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Graduate Studies

FACTORS OF RESILIENCY AND DEPRESSION IN ADOLESCENTS

A Chapter Style Thesis Submitted in Partial Fulfillment of the Requirements for the  
Degree of Education Specialist in School Psychology

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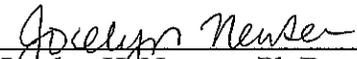
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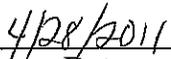
FACTORS OF RESILIENCY AND DEPRESSION IN ADOLESCENTS

By Michelle S. Anderson

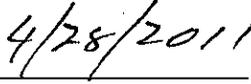
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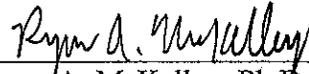
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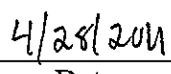
  
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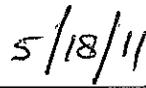
  
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## ABSTRACT

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Despite multiple studies indicating that as overall resilience increases, overall level of depression decreases, little is known about the specific factors that contribute to this relationship. This study examined the predictive relationship between factors of resilience, number of stressors, and factors of depression in adolescents utilizing multivariate multiple regression with canonical correlation analysis (CCA). Consistent with past research, overall resilience was negatively correlated with overall depression, as determined by a univariate correlation analysis. The equanimity and meaning factors of resilience contributed the most to the prediction of factors of depression. Further, number of stressors was a significant predictor of depression, indicating that reducing stressors such as difficulty with peers at school and discrimination may reduce adolescents' risk for depression. These results were discussed with implications for the school-based tiered prevention and intervention programs of Response to Intervention (RtI) and Positive Behavioral Interventions & Supports (PBIS). Qualitative data about adolescent support systems and coping strategies were also analyzed and discussed. Future areas of research include experimental designs that assess the effectiveness of resilience interventions. With greater understanding of this relationship, school psychologists can better support students' mental health needs both as a preventative measure and for intervention purposes.

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## **CHAPTER 1**

### **INTRODUCTION AND LITERATURE REVIEW**

#### **Statement of the Problem**

Children and adolescents spend more time at school than any other place outside the home (Lerner & Steinberg, 2004). Consequently, educators are often concerned with the identification and intervention of students with mental health difficulties. However, difficulties abound in deciding how and when to screen children for mental health concerns such as depression, differentiating between symptoms of depression and typical developmental behaviors, and the fact that adults and peers are not often able to easily detect depressive symptoms.

Depression in adolescence is currently a serious public health concern. In 2007, 8% of adolescents aged 12-17 experienced major depressive episodes. Rates of adolescents experiencing major depressive episodes increased with age, with 11.5% of 16 and 17 year olds enduring this experience. Of these adolescents, nearly half reported severe impairment in home, school/work, family, and/or social life and nearly a quarter reported very severe impairment (Federal Interagency Forum on Child and Family Statistics, 2009). Depression may adversely affect an individual's academic achievement, social and familial relationships, contribute to health problems, and increase his or her risk for suicide and substance abuse. Internalizing disorders such as

depression are often under-identified or mistaken for lack of motivation or disinterest (Huberty, 2005). The current study aims to examine the relationship between adolescent resilience and depression in order to identify an appropriate point of intervention.

## **Literature Review**

### **Adolescence**

As children mature into early adolescence, they encounter the challenges and opportunities that accompany puberty. They find their bodies perhaps disconcertedly rapidly maturing, and the physical changes are accompanied by cognitive developments that foster increasingly sophisticated thought processes as well as more social opportunities for peer relationships at the same time as they encounter less parental supervision (Schneider & Bullock, 2009). The period of adolescence can be a particularly delicate time for individuals, with many mood changes and emotional fluctuations.

During adolescence, there is an asynchrony between the neurological development of emotional processing in the limbic system and that of executive functions of the prefrontal cortex (Lerner & Steinberg, 2004). The frontal and prefrontal cortexes are the last parts of the brain to mature in human development, and this occurs during adolescence and into the mid-twenties. Executive functions of the prefrontal cortex include impulse control, planning, reasoning, emotional regulation, risk conceptualization, and the ability to learn from experience. It is only natural that adolescents face difficult emotional challenges and decision-making choices during the closing stages of neuromaturation (Blum & Blum, 2009). It is important to note that the

traditional “storm and stress” view (e.g. Hall, 1904; Freud, A., 1969) of adolescence has been revised by the more balanced view of a period of biological, cognitive, emotional, and social reorganization during which children become adults (Lerner & Steinberg, 2004).

## **Depression**

Emotion can be defined as, “short-lived cognitive and somatic reactions to specific environmental or cognitive antecedents” (Sherer, 2000, p. 144). This is to be distinguished from mood, which can be defined as “the background affective state of an individual, lasting on the order of minutes and often not having a specific known antecedent” (Bower & Forgas, 2000, p. 139). While changes in emotion and mood happen on a regular basis, they can become so severe that they are no longer developmentally appropriate or adaptive. It is when this occurs that an individual should be assessed for the possibility of an internalizing disorder such as depression or anxiety.

The word depression has several meanings and levels of severity. It has been described as the “common cold of mental illness” due to the fact that individuals with depression experience wide ranging symptoms and differing levels of severity (Karren, Hafen, Smith, & Frandsen, 2006, p. 200). It can be a description of typical human affect occurring when life is disrupted by loss, conflict, or trauma. Depression can also be a symptom of illness or medication side effects. Further, it can be a syndrome, including a constellation of co-occurring symptoms such as sadness, loneliness, and worry (Karren et al., 2006). Lastly, it can be a disorder, which means that the symptoms profoundly impact an individual’s daily functioning (Merrell, 2008). It should be noted that no two people experience depression in the same way (Solomon, 2001).

Several factors of depression have been identified. *Negative Mood* includes symptoms such as feeling sad, crying, worrying about “bad things,” and being bothered or upset. *Negative Self-Esteem* includes self-dislike, feeling unloved, and suicidal ideation. *Ineffectiveness* has been defined as negatively evaluating one’s ability and school performance. *Interpersonal Problems* include having problems interacting with peers and feeling unimportant in one’s family (Kovacs, 2010).

A major challenge in addressing the mental health needs of children and adolescents is that it was believed for many years that internalizing disorders such as depression could only be experienced in adults (Merrell, 2001). It was once believed that children did not have the intellectual complexity to experience depression. A more current understanding is that children can have depression, but may experience some of the symptoms differently than adults do.

Depression is considered an internalizing disorder, which consists of overcontrolled symptoms. Individuals with depression have inappropriate self-regulation of their internal emotions and cognitions (Merrell, 2001). Specific concerns for adolescents in relation to depression include negative patterns of thinking, beginning to feel much deeper emotions, and the external pressures that come along with young adulthood (Kerig & Wenar, 2006). An example of a negative pattern of thinking would be stating “everybody’s out to get me – all the teachers are against me and none of the kids want to hang out with me.” In this type of emotional dysregulation, the adolescent selectively abstracts one small event and draws broad negative conclusions from it, feeling more depressed. Dysregulation can also manifest itself through physical actions, such as an adolescent reporting, “When he calls me a loser, I just get so angry that all I

can do but cut myself.” Adolescents can become so overwhelmed by emotions that their coping strategies begin to break down into these maladaptive dysregulations (Sharf, 2008). Some of the major consequences of such internalizing disorders include diminished self-esteem, academic problems, poor social relationships, chronic mental health problems, substance abuse, and suicidal thoughts, attempts, and completion (Merrell, 2001).

Individuals with internalizing disorders such as depression often go unnoticed for far too long simply because their symptoms are not overt or disruptive. Due to the high costs associated with pediatric depression treatment in clinical settings, there has been a significant shift toward preventative measures. These often take the form of universal preventative interventions in the school setting administered to all members of a target population. In the three-tiered Response to Intervention (RtI) model (see Figure 1 for a detailed model of RtI), schools are called to address both academic and socio-emotional needs through a problem-solving approach (Brown-Chidsey, Bronaugh, & McGraw, 2009). This process is relatively straightforward for academic subjects. For example, all students should receive at least 90 minutes per day of core curriculum-derived reading instruction that is adapted to meet their needs. For the small group of students who still struggle even with strong core instruction, targeted group interventions with weekly progress monitoring and an additional 30 minutes of reading per day should be implemented. Finally, a few students will need intensive, individualized interventions in order to meet their academic reading needs (Brown-Chidsey, et al., 2009).

