Neckerman goes on to describe the consequences of lower-quality care:

> Care arrangements also differ with socioeconomic characteristics in the type and quality of care that children receive. To the extent that children in less-advantaged families receive less formal or lower-quality care, these differences represent a direct form of social inequality. To the extent that the quality of these arrangements influences development and health, inequalities in children’s early care may also have lasting consequences. If children from less-advantaged families receive worse-quality care than their more affluent counterparts, and child care quality is associated with the early development of human capital, then child care inequalities may exacerbate a multigenerational cycle of disadvantage. (Neckerman, 2004, p. 223-224).

Another factor that plays a role in the well-being of a child is divorce. Divorce not only has negative implications for the single-parent family and the attempt to pick up the slack that the missing parent has left behind, but also has a direct impact on a child’s life. Divorce can be a traumatic event in a child’s life, understandably so. If the child grows up thinking that their parents are dedicated to one another, and then one day find out that their parents are no longer going to be with one another, the child becomes confused. Shortly after a divorce, a child may become depressed, aggressive or angry, and school performance can suffer as well (Meece, 2002).
A child experiencing the divorce of their parents may change their attachment styles. Seeing someone they have loved and been close to move out of the home, sometimes out of their life, can make the child become more anxiously attached to the parent at home. A child who was once securely attached to their parents can now become ambivalently attached to the lone parent at home (Karen, 1994). Fearing that this parent will leave them, just like the other parent did, the child may become preoccupied with not letting the custodial parent out of their sight (Karen, 1994). Karen (1994) points out that Bowlby has connected ambivalent attachment from the child to the mother with school phobia. Bowlby says, because the child fears losing his or her mother, he/she does not want to let her out of his/her sight. This elicits a phobia of school because the child will be gone most of the day and will not be able to see his mother and make sure she does not leave (Karen, 1994).

The child may also develop a lower sense of self-worth and esteem from the act of divorce or separation of the parents. Anthony Storr explains that:

Self-esteem is not only connected with feeling lovable, but also with feeling competent. Depressive personalities, in the face of adversities like divorce or loss by death of a spouse, not only suffer the loss of someone who provided self-esteem by proffering love and care, but also often feel helpless at trying to cope with life alone, at least initially (Storr, 1988, p. 126).
It seems that Storr is saying that one is at a high risk of low self-esteem if they suffer the loss of someone who was providing self-esteem. A parent is usually one who helps boost a child’s self-esteem, and divorce almost always means that that child will be unable to see that parent as much as they did before. This loss of contact and time may lead to lower levels of self-esteem in the life of a child facing divorce, separation, or loss of a parent.

**Resiliency**

When talking about resiliency there is an inference about the person being labeled as “resilient.” Suniya Luthar describes this inference in two parts: “(1) that a person is ‘doing okay’, and (2) that there is now or has been significant risk or adversity to overcome.” (Luthar, 2003, p. 4). This definition is used diagnostically, and implies that a child has shown a pattern of resilient behavior in the face of adversity.

Leckman and Mayes describe resiliency as “…the term applied to children exposed to severe risk factors, such as poverty, who nevertheless thrive and excel.” (Leckman & Mayes, 2007, p. 221). Resiliency, simply put, is overcoming life’s adversities. These adversities come in many different manifestations such as: natural disasters, genetic risks, neglect, war, bereavement, family conflict and violence, and economic hardships (Masten, 2009). What is astonishing to see, is that even in the face of some of life’s worst adversities, there are people who are able to
overcome these obstacles and lead a normal life as if none of the hardships ever happened.

Masten was able to come up with a short list of important factors for resilience: Attachment relationships, human intelligence and information processing, motivation to adapt, self control and emotional regulation, religious and cultural systems, and schools and communities were all on the list (Masten, 2009). Taking a closer look at these important factors provided by Masten, a common thread starts to emerge: these are all ordinary human processes. The ordinary nature of this list could imply that every human has the ability to be resilient; it may be a matter of how resiliency is triggered.

The idea of resiliency being triggered was something that Henley et al. (2007) researched. More specifically, researchers investigated how youth became more resilient and managed their adversity through play programs. Play programs could include sports, organized movement, exercise and even artistic movement. The basis of the research was that play programs would help restore a child’s social well-being and mental health through sports and play (Henley, et al., 2007). These play programs had two main purposes. The first purpose was to help children overcome adversity through direct psychosocial support when participating in the play programs. This direct support would help the children learn and practice important values and social skills to help overcome adversity.
The second purpose of the play program was to identify those children who could not participate in the program due to the inability to overcome adversities. This identification method would ensure the child was given extra attention and support in order to help alleviate the trauma and stress of their adversities (Henley, et al., 2007).

One area these play programs are available are after-school programs. There has been an after-school “movement” where these after-school programs are seen as a necessity rather than a luxury (Reisner, et al., 2007). This necessity has sparked an interest in looking at how to make these programs more effective in providing quality care for its participants. The Reisner, et al. study investigated which type of participation level of after-school programs was most effective: program plus activities, program only, supervised at home, or self-care plus activities. The program plus activities participants consisted of high-quality after-school programs and after-school activities that children attended regularly. The program only participants consisted of children attending just the high-quality after school programs. The supervised at home participants consisted of children that did not participant in after-school programs and who were supervised at home after school. The self-care plus activities participants consisted of children who were in unsupervised after-school settings 1-3 days a week and dropped in occasionally to after-school activities.
The results of the study showed that children’s conduct and work habits benefitted from after-school experiences in high-quality after-school programs and supervised community-based activities (Reisner, et al., 2007). Conversely, the findings showed the risks children face when they are inadequately supervised even when those unsupervised children still participate in sports, or some after-school activities (Reisner, et al., 2007). The conclusion of the study highlighted that adult supervision was a major factor in the relationship of a child’s school conduct and work habits. The children who had the least supervision by adults were more likely to exhibit misconduct and even drug use (Reisner, et al., 2007).

The importance of study above is that there is a relationship between negative behavior and unsupervised children (Reisner, et al., 2007). As stated previously, mothers are the predominate head of household in a single-parent family. More mothers are entering the workforce in order to provide for their family. This choice to work has forced head of households to make a tough decision about childcare. If the single-parent cannot afford childcare the likeliness of the child being home from school unsupervised increases. With the unsupervised child can come the potential for misconduct and even drug use as evidenced by Reisner, et al. (2007).
Resiliency Scales

The Resiliency Scales for Children and Adolescents (RSCA) is an instrument that identifies and qualifies qualities of resiliency in children. The RSCA, “…reflects three underlying factors of personal resiliency consisting of Sense of Mastery, Sense of Relatedness, and Emotional Reactivity.” (Prince-Embury & Steer, 2010, p. 303). Each of these three factors separated into global scales within the instrument. Sense of Mastery (MAS) is the first global scale and has 20 items within the instrument. Sense of Relatedness (REL) is the second global scale and has 24 items within the instrument. Finally, Emotional Reactivity (REA) is the third global scale and has 20 items within the instrument (Prince-Embury & Steer, 2010).

