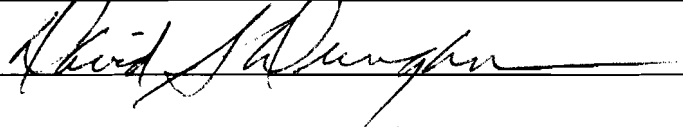


AN ABSTRACT OF THE THESIS OF

Jana G. Muzyka for the Master of Science
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Title: AN EXAMINATION OF THE RELATIONSHIP AMONG DEPRESSION,
ANGER, COPING STYLE, AND GENDER IN ADOLESCENTS.

Abstract approved: _____



Even though depression has been a topic of research for many years, as society changes, updates need to be made on the knowledge of depression and what contributes to this illness. Depression can be caused in part by anger directed inward or anger that is suppressed (Kashani, Dahlmeier, Bourduin, Soltys, & Reid, 1995; Riley, Treiber, & Woods, 1989). Other factors which may also contribute to depression include stressful life events, how the individual copes with those stressful events, and the gender of the individual. Despite the many studies done in this area, little is known about the relationship of anger, coping styles, and depression.

The current study found a significant difference on coping styles most often used by depressed and non-depressed adolescents. Depressed adolescents tend to use an emotion-oriented coping style while the non-depressed adolescents tend to use a task-oriented coping style. Depressed adolescents also showed a significant difference in the way

they expressed their anger, reporting a higher rate of internalized anger. Adolescent girls showed a significant difference in the ability they have to control over their anger when compared with adolescent boys. Adolescent girls also reported experiencing internalized anger more than adolescent boys.

The current research did not support gender differences on the acknowledgement of depression symptoms or on the coping style used in stressful situations. Societal changes may explain these discrepancies.

The present study supports the idea that anger expression and coping style are related to depression. This information can help mental health professionals in assessing and treating individuals with depression as well as teaching more effective, healthy ways to cope with stress and to express anger.

**AN EXAMINATION OF THE RELATIONSHIP AMONG DEPRESSION, ANGER,
COPING STYLE, AND GENDER IN ADOLESCENTS**

A Thesis

Presented to

the Division of Psychology and Special Education

EMPORIA STATE UNIVERSITY

In Partial Fulfillment

of the Requirements for the Degree


Master of Science

by

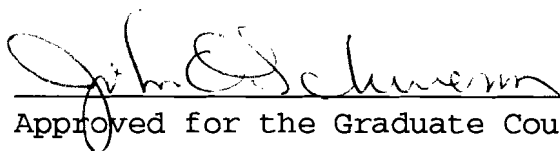
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Approved for the Division of
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CHAPTER 1

Introduction

Depression can be caused in part by anger directed inward or anger that is suppressed (Kashani, Dahlmeier, Bourduin, Soltys, & Reid, 1995; Riley, Treiber, & Woods, 1989). Anger affects individuals both physiologically and affectively, as well as cognitively (Sharkin, 1988). Anger is common in mental illness, but is quite often neglected. This neglect could be caused by the social stigma attached to its expression (Kennedy, 1992). Anger appears to be a symptom not only to depression, but to other mental disorders such as conduct and adjustment disorders. For this reason, the assessment and treatment of these disorders requires a multidimensional approach. A variety of measures that explore the different dimensions of anger may be used in clinical assessment. Today, the assessment of anger in the clinical setting consists of analyzing aspects of anger experiences or anger expression.

Stressful life events play a role in adolescent depression. Those individuals who have experienced stressful events that they have some control over tend to report more

depressive symptoms (Williamson, Birmaher, Anderson, Al-Shabbout, & Ryan, 1995). The type of coping strategy one uses in order to deal with life's stressful events also plays a role in depression. Coping strategies can differ in individuals as well as between gender groups. Not surprisingly, a person's coping strategies can make a significant difference on his or her ability to adapt to the stressors of life. Given the same degree of stress, people who engage in a more effective coping strategy will experience less distress (Rohde, Lewinsohn, Tilson, & Seeley, 1990). The effectiveness or ineffectiveness of the coping strategy employed influences a person's physiological and psychological well being. Assessment of an individual's type of coping may give insight into his or her mental health along with the necessary information to determine a mode of treatment that would be useful.