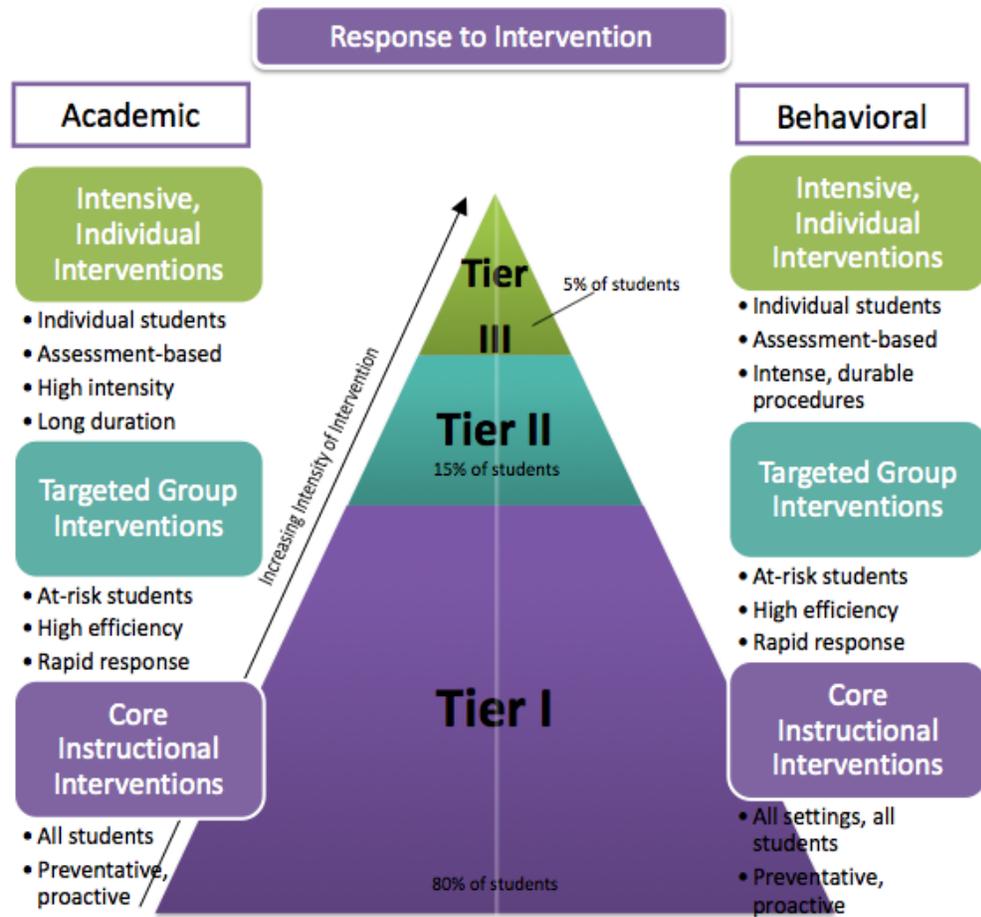


Figure 1. Response to Intervention (RtI) Framework

While fairly straightforward for academics, there are much less clear guidelines and practices for the use of RtI to address the socio-emotional needs of students. The basic guidelines for RtI and mental health include general psychological education for all students (Tier I), group intervention programs for at-risk students (Tier II), and therapeutic interventions for individual students and families (Tier III) (Simon, 2010). The National Association of School Psychologist's *Best Practices V* does explain that all children should be screened for depression at the universal Tier I level. Tier II involves the implementation of group interventions for targeted groups and Tier III should include

individual direct intervention through consultation with parents and teachers (Huberty, 2005).

There is a great deal of research about at-risk and protective factors in relation to depression in adolescence, especially from clinical settings. However, there is still a lack in information about evidence-based interventions that can be used within the school setting. One proposed construct that may be of use to educators interested in the preventing/intervening for depression in students is the area of resilience.

### **Resilience**

As children move into this period of emergent adulthood, powerful interactions between biological, cognitive, and socio-emotional factors influence their psychosocial functioning. The better they can utilize their psychological strengths to navigate challenging new experiences, the more successful they can be their transition toward adulthood. Resilience is a term used to describe this type of psychological strength (Blum, 2009). Social scientists have long understood that children exposed to adverse life events often have negative outcomes. However, in the 1970s, many researchers began noting that some children exposed to adversity did much better than other children exposed to similar events (e.g. Garmezy, 1974; Murphy & Moriarty, 1976; Werner, 1971). This inspired many questions and future work to better understand children who were considered invulnerable, stress resistant, and resilient (Luster, Bates, & Johnson, 2006).

### **Defining Resilience**

Resilience has been defined in many ways. A few common definitions of resilience include: “the process of, capacity for, or outcome of successful adaptation

despite challenging or threatening circumstances” (Masten, Best, & Garmezy, 1990, p. 425), “the capacity to transcend adversity” (Gilligan, 1997, p. 14), and the “skills, attributes, and abilities that enable individuals to adapt to hardships, difficulties, and challenges” (Alvord & Grados, 2005, p. 238).

While controversy remains over what exactly constitutes resilience and how to measure successful adaptation to adversity, most researchers agree that resilience involves multiple skills that help individuals cope (Alvord & Grados, 2005). *Coping* has been defined as the process of coming up with new ways of dealing with adverse situations that arise (Lerner & Steinberg, 2004). Having the ability to adapt successfully in the face of risk has implications for positive mental health during adolescence. *Risk* is defined as the increased probability of a negative outcome in a certain population. In addition to overcoming risk, these adolescents are better able to involve themselves with others in meaningful and productive relationships and activities (Lerner & Steinberg, 2004). *Vulnerability* is different than *risk* in that it encompasses the degree to which risk factors are associated with negative outcomes. Vulnerability helps explain why some people exposed to risks experience difficulties and others continue as usual.

Protective factors are another concept that may help explain why some adolescents are able to cope with adverse life events better than others (Daniel & Wassell, 2002). Risk factors, contrarily, are variables that can significantly increase the likelihood of negative outcomes. Some risk and protective factors are stable and consistent throughout time (e.g. chronic poverty or a supportive and structured family environment), while others may emerge during adolescence. Factors that emerge during

adolescence are considered developmental risk and protective factors, and include changes in brain development and cognition (Lerner & Steinberg, 2004).

### **Resilience in Adolescents**

Bronfenbrenner's ecological framework helps us consider what resources and risks an adolescent has available at each level (Bronfenbrenner, 1979). Looking at the broad picture of the individual's environment helps us assess the influences, both positive and negative, that may affect the adolescents' mental wellness. Figure 2 shows a basic model of Bronfenbrenner's ecological framework (Bronfenbrenner, 1979).

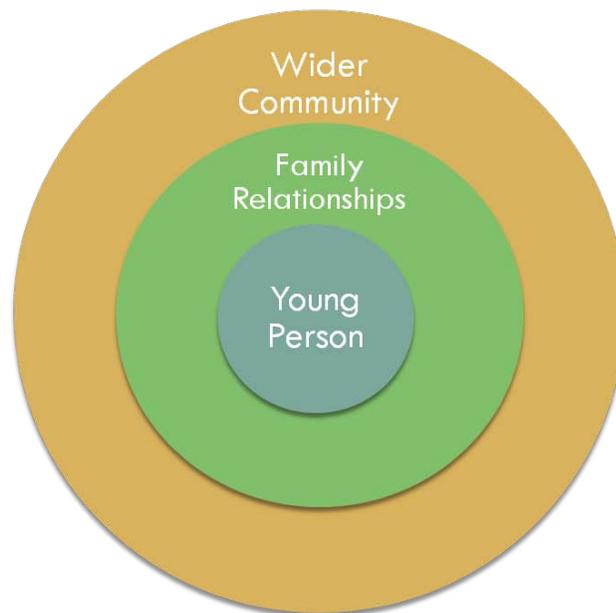


Figure 2. Bronfenbrenner's Ecological Framework

At the individual level, adolescents have variations in disposition and temperament that may serve as protective (or risk) factors. Protective factors serve to buffer or ameliorate the effects of adverse situations. Individual risks factors, on the other hand, could include low birth weight or having a specific learning disability

(Luster, Bates, & Johnson, 2006). Moving out beyond the individual level, students may have close family or substitute family relationships that serve to provide secure attachments (Daniel & Wassell, 2002). Contrarily, they may have grown up in neglectful or abusive families or had a peer group that engaged in risky behaviors (Luster et al., 2006). Finally, at the outer tertiary level, the wider community may provide extra-familial supports to the adolescent (Daniel & Wassell, 2002) or be a place of violence and prejudice (Luster et al., 2006). School (a tertiary level support) can be viewed as a safe haven for some students who have difficult home lives. As educational professionals, school psychologists need to strive to create open environments in which they can support these students. They can provide regularity and safety in an otherwise chaotic world. However, they also need to be aware that some students will view school as a source of stress and anxiety (Daniel & Wassell, 2002).

Bronfenbrenner's (1974; 1979) and Hamburg's (1992) theoretical frameworks of development in the context of reciprocal collaborations are core foundations of adolescent research. Furthermore, there are varying theoretical frameworks specifically in the area of resilience. Some researchers view resilience as a personality *trait*, implying that it is a stable and innate quality that influences individual behavior. If this is so, then our ability to respond to adverse life situations is limited by our inherited level of resilience (Wagnild, 2009). Others argue that individuals can only develop resiliency in the face of adversity, and thus it cannot be a lifelong stable trait (Rutter, 2007). Another theory is that resilience is a *state* of being at a particular point in time resulting from dynamic interactions with the environment. The current research project is embodied by the theoretical framework that resilience is a complex relationship between nature and

nurture that cannot be limited solely by trait or state. It takes the stance of Plomin and Spinath (2004), who have determined that behavior is not influenced by trait *or* state, but rather by trait *and* state. Under this framework, it should be possible that resilience can be strengthened in individuals who are at-risk or currently experiencing adversity (Wagnild, 2009).

A key concept in resilience research is that of cumulative risk. While adolescents may be able to cope relatively well with one major risk factor, they can often be overwhelmed when faced with multiple risk factors. As the number of risk factors increases, the probability of poor outcomes increases (Luster et al., 2006). For some individuals, the addition of other risks add up to a complicated web of cumulative risk which is much more difficult for adolescents to undertake.