Each of the three global scales consists of multiple subscales. Within MAS, there are three subscales: Optimism, Self-efficacy, and Adaptability. Within REL, there are four subscales: Trust, Perceived Social Support, Comfort, and Tolerance. Within REA, there are three subscales: Sensitivity, Recovery, and Impairment. Each subscale is rated in a 5-point Likert-type scale that starts at 0, which reflects the answer never, and ends at 4, which reflects the answer almost always.

The psychometric strength of the instrument is very good as evidenced by the extensive testing and positive results. The standardizing group for the RSCA had coefficient as for the MAS, REL, and REA total
scores of ≥ .85. The test-retest strength of the scales was ≥ .70 (Prince-Embury & Steer, 2010).

The RSCA instrument is based on the assumption that a child’s resiliency reflects how well the adolescent experiences a sense of mastery, relatedness, and reactivity to emotions. The results of the instrument give a personal resiliency profile of the adolescent in which it reflects the strengths and vulnerabilities of the adolescent visually. Through this instrument’s results, an adolescent’s resiliency is viewed not only as being influenced personally, but as being influenced by the interaction of multiple attributes the adolescent possess. The results can be interpreted by a trained clinician to discover if any deficits exist in the three global scales of the adolescent. This easy identification can help the clinician tailor counseling to the adolescent for a more effective experience.

**Cross-Cultural Similarities**

The trend of single-parent families and negative impacts on a child’s life is not only seen in the United States, but in other countries as well. In India, a study revealed that children from single-parent mothers had fewer years of schooling and were much more likely to not complete school (Rani, 2006). The study uncovered some possible reasons for a child’s behavior to become defiant in a single-parent household. Given that the mother had less time to spend with the children because she has
to work so much, she would not be there to discipline her children when their behavior was bad or defiant. This lack of discipline resulted in poor behavior in the children. The study also concluded that the absence of the father is another factor in why children from female-headed single-parent homes become defiant. The father usually assumes the role of disciplinarian and, without him, the children are not disciplined (Rani, 2006).

A study of European countries revealed similar results to American studies (Hampden-Thompson & Pong, 2005). The study compared 14 European countries, looking for any significant relationship between family make-up and a child’s educational achievement. The focus was on children around the age of nine and around the fifth grade. Europe is seeing the same trend that the United States has been seeing for some time; that the number of single-parents are on the rise. The findings concluded that single-parenthood resulted in negative effects on a student’s educational achievement (Hampden-Thompson & Pong, 2005). The negative effects were suggested to come from the low monetary resources at the single-parent household. These low monetary resources led to fewer books and possessions that help facilitate educational achievement. The measurement of education achievement was calculated through science and mathematics test scores of the participants.
**Fathers**

Since most single-parent families tend to be headed by females, research has investigated the impact of the father not being present in the child’s life. Michael Lamb (1997) agrees that the absence of the father in a child’s life is harmful, but not for the same reasons others believe. The usual assumption is that taking away a male role model will harm the child and in turn produce unfavorable outcomes in the child’s life. Lamb suggests that is not always the case.

More specifically, Lamb gives four reasons why he believes children are more at risk when the father is not present in a single-parent family. The first reason has to do with the hostile atmosphere that can exist before, during, and after a divorce. Most single-parent families are generated through divorce, says Lamb (1997). He goes on to say that most divorces are preceded by overt and covert hostility between spouses. Lamb suggests this parental conflict. This conflict can be exposed to any children in the household which can lead to explaining problems of fatherless children, as Lamb suggests.

The second reason Lamb gives is the absence of the co-parent. The lack of co-parent means there is no one to help with tough decisions, child care, and to take over when one parent needs a break from supervising the children. Lamb also believes this absence can lead to the
child perceiving, which is often actual, abandonment of the absent parent.

The third reason Lamb suggests is the economic stress that single-parent families face. The single-parent families that Lamb is describing are headed by women. Lamb (1997) states that the median and mean income of females headed households are substantially lower than any other family makeup. This lower income means tighter budgets and often compromises for basic amenities such as food or rent.

The fourth and final reason Lamb presents is related to the low-income described in the third reason. That is to say, single-parent mothers are subjected to economic stress which, in most cases, is accompanied by emotional stress (Lamb, 1997). This emotional stress can manifest itself in bouts of social isolation shown in the mother and children. The emotional stress is also intensified due to the social disapproval of single or divorced children and mothers (Lamb, 1997).

Lamb (1997) believes that unfavorable outcomes are due to the roles that go unfulfilled when a father is absent. A father usually takes on economic, social, and emotional roles in the family unit. Without these present, the child is more at risk for negative childhood development.

Aaron Kipnis (1999) argues that the reason boys perform poorly is because they do not have a proper same-sex role model. He alludes to a special bond that father and son have with one another and the need for
a male role model in a boy’s life. Kiphis says, “The power of a father’s presence to lift his children’s academic performance transcends class, race, ethnicity, and his level of education” (Kiphis, 1999, p. 45). In a society where education is so important and the development of a child has a close relationship to academic achievement, boys need all the help they can get from their father or father figure. Young men raised in families from working class, or poor families, are even more at risk for poor outcomes in development and life (Kivel, 1999). Education can be a way out of poverty for poor boys, and it seems that a good father figure can help set boys on the right path to achieve a high level of education (Kivel, 1999).

**Time**

Single-parenthood can often mean less time to devote to one’s child/children. Unfortunately for single-parent families, children need a lot of support not only in their life, but also in their schooling. A parent who can spend time with their child and be there for him/her can have a positive impact on that child’s life and academic achievement. This is evidenced through Reisner et al. (2007) and their results of how adult supervision is an important part of fostering proper conduct and school performance in adolescents. If parents are there not only to talk but also listen to their kids, children with poor behavior and aggression problems become less aggressive, less impulsive, and perform better in school.
Garbarino witnessed this after he saw one of his clients participate in and graduate from a positive parenting program. This program helped the client increase her skills in managing her children. Before the program, the client had no idea how smart her children were and how much her toddler could understand. This realization helped eliminate the use of physical discipline in order to correct her children’s unwanted behavior and the client felt she could relate more closely with her children (Garbarino, 1999).