Over the years, a plethora of research has been conducted on depression. Until recently, only a few have focused on elements that can be used to predict depression. It is possible individuals who experience a depressive episode earlier in life, such as during adolescence, may be

more severely impacted by the disorder (Rohde, Lewinsohn, & Seeley, 1994). Increasing a clinician's knowledge of various components contributing to or symptomatic of an individual's mental health would aid in the possible prevention, assessment, and or treatment of depression. Preventive measures can be used on individuals who have similar characteristics as those with depression. New, more effective ways of coping and expressing anger can be introduced to those seen at risk.

In the past, researchers have separately studied anger expression and coping strategies and their individual relationships to depression. The purpose of this study was to measure the difference between boys and girls on anger expression and coping style, which were measured respectively using the State-Trait Anger Expression Inventory (STAXI) and the Coping Inventory for Stressful Situations (CISS), and the level of depression which was measured by Beck's Depression Inventory (BDI).

The manner in which anger and coping styles relate to other mental health issues should receive more attention as a factor used in the treatment and assessment of individuals. With the growing cost of health care in the United States,

preventive measures are in high demand. Identifying characteristics in young people that have been linked with depression will enable professionals to intervene and possibly prevent depressive episodes or decrease the intensity of the episode.

Literature Review

Depression has been a topic of psychological research for many years. Freud (1968) described depression as an experience in which an individual feels both sad and angry. Until the mid 1980s, depression in children and adolescents was a controversial topic (Baron & Peixoto, 1991). Researchers believed depressive symptoms were not the same for children as they were for adults, making the use of adult criteria to diagnose a depressive disorder problematic when used with children. Within the past decade research has been done which suggests the opposite: depression in young people does not differ significantly from that in adults (Blumberg & Izard, 1985, 1986; Carey, Finch, & Carey, 1991; Carlson & Cantwell, 1980). In a study conducted by Blumberg and Izard (1985) it was found that 10 and 11 year old children suffering from depression experienced a similar pattern of emotions as described by depressed adults. The main

difference in the two emotional patterns was the children reported experiencing anger more frequently than sadness (Blumberg & Izard, 1985). Sadness is not always a symptom of childhood depression (Toolan, 1974). Anger does play a role in adult depression. This emotion, however, tends to be secondary to sadness (Blumberg & Izard, 1985, 1986). Depressed adolescents report higher levels of many negative emotions when compared with non depressed youths (Carey et al., 1991). According to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, [DSM-IV], children and adolescents suffering from major depression report the same core symptoms although the dominance of certain characteristic symptoms may change with age (American Psychiatric Association, 1994). These changes include anger as a more prominent symptom than sadness in children, as noted earlier, and gender differences that have been noted in research done with adolescents.

Adolescents and adult females are twice as likely to suffer from a major depressive disorder as are adolescent and adult males (Baron & Campbell, 1993; Campbell, Byrne, & Baron, 1992; DSM-IV, 1994). Some of the gender differences can be accounted for through the learning of cultural and

social acceptability (Campbell et al., 1992). Depression is seen as more socially acceptable for females than for males (Warren, 1983). Males develop under controlled externalizing disorders such as conduct disorders where as females develop over controlled internalizing disorders like depression (Kurdek, 1987). Campbell et al. found males obtain lower mean scores than females on all discriminating items on the Reynold's Adolescent Depression Scale. Gender differences for depression begin to appear during adolescence. The higher rate of depression found in females is consistently found around the mid-adolescent period (Nolen-Hoeksema & Girgus, 1994). A study conducted by Peterson, Sarigiani, and Kennedy (1991) found no differences in depressed mood before the ages or 13 to 14 years old. By the ages of 17 to 18 years old, however, there were significant gender differences.

Baron and Campbell (1993) found that in general, adolescent girls tend to support more depressive symptoms. Females also tend to endorse discriminating items even when their levels of distress are low and they report a more depressed affect than do males (Baron & Campbell, 1993; Campbell et al., 1992; Chan, 1995; Kurdek, 1987). In this

light, it is not surprising that discriminating items tend to represent stereotypically female characteristics such as crying and loss of appetite (Baron & Campbell, 1993). There is a tendency for males to report symptoms which are considered stereotypically masculine such as work inhibition and somatic symptoms (Baron & Campbell, 1993; Campbell et al., 1992). Caution is imperative when interpreting depression scores, it may even be necessary to use different norms for males and females.