The core foundations of resilience include having a secure base with a sense of belonging and security, good self-esteem, and a sense of self-efficacy in understanding one's personal strengths and weaknesses. Other domains of resilience include educational achievement, talents and interests, positive values, social competencies, and friendships (Luster et al., 2006). Friendship provides adolescents with situations in which to acquire and better develop their social skills, gain knowledge about themselves and others, provide emotional support, and can serve as the basis for future intimate relationships (Daniel & Wassell, 2002).

There are also many other individual factors associated with resilience during the adolescent years. Simply being male is one of the main factors associated with resilience during the adolescent years. In particular, females have traditionally been at much higher risk for internalizing disorders than their male peers (Daniel & Wassell, 2002). Although

this gender difference does appear to exist, it may be that males experience depression at similar rates as females, but have different presentation of symptoms. Males may exhibit more externalizing behaviors, such as bullying, violence, vandalism, or substance abuse (Kerig & Wenar, 2006). The influence of gender may be explained by pubertal transition variables such as time of menarche in girls. Girls who experience early-onset menarche show higher levels of depressive symptoms than typically maturing or late-maturing peers (Lerner & Steinberg, 2004).

Other factors associated with resilience during the adolescent years include responsibility, empathy for others, internal locus of control, social maturity, and having talent in some area (Daniel & Wassell, 2002). Having an outside adult support such as a coach, teacher, clergy member, or mentor has been shown to support resilience. Another factor is involvement in prosocial organizations and activities such as 4-H, the YMCA/YWCA, or a religious group. Consistent with Erikson's stage theory, adolescents with a strong sense of identity show resilience. For girls, this is experienced through being assertive and independent; for boys, this includes having a positive male role model (Luster et al., 2006).

In Rubin's *The Transcendent Child* (1996), a case study of adults who turned out well despite difficult early family experiences, a consistent theme in these resilient individuals was a trait termed *adoptability*. These individuals were able to make good use of even brief experiences with supportive mentors and surrogate parents at key times in their lives. They used their personalities to elicit support from these helpful people when they could. One resilient adult in the book reflected on her abusive childhood,

“*That is what happened to me; it’s not who I am,*” (Rubin, 1996, p. 228 as cited in Luster et al., 2006).

Protective and at-risk factors can be moderated or mediated by other factors, increasing or decreasing the likelihood that various stressors will contribute to psychopathology (Lerner & Steinberg, 2004). Moderating variables are pre-existing characteristics that may include age, gender, temperament, stress reactivity, and the presence of stable supportive relationships. Mediators are factors that are activated by stressful situations and include coping responses and cognitive style. It is important to note that not all attempts at coping mean that competence has been gained or result in resilience (Lerner & Steinberg, 2004). As all who have experienced adolescent life know, some coping efforts are unsuccessful.

Being aware of these protective and at-risk factors can help practitioners enhance and strengthen resilience in children and adolescents. While some of these factors are biologically determined, others can be environmentally strengthened and learned, such as social supports, literacy skills, and helping students move from an external to an internal locus of control (Alvord & Grados, 2005). These are the areas that we, as educational professionals, can and should address in our adolescents who are at-risk for internalizing disorders.

### **Factors of Resilience**

Five main factors associated with resilience have been identified. *Equanimity* has been defined having a balanced perspective on life. *Existential aloneness* is having a sense of uniqueness and independence. *Meaningfulness* can be conceptualized as holding the belief that life has a purpose. *Perseverance* means persisting despite discouragement.

Lastly, *self-reliance* is the ability to utilize one's own strengths and experiences to navigate difficult situations (Wagnild & Young, 1993).

### **Connecting Resilience to Depression**

Research indicates that as resilience increases, depression decreases (Nrughma, Holen, & Sund, 2010; Smith, 2009; Wagnild & Young, 2010). Despite these findings, little is known about the specific factors that contribute to this relationship. Adolescence is a period in which the incidence of depression significantly increases. With greater understanding of the specific ecological supports that contribute to resilience in adolescents, school psychologists and other professionals working in the schools can better support students' mental health needs in terms of preventing psychopathology and promoting psychological wellness. Therefore, the current thesis seeks to examine the relationship between the various factors that contribute to resiliency (equanimity, existential aloneness, meaning, perseverance, and self-reliance) and level of depression in adolescents.

### **Significance of Current Study**

Adolescence is a period in which the incidence of depression significantly increases. With greater understanding of the specific ecological supports that contribute to resilience in adolescents, school psychologists and other professionals working in the schools can better support students' mental health needs in terms of preventing psychopathology and promoting psychological wellness.

It is important that school psychologists be aware of specific factors of resilience and how they relate to depression. While some protective factors are biologically determined, others can be environmentally strengthened and learned (Alvord & Grados,

2005). These alterable traits associated with resilience are the areas to be addressed in working with adolescents in the schools. With greater understanding of this relationship, school psychologists can better support students' mental health needs both as a preventative measure and for intervention purposes. With recent state and federal requirements of utilizing Response to Intervention (RtI), educators need to have specific information about what they can do to address the very serious issue of depression at all levels. Adolescence is a time of great importance to us all; for, as Lerner and Steinberg (2004) stated, "*The future of civil society in the world rests on the young,*" p. 9.

### **Research Questions and Hypotheses**

Based upon previous literature in the areas of resilience, depression, and adolescence, three basic research questions have emerged:

- 1) Are overall factors of resilience and overall levels of depression related?
- 2) Which factors of resilience (Equanimity, Existential Aloneness, Meaning, Perseverance, and Self-Reliance) are most correlated with overall depression? and
- 3) Which factors of resilience (Equanimity, Existential Aloneness, Meaning, Perseverance, and Self-Reliance) are most predictive of factors of depression (Negative Mood, Negative Self Esteem, Ineffectiveness, or Interpersonal Problems)?

## **CHAPTER 2**

### **METHODS**

The current study was designed to explore the connection between factors of resiliency and depression in adolescence and to aid school professionals in gaining insight into appropriate prevention and intervention techniques for adolescents. Specifically, the research design was a predictive relationship between stressors and the various factors that contribute to resiliency and factors of depression. The independent variables were number of stressors, and the five subfactor scores of resilience, as measured by the Resilience Scale (Wagnild & Young, 1993). The dependent variables were level of factors of depression, as measured by the Children's Depression Inventory – Second Edition (CDI-2).

#### **Participants**

The participants for this study were middle and high school students from a small rural school district in Wisconsin. Data from the 2009-2010 school year indicated that students in the district were 96.8% White, 2.4% Hispanic, 0.4% African American, and 0.4% Asian. The majority of students in the district (56.4%) come from families that are considered economically disadvantaged (WINSS, 2011). Participants provided demographic information on the date of data collection, including: age, grade, gender, race/ethnicity, and mother's highest level of education (used as an estimate of socio-

economic status). One hundred forty six students completed surveys, and after removing those missing data, one hundred seventeen subjects were retained. For multiple regression with canonical correlation, Tabachnick and Fidell (2007) recommend 10 subjects per variable in the analysis.

### **Procedures**

The procedure was approved by the University of Wisconsin – La Crosse Institutional Review Board (IRB) in compliance with the ethical standards published by the American Psychological Association. After obtaining IRB approval, the lead investigator contacted the superintendent and principal of the school. A proposal of the study was provided in written format and presented orally at the school board meeting. After approval by the school board, individual parent/guardian notification forms were distributed to the parents of 197 adolescents through the postal service (Appendix A). One parent called the lead researcher to state that her two children would not participate and the parents of 18 other students opted out in written format. Of 177 possible students, 48 students decided not to participate in the study. After notification and student informed assent (Appendix B), the remaining 129 students completed self-report survey measures in a large group auditorium setting. The surveys were anonymous and there was no way to connect student information with individual student's names.

### **Instruments**

#### **Depression**

To measure overall depression, as well as specific factors of depression, students completed the Children's Depression Inventory – Second Edition (CDI-2). The normative sample included 1,100 children and adolescents from 26 different states in the

U.S., with 50 females and 50 males of each age from 7 to 17 years. Racial/ethnic demographics corresponded to the 2000 U.S. Census data. Further, the clinical sample that was obtained included 319 children and adolescents with Major Depressive Disorder (33.86%), Attention Deficit Hyperactivity Disorder (28.21%), Conduct Disorder/Oppositional Defiant Disorder (24.14%), and Generalized Anxiety Disorder (13.79%), (Kovacs, 2010). Internal consistency, as measured by Cronbach's alpha values, for the CDI-2 factors range from .73 to .85, with the overall depression score having the high reliability of .91. Test-retest reliability was also strong, with the overall depression score having a corrected  $r$  of .89 (mean difference between the first and second testing sessions was  $-0.3$ ,  $SD = 4.3$ ). Validity was demonstrated through significant correlations at the  $p < .01$  level with the Beck Depression Inventory – Youth version ( $r = .37$ ) and the Major Depressive Episode scale of the Conners Comprehensive Behavior Rating Scales ( $r = .58$ ) (Kovacs, 2010).