**Parent Education**

One study by Weitoft, Hjern, and Rosen (2004) found that single-parent households held the majority of unskilled manual and non-manual jobs. When they compared single-parents to partnered parents, the latter held significantly more upper-level non-manual jobs. The following message can unintentionally be communicated to the children of single-parent households; there is no reason to gain a high education because all you will be able to do is work in a job which involves manual labor. When this notion is compared to a child from a partnered household, the child sees their parents working in mid to high-level jobs and going to work in a suit or dress clothes. The child can easily see the importance of a good education because they see their parents leaving for a prestigious job every morning (Weitof et al., 2004)
The study by Weitof et al. (2004) also looked at highest level of schooling among single-parent households and two-parent households. The sample consisted of 148,325 Swedish children living in single-parent and two-parent households between 1985 and 1990. There were age restrictions of the parents that limited females to 18-49 and males to 18-59 years at the birth of their child. The children from single-parent families were divided into three categories: children of widows/widowers, children of lone parents with a deceased parent, and children of lone parents with a non-custodial biological parent more specifically, there is only one custodial parent present in the household. The reason for this could be due to divorce, death, or separation from the other biological parent that was not in the household at the time of the study (Weitof et al., 2004).

The findings were in line with previous research; children from single-parent households were more likely to complete less education than children from two-parent households. Only 8% of children from two-parented households had nine years of education or less (Weitof et al., 2004). When compared to single-parent families, the average of children with nine years or less of education jumped. The highest group was children of lone parents with a non-custodial single-parent, with 21% having nine years or less of education (Weitof et al., 2004). Next, came children from a single-parent due to death, with 20.2%; and finally, children from a custodial single-parent with 12.2% (Weitof et al., 2004). The
jump is dramatic from partnered parents to single-parent families in relation to level of schooling. This research suggests that the chances that a child will have nine years or less of education more than doubles if they come from a single-parent household.

Education of the child is very important, but just as important is the level of education of the single-parent. Another study looked at children in single-parent households and their subsequent levels of aggression. The three most critical factors that were found linked to child aggression were family income level, age of mother, and education level of parent (Harachi, Fleming, White, Ensminger, Abbott, Catalano, & Hoggerty, 2006). Among family income level, age of mother, and education level of parent, the latter variable was the most significant indicator of a child’s aggressive behavior. The lower the education level of the parent, the more aggressive the child would present. The boys of parents with low education were more likely to be found in the high aggression group, whereas boys from young mothers and low-income families were more likely to be found in the moderate group (Harachi et al., 2006).

**Substance Use**

Not only does single-parenthood have implications for a child’s level of aggression, but it is also correlated with drug use. Children who live in two-parent families are less likely to report using marijuana (Hollist & Mcbroom, 2006). Hollist & Mcbroom (2006) investigated marijuana use
within 15,143 children (age range not given). Out of the sample, the majority are White (12,826) and more than half lived with their biological parents (63.1%) (Hollist & Mcbroom, 2006). When comparing single-parent households to two-parent households, children with one parent are much more likely to have used marijuana than those children with two-parents. Just over forty-nine per cent of children from single-parent households have used marijuana; 48% of children from nonparent homes (no identifiable single-parent present in a child’s home) have tried marijuana; 46.8% of children from stepparent homes have used marijuana; and 31.9% of children from two-parent households have used marijuana (Hollist & Mcbroom, 2006).

What was interesting is that this study looked at alternate explanations to account for the increase in marijuana use among children from single-parent homes. The belief was that inter-family tension could have played a role in the likelihood of using marijuana regardless of whether the child is in a single or two-parent household. What was found was that the level of conflict was not the most important factor in determining the risk of a child for using marijuana (Hollist & Mcbroom, 2006). Instead, these authors stated that, "... the data show that levels of marijuana use are lower in high-conflict two parent homes than they are in low-tension homes where one or both parents is missing." (Hollist & Mcbroom, 2006, p. 977).
There are three influences that Hollist and Mcbroom (2006) believe affect the child’s use of marijuana. The first is the structural advantage of two-parent families. The researchers believe that two parents are able to keep track of their children more than one parent. This increased supervision will likely result in a faster discovery of deviant behavior. The next reason is the economic advantage of the two-parent family. The researchers say the following about two-parent families, “... there is an added benefit in that the parents are less likely to be burdened with severe economic strain that may impede the parent-child relationship and the overall climate within the family” (Hollist & Mcbroom, 2006, p. 979). Finally, the third reason is the likelihood of two-parent families to access and use family social capital resources that pertain to raising their children. Two-parent families are likely to have more time for their child, which facilitates parent-child socialization. They are also more likely to use resources from the community such as neighbors and teachers (Hollist & Mcbroom, 2006).

**Positive Influences**

With the bad there is always some good. Most studies have focused on which factors result in a child’s negatively impacted life and academic performance when they come from a single-parent home. There are also some resiliency factors identified, although only a few. One study looked at resiliency factors among children of divorced parents.
What was found was that the most important resiliency factor was the availability of good relationships with the family (Greeff, & Van Der Merwe, 2004).

Along the same lines of good family relationships is the investment of siblings in each other's lives. Siblings are usually a form of socialization to one another while they are very young. As they grow and mature, they can assume new and more responsible roles in the family. An older brother or sister can take on the responsibility of caring for the younger brother or sister in a single-parent home (Turnbull & Turnbull, 2001). If an older sibling is now taking care of a younger one, the importance of school in one's life can have a dramatic affect on the importance of school in the others. If the older sibling believes that school is important, they are more likely to push the younger sibling to do well in school. On the flip side, if the older sibling does not see the importance of school, then that will most likely come across to the younger sibling as well.

It is important to note that some studies have found that some of the above factors seem to not play an important role for a child in a single-parent family. Income was a major topic of study, and seems to be an important predictor of parental involvement. The idea that single-parents need to work more hours and thus have less time with their child is the driving idea behind less parent involvement in single-parent households. What Marcon (1999) found was just the opposite. Marcon
looked at parental involvement in their children’s preschool class. The assumption was that more time spent involved in the child’s academics would result in a more positive outcome for the child. The findings showed that, “Involvement of poorer families (those that qualified for lunch subsidies) was not significantly different from that of more affluent families” (Marcon, 1999, p. 404). The reason for the similarity in parental involvement was not stated in the research. A general assumption can be made that single and two-parent families are involved for roughly the same amount of time in their child’s academics. Whether this figure is a low or high number is unclear. What is interesting to note is that even though socioeconomic status (based on subsidized lunch) is directly related to a child’s school performance, socioeconomic status is not directly related to a parent’s involvement in their child’s preschool class (Marcon, 1999).

Another study looked at single-parenthood and achievement of White, Black, and Hispanic children. Ricciuti (2004) looked at whether adverse effects of single-parenthood might display themselves later in a child’s life. Ricciuti was interested to see if children (ages 6-7) who did not display any negative effects of single-parenthood would display them later in life when they reached the age of 12-13. What he found was, “... no consistent relationships between children’s behavior at 12 to 13 years

Since there were no significant findings among this target group, Ricciuti researched this result a little further. He wanted to examine why his findings went against what was already established. The single-parents he looked at fit the stereotype of the lone parent. They were mostly women, low income, less educated, younger, and more likely to experience racial discrimination. The reason that these findings were not consistent with previous research was examined, concluding that positive maternal attitudes and parenting resources may have countered the negative effects that are usually seen with children from single-parent families (Ricciuti, 2004).