In the past, anger had been a difficult emotion to study due to the lack of agreement on its definition, as well as it being combined with other emotions such as hostility, aggression, and violence (Sharkin, 1988). Kurdek (1987) frequently found when males and females had a tendency to become angry, place blame on others, and become verbally aggressive, these behaviors were related to heightened psychological symptomology. With the continuing research on emotions, better and more specified self report scales are being developed. Anger, as defined in a recent study, is "an emotional response to perceived threat, insult, frustration, or injustice" (Lehnert, Overholser, & Spirito, 1994, p. 106). The intensity of an individual's anger (Kennedy, 1992) as

well as the way in which it is expressed (Speilberger, 1988) can vary between individuals. Some individuals suppress their feelings of anger resulting in the absence of its outward expression (Lehnert et al., 1994). This is known as internalizing anger. A second type of anger expression, externalized anger, is characterized by a negative mood state in which emotions build up resulting in verbally or physically aggressive behavior. Since individuals vary in their styles of anger expression, the manner in which they deal with the anger can be clinically relevant. It has been noted that the direction of the anger, internalized or externalized, as well as the ability to control anger, may help identify disorders because of the variance present between diagnostically distinct groups (Lehnert et al.; Myers, McCauley, Calderon, & Treder, 1991). One drawback in using anger expression in such a manner is the lack of ability to identify the style of expression. It may be difficult to detect adolescents who turn their anger inward without a reliable assessment tool. Internalized anger is obviously less observable than the externalized outbursts. Individuals have shown improvement when they learn to express

their anger instead of holding it in (Parker, Brown, & Blignault, 1986).

Depression in adolescents is characterized as being a combination of anger and sadness (Harter & Jackson, 1993; Lehnert et al., 1994; Renouf & Harter, 1990). Theoretically, depression and anger are overlapping constructs. Depression has been related to an increase in many negative emotions (Carey et al., 1991; Kashani et al., 1995). A significant causal relationship exists between internalized anger and depression (Blumberg & Izard, 1985, 1986; Clay, Anderson, & Dixon, 1993; Harter & Jackson, 1993; Lehnert et al.; Kashani et al.; Myers et al., 1991; Simond, McMahan, & Armstrong, 1991). When internalized anger increases so will the level of depression (Blumberg & Izard, 1986; Clay et al., 1993; Lehnert et al.; Myers et al.). A study by Myers et al. concluded that anger was highly correlated with depression. Results of a study by Renouf and Harter (1990) showed that adolescents not only reported experiencing internalized anger, but that a majority reported having anger toward others. This externalized anger was seen by itself as well as combined with the anger directed towards the self.

Windle (1992) described adolescence as a period, or

phase, in the life span that involves confrontation with a range of biological changes, psychosocial tasks, and environmental shifts. Adolescents, as well as children, suffering from depression have reported an association between stressful life events and depression (Compas, Slavin, Wagner, & Vannatta, 1986; Swearingen & Cohen, 1985; Williamson et al., 1995).

Adolescence is a heightened period for the occurrence of stressful life events (Newcomb, Huba, & Bentler, 1981) resulting in an increase in vulnerability to depression (Downey & Coyne, 1990). The way in which an individual copes with these stressful life events is important because the coping strategy used can either promote or hinder both mental and physical health (Clark & Havanitz, 1989; Endler & Parker, 1990a, 1994; Rohde et al., 1990). Endler and Parker (1994, p. 50) defined coping as "a conscious response to external stressful or negative situations" (also see Endler & Parker, 1990b).

Through many years of research three basic coping strategies have been identified (Billings & Moos, 1984; Carver, Scheire, & Weintraub, 1989; Endler & Parker, 1990a, 1990b, 1994). Problem-focused responses are aimed at

changing the relationship in person-environment interactions. The second strategy can be described as emotion-focused. The purpose of this strategy is to regulate emotional distress. The last strategy is known as avoidance coping which consists of using person or task oriented behaviors or strategies in order to avoid dealing with the perceived distress. Seeking other individuals to relieve the negative feelings is known as social diversion and engaging in a different activity or task is known as distraction.

Experiencing stressful life events has also been associated with psychological and physical problems (Hains, 1994). Depression, anxiety, and poor recovery from illness has been linked to the emotion-oriented coping strategy (Endler & Parker, 1994). In a study by Billings & Moos (1984) it was found that depressed individuals use more emotional coping and less problem solving methods. Coyne, Aldwin, and Lazarus (1981) reported depressed individuals more frequently use wishful thinking, avoidance, and emotional discharge. The task-oriented coping strategy has been found to be negatively or unrelated to these difficulties (Curry, Miller, Waugh, & Anderson, 1992; Endler & Parker, 1994; Felton & Revenson, 1984; Miller, Broody, &