### **Resilience**

To measure overall resilience and associated subfactors, students completed the Resilience Scale (RS) developed by Wagnild and Young (1993). The RS has 25 items and produces an overall resilience score and five factor scores: equanimity (e.g. "I usually take things in stride,") existential aloneness (e.g. "I am friends with myself,") meaningfulness (e.g. "My life has meaning,") perseverance (e.g. "I am determined,") and self-reliance (e.g. "In an emergency, I'm someone people can generally rely on.") Each question has seven possible responses in a Likert-scale format ranging from 1 (strongly agree) to 7 (strongly disagree) (Wagnild, 2009). The Cronbach's alpha coefficient for reliability ranges from 0.85 to 0.94. Individual item-to-item correlations ranged from .37

to .75, with the majority between .50 and .70,  $p < .001$ . Content validity was developed through an expert panel and interviews with individuals considered to be resilient by successfully adapting to life after experiencing major life events (Wagnild, 2009). Concurrent validity is to be considered strong, due to high correlations with well-established validity measures of constructs linked with resilience and outcomes of resilience (depression  $r = -.37$ ) life satisfaction ( $r = .30$ ), moral ( $r = .28$ ), and health ( $r = -.26$ ) (Ahern, Kiehl, Sole, & Byers, 2006). Specifically, the RS has been highlighted as a strong measure for use with adolescents and has been used successfully with this population in at least 18 different studies (Wagnild & Young, 2010).

### **Demographic and Qualitative Questions**

Participants also indicated their basic demographic information such as gender, age, grade, socioeconomic status (as measured by mother's level of education) and race/ethnicity, as well as answer qualitative questions. These questions included: "When you are sad, what are three things you do to feel better?", "Who do you go to when something bad happens?", and "Have you ever been diagnosed with depression?" In addition, one of the study's variables was to look at adolescent stressors, so we asked the following question: "Which of the following have you experienced recently (Check all that apply)?" After conducting a review of relevant research, the lead investigator identified eight main adolescent stressors. These stressors included difficulty with peer relationships at school, difficulty with peer relationships in my neighborhood, difficulty with school classes, health related concerns (diseases or accidents), suicides or deaths of relatives or friends, conflict between family members, not getting along with my parents, and discrimination based on my race, gender, religion, sexual orientation, etc. (Garcia,

2010; McMahon, Grant, Compas, Thrum, & Ey, 2003; Suldo, Shaunessy, Thalji, Michalowski, & Shaffer, 2009). This question was included to identify and better understand adverse situations and stressors that the participants face. The results may describe adolescent populations and the stressors that they typically experience, leading to a needs assessment-based intervention plan for the school.

### **Hypotheses and Data Analysis**

It was hypothesized that people who reported higher resilience overall would report lower levels of depression. We conducted a correlational analysis to address this hypothesis. A multivariate multiple regression analysis with canonical correlation analysis was used to determine the predictive relationship between factors of resilience and factors of depression in adolescents. The independent variables were number of stressors, level of resilience, as measured by the RS (Wagnild & Young, 1993), and well as the five factors of resiliency: Equanimity, Existential aloneness, Meaningfulness, Perseverance, and Self-reliance. The dependent variable was level of depression, as measured by the CDI-2, along with the factors of depression: Negative Mood, Negative Self Esteem, Ineffectiveness, and Interpersonal Problems.

## **CHAPTER 3**

### **RESULTS**

The current study was designed to examine the predictive relationship between adolescent stressors and factors of resilience with factors of depression. Middle and high school students completed the Children’s Depression Inventory – Second Edition (CDI-2), the Resilience Scale (RS), qualitative questions, and a demographic questionnaire. A total of 197 parent/guardians received letters of notification and the parent/guardians of 20 students opted to have their children not participate in the study. One hundred seventeen participants were used for analysis after student self-removal and removal of cases with missing data. This chapter will begin with a description of demographic information of the research study sample, followed by a presentation of the results of the preliminary analyses, the main analyses addressing the hypotheses of this study, as well as findings of the qualitative data collected.

#### **Demographics**

Table 1 provides a summary of demographic information describing the participants in the study. Students were in grades 7 through 12 and their ages ranged from 12 to 18 (mean age = 15.19, SD = 1.72). Of the respondents, the majority identified themselves male (53%), and White (94%), with 1.7% identifying themselves as Hispanic and 0.9% “Other.” An estimate of socioeconomic status was measured by an eight point

scale of participants' mother's highest level of education ranging from "some high school" to "doctoral degree" and including the options "other" and "I don't know." The majority of students reported coming from families in which their mother's highest level of education was high school (24.8%) or some college (20.5%). Approximately 4% of students reported having a diagnosis of depression.

Table 1

*Student Demographic Information (N = 117)*

Demographic	Frequency	Percentage
<b>Gender</b>		
Male	62	53.0
Female	55	47.0
<b>Age</b>		
12	8	6.8
13	16	13.7
14	17	14.5
15	21	17.9
16	24	20.5
17	22	18.8
18	9	7.7
<b>Grade in School</b>		
7	21	17.9
8	7	6.0
9	25	21.4
10	17	14.5
11	30	25.6
12	17	14.5
<b>Ethnicity</b>		
Hispanic	2	1.7
White	110	94.0
Other	1	0.9
<b>Mother's Highest Level of Education<sup>a</sup></b>		
Some High School	7	6.0
High School Graduate	29	24.8
Some College	24	20.5
2 Year Technical College	12	10.3
4 Year College Degree	21	17.9
Master's Degree	12	10.3
Doctoral Degree	2	1.7
Other	2	1.7
Don't Know	10	8.5
<b>Depression Diagnosis</b>		
Yes	5	4.3
No	112	95.7

*Note.* <sup>a</sup> Mother's Highest Level of Education used as an estimate of socioeconomic status.

## Preliminary Analyses

### Scale Statistics

The means, standard deviation, and range for participant scores on the measures of depression, resilience, and stressors are summarized in Table 2.

Table 2

*Means, Standard Deviations, and Ranges for Variables*

Variable	<i>M</i>	<i>SD</i>	Range
Number of Reported Stressors	1.69	1.45	0 - 6
Resilience Scale (RS)	137.72	18.61	91 - 171
Children's Depression Inventory (CDI-2)	51.15	9.59	40 - 87

*Note.* Mean score for RS is 135.49 (SD 19.68). Mean score for CDI-2 is 45.82 (SD 6.18).

Children's Depression Inventory – Second Edition (CDI-2) scores are converted to standard T-scores, with a mean of 50 and standard deviation of 10. T-scores between 40 and 59 are considered average, indicating that the respondent experiences a typical number of concerns. T-scores of 60 and above indicate more concerns than are typically reported and T-scores below 40 indicate fewer concerns than are typically reported. The mean for CDI-2 scores in this sample was in the average range ( $M = 51.15$ ;  $SD = 9.59$ ). See Table 3 for a full depiction of classification of participants' scores on the CDI-2.

Table 3

*Children's Depression Inventory – Second Edition Scores by Classification*

Classification	T-Score	Percentile Rank	Number of Students	Percentage
Very Elevated	70+	98%ile+	8	6.8
Elevated	65-69	93-97%ile	2	1.7
High Average	60-64	84-92%ile	6	5.1
Average	40-59	16-83%ile	88	75.2
Low	<40	<16%ile	13	11.1

The Resilience Scale (RS) scores are reported as raw scores, with scores below 130 indicating a low level of resilience. The mean for RS scores in this sample was in the moderate range ( $M = 137.72$ ;  $SD = 18.61$ ). See Table 4 for a full depiction of classification of participants' scores on the Resilience Scale.

Table 4

*Resilience Scale Scores by Classification*

Classification	RS Score	Number of Students	Percentage
Very Low	25-100	5	4.3
Low	101-115	10	8.5
On the Low End	116-130	29	24.8
Moderate	131-144	26	22.2
Moderately High	145-160	31	26.5
High	161-175	16	13.7

Of eight possible adolescent stressors listed, students in this sample reported experiencing a range of none to six stressors. The majority of students (29%) reported no stressors, while 20% reported two stressors and 20% reported three stressors. A small subset of students (1%) reported experiencing six stressors. The mean number of stressors reported was 1.69 (SD = 1.45). The most commonly reported stressor was conflict between family members, with 40% of the sample reporting this to be a stressor. Participants also commonly identified difficulty with peers at school (34%), difficulty with school classes (33%), and not getting along with parents (26%) as stressors. See Figure 3 for a full depiction of the percentage of students who reported difficulty with each stressor.