One last study reiterates the findings that income can play a large role on the outcome of a single-parent child. Researchers Zhan and Sherraden (2003) looked at the effect of mother’s assets on expectations of children’s educational achievement. What was found was that, “Mother’s home ownership has a significant effect on children’s academic performance. Compared with children of non-homeowners, children of homeowners have better academic performance” (Zhan & Sherraden, 2003, p. 200). The researchers discovered that if a mother earns enough money to purchase or keep a house, chances are that their children will be better off academically. This could have some relation to
the general amount of safety the child feels, or the increase in services and opportunities a child is afforded when their mother can earn a substantial wage.

**Summary**

The research has pointed to many similar findings. Level of income has an effect on the outcome of a child. Most single-parent homes are headed by females, and an ongoing problem in the United States is that women are getting paid substantially less than their male counterparts. This low level of income has some inherent consequences. The mother must now work longer hours to make up for the deficit of the missing second parent. These long hours of work mean that the mother tends to have less time to devote to her children. More time away from children means less involvement in their life. Research suggests that this reality contributes to children becoming anxiously attached to the parent at home, and developing a fear of losing their parent (Karen, 1994).

One recurring problem seems to be not enough time spent between the single-parent and child. In the marijuana study, time not spend with the child means less opportunity for the single-parent to become aware of possible drug use. Two-parent families have an advantage because there is greater opportunity for one of the parents to spend more time with the child. More time with the child results in a closer eye on any possible deviant behaviors. The two-parent families can quell
any negative behavior before it can manifest into something out of control. Unfortunately, that does not seem to be the case for single-parent families.

What will be important to consider are results that refute the current knowledge. Like the two studies above, the research can sometimes produce findings that are not congruent with previous knowledge. There have been some questions raised about socioeconomic status (SES) and its effects on children’s outcomes. Some studies have shown that SES plays an important role in the child’s outcome, where other studies have shown that parental involvement is the more important variable. What is needed is more information on which factors, or interactions among factors, are more important. There is also considerable focus on what variables negatively affect children’s behavioral and academic achievement. What is needed is more information on what children, families, social services, schools, and role models can do to help these children become more resilient.

Current research lacks attention to resiliency factors among children from single-parent households. Existing research tends to focus on the negative and not the positive. The current study hopes to find some positive factors that children can put in place to help them cope with the possible negative effects of being raised in a single-parent household. Not only will the study hope to identify resilience factors, but
help strengthen previous knowledge about which factors play a negative role in the life of a child from a single-parent family. If both positive and negative factors can be identified through research, children from single-parent families may have a fighting chance for better outcomes in life.
Chapter III

ANALYSIS OF DATA

METHODOLOGY

Is there a significant difference in net resiliency scores of children from Single-Parent Families as compared to children from Two-Parent Families?

The design is correlational in nature, using independent sample t-tests and Pearson correlations. The t-test analysis single and two-parent families aim to explore any significant relationship between family makeup and their possible relationship with net resiliency. Pearson correlations will investigate any relationship between specific questions on the New Heights Resiliency Assessment to net resiliency.

Along with strengthening existing correlations, there is a need to find new ways that children from single-parent homes can become resilient; thus this study seeks to learn more about how students from single-parent families become at-risk for lower net resiliency scores.

SAMPLING

The population for this study consists of 11-18 year old children from a major coastal New Hampshire city and some immediate surrounding
towns who attend an after-school program focused on adventure based activities. The mission of this program is to aid teens in making a successful transition into adulthood. This transition is facilitated through health-related programs that help instill respect for the attendees, others, and the environment. This program is based on the premise that good and bad habits are formed in the middle school years. These habits can largely influence lifestyle choices in the years to come. The program strives to foster the good habits during the influential years so the child will continue to exhibit these good habits in the years to come. The program is sponsored and coordinated by New Heights in Portsmouth, NH.

A total of 91 participants are included in the study. Of those 91 participants, 48 are female and 43 are male. Each participant of the study previously filled out a New Heights Resiliency Assessment and demographic inventory as part of admittance into the after school program. Participation and attendance of the after school program is completely voluntary. The population is mostly white (87%) and from middle socio-economic status.

New Heights is the largest after-school program in the Seacoast area. There are programs during the school year and in the summer. Some examples of the programs are: cooking clubs, rappelling classes, mountain biking, movies, dodge ball, boogie boarding, ski trips, indoor soccer, geocaching, and many other activities. The program is free to all
11-18 year olds interested in joining. The trained staff has a wide variety of educational and vocational backgrounds. The nine staff members consist of professionals who have backgrounds in counseling, psychology, forestry, and outdoor education (New Heights, 2011).

For purposes of this study, the participants are broken down into two main categories. The first category consists of participants from single-parent families. The second category consists of participants from two-parent families. This division of participants was facilitated through the New Heights Resiliency Assessment and its demographic section that each participant and guardian filled out. All information for this study was gathered through the New Heights Resiliency Assessment which is administered by the New Heights program. Parental consent is necessary and was given before any participant filled out the assessment.

**INSTRUMENTATION**

The main instrument used in the research is a proprietary tool created by New Heights. The tool is named the New Heights Resiliency Assessment (Tucker & Vance, 2005). Each child in the 2007 New Heights after-school program was asked to complete the assessment and return it to the staff. The aim of the assessment is twofold: 1) Gather the participant’s history and in doing so, assess specific risk and protective factors that would give a brief overview of the participant’s life. 2) Include specific questions that assess protective factors of the participants.
in which the program thought they could influence through their activities. The questions of the assessment are taken from a larger assessment tool named Brief Resiliency Checklist (Sanchez & Vance, 1995). This tool is designed to take inventory of all risk and protective factors within a child or their family. The end result of the checklist is one of three levels of risk: low, moderate, or high. A treatment service is based on each level of risk in order to aid a health professional in treatment.

After each participant completes the New Heights Resiliency Assessment, a total score is calculated. This score is called the participant’s “Net Resiliency Score” and is derived by subtracting the number of protective factors identified by the number of risk factors identified. The total number of protective factors is calculated by adding up the number of questions answered either “Yes” or “3, 4, 5” for questions 1-28. The total number of risk factors is calculated by adding up the number of questions answered either “Yes” or “3, 4, 5” for questions 29-44. The highest score possible is a 28, which would indicate all protective factors present with no risk factors. The lowest score possible would be a -16, which would indicate no protective factors and the presence of all the risk factors. New Heights considers a resiliency score of fewer than 20 to be a concern (T. Tucker, personal communication, March 28, 2011).