Summerton, 1988; Suls & Fletcher, 1985). A study by Chan (1995) found that an escape avoidance coping style could be used as a predictor of depression along with self esteem and social support. Individuals who are not depressed tend to rely on social support when experiencing a stressful life event and depressed individuals use escape avoidance coping strategies (Chan, 1995). The relationship of stressful life events and perceived social support shows a consistent predictive value for depressive symptoms (Windle, 1992). There continues to be much debate over whether stressful life events precede the onset of depression or whether they are a result of being depressed (Williamson et al., 1995). Psychosocial disturbances tend to characterize the onset of depression (Puig-Antich, Kaufman, & Ryan, 1993). Results from the 1992 study by Curry, Miller, Waugh, and Anderson reflect that specific coping methods are associated with many dimensions of psychological disturbance among adolescents.

Research on adult males shows college-aged men score higher than college-aged women on task-oriented coping strategies. Women, in an adult and college sample, scored significantly higher than men on the emotion and avoidance

coping strategies scales and subscales (Endler and Parker, 1994). Chan's study (1995) found no gender difference in coping strategies of adolescents, however, Nolen-Hoeksema, Girgus, and Seligman's (1992) research portrayed girls to have less effective coping styles.

In conclusion, anger has been shown to be related to depression in adolescents. Individuals express their anger in one of two ways. Individuals who hold their anger in increase their chances to experience depression. In past research, it has been shown that being able to assess anger expression may be an important tool in diagnosing depression.

The coping strategy an individual uses influences both their mental as well as physical health. Some coping strategies are more effective than others. Research suggests the emotion-oriented coping may lead to more problems with depression (Billings & Moos, 1984; Endler & Parker, 1994).

Gender differences begin to emerge during adolescence. Researchers are not quite sure why this occurs. Some have hypothesized that gender differences are a result of social learning (Campbell et al., 1992).

Research has not yet been done in order to assess if both anger expression and coping strategy play a role in

adolescent depression. The purpose of this study will be to find any significant relationships between these variables. The researcher expects to find that adolescent girls will score significantly higher on the Beck Depression Inventory than adolescent boys (hypothesis 1). Since females reportedly are more likely to experience depression, and internalized anger has been found in past research to be related to depression, the researcher expects to find that adolescent girls will score significantly higher on the anger-in scale of the State-Trait Anger Expression Inventory than adolescent boys (hypothesis 2). Adolescent girls will score significantly higher on the emotion oriented coping scale from the Coping Inventory for Stressful Situations than adolescent boys (hypothesis 3). Individuals acknowledging depressive symptoms on the Beck Depression Inventory will score significantly higher on the anger-in scale of the State-Trait Anger Expression Inventory (hypothesis 4), as well as on the emotion oriented coping scale of the Coping Inventory for Stressful Situations from those not acknowledging depression symptoms (hypothesis 5). Individuals acknowledging depressive symptoms on the Beck

Depression Inventory will score significantly lower on the task oriented coping scale of the Coping Inventory for Stressful Situations from those not acknowledging depressive symptoms (hypothesis 6).

CHAPTER 2

Methods

Participants

The participants in this study consisted of 30 adolescent boys and 56 adolescent girls. They were currently enrolled in an introductory psychology or sociology type course at a public high school in a suburban city of northeast Kansas.

Sampling Procedures

Data collection involved a three part process. The experimenter entered the classroom and informed the class that volunteers would be selected to participate in a study to determine if an individual's mood is affected by the type of coping strategy used. A brief description of what was expected of participants if they volunteer was then explained. They were told they would be completing three inventories, the Beck Depression Inventory, the Coping Inventory for Stressful Situations, and the State-Trait Anger Expression Inventory, during the regularly scheduled class period. The students were also informed that if they chose not to participate their grades would not be affected. Each student who volunteered was given an informed consent

form containing information about the study to take home, read over with his or her parent or guardian, and to have both the student and the parent or guardian sign.

On the second visit, the experimenter administered the three inventories along with a demographics sheet to each student who brought back the completed informed consent form. On the third, follow-up visit, the experimenter administered the three inventories and demographics sheet to each student who was absent during the second visit or returned the informed consent form late.

The individual test packets were coded for identification purposes. Any student who was currently being treated for depression with medication was not included in the study. This was determined by asking the participant if he or she was currently taking medication for depression. Only one participant was omitted from the study for this reason.

Research Method

The data were collected through a depression inventory, an anger inventory, and a coping strategy inventory. These data were used to determine if, and to what extent a significant relationship exists between adolescent boys and

girls in the expression of anger, the coping strategy used, and the level of depression. No variables were manipulated.