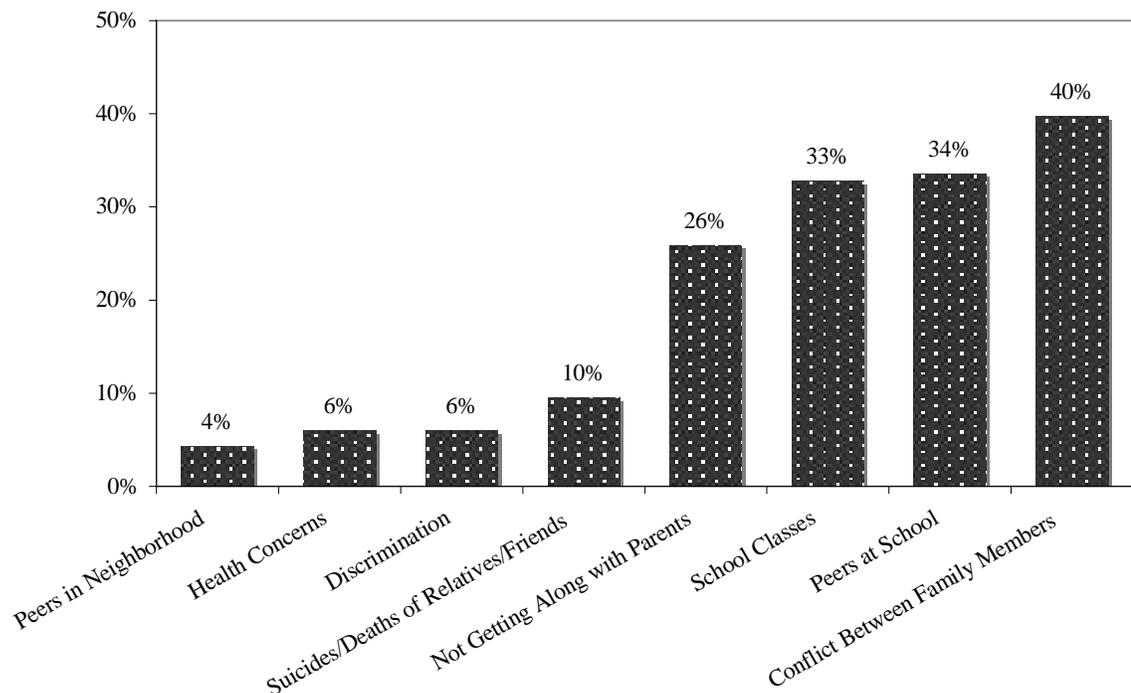


Figure 3. Percent Students Who Reported Experiencing Stressor

## **Reliability Analyses**

Reliability analyses were conducted for the RS and CDI-2 results of the current study. These values were then compared to those reported by the technical manuals of the measures. Overall reliability values for each of the measures were consistent with the original values published in the manuals. Reliability values of the subfactor scores of the CDI-2 were slightly lower than those presented in the manuals. Table 5 summarizes a detailed comparison of reliability Cronbach's alpha ( $\alpha$ ) values from the current study and those reported by the technical manuals. These values all exceed the recommendation that measures intended for group research purposes have reliability coefficients of .60 or higher (Salvia & Ysseldyke, 2007).

Table 5

*Comparison of Reliability of Measures in Current Study and Previously Reported*

Instrument	$\alpha$	$\alpha$ Reported by Manuals
Resilience Scale	0.91	0.90
Perseverance	0.68	*
Self-Reliance	0.73	*
Existential Aloneness	0.65	*
Meaning	0.65	*
Equanimity	0.72	*
Children's Depression Inventory (CDI-2) Total	0.86	0.91
Emotional Problems	0.76	0.85
Negative Mood/Physical Symptoms	0.60	0.75
Negative Self-Esteem	0.66	0.77
Functional Problems	0.78	0.83
Ineffectiveness	0.68	0.76
Interpersonal Problems	0.62	0.73

*Note.* \*Resilience Scale factor reliability scores not provided in technical manual.

**Main Analyses**

The main purpose of this study was to examine the predictive relationship between factors of resiliency and stressors with factors of depression in adolescents. Specifically, three research questions were proposed. Those three questions and their corresponding results will be presented in the following sections.

**Research Question 1: Are overall factors of resilience and overall levels of depression related?**

Correlations among all variables were calculated (See Table 6). Overall resilience and overall depression had a significant negative correlation,  $r(115) = -.463, p = .000$ . In addition, many significant correlations were found between the remaining variables. As expected, the subfactors of resiliency all had significant correlations to each other and to overall resiliency. Similarly, the subfactors of depression all had significant correlations to each other and to overall depression. There was also a significant correlation between the number of stressors reported and level of equanimity, a subfactor of resilience that measures the extent to which one holds a balanced view of life,  $r(115) = -.245, p = .000$ . Number of stressors was not significantly correlated with any other factors of resilience, but was significantly positively correlated with all factors of depression and overall depression.

**Research Question 2: Which factors of resilience (Equanimity, Existential Aloneness, Meaning, Perseverance, and Self-Reliance) are most correlated with overall depression?**

Each of the five factors of resilience were significantly negatively correlated with depression at the  $p < .001$  level (See Table 6). Equanimity ( $r = -.479$ ) and Meaning ( $r = -.469$ ) were most highly correlated with overall depression, followed by Perseverance ( $r = -.390$ ), Self Reliance ( $r = -.364$ ), and Existential Aloneness ( $r = -.259$ ). Correlations between +/- 0.2 and 0.4 are considered weak, +/- 0.4 to 0.7 moderate, and +/- 0.7 to 0.9 strong (Johnston, 2000).

Table 6

*Intercorrelations for Variables*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Overall Resilience		.872**	.789**	.827**	.848**	.868**	-.171	-.478**	-.439**	-.404**	-.392**	-.344**	-.347**	-.463**
2. Self Reliance			.567**	.688**	.732**	.689**	-.067	-.345**	-.289**	-.324**	-.340**	-.304**	-.281**	-.364**
3. Meaning				.504**	.646**	.633**	-.166	-.493**	-.472**	-.398**	-.384**	-.343**	-.331**	-.469**
4. Existential Aloneness					.575**	.661**	-.151	-.298**	-.250**	-.277**	-.188*	-.172	-.167	-.259**
5. Perseverance						.650**	-.076	-.388**	-.368**	-.305**	-.344**	-.317**	-.272**	-.390**
6. Equanimity							-.245**	-.494**	-.477**	-.399**	-.408**	-.329**	-.415**	-.479**
7. Number of Stressors								-.245**	.335**	.307**	.303**	.269**	.281**	.350**
8. Emotional Problems									.932**	.844**	.738**	.613**	.355**	.928**
9. Negative Mood										.604**	.629**	.530**	.615**	.831**
10. Negative Self Esteem											.724**	.595**	.735**	.844**
11. Functional Problems												.943**	.807**	.935**
12. Ineffectiveness													.577**	.838**
13. Interpersonal Problems														.830**
14. Overall Depression														

Note. \*\*Correlation is significant at the 0.01 level (2-tailed). \*Correlation is significant at the 0.05 level (2-tailed).

**Research Question 3: Which factors of resilience (Equanimity, Existential Aloneness, Meaning, Perseverance, and Self-Reliance) are most predictive of factors of depression (Negative Mood, Negative Self Esteem, Ineffectiveness, or Interpersonal Problems)?**

To address this question, a multivariate multiple regression analysis with canonical correlation was conducted to determine if number of stressors, and factors of resilience predict the factors of depression. This analysis was chosen because there were multiple independent and dependent variables. The independent variables selected for this analysis were the number of stressors reported and the five factors of resilience: Self Reliance, Meaning, Existential Aloneness, Perseverance, and Equanimity. The dependent variables were four factors of depression as measured by the CDI-2: Negative Mood, Negative Self Esteem, Ineffectiveness, and Interpersonal Problems. Due to high correlations (summarized in Table 6), the overall resilience score, the overall depression score, and two subscale scores (Emotional Problems and Functional Problems) were eliminated from the analysis. The means, standard deviations, and range of the variables can be found in Table 2.

Results of the multivariate multiple regression analysis revealed that overall, the independent variables significantly predicted the dependent variables, Wilks'  $\Lambda = .55$ ,  $F(24, 374) = 2.92$ ,  $p = .000$ . The correlation between the two sets of variables was  $R_c = .61$  (38% overlapping variance), indicating a moderately strong link between factors of resilience/number of stressors and factors of depression. Canonical correlations between .3 and .7 are considered moderately strong (Stephens, 2002). Follow-up univariate tests indicated that all four dependent variables were significantly predicted by the set of

independent variables (Negative Mood;  $F(6, 110) = 9.57, p = .000$ ; Negative Self-Esteem;  $F(6, 110) = 5.94, p = .000$ ; Ineffectiveness;  $F(6, 110) = 4.79, p = .000$ ; and Interpersonal Problems:  $F(6, 110) = 5.87, p = .000$ ).

Canonical loadings were used to determine the relative contribution of each variable to the multivariate relationship (see Table 7). Loadings greater or equal to .32 indicate a meaningful contribution to the multivariate relationship, with those over .45 considered fair, .55 good, .63 very good, and .71 excellent (Tabachnick & Fidell, 2007). All of the independent variables met this criterion; with Equanimity (.82) contributing the most to the overall relationship, followed by Meaning (.80), Perseverance (.64), Number of Stressors (.59), Self Reliance (.56), and Existential Aloneness (.44). Among the dependent variables, all four variables also had loadings that exceeded .30. Specifically, Negative Mood (-.95) contributed the most to the overall relationship, followed by Negative Self Esteem (-.79), Interpersonal Problems (-.77) and Ineffectiveness (-.70). The redundancy index showed that 65.46% of the variance in the set of depression variables was explained by the set of independent variables (the 5 factors of resilience and number of stressors reported). Pedhazur (1982), recommends a redundancy value of 10% or higher as meaningful.

Table 7

*Canonical Solution for Resilience Factors/Number of Stressors Predicting Factors of Depression*

Variable	Coefficient	$r_s$	$r_s^2$ (%)
Self Reliance	.01	<u>.56</u>	31.36
Meaning	.45	<u>.80</u>	63.72
Existential Aloneness	-.28	.44	19.33
Perseverance	.13	<u>.64</u>	40.66
Equanimity	.53	<u>.82</u>	66.90
Number of Stressors	-.42	<u>.59</u>	34.98
$r_c^2$			37.66
Negative Mood	-.67	<u>-.95</u>	90.14
Negative Self Esteem	-.19	<u>-.79</u>	61.68
Ineffectiveness	-.17	<u>-.71</u>	50.12
Interpersonal	-.13	<u>-.77</u>	59.90

*Note.* Structure coefficients ( $r_s$ ) greater than  $|.45|$  are underlined for emphasis.

## Analyses of Qualitative Questions

Students responded to two qualitative questions about 1) the support systems they access when something goes wrong and 2) the coping strategies they implement when they are feeling sad. They were provided with three blank spaces for open-ended answers to each question. The lead researcher entered the raw data for each of the questions and analyzed responses by coding for themes.