The consistency of the instrument is boosted by having the New Heights staff trained on how to administer the assessment. The New Heights...
Heights staff administered the assessment to help the children fully understand each question they were answering. New Heights received parental consent for each child under the age of 18.

The instrument consists of forty-four questions that are scored by the participant on a scale of “0-5” or “Yes or No”. “0” represents the child “Completely Disagrees” with the statement and “5” represents the child “Completely Agrees” with the statement. The instrument’s questions are broken into two overall categories and eight sub-categories. The first overall category of questions investigates a child’s protective factors.

There are a total of twenty-eight questions that investigate the first overall category of protective factors. These factors are exactly as they seem, factors that help protect the child from any negative impact in their lives. Each question can be traced back to the four subcategories within protective factors. The categories are: Family Protective Factors, Extra-Familial Social Support, Social Skills, and Competencies.

The second overall category of questions investigates a child’s risk factors. There are a total of sixteen questions that investigate this category. Again, these factors are as they seem in which any situation or environment that may have a negative impact in a child’s life is categorized as a risk factor. Each question can be traced back to the four subcategories within risk factors. The categories are: Outlooks and
Attitudes, Childhood Disorders, Social Drift Factors, and Family Stress Factors.

The eight subcategories of risk and protective factors from the New Heights Resiliency Assessment come from a larger assessment tool named the Brief Resiliency Checklist (BRC) which was developed by Horacio Sanchez and Dr. Eric Vance (1995). Like the New Heights Assessment, the BRC has two categories of factors (Risk and Protective) as well as four subcategories in each of the two main categories. The eight subcategories are very similar to the New Heights’ eight subcategories and are as follows: 1) Social/Relational Problems, 2) Social Drift, 3) Family Instability, 4) Lack of Family Attention, 5) Social Skill Enhancement, 6) Competencies/Confidence, 7) Family Enhancement, and 8) Social Support.

Categories 1-4 are considered risk factors and categories 5-8 are considered protective factors according to Horacio and Vance (1998). Risk and protective factors are seen as being directly related in such a way that, “...general areas of risk can only be impacted by the promotion of protective factors.” (Horacio & Vance, 1998, p. 9). More specifically, Horacio and Vance believe that in order to combat risk factor 1, from the above list, you need to have protective factor 5 present. This pattern follows for the remaining factors in that risk factor 2 is mitigated by protective factor 6 etc...
When the New Heights Resiliency Assessment is completed, the total number of risk factors and protective factors are counted based on how the participant answers each question. By subtracting a child’s risk factors from their protective factors, their net resiliency score is formed. A score of twenty-eight indicates the participant currently has no risk factors in their lives. A net resiliency score of negative sixteen reflects that a participant currently has all the risk factors the assessment is investigating. The highest score is a twenty-eight, and the lowest score is a negative sixteen if the participant completes every question of the assessment. The higher the overall score, the more resilient the child is considered. Conversely, the lower the overall score, the less resilient the child is considered.

The New Heights Resiliency Assessment has no psychometric data regarding the validity and reliability of the tool. Although, there is no formal data for the assessment, face validity can be assessed. The New Heights tool does seem to have a high amount of face validity. More specifically, the forty-four questions on the Assessment seem to accurately reflect the eight subcategories outlined above. There are a minimum of three and a maximum of eleven questions in each subcategory. To further increase the New Heights validity, the categories and questions have been selected from the BRC which has been validated through large sampling of high-risk participants. The finding of the sampling was
found to be predictive, accurate, and consistent in identifying treatment plans ("Assessment," 2006).

**PROCEDURES**

The data were gathered by the New Heights' staff in September of 2007. Each participant completed the New Heights Resiliency Assessment, which was individually administered by a New Heights staff member to clarify any questions participants may have and to keep the consistency of the instrument as high as possible. Participants are from the state of New Hampshire and living within the Portsmouth NH area. The sample consisted of 43 males and 48 females which totals 91. The age of the participants ranged from 11 to 18 years. 31 participants (34%) were identified as living in a single-parent household as compared to 60 (66%) participants living in two-parent households. The participants are mostly white (87%). All participants under the age of eighteen, who took the assessment, were given permission to participate by their legal guardian(s). All the data were collected and maintained by New Heights.

The New Heights staff is instructed to go over the directions of the instrument with each participant. Each child is to be read each question and then each respective optional answer. If the child is confused at any point in the process, the New Heights staff will stop the assessment and work through the confusion until the child fully comprehends the question and possible answer they are going to mark on the assessment.
**DATA RESULTS**

The data collected from the New Heights Resiliency Assessment is broken into four comparisons for analysis.

**H1** It is predicted that a negative correlation exists between living in a single-parent family and net resiliency. The first comparison explores net resiliency in single-parent homes as compared to net resiliency in two-parent homes using Independent Sample t-tests. More simply, how do the net resiliency scores of participants from single-parent households differ from the net resiliency scores of participants from non single-parent households?

**H2** I expect to see a negative correlation between children living in a single-parent family and number of protective factors. Single-parent and two-parent families will be correlated, by Independent Sample t-Tests, to protective factors. The second comparison explores the relationship of protective factors in single-parent homes as compared to the number of protective factors in two-parent homes.

**H3** I expect to see a positive correlation between children living in a single-parent family and number of risk factors. Single-parent and two-parent families will be correlated, by Independent Sample t-Tests, to risk factors. The third comparison explores the relationship of risk factors in single-parent homes as compared to the number of risk factors in two-parent homes.
H4 I expect to find a higher correlation between a risk factor and net resiliency. Risk and protective factors will be correlated, by Pearson r, to net resiliency. The fourth comparison explores the strength of all forty-four questions which aim to discover risk or protective factors. More specifically, if any of the questions have a stronger correlation with the participant's overall net resiliency score than other questions.
CHAPTER IV

RESULTS OF DATA

Demographic information was gathered by New Heights from the 91 participants in the study. Some of that data was available for purposes of analysis while other data was unavailable for this study. Of the 91 participants, 43 are male and 48 are female. The age of the participants ranges from 11 to 18. The specific ages are not provided in the data given for this study and subsequently age could not be computed. 31 of the participants (34%) are living with a single-parent, while the other 61 participants (66%) are living in a two-parent family. Most of the participants categorize themselves as “White” (87%).

**NET RESILIENCY IN SINGLE-PARENT HOMES**

A two tailed, independent sample t-test was used to explore the relationship of living in a single-parent household with net resiliency, risk factors, and protective factors. The t-test was run not assuming equal variance among samples. Table 1 shows that children living in a single-parent household were significantly different from children living in a two-parent household on net resiliency, \( p = .000 \). The average net resiliency
score of children from single-parent families (M= 21.23) is significantly lower than the score (M= 24.67) for children in two-parent families. The difference between the means is 3.44 points. The effect size $d$ is approximately 1.16, which is defined as a much larger than typical effect size.