Research supports the assumption that depression varies along a continuum from normal or mild depression to clinical depression. Volunteers from a nonclinical population should follow a similar pattern (Blumberg & Izard, 1985). The results will be generalized to identifying adolescents at risk for depression.

Instruments

The Beck Depression Inventory - Revised Edition consists of 21 items (Beck & Steer, 1987). The items have four possible responses. Each response has a score value ranging from 0 to 3 points. The higher scores signify greater depression. An individual chooses from the four possible responses to best describe his or her feelings at the time. The individual may pick more than one response per item. When scoring the inventory, however, the highest score is counted. The total score is broken down into these categories: 0 to 9 are within the normal range; 10 to 18 represents a mild - moderate depression; 19 to 29 represents a moderate - severe depression; and 30 and above represents extremely severe depression. In nonclinical individuals,

however, a score greater than 15 may suggest depression (Beck & Steer, 1993). To follow the guidelines set by Beck, in the present study, a score of greater than 15 was used to signify an individual experiencing depressive symptoms. Therefore, if the participant received a score of 0 - 15 then he or she was classified as non-depressed, and if the score received was 16 and above he or she was classified as depressed. The BDI's purpose is to detect possible depression, as well as assess the severity of the depression. It has been used with adolescents as young as 13 years of age (Beck & Steer, 1993; Kramer & Conoley, 1992). With non psychiatric samples, the test-retest reliability ranges from .60 to .90. Internal consistency with non psychiatric participants is .81 (Kramer & Conoley, 1992).

Anger expression is measured by the Spielberger State-Trait Anger Expression Inventory (STAXI; 1996). The STAXI is comprised of 44 items and broken down into three parts. Each of the three parts begins with a set of directions specific to that scale. The participants were asked to complete the entire inventory. Only part three, however, was analyzed in this study. Part one comprises the State Anger (S-Anger) items. Part two comprises the Trait Anger

(T-Anger) items. And lastly, part three comprises the Anger Expression Scales. Furthermore, part three breaks down into three, 8-item scales; Anger/In (AX/In), Anger/Out (AX/Out), and Anger/Control (AX/Con). The overall Anger Expression score (AX/EX) is derived from the three primary anger expression scales. AX/In measures the individual's tendency to suppress his or her feelings of anger. AX/Out measures the individual's tendency to express his or her feelings of anger outwardly. AX/Con measures the individual's tendency to control the experience and expression of anger. The AX/EX shows the individual's tendency to respond to angry feelings by either suppressing or outwardly expressing anger (Kramer & Conoley, 1992).

The STAXI has been normed for individuals ages 13 through adult (Speilberger, 1988). The individual scale items are rated on a four-point Likert scale from almost never to almost always, depending on how frequently the individual behaves in a particular way when angry. The total score for each scale is converted into standardized T-scores. These T-scores are simply normalized linear transformations of raw scores, with a mean of 50 and a standard deviation of 10 (Speilberger, 1996). The present study used the

guidelines stated above. The internal consistency reliability coefficients for the AX/In, AX/Out, and AX/Con subscales range from .73 to .84. The coefficients alpha is approximately .82 (Spielberger, 1996).

The Coping Inventory for Stressful Situations, Adolescent Version (CISS) measures basic coping styles used by adolescents across different types of stressful situations (Endler & Parker, 1990). This inventory can be used with individuals between the ages of 13 through 18 years old. The CISS contains 48 items which are broken down into three 16 item scales. The scales assess task-, emotion-, and avoidance-oriented coping. The avoidance scale breaks down further into two subscales; an 8-item Distraction subscale and a 5-item Social Diversion subscale. The task-oriented coping scale assesses if and to what extent an individual uses planning to solve a problem. The emotion-oriented coping scale assesses if and to what extent the individual reacts with an emotional response to a problem. And the avoidance-oriented coping scale assesses if and to what extent an individual avoids a problem or stressful situation. The avoidance scale also looks at whether the individual uses social interactions or other tasks/situations to relieve the

stress of the original problem. The individual raw scores are converted into standardized T-scores with a mean of 50 and a standard deviation of 10. The present study used the guidelines stated above in the data analysis.

The internal reliability coefficients of the CISS range in the high .80s to low .90s according to Endler and Parker (1990). They also found the test-retest reliability to be .51 to .73 (Endler & Parker, 1990).