In response to the question, “Who do you go to when something bad happens?” the majority of students included a parent (74%) and friend (69%) as at least one of their three answers. Teachers or other school employees such as counselors or principals were only listed by 12% of students. See Figure 4 for a full depiction of all response themes for the question of student support systems.

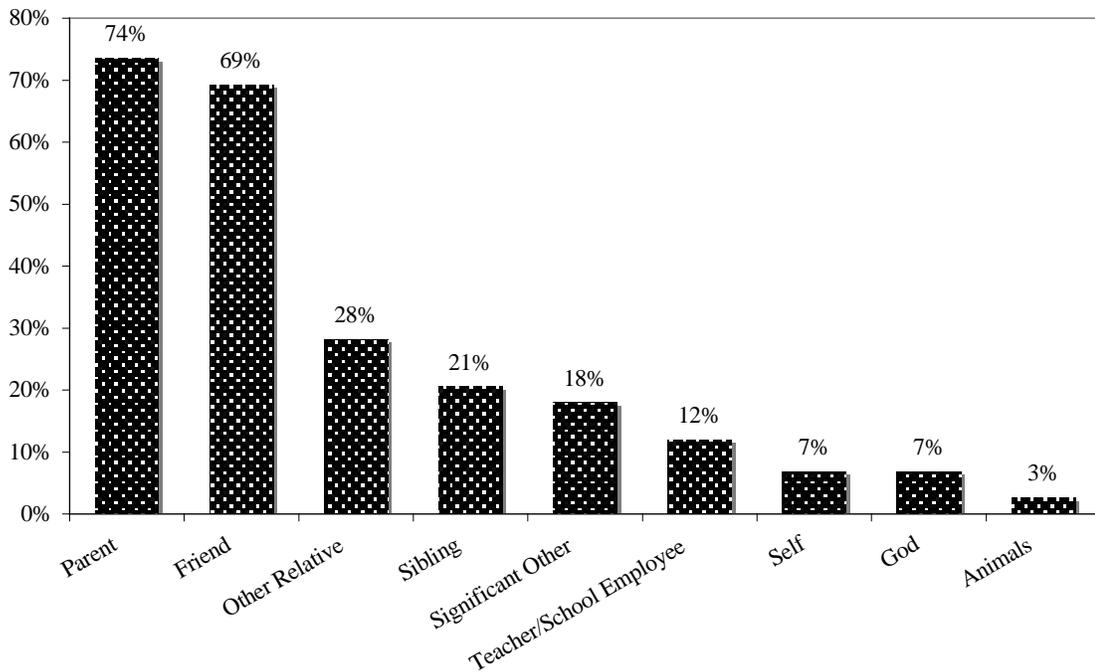


Figure 4. Percent Students Who Reported Support System Type

Students also responded to the question, “What are three things you do when you are feeling sad?” The majority of student responses described engaging in an activity and keeping busy. The most frequent responses within this genre of engaging in an activity included listening to music and playing video games. Another major theme that arose from the question on coping strategies was going to talk with and/or hang out with people, which was reported by 59% of respondents. Seventeen percent indicated attempting to make some type of cognitive shift by thinking about something positive, trying to “forget about it,” laughing, or thinking of something else. See Figure 5 for a full depiction of coping strategy response themes.

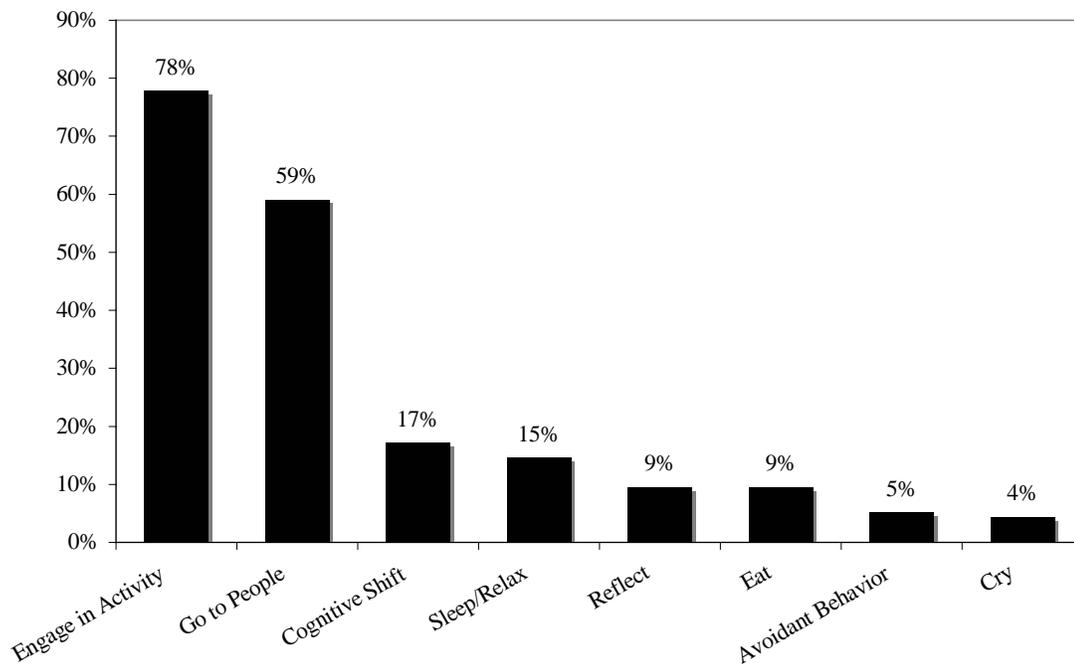


Figure 5. Percent Students Who Reported Coping Strategy

## **CHAPTER 4**

### **DISCUSSION**

The purpose of the current study was to conduct a preliminary investigation of the predictive relationship between factors of resiliency and number of stressors to factors of depression and overall level of depression. Understanding specific predictive relationships could potentially suggest target points of intervention for students identified with depressive symptoms, low resiliency, and/or risk factors and stressors. This information would provide important information about strategies for schools, teachers, families, school psychologists, and other pupil service providers to help promote psychological well-being and prevent psychopathology and negative outcomes in adolescents.

Adolescents completed a stressor checklist developed from a review of literature on the most frequent adolescent stressors. Interpersonal stressors (conflict between family members and difficulty with peers at school) were reported by over one-third of the sample. One-third of the sample reported academic concerns and one-quarter of the sample reported not getting along with parents. Adolescents also reported information about resilience and depression, as measured by the Resilience Scale (Wagnild & Young, 1993), the Children's Depression Inventory – Second Edition (Kovacs, 2010). Results from the current study found reliability values concurrent with those reported by Wagnild

(2009) for the Resilience Scale and Kovacs (2010) for the CDI-2. This indicates that findings from the current study can be interpreted as reliable estimates of the constructs measured.

A significant negative correlation was found between overall resilience and depression in the current study. This supports past research indicating that adolescents with higher levels of resilience are less likely to report depressive symptoms, and vice versa. This finding is concurrent with numerous previous studies (Nrughma, Holen, & Sund, 2010; Smith, 2009; Wagnild & Young, 2010). Such a correlation indicates that building resilience in adolescents may have strong implications for the prevention of depressive symptoms. Overall, it is promising that the majority of participants had levels of depression that were within typical limits and had at least moderate levels of resiliency. However, the minority of students who did report low levels of resiliency tended to also report significant levels of depressive symptoms.

Before conducting the main analyses, the correlations among the fourteen variables (number of stressors, overall resilience, five factors of resilience, overall depression, and six factors of depression) were calculated. The results of the correlation analysis revealed that overall resilience and each of the factors of resilience were significantly correlated with one another. Further, overall depression and each of the factors of depression were significantly correlated with one another. These correlations within the constructs of resilience and depression are to be expected, as that is the nature of the original psychometric design of each of the measures. It is promising that the results of the current study were in accord with expected correlations.

Another important finding is that every factor of depression was significantly correlated with the number of stressors that adolescents reported. This indicates that adolescents who experience things like conflict at home and difficulty with peers at school are also likely to report depressive symptoms. This is commensurate with other studies indicating that adolescents with depression report higher amounts of life stressors than non-depressed peers (Horesh, Ratner, Laor & Toren, 2008). In addition, the equanimity factor of resilience was significantly negatively correlated with number of stressors. Adolescents who held a balanced view of life events reported fewer life stressors than their peers who did not have a strong sense of equanimity.

For the current study, a multivariate multiple regression analysis with canonical correlation analysis was conducted to determine the predictive relationship between number of stressors and factors of resilience to the factors of depression. The results of this analysis revealed that the independent variables of number of stressors and factors of resilience significantly predicted the dependent variables of factors of depression. This analysis brought to light the importance of building resilience and reducing stressors in adolescents' lives as a means of preventing depressive symptoms.

To add new information to the existing literature about the relationship between the constructs of resilience and depression, this project also looked at specific predictive relationships between subfactors. Examination of canonical correlation loadings revealed that all six independent variables were significant predictors of the dependent variables. Two subfactors of resilience, equanimity and meaning, emerged from this analysis as able to best account for variance in the set of depression variables. Perseverance was

found to be the next best predictor of factors of depression, followed by number of stressors and self-reliance.

Qualitative information from the current study indicated that the most frequently reported coping strategies were engaging in activities to keep busy and seeking out the company of others. The majority of students reported seeking out parents and friends as their main support systems, with very few seeking out school staff for support.