**Resiliency and Protective Factors**

Table 1 shows that children living in a single-parent household were significantly different from children living in a two-parent household on protective factors, ($p= .020$). The average number of protective factors from single parent-families (M= 25.7) is significantly lower than the score (M= 26.62) for children in two-parent families. The difference between the means is .92 points. The effect size $d$ is approximately .04, which is defined as a small or smaller than typical effect size.

**Resiliency and Risk Factors**

Table 1 indicates that children living in a single-parent household were significantly different from children living in a two-parent household risk factors, ($p= .000$). The average number of risk factors from single-parent families (M= 4.47) is significantly higher than the score (M= 1.95) for children in two-parent families. The difference between the means is 2.52 points. The effect size $d$ is approximately .79 which is just under the .80 value that indicates large or larger than typical effect size.
Table 1

Resiliency in Single-Parent Homes

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am living with a single-parent.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net Resiliency:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>61</td>
<td>24.67</td>
<td>2.521</td>
<td>5.441</td>
<td>89</td>
<td>.000</td>
</tr>
<tr>
<td>Yes</td>
<td>30</td>
<td>21.23</td>
<td>3.390</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk Factors:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>61</td>
<td>1.95</td>
<td>1.962</td>
<td>-5.458</td>
<td>89</td>
<td>.000</td>
</tr>
<tr>
<td>Yes</td>
<td>30</td>
<td>4.47</td>
<td>2.270</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protective Factors:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>61</td>
<td>26.62</td>
<td>1.451</td>
<td>2.374</td>
<td>89</td>
<td>.020</td>
</tr>
<tr>
<td>Yes</td>
<td>30</td>
<td>25.70</td>
<td>2.231</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
INFLUENCE OF RISK AND PROTECTIVE FACTORS

A Pearson correlation was used to explore the relationship of the 37 questions inquiring about risk and protective factors. The Assessment has a total of 44 questions, but 7 are not used in this analysis because the questions yielded nominal data. As Appendix B shows, statistically significant relationships are found between 25 out of the 37 questions examined. Of those 25 questions 10 of them inquire about risk factors. The other 15 inquire about protective factors. Although there are more statistically significant protective factors identified risk factors make up a larger percentage in their respective category.

There are a total of 11 questions that inquired about risk factors in the analysis. Of those 11 questions, 10 were found to be statistically significant. That is, 90.9% of the questions searching for risk factors that are found to have a statistically significant relationship with net resiliency. There are a total of 26 questions that inquired about protective factors in the analysis. Of the 26 questions, 15 are found to have a statistically significant relationship with net resiliency. That is, 57.7% of the questions inquiring about protective factors are statistically significant.

The strongest correlation with low net resiliency is the question that asked the participant to rate, "I have thought about dropping out of school." The Pearson correlation for the previous question was -.590 and was significant at the p<.01 level. The weakest correlation with low net
resiliency is the question that asked the participant to rate, “I participate in extracurricular activities.” The Pearson correlation for the previous question was $p<-.020$ and was not found to be significant. All of the 10 significant questions about risk factors have a negative correlation with net resiliency. This is interpreted as the higher the participant rates these risk questions to be true (from a 0-5 scale) the lower the net resiliency score will be. All 15 significant questions about protective factors had a positive correlation with net resiliency. This is interpreted as the higher the participant rates these protective questions to be true (from a 0-5) the higher the net resiliency score will be.
CHAPTER V

DISCUSSION AND IMPLICATIONS

Summary of Findings

The study seeks to explore the relationship between a participant’s family, social, and demographic factors with net resiliency. More specifically, this study explores the relationship between children of single-parent families and net resiliency in adolescents ages 11-18 and comparing the net resiliency score to children of two-parent families. There are many ways this study examined the relationship mentioned above such as examining the participant’s net resiliency score and comparing that to whether or not they resided in a single or two-parent household. The study examined whether or not living in a single-parent household would account for an increase rate of risk factors and/or a decreased rate of protective factors. The last part of the study explores relationships between specific questions on the New Heights Resiliency Assessment and a participant’s net resiliency.

Firstly, the analysis uncovered relationships between the above-mentioned factors. Participants living in a single-parent household had
lower net resiliency scores when compared to the participants who did not live in a single-parent household. These findings confirmed the first hypothesis of expecting to see a negative correlation between children living in a single-parent family and net resiliency.

Secondly, participants living in a single-parent household had fewer protective factors when compared to the participants who did not live in a single-parent household. These findings confirmed the second hypothesis of expecting to see a negative correlation between children living in a single-parent family and protective factors.

Thirdly, participants living in a single-parent household had more risk factors when compared to the participants who did not live in a single-parent household. These findings confirmed the third hypothesis of expecting to see a positive correlation between children living in a single-parent family and risk factors.

When the questions on the assessment were correlated with net resiliency, it became clear that risk factors had a stronger relationship when compared to protective factors. These findings confirmed the fourth hypothesis of expecting to find a higher correlation between a risk factors and net resiliency. Although there were more questions asking about protective factors on the Assessment that were statistically significant, the percentage of risk factors that were significant out of the
total number or risk factors was much higher (90.9%) than compared to the protective factors (57.7%).

**Discussion**

The study investigated the relationship between children of single-parent families with net resiliency and comparing those scores to children of two-parent families. A quick overview would show that there are specific factors that may influence overall net resiliency. The ability to overcome stressful life events is a trait that most human beings have to develop. Statistically different significances were found in net resiliency when investigating participants living in single-parent families and participants living in non single-parent families. Participants living in single-parent families tended to have lower net resiliency scores compared to those living in non single-parent families (the higher score is related to a better ability to cope with life stressors). There were also statistically significant differences between the groups when total number of risk and protective factors was examined. Those participants living in a single-parent family tended to have more total risk factors and less protective factors when compared to those participants living in non single-parent families. This suggests there is a factor between the two groups that is influencing the net resiliency score. What that factor is has yet to be seen. This study did not intend to find the specific factor or factors.
The last investigation was between the strength of the relationship between protective and risk factors on net resiliency. The findings are that risk factors have a stronger relationship with net resiliency as compared to protective factors. Although there are more protective factors that were significantly linked to net resiliency (15 out of 26, 57.7%) there are a higher percentage of risk factors that were statistically significant (10 out of 11, 90.9%) when correlated with net resiliency. What seem to be significant are the risk factors. Almost all eleven of them were statistically significant.