Procedures

An informal letter (Appendix A) about the study was mailed to each student's parent(s) or guardian(s) before the first contact with the students. During the first contact, after the volunteers had been identified, each of the participants was given an informed consent form (Appendix B). The participants were reminded to return the informed consent forms a few days before the data collection contact.

During the second contact, the participants who returned the signed informed consent form were given a brief demographics page (Appendix C) and information regarding sources where they can get help for depression (Appendix D), along with the BDI, STAXI, and the CISS. The order of

administration of the BDI, STAXI, and CISS was systematically varied.

The researcher read the instructions for each inventory before the participants began. This ensured that each participant understood the directions, therefore making the instruments standardized. The participants were then instructed to turn their survey packets to the demographic page and to begin completing each page in the order in which it was presented.

Upon receipt of the survey packet, the inventories were scored first to help prevent possible experimenter bias. Then the demographic sheet was examined for completeness.

Statistical Design

The data in the study were analyzed by using a Multivariate Analysis of Variance (MANOVA) to examine each hypothesis. The MANOVA is especially well suited for this study for the following reasons. MANOVA offers better control than univariate analysis for the overall type I error rate, especially when dealing with a moderate or large number of dependent variables. MANOVA also has the ability to consider measures jointly in order to determine if small differences on each of the variables combine to produce a

reliable overall difference. If the independent variable affects the dependent variables differently and the dependent variables are at least moderately correlated within groups, MANOVA is more powerful than univariate tests at detecting differences (Stevens, 1990).

Summary

As the pressures that society places on adolescents increase, so does the need to effectively understand the adolescents' concerns. The researcher intends to contribute to the existing body of knowledge dealing with the relationship between anger, coping styles, and depression in order to deal with these concerns.

CHAPTER 3

RESULTS

Two multivariate analyses of variance (MANOVA) were used to assess the relationships among depression, anger, coping style, and gender. The first MANOVA analyzed the level of depression, the expression and control of anger, and the coping strategy used with gender as the independent variable. The Pillai's trace MANOVA was used because of its robustness. The significance level is reasonably correct even when assumptions are not exactly met (Norusis, 1988). The MANOVA revealed a significance among the above mentioned variables, $F(10,75) = 2.89, p < .05$. The univariate post hoc F-tests showed a significant difference in internalized anger and anger control between genders, $p < .05$ (see Table 1). Adolescent girls experienced more internalized anger, as well as had more control over their anger.

The second MANOVA analyzed the expression and control of anger and the coping strategy used with depression as the independent variable. The Pillai's trace MANOVA revealed significance in the variables, $F(9, 76) = 3.85, p < .05$. The univariate post hoc F-tests showed a significant difference in anger expression, internalized anger, emotion-

Table 1:

Cell Means and Standard Deviations by Gender With Associated Univariate Post Hoc F-tests.

Variable	Girls (n = 56)	Boys (n = 30)	F	p
BDI	9.60 7.92	7.40 7.33	1.65	.20
Anger-In	50.10 8.47	44.10 7.56	10.50	.00
Anger-Out	49.90 11.29	53.80 11.85	2.24	.14
Anger Control	57.80 8.82	52.90 11.76	4.66	.03
Anger Expression	44.70 11.47	48.00 12.46	1.54	.22
Task Coping	55.10 10.80	52.90 8.24	.98	.32
Emotion Coping	49.00 10.65	52.90 10.06	2.70	.10
Avoidance Coping	53.50 10.61	53.60 7.52	.00	.95
Social Diversion	52.10 9.44	51.80 7.03	.03	.88
Distraction	52.60 10.43	53.70 8.52	.27	.61

Note. Within each cell, the upper number refers to the mean, while the lower number refers to the standard deviation. BDI stands for the Beck Depression Inventory.

oriented coping style, and task-oriented coping style in depressed and non-depressed individuals, $p < .05$ (see Table 2). Depressed individuals experienced more internalized anger, as well as more total anger than non-depressed individuals. Depressed individuals used the emotion-oriented coping style when in stressful situations more often than non-depressed individuals. Likewise, non-depressed individuals used task-oriented coping style more often than non-depressed individuals.

Table 2:

Cell Means and Standard Deviations by Depression Level With
Associated Univariate Post Hoc F-tests.