### **Implications for Schools**

Based on the findings from the literature and the results of the current study, there is a strong link between resilience and depression. As depression is a significant concern for young people in the schools, building resilience may be one way of preventing adolescent depression. Resiliency assessment and intervention support adolescents by reducing vulnerability and risk, increasing available resources, mobilizing protective processes, and fostering resilience (Daniel & Wassell, 2002).

The results of the current study indicated that having a sense of equanimity is one of the strongest predictors of factors of depression. Schools should strive to promote this sense of balance and acceptance of the concept that good and bad things will happen in life (Alvord & Grados, 2005). One way of fostering equanimity is to work with students on framing failures as learning opportunities to evaluate and adjust their strategies that may not be working (Glover, 2009). Many adolescents tend to “catastrophize” such negative events, believing that one negative occurrence means that *everything* is terrible. Working with students on cognitive restructuring helps adolescents build equanimity and may lead to fewer depressive symptoms in adolescents. Another way schools can build equanimity in their students is to provide choice and the opportunity for creativity in

projects, so that students build an understanding that there are many possibilities in life. Further, school staff can model equanimity through taking things in stride and using humor (Wagnild, 2010).

The resilience factor of meaning was also found to be a strong predictor of factors of depression in the current study. It is particularly connected with identity development in adolescence, as it involves developing an understanding one's purpose in life (Wagnild, 2010). School staff should provide students with opportunities in which they can display their skills and strengths, feeling a sense of success and value. It is recommended that adults point out the ways in which the adolescent made a positive impact in order to show that they can create change (Alvord & Grados, 2005). Adults should help students focus on promoting healthy identity through phrases such as "I am... a person worthy of love and attention," "I have ... reliable adults available to offer me support," and "I can... do well in school and have good friendships." These types of I am, I have, and I can statements put the power back into the adolescents' hands and create powerful cognitive patterns of recognizing oneself as a competent and successful individual (Daniel & Wassell, 2002).

Based on the study's qualitative analyses, it appears that only a small amount of students in the current study indicated that they would confide in a teacher or other school employee if something bad happened. As such, educational staff should consider interventions for students at each ecological level in utilizing all of the adolescent's available resources (Cobb, 2001). It is also essential to be aware that many stressors and adverse conditions occur in adolescents' community and home lives that are mostly out of the school's control. This means that educational staff need to do as much as they can

*within* the school environment to provide students with solid support systems and safe outlets for coping with the negative experiences and emotions they may have. Schools should strive to increase students' connectedness to trusted adults in order to provide students with support in different environments.

One method of assessing connectedness within schools is to conduct a "dot test" in which all the names (and photos, if desired) of students are posted on a wall in the teacher's lounge. Each staff member places a sticker or mark of some sort next to students with whom they have a connection. This is a simple way of visualizing which students are lacking support from school staff. Another way many schools have fostered positive relationships between students and school staff is to have students stay with the same homeroom teacher over several years. Further, block scheduling can allow teachers to have longer amounts of time to get to know students and build connections (Harvey, 2007). Such connectedness to adults provides students with a greater support system.

The majority of students in the current study gave responses that indicated levels of resilience and depressive symptoms that are considered to be in the average range. However, there was a subset of students whose responses indicated that they might be at risk for depression and/or have low levels of resilience. Administering screening measures such as the Resilience Scale is an efficient way to identify those students who may be at risk for depressive symptoms and engaging in risky behaviors. After at risk students have been identified, theory-based resilience building and depression prevention programs should be implemented (Horowitz & Garber, 2006). Schools should facilitate growth through groups and individual interventions for at-risk students. Suggested topics for resilience groups include the importance of sticking with routines even through tough

times, taking care of oneself physically and mentally, and putting things in perspective (APA, 2011).

Many students in the current study reported reaching out to their parents and other family members as support systems. In order to further capitalize upon this connection, schools should work to make strong home and community relationships so that resilience can be fostered at all ecological levels. School psychologists can lead parenting skills sessions and advocate for responsive and supportive home environments. Longitudinal research has indicated that having family social support and family cohesion are stronger predictors of positive adolescent outcomes than peer influences or the media (Reinherz, Giaconia, & Paradis, 2007). Further, schools should strive to build strong school-community connections in order to provide safe environments for adolescents in and out of school (Harvey, 2007).

### **Directions for Future Research**

Future replications of this study should include a sample of a more ethnically diverse population that more closely resembles the demographics of the United States in general. This would allow for more generalizability of the results and greater external validity. Perhaps a comparison of rural samples, such as that used in the current study, with urban samples would be a beneficial variable to assess. It is hypothesized that adolescents who come from different environments would have similar trends overall, but may have significant differences in terms of the nature and number of stressors they experience, as well as differences in methods of coping and support systems.

Future research should also be sure to slightly modify methodology in data collection so as to provide results of the highest validity possible. Data should be

collected in small group private settings such as individual classrooms. Desks or tables should be spaced far enough apart that adolescents cannot see each other's responses and can feel comfortable providing the most accurate and representative answers. As the data for the current study was collected in a large group setting in which participants were seated closely together, it is hypothesized that some students may not have felt comfortable answering as accurately as they may have in a more private setting. As we know, adolescents are typically highly concerned with how their peers view them. Consequently, it would be ideal to remove this type of peer concern from further studies of this nature.

Further, data collection in more small group settings may avoid some of the complications with multiple missing values in responses. In the current study, several respondents had multiple missing values that were not discovered until after data collection, and were thus not included in the data analysis. It is possible that by taking precautions of sampling a small group of one classroom at a time, researchers could more closely monitor participants and prompt them to complete all answers. This would create a more robust sample size and potentially greater research value. Further, it should be noted that the CDI-2 is normed for children ages 7 to 17. Several 18 year old students were included in the current study, as they were part of the seventh to twelfth grade students sampled. These 18 year olds' CDI-2 responses were scored using the norms for 17 year olds for the purposes of this study. In future studies, researchers may want to exclude 18 year old participants or choose a different measure which has norms for this age group.

Several new ideas for expanding the current study are also proposed. One proposal would be to analyze the statistical differences between adolescent depression in school-based and clinical settings. Potential subgroups include adolescents who are in school-based settings (diagnosed with depression and not diagnosed with depression) and adolescents who are in clinical settings (diagnosed with depression and not). Off-shoots of this research could also look into other clinical populations beyond depression, by looking at the relationship between resiliency and conduct disorders, attention deficit hyperactivity disorder (ADHD), learning disabilities, anxiety disorders, etc.

Another direction for future research would be to determine what interventions specific to resilience effectively target the significant connections found between resilience, stressors, and depression. This would involve experimental research through implementing interventions with an experimental group and measuring levels of depression, resilience, and stressors before and after implementation of the interventions. This type of design could begin to build a more robust body of evidence-based intervention and prevention planning for schools and clinical settings in building adolescent resilience and the prevention of depression.

### **Summary and Conclusion**

The current study examined the predictive relationship between number of stressors and resilience with depression in adolescents, specifically looking for specific predictive relationships between factors of resilience and factors of depression. Overall resilience was a significant negative predictor of overall depression, indicating that programs that promote resilience may reduce adolescents' risk for depression. Further, number of stressors was a significant predictor of depression, indicating that reducing

stressors such as difficulty with peers at school and discrimination may reduce adolescents' risk for depression. Other specific predictive relationships were also discussed, with implications for the school-based tiered prevention and intervention programs of Response to Intervention (RtI) and Positive Behavioral Interventions & Supports (PBIS). Future areas of research include experimental designs that assess the effectiveness of resilience interventions.

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APPENDIX A

PARENT/GUARDIAN NOTIFICATION FORM

Dear Parent/Guardian:

I am a graduate student in school psychology from the University of Wisconsin – La Crosse. I am working on a study involving the way teenagers deal with life events and the feelings they have. I would like your child’s input on this topic.

- If you agree to allow your child to participate, he/she will be asked to complete a written activity in his or her classroom, including questions about depression. It will take about 30 minutes.
- You and your child can choose to not do this.
  - **If you do not want your child to complete this activity, please sign and return the bottom of this letter to school by January 28.**

The results of this survey will be presented at the National Association of School Psychologist’s conference in San Francisco in 2011. No personal information about your child will be shared.

Your school’s administrators and the UW- La Crosse Institutional Review Board (IRB) have approved this activity.

- If you have any questions, please contact
  - Michelle Anderson (920-570-1379), graduate student
  - Katie Stinson, School Psychologist at (608-627-0121)
  - Aaron Mithum, Principal at (608-627-0100)
- If you have questions about ethics, please contact the UW-La Crosse Institutional Review Board for the Protection of Human Subjects (608-785-8124).

Sincerely,

Michelle Anderson

✂-----

**I DO NOT** wish for my child to participate in this activity.

\_\_\_\_\_  
Parent/Guardian signature

\_\_\_\_\_  
Date

**APPENDIX B**

**STUDENT INFORMED ASSENT STATEMENT**

## Student Informed Assent Statement

The purpose of this activity is to better understand of the way students deal with life events and the feelings that they have.

If you agree to do this, you will be asked to spend thirty minutes answering questions. Your parents have been told that you can **choose** to do this activity. If you do not want to, you may sit quietly and complete class-related work.

Doing this activity should not harm you or anyone else. The School Psychologist is available if you want to discuss any issues after this activity.

If you agree to do this, you will not put your name on any papers. No one will know how you answered the questions and no one will ask you about your answers. You should also respect your peers and not ask how they answered.