**Constraints of the Study**

The first constraint of the study has to do with the population. The age of the children in the study range from 11 to 18 years old. This is a wide gap and undoubtedly there are many physical, social, and mental changes going on between those ages. Because the participants are not individually identified by their age, there was no way to find out if the younger or older participants have the same net resiliency scores. It could be that the younger participants are more at risk due to factor X or vice versa.

The next problem with the study is that there is no distinct clarification of a “non single-parent household” or “two-parent household”. This could mean a traditional makeup, or it could mean a non-traditional makeup such as two males, or a single-parent and a significant other who the child assumes as being two parents. It would be
interesting to see if there is any difference between traditional and non-traditional single-parent families. Also, comparing all three groups would have given the study a more in-depth look at how family makeup may have an influence on net resiliency.

Another constraint of the study is that it lacks diversity. The participants were from a few towns in one state. There could be a possibility that had this study been conducted in another location, there may be different results. Children may face different social, economic, family, etc...factors depending on where they are located in the world. A wider swath of background and participants would make the study’s findings much stronger. Another lack of diversity is with the race of the participants. 87% reported themselves as “White”. This overwhelming majority makes the results hard to generalize across race.

**Implications for Future Research**

One of the biggest implications for future research is the area of risk factors and the influence they can have on a child’s net resiliency score. An example can be seen when examining the data of relational strength between risk/protective factors and net resiliency. Ten out of eleven risk factors were found to have a significant relationship with the outcome of lower net resiliency score. Even though there were more protective factors that were found to have a significant relationship with net resiliency, they still did not have the strength of relationship that risk factors
had. The difference seems to lie within the risk factors. An investigation on why these risk factors play a larger role in net resiliency scores could lead to further knowledge about resiliency.

Another area of research could examine protective factors and their influence on risk factors. A question of whether or not X amount of protective factors can negate a risk factor would be interesting to investigate. Are all risk factors more influential than any protective factor, or vice versa? The investigation could lead to new ways to combat certain risk factors.

This study and future research could benefit anyone who works with children or adolescents. After school programs that target at-risk youth would be a great beneficiary of a more in-depth investigation of how risk and protective factors interact with one another. More specifically, protective factors mitigate risk factors? Schools would be another group that could benefit from knowing more about this topic. A school could be proactive in identifying children in need of protective factors and provide in-school programming for them or set up a treatment plan specific to the child’s lack of protective factors. Lastly, parents could be the ultimate beneficiaries of this information. The involved parent is the one who spends the most time with their kids. The involved parent can be aware of signs of distress or signs of success in their child and act accordingly. The best medicine is preventative in nature, and if parents stay involved and
provide effective interventions for their child when needed, it may just lead to a higher net resiliency and more fruitful childhood, adolescence, and adulthood.

The results of this study show a link between risk factors and low net resiliency scores as well as protective factors and high net resiliency scores. This study is a broad overview of a specific population and more descriptive, in-depth analysis would give a clearer and more precise picture of how risk and protective factors interact with one another.
List of References


### New Heights Resiliency Assessment

**Participant Name:**  
**Date:** 

<table>
<thead>
<tr>
<th>Family Protective Factors</th>
<th>Completely Disagree</th>
<th>Mostly Disagree</th>
<th>Slightly Disagree</th>
<th>Slightly Agree</th>
<th>Mostly Agree</th>
<th>Completely Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I am currently living with my parent(s) or family members.</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>2. My parent(s) or caregiver(s) work.</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>3. There are other adults or family members that help my parent(s) or caregiver(s) take care of me.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. I feel loved and care for at home.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. I feel like I have a warm and positive relationship with my parent(s) or caregiver(s).</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. I am or my family is involved in a community of worship or church.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. I have rules I have to follow at home.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. I have a curfew at home.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. I have chores I have to complete at home.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. My punishment is fair when I get in trouble.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
11. My parent(s) or caregiver(s) discuss the punishment with me. | 0 | 1 | 2 | 3 | 4 | 5

**Extra-Familial Social Support**

12. I have close and positive relationships with adults outside of my family. | 0 | 1 | 2 | 3 | 4 | 5
13. I feel like I am supported by adults at school. | 0 | 1 | 2 | 3 | 4 | 5
14. I feel like I am supported by my close friends. | 0 | 1 | 2 | 3 | 4 | 5

**Social Skills**

15. I feel like I get along with my peers. | 0 | 1 | 2 | 3 | 4 | 5
16. I feel like I get along with adults. | 0 | 1 | 2 | 3 | 4 | 5
17. I feel like people like me. | 0 | 1 | 2 | 3 | 4 | 5
18. I feel like people think I have a good sense of humor. | 0 | 1 | 2 | 3 | 4 | 5
19. I help others when they are down or need help. | 0 | 1 | 2 | 3 | 4 | 5

**Competencies**

20. I feel as though I am a good problem solver. | 0 | 1 | 2 | 3 | 4 | 5
21. I feel like I try hard in school even if I don't get good grades. | 0 | 1 | 2 | 3 | 4 | 5
22. I feel like I am a good reader. | 0 | 1 | 2 | 3 | 4 | 5
23. I participate in extracurricular activities. | 0 | 1 | 2 | 3 | 4 | 5
24. I have hobbies. | 0 | 1 | 2 | 3 | 4 | 5
25. I feel like I have special talents or skills. | 0 | 1 | 2 | 3 | 4 | 5

**Outlooks and Attitudes**

26. I feel like events and the direction of my life are in my control. | 0 | 2 | 3 | 4 | 5
27. I feel positive about | 0 | 2 | 3 | 4 | 5
<table>
<thead>
<tr>
<th>Trait</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>28. Reaching my future goals in life.</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>29. Childhood Disorders</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>30. Struggled with chronic medical issues needing frequent doctor visits.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>31. Behavior or emotional issues.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>32. Physical fights with other kids.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>33. Arrested or involved with the juvenile court system.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>34. Concussion, seizure or major injury to my brain.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>35. Social Drift Factors</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>36. Struggling academically.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>37. Dropping out of school.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>38. Friends get in trouble.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>39. Alcohol, tobacco, or drugs.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>40. Family Stress Factors</td>
<td>No</td>
<td>Yes</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>41. I receive free or reduced lunch at school.</td>
<td>No</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>42. My parents are divorced or separated.</td>
<td>No</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>43. Living with a single parent.</td>
<td>No</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>44. Living with five or more</td>
<td>No</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>-----------------------------------------------------------------</td>
<td>----</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
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<tr>
<td>43. My family has moved in the past year.</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>44. I fight or argue with my parent(s) or caregiver(s).</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**Net Resiliency Summary**

Total Number of Protective Factors (Items #1-#28: Either answered “Yes” or “3, 4, 5”): _____

Total Number of Risk Factors (Items #29-#44: Either answered “Yes” or “3, 4, 5”): _____