Variable	<u>Depressed</u> (n = 17)	<u>Non-Depressed</u> (n = 69)	F	p
Anger-In	53.90 5.67	46.60 8.63	11.05	.00
Anger-Out	55.10 10.80	50.30 11.63	2.38	.13
Anger Control	53.50 8.87	56.70 10.39	1.42	.24
Anger Expression	52.20 9.84	44.30 11.86	6.37	.01
Task Coping	47.90 10.51	56.00 9.26	9.84	.00
Emotion Coping	58.60 9.28	48.30 9.87	15.35	.00
Avoidance Coping	50.70 11.17	54.20 9.13	1.83	.18
Social Diversion	48.80 11.07	52.80 7.81	3.12	.08
Distraction	51.40 10.73	53.30 9.56	.57	.45

Note. Within each cell, the upper number refers to the mean, while the lower number refers to the standard deviation.

CHAPTER 4

DISCUSSION

The present study was an attempt to understand the relationship among depression, anger, coping style, and gender in adolescents. The research did not support hypothesis 1 which states, adolescent girls would score significantly higher on the Beck Depression Inventory (BDI) than adolescent boys. Adolescent girls also did not score significantly different on the emotion-oriented coping scale from the Coping Inventory for Stressful Situations (CISS) than adolescent males (hypothesis 3). Hypothesis (2) which states that adolescent girls would score significantly higher on internalized anger than adolescent males was supported. The results also supported hypotheses 4, 5, and 6 which state depressed individuals would score significantly higher on the internalized anger scale and on the emotion-oriented coping style scale and significantly lower on the task-oriented coping style scale than non-depressed individuals.

Based on the participants of this sample, adolescent girls are not acknowledging more depressive symptoms than adolescent boys. This result clearly is not congruent with the majority of past research. The discrepancy may be

explained by looking at the current trend toward androgyny among adolescents. This trend would make it more socially acceptable for both boys and girls to acknowledge similar symptoms, unlike the past, when stereotypes were used to dictate how the different genders dealt with depression.

Referring to internalized anger, previous research points to a relationship between adolescent depression and an increase in negative emotions (Carey et al., 1991) including anger. Depression can be caused in part by anger, directed inward, or anger that is suppressed according to previous psychoanalytic concepts (Clay et al., 1993). In the current sample, not only did depressed adolescents have significantly more internalized anger than non-depressed adolescents, but adolescent girls, too, showed more signs of internalized anger than adolescent boys. Adolescent girls have significantly more control over their anger than adolescent boys according to the data collected from this sample. This may be explained by society's expectations for girls to control their anger by holding it in while allowing boys to be aggressive and express their anger outwardly.

Depression, anxiety, and poor recovery from illness have

been linked to the emotion-oriented coping style (Endler & Parker, 1994). Task-oriented coping style is found to be negatively linked or unrelated to depression, anxiety, and poor recovery (Endler & Parker, 1994). The results from the current study support past research findings. Depressed adolescents acknowledged using the emotion-oriented coping strategy in stressful situations more frequently than non-depressed adolescents. The reverse is true for non-depressed adolescents, as they acknowledged using the task-oriented coping style more often than depressed adolescents. Even though past research had found gender differences in the use of coping strategies in an older, college-age, sample, the current study did not show any significant differences.

Implications for further research would include the need for replication of the current study with a larger, more diverse sample. This would allow the findings to be generalized to a larger segment of the population. Also, a larger sample with a more equal gender representation would allow for greater confidence in interpretations of gender differences on the BDI. Another area for exploration could be a comparison of the BEM sex role inventory with the BDI to

determine the effect of the trend towards androgyny in the current adolescent generation.

In summary, the present work puts forth strong evidence supporting that coping style and anger expression are related to depression. These factors should be taken into consideration when assessing and treating individuals. Teaching more effective, healthy ways to cope with stressful situations and to express anger may be the key in preventing depression or reducing the intensity of the depressive episode.

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Appendix A
Letter to Parents or Guardians

September 7, 1996

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Dear Parents,

My name is Jana Muzyka. I am a graduate student at Emporia State University and am currently working on my Master's thesis project. Dr. Novak has generously allowed me to contact some of the students at DeSoto High School in hopes that they would be willing to participate in my study. The topic of the study is how adolescent depression is related to the individual's anger expression and the type of coping strategy used in stressful situations. This study will include teens representing different levels of depression ranging from normal to severe.

I will be at DeSoto High School during Ms Copeland's Psychology classes, Ms Figuly's Married and Single Living classes, and Mr. Krug's Community Service class on September 13 asking for volunteers to complete three surveys. A permission form will be given at this time to those students who volunteer to participate in the study. You, as well as the student, will need to sign and the student to return this form to school on or before September 17. Your teen will not be able to participate unless this form is returned. On September 17, I will return to the above mentioned classes and hand out the three surveys to the volunteering students. A make up time will be scheduled on September 19 for those who were absent. After the study has been completed, I will return to the classes to give the students an overview of the results. **The results of the study will be completely confidential. Your teen's name will not be associated with any of the test results.**

I would like to thank you in advance for your help. A copy of the results from the study will be delivered to Dr. Novak. If you have any further questions, I can be reached at 268-5915.