There are no right or wrong answers. This is not a test. You should answer based on what you feel is the best answer for you right now.

Please ask any questions you have about this activity.

Please be aware that your participation in this activity is strictly **your choice**. You may choose not to do this or you may quit at any time.

By signing your name, you are saying that you have understood all of the information on this paper and that you are **choosing** to do this activity.

---

Signature

---

Date

APPENDIX C

DEMOGRAPHIC AND QUALITATIVE QUESTIONS

## Demographic and Qualitative Questions

**Gender: (Circle one)**    Male    Female    Not Specified

**Age:** \_\_\_\_\_                      **Grade:** \_\_\_\_\_

**Mother's Highest Level of Education:**

- Some High School
- High School Graduate
- Some College
- 2 Year Technical Degree
- 4 Year College Graduate
- Masters Degree
- Doctoral (MD, JD, PhD, etc) Degree
- Don't Know
- Other: \_\_\_\_\_

**Ethnicity:**

- African American
- Asian American
- European American
- Hispanic American
- Native American
- Pacific Islander
- Other: \_\_\_\_\_

**When you are sad, what are three things you do to feel better?**

- 1.
- 2.
- 3.

**Who do you go to when something bad happens? (List up to three people)**

Person's relationship to you

- 1.
- 2.
- 3.

**Have you ever been diagnosed with depression? (Circle one)**    Yes    No

**Which of the following have you experienced recently (Check all that apply)?**

- Difficulty with peer relationships at school
- Difficulty with peer relationships in my neighborhood
- Difficulty with school classes
- Health related concerns (diseases or accidents)
- Suicides or deaths of relatives or friends
- Conflict between family members
- Not getting along with my parents
- Discrimination based on my race, gender, religion, sexual orientation, etc.

APPENDIX D  
QUALITATIVE QUESTION RESPONSES

<b>Who do you go to when something bad happens?</b>	<b>Support System</b>
Dog	Animals
My animals	Animals
Bestest Best Friend Ever	Friend
Best friend(s) (18)	Friend
BFL	Friend
Close guy friends	Friend
Family friend (2)	Friend
Friend(s) (71)	Friend
Gay friend	Friend
School friend who I've known for many years	Friend
God (4)	God
Jesus (3)	God
Aunt (6)	Other Relative
Aunt/Uncle	Other Relative
Cousin(s) (8)	Other Relative
Family (4)	Other Relative
Grandma/Grandmother (8)	Other Relative
Grandpa/Grandfather (4)	Other Relative
Grandparents (2)	Other Relative
Other family	Other Relative
Uncle (2)	Other Relative
Dad/Father (37)	Parent
Mom/Mother/Mommy (54)	Parent
Parent/Parents (18)	Parent
Bed - in my room	Self
I	Self
Me (2)	Self
Myself (3)	Self
No one else	Self
Take mind off of it	Self
Brother (7)	Sibling
Sister(s) (17)	Sibling
Boyfriend (11)	Significant Other
Fiancé	Significant Other
Girlfriend (7)	Significant Other
My partner	Significant Other
Band teacher	Teacher/Other School Employee
My social worker	Teacher/Other School Employee
Teacher(s) (11)	Teacher/Other School Employee

<b>When you are sad, what are things you do to feel better?</b>	<b>Coping Strategy</b>
Animals (x2)	Activity
Baking	Activity
Black Ops	Activity
Clean	Activity
Color/Draw	Activity
Computer (x2)	Activity
Cross-country ski	Activity
Do an activity that will take my mind off the feeling	Activity
Do my arts and crafts	Activity
Do something	Activity
Do something else	Activity
Do something fun (x2)	Activity
Do something to keep my mind off it	Activity
Drive (x3)	Activity
Drive fast cars	Activity
Farm	Activity
Farming	Activity
Find something to do	Activity
Games	Activity
Get active	Activity
Go by animals	Activity
Go for a drive	Activity
Go for a run	Activity
Go on an adventure	Activity
Go on computer	Activity
Go out and have fun	Activity
Go outside (x2)	Activity
Go shopping (x2)	Activity
Golf (x2)	Activity
Goof with the dogs	Activity
Halo: Reach	Activity
Have fun doing something	Activity
Hug my dog	Activity
Hunt/Go outside	Activity
Hunting	Activity
I start accomplishing things such as cleaning my room	Activity
Jam to music	Activity
Leave, go for a walk	Activity
Lift weights	Activity
Listen to heavy metal music	Activity
Listen to music (x26)	Activity
Listen to upbeat music	Activity
Modern Warfare 2	Activity

Music	Activity
Music/Art	Activity
Paint	Activity
Play basketball (x3)	Activity
Play computer	Activity
Play games (x2)	Activity
Play guitar	Activity
Play music (x2)	Activity
Play sports (x4)	Activity
Play trumpet	Activity
Play with my cat	Activity
Play with my dog (x2)	Activity
Play Xbox	Activity
Pray	Activity
Read	Activity
Read a book (x4)	Activity
Read fantasy novels	Activity
Read the Bible and pray	Activity
Read the Bible for a bit	Activity
Relax	Activity
Ride four wheelers	Activity
Scream in my pillow	Activity
Sex	Activity
Sing	Activity
Sing/listen to music	Activity
Sit with my guinea pig	Activity
Skateboard	Activity
Snowmobiling	Activity
Sports (x3)	Activity
Start a hobby	Activity
Take a shower	Activity
Take a walk outside to think	Activity
Take pictures	Activity
Talk with and hug my puppy	Activity
Vent in a notebook	Activity
Video games (x9)	Activity
Violent video games	Activity
Walk	Activity
Walk around the farm	Activity
Watch a funny movie	Activity
Watch anime	Activity
Watch funny videos	Activity
Watch movies (x3)	Activity
Watch Star Trek	Activity
Watch TV (x5)	Activity
Woods	Activity

Work (x3)	Activity
Write (x2)	Activity
Write in a notebook	Activity
Write it down	Activity
Write poetry	Activity
Be alone	Avoidant Behavior
Don't think about it	Avoidant Behavior
Ignore it	Avoidant Behavior
Ignore what I'm sad about	Avoidant Behavior
Lock myself in my bedroom	Avoidant Behavior
Not care	Avoidant Behavior
Remove myself from people	Avoidant Behavior
Deal with it	Cognitive Shift
Forget about it	Cognitive Shift
I laugh a lot	Cognitive Shift
I think about the amazing people in my life	Cognitive Shift
I think of something else	Cognitive Shift
Laugh (x5)	Cognitive Shift
Laugh at something	Cognitive Shift
Occupy my mind with video games or happier thoughts	Cognitive Shift
Suck it up crybaby	Cognitive Shift
Think about a good memory	Cognitive Shift
Think about everything that I am blessed to have	Cognitive Shift
Think about funny things	Cognitive Shift
Think about good things	Cognitive Shift
Think about good times	Cognitive Shift
Think about other things	Cognitive Shift
Think of family	Cognitive Shift
Think of friends	Cognitive Shift
Think of the better side of things	Cognitive Shift
Think of what I have	Cognitive Shift
Try hard	Cognitive Shift
Try to forget about it	Cognitive Shift
Cry (x4)	Cry
I cry it out	Cry
Chocolate	Eat
Drink hot tea (x2)	Eat
Eat (x7)	Eat
Eat candy	Eat
Eat Kit-Kats	Eat
Lick lollipops	Eat
Strawberries	Eat
Being with my friends	Go to people
Call friend (x3)	Go to people
Call my best friend	Go to people
Call my boyfriend to talk	Go to people

Call my friends/boyfriend	Go to people
Face it	Go to people
Family (x2)	Go to people
Find someone to talk to	Go to people
Find someone to tell	Go to people
Friends	Go to people
Go to a friend's house (x2)	Go to people
Hang (out) with friends (x8)	Go to people
Hang out with family/friends	Go to people
Hang out with my girlfriend	Go to people
Hang with family	Go to people
Play with friends	Go to people
Seeing my family	Go to people
Spend time with friends	Go to people
Spend time with my daughter	Go to people
Spend time with my mom/talk to her about it	Go to people
Talk	Go to people
Talk about it	Go to people
Talk or be with friends	Go to people
Talk to a close friend	Go to people
Talk to a friend about stuff	Go to people
Talk to family (x5)	Go to people
Talk to family/friends (x5)	Go to people
Talk to friends (x17)	Go to people
Talk to friends on Facebook or through texting (x2)	Go to people
Talk to mom	Go to people
Talk to my boyfriend	Go to people
Talk to my dad	Go to people
Talk to my fiancé about everything	Go to people
Talk to my girlfriend (x2)	Go to people
Talk to my parents (x2)	Go to people
Talk to my sister (x3)	Go to people
Talk to parents/friends	Go to people
Talk to people (x2)	Go to people
Talk to people that mean the most to me	Go to people
Talk to someone (x4)	Go to people
Text friends or call them	Go to people
Vent to my mom or friends	Go to people
Being alone and having time to think	Reflect
Dwell on what went wrong and think of ways to fix it	Reflect
Figure stuff out and re-unite	Reflect
Talk to myself quietly	Reflect
Think (x3)	Reflect
Think about it	Reflect
Think about things that I want to happen	Reflect
Think of how to make it better	Reflect

Writing about how I feel  
Nap (x3)  
Sleep (x13)  
Take deep breaths

Reflect  
Sleep/Relax  
Sleep/Relax  
Sleep/Relax