Net Resiliency (Total Protective Factors – Total Risk Factors): _____

**DO NOT COPY**
APPENDIX B

Correlations of Risk and Protective Factors With Net Resiliency Scores

<table>
<thead>
<tr>
<th></th>
<th>Net Resiliency:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td>Sig.</td>
</tr>
<tr>
<td>(2-tailed)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>There are other adults or family members that help my parent(s) or caregiver(s) take care of me.</td>
<td>.111</td>
</tr>
<tr>
<td>2.</td>
<td>I feel loved and cared for at home.</td>
<td>.301**</td>
</tr>
<tr>
<td>3.</td>
<td>I feel like I have a warm and positive relationship with my parent(s) or caregiver(s).</td>
<td>.285**</td>
</tr>
<tr>
<td>4.</td>
<td>I am or my family is involved in a community or worship or church.</td>
<td>.106</td>
</tr>
<tr>
<td>5.</td>
<td>I have rules I have to follow at home.</td>
<td>.297**</td>
</tr>
<tr>
<td>6.</td>
<td>I have a curfew at home.</td>
<td>.303**</td>
</tr>
<tr>
<td>7.</td>
<td>I have chores I have to complete at home.</td>
<td>.273**</td>
</tr>
<tr>
<td>8.</td>
<td>My punishment is fair when I get in trouble.</td>
<td>.504**</td>
</tr>
<tr>
<td>9.</td>
<td>My parent(s) or caregiver(s) discuss the punishment with me.</td>
<td>.177</td>
</tr>
<tr>
<td>10.</td>
<td>I have close and positive relationships with adults outside of my family.</td>
<td>.195</td>
</tr>
<tr>
<td>11.</td>
<td>I feel like I am supported by adults at school.</td>
<td>.291**</td>
</tr>
<tr>
<td>12.</td>
<td>I feel like I am supported by my close friends.</td>
<td>.260*</td>
</tr>
<tr>
<td>13.</td>
<td>I feel like I get along with my peers.</td>
<td>.294**</td>
</tr>
<tr>
<td>14.</td>
<td>I feel like I get along with adults.</td>
<td>.333*</td>
</tr>
<tr>
<td>15.</td>
<td>I feel like people like me.</td>
<td>.396**</td>
</tr>
<tr>
<td>16.</td>
<td>I feel like people think I have a good sense of humor.</td>
<td>.104</td>
</tr>
<tr>
<td>17.</td>
<td>I feel like I help others when they are down or need help.</td>
<td>.409**</td>
</tr>
<tr>
<td>18.</td>
<td>I feel as though I am a good problem solver.</td>
<td>.362**</td>
</tr>
<tr>
<td>19.</td>
<td>I feel like I try hard in school even though I don’t get good grades.</td>
<td>.184</td>
</tr>
<tr>
<td>20.</td>
<td>I feel like I am a good reader.</td>
<td>.185</td>
</tr>
<tr>
<td>Statement</td>
<td>Correlation Coefficient</td>
<td>P-value</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>--------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>21. I participate in extracurricular activities.</td>
<td>-0.020</td>
<td>0.849</td>
</tr>
<tr>
<td>22. I have hobbies.</td>
<td>0.059</td>
<td>0.581</td>
</tr>
<tr>
<td>23. I feel like I have special talents or skills.</td>
<td>0.196</td>
<td>0.062</td>
</tr>
<tr>
<td>24. I feel like events and the direction of my life are in my control.</td>
<td>0.235*</td>
<td>0.025</td>
</tr>
<tr>
<td>25. I feel positive about reaching my future goals in life.</td>
<td>0.222*</td>
<td>0.034</td>
</tr>
<tr>
<td>26. I feel like I am independent minded.</td>
<td>0.101</td>
<td>0.342</td>
</tr>
<tr>
<td>27. I have struggled with chronic medical issues needing frequent doctor visits.</td>
<td>-0.100</td>
<td>0.347</td>
</tr>
<tr>
<td>28. I have been treated for behavioral or emotional issues.</td>
<td>-0.498**</td>
<td>0.000</td>
</tr>
<tr>
<td>29. I get into physical fights with other kids.</td>
<td>-0.513**</td>
<td>0.000</td>
</tr>
<tr>
<td>30. I have been arrested or involved with the juvenile court system.</td>
<td>-0.230*</td>
<td>0.028</td>
</tr>
<tr>
<td>31. I have had a concussion, seizure, or major injury to my brain.</td>
<td>-0.261*</td>
<td>0.013</td>
</tr>
<tr>
<td>32. I am struggling academically.</td>
<td>-0.498**</td>
<td>0.000</td>
</tr>
<tr>
<td>33. I have thought about dropping out of school.</td>
<td>-0.590**</td>
<td>0.000</td>
</tr>
<tr>
<td>34. The friends I hang out with get in trouble.</td>
<td>-0.506**</td>
<td>0.000</td>
</tr>
<tr>
<td>35. My close friends have tried alcohol, tobacco, or drugs.</td>
<td>-0.225*</td>
<td>0.032</td>
</tr>
<tr>
<td>36. I have tried alcohol, tobacco, or drugs.</td>
<td>-0.213*</td>
<td>0.043</td>
</tr>
<tr>
<td>37. I fight or argue with my parent(s) or caregiver(s).</td>
<td>-0.454**</td>
<td>0.000</td>
</tr>
</tbody>
</table>

** p < 0.01
* p < 0.05
APPENDIX C

IRB APPROVAL LETTER

University of New Hampshire

Research Conduct and Compliance Services, Office of Sponsored Research
Service Building 51 College Road, Durham, NH 03824-3585
Fax 603-862-3564

25-Mar-2008

DePasquale, Chad
Education, Morrill Hall
439 Bennett Way
Newmarket, NH 03857

IRB #: 4248
Study: Exploring Net Resiliency in Children Ages 11 to 18
Approval Date: 24-Mar-2008

The Institutional Review Board for the Protection of Human Subjects in Research (IRB) has reviewed and approved the protocol for your study as Exempt as described in Title 45, Code of Federal Regulations (CFR), Part 46, Subsection 101(b) Approval is granted to conduct your study as described in your protocol.

Researchers who conduct studies involving human subjects have responsibilities as outlined in the attached document, Responsibilities of Directors of Research Studies Involving Human Subjects. (This document is also available at http://www.unh.edu/osr/compliance/irb.html.) Please read this document carefully before commencing your work involving human subjects.

Upon completion of your study, please complete the enclosed pink Exempt Study Final Report form and return it to this office along with a report of your findings.

If you have questions or concerns about your study or this approval, please feel free to contact me at 603-862-2003 or Julie.simpson@unh.edu Please refer to the IRB # above in all correspondence related to this study. The IRB wishes you success with your research.

For the IRB,

Julie F. Simpson
Manager

cc: File
Thompson, Janet