Sincerely,
Jana Muzyka

Appendix B
Informed Consent Form

Participation Consent Letter

Your teen is invited to participate in a study investigating the relationship between anger, coping style, and depression. He/She will be completing a State-Trait Anger Expression Inventory, a Coping Inventory for Stressful Situations, and a Beck Depression Inventory. The completion of these instruments takes approximately 40 minutes.

Information obtained in this study will be identified only by code number. His/Her name will not be associated with the answers he/she gives on the three inventories. The information he/she provides will remain confidential.

Your teen's participation in this study is completely voluntary. Should he/she wish to terminate his/her participation, he/she is welcome to do so at any point in the study. Termination of participation will have no bearing on your teen's class grade. There is no risk or discomfort involved in completing the study.

If you have any questions or comments about this study, feel free to contact the researcher, Jana Muzyka, at 268-5915. If you have any additional questions, please contact David Dungan, Division of Psychology and Special Education, 301 Visser Hall, (316) 341-5806.

Thank you in advance for allowing your teen to participate.

I, _____, have read the above information and have agreed to allow
(please print your name)

_____ to participate. I understand that his/her participation is voluntary
(please print teen's name)
and that he/she may withdraw at any time without prejudice after signing this form should he/she choose to discontinue participation in this study.

(signature of Parent of Guardian)

(date)

(signature of Participant/Student)

(date)

(signature of Researcher)

(date)

THIS PROJECT HAS BEEN REVIEWED BY THE EMPORIA STATE UNIVERSITY COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS.

Appendix C
Demographics

All information below is CONFIDENTIAL

Demographics

Please mark the appropriate box:

Male Female Date of Birth __ / __ / __ Age _ _ _ _

Grade in School 9 10 11 12

1. Are you currently taking any medication, such as an antidepressant, for depression? Yes No

2. If you answered "Yes" to question #1, please indicate what medication you are currently taking.

3. Are you currently or have you in the past 6 months been in counseling for depression? Yes No

4. If you answered "Yes" to question #3, please mark the type or types of counseling you have received.

Individual counseling

Group counseling

Hospitalization

Appendix D
Depression Information

Depression

Depression is a mood that anyone can experience at one time or another. If these feelings, however, last more than a few weeks and get in the way of everyday life some type of intervention may be necessary.

Some of the symptoms of clinical depression include:

- a deep sense of sadness
- a noticeable change in appetite or sleep patterns
- a loss of interest in pleasurable activities
- fatigue or loss of energy
- a feeling of worthlessness
- recurrent thoughts of death or suicide

If you feel you have a problem with depression, you should contact a parent, school counselor, teacher, or your doctor. An adult you trust can help you find the assistance you may need.

Here are some numbers that might be helpful:

- College Meadows Hospital Helpline.....1-800-525-2673
- Crittenton (Johnson County Clinic).....345-1551
 - Emergencies/Admissions.....765-6600
- Families For Mental Health.....262-2200
- Johnson County Mental Health.....362-2233
 - After Hours Emergency.....384-3535
- Providence Medical Center--Mental Health Community Line
 -596-4276
- Shawnee Mission Medical Center--Mental Health Community Line
 -789-3222
- *Shawnee Mission Medical Center--Assessment Center.....789-3218
 - *Provides free assessments for depression.

If you are experiencing a life threatening situation, please go directly to the nearest emergency room.

I, Jana G. Muzyka, hereby submit this thesis to Emporia State University as partial fulfillment of the requirements for an advanced degree. I agree that the Library of the University may make it available for use in accordance with its regulations governing materials of this type. I further agree that quoting, photocopying, or other reproduction of this document is allowed for private study, scholarship (including teaching) and research purposes of a nonprofit nature. No copying which involves potential financial gain will be allowed without written permission of the author.

Jana G. Muzyka
Signature of Author

October 31, 1996
Date

AN EXAMINATION OF THE RELATIONSHIP
AMONG DEPRESSION, ANGER, COPING STYLE,
AND GENDER IN ADOLESCENTS

Title of Thesis/Research Project

Doug Cooper
Signature of Graduate Office
Staff Member

12-4-96
Date Received