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SEX-ROLE ATTRIBUTES, SELF-PERCEPTION
AND PREDISPOSITION TO DEPRESSION IN
EARLY ADOLESCENCE

by
Lance Gregory Woods

A Dissertation Submitted to the Faculty of the
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY
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For the Degree of
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1998
As members of the Final Examination Committee, we certify that we have read the dissertation prepared by Lance Gregory Woods entitled Sex-Role Attributes, Self-Perception and Predisposition to Depression in Early Adolescence and recommend that it be accepted as fulfilling the dissertation requirement for the Degree of Doctor of Philosophy.

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Final approval and acceptance of this dissertation is contingent upon the candidate's submission of the final copy of the dissertation to the Graduate College.

I hereby certify that I have read this dissertation prepared under my direction and recommend that it be accepted as fulfilling the dissertation requirement.

Dissertation/Director

Date
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Dedication

This dissertation is dedicated to my father, Loy Winfred Woods. I believe, in no small part, that I am here today because of his words and example. If it were not for him I believe that much of the motivation and desire to succeed that I possess would not be present. Whenever it has been difficult or whenever I felt that I wouldn't make it or couldn't succeed I thought of what he used to say to me and that inspired me to renew my quest. I am not sure what he would think of me at this moment but I derive a great deal of satisfaction in knowing that he inspired me to get here.

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Abstract

This study investigated the relationship of sex-role attributes, self-perception, and predisposition to depression in early adolescence. 235 students from middle schools in Dade County, Florida were asked to complete three instruments; the Personal Attributes Questionnaire, the Perceived Competence Scale, and the Children's Depression Inventory. The study was designed to determine the effects of sex-role attributes on self-perception and predisposition to depression in early adolescence. More specifically, the study asked whether instrumental attributes were implicated in higher levels of perceived competence and lower depressive symptomatology while the reverse was true for those with expressive attributes.

The results of the study confirmed that instrumentality and perceived competence appear to inoculate against depression. Instrumentality for the entire sample was, in fact, significantly correlated with higher overall perceived competence and significantly inversely correlated with depressive symptomatology. Contrary to the initial hypotheses, however, expressive traits were also positively correlated with higher perceived competence and lower levels of depressive symptomatology in the entire sample. Within the sample, though, those designated as expressive individuals did report a positive but nonsignificant relationship between expressive traits and increased depression measures. Instrumental males and androgynous females reported the lowest percentages
of elevated depression scores while undifferentiated males and females reported the highest percentage.

While both perceived competence and instrumental attributes were found to have a significant inverse relationship with depression, the hypothesis that instrumental traits mediated the relationship between perceived competence and depression was not borne out with both perceived competence and instrumentality maintaining significant contributions to overall levels of depressive symptoms. The same was not true for expressive attributes as they related to the mediation of perceived competence and depression. When both perceived competence and expressivity were considered expressivity failed to maintain a significant relationship with levels of depressive symptoms.

The study also reflected sex role attributes as coping styles similar to problem focused and emotion focused approaches and also suggested an awareness that a coping style other than the individual’s predominant style seemed to exist.
INTRODUCTION

Depression is one of the most common behavior disorders in adulthood, occurring in 17.5% of all mental health patients (National Institute of Mental Health, 1973). Nearly everyone experiences some depressed affect in the course of their lives, usually involving some time limit and this experience is considered quite normal. These episodes normally follow a stressful event such as the loss of a loved one, the end of a relationship, a serious illness, or financial difficulties. Depression, as outlined in DSM-IV, is quite different. It usually involves a prolonged period of time or a significant loss of interest in things which one previously enjoyed, coupled with a wide range of symptoms such as weight loss or gain, lack of or excessive sleep, loss of energy, troubles concentrating, etc. While diagnosed in adults for some time, it was not until 1980 that DSM-III-R recognized the legitimacy of the diagnosis for children and adolescents, provided that the adult diagnostic criteria were met. Prior to this change in diagnosis, most psychotherapists believed that children and adolescents were too psychologically immature to become depressed and clinicians like Margaret Mahler (1952) maintained that the child would use denial and regression to defend against the emotional pain. Many psychologists agreed and attributed a wide variety of problems, ranging from hyperactivity to phobias, to “masked depression” (Cytryn & McKnew, 1974). Many social scientists also viewed adolescence as a highly stressful, unstable period of the life cycle. Hence, they considered depressive symptoms to be a relatively common and normal aspect of adolescent development.
Several recent studies, however, have found that adolescent depression is not the transitory, benign condition it has been presumed to be (Robertson & Simons, 1989).

Developmental Perspectives

Since the inclusion of childhood depression in DSM-III-R, however, many have argued that the changes from childhood to adolescence as well as significant differences in verbal and cognitive abilities force questions regarding the use of adult criteria. Unlike depression in adults where symptoms are relatively consistent, the ongoing cognitive changes of childhood and adolescence would seem to indicate that variations in symptoms may occur with age. Movement through stages, such as those outlined by Piaget (1972), would seem to require a different view as to causes and symptoms as one moves from preoperational, to concrete, to formal operational cognitive development. The egocentrism of infancy gives way to self-reflection, peer influences, and, eventually to the ability to conceptualize and understand the meaning of the future. Each of these stages brings with them different sources for the onset of depression and each varies in the ways in which symptoms will manifest themselves.

Murray (1970) as well as Myers & Troutman (1993) have suggested that developmental factors are believed to play a role and affect the expression, course, and pathophysiology of depressive episodes. Younger children (ages 6-10), have anxiety as a prominent part of their depressed affect, whereas aggressive behavior is more typically displayed by 11-15 year-olds. McConville, Boag, & Purohit (1973) identified three aspects of childhood depression correlated with development and chronological factors, that
consist of the following depressive subtypes: Affectual, negative self-esteem and guilt. The affectual subtype is found mostly in 6-8 year-olds, the negative self-esteem in 8-12 year-olds, and the rarely occurring guilt subtypes in children over age 10 (Ollendick & Hersen, 1989).

Symptoms, in addition to those mentioned previously, can also indicate developmental differences. Children under 6 years may develop toilet training problems, withdrawn or aggressive behavior, or separation problems. Prepubescent children may develop vague physical complaints, school and social problems, or strong fears or phobias. Adolescents may indicate negativistic or antisocial behavior with sulky withdrawal from family and peer activities. School problems and substance abuse may begin and over sensitivity, especially to rejection, may be seen (Herzog & Rathbun, 1982).

A compilation of the symptoms previously noted might then follow developmental patterns as follows:

0-2 years: Excessive crying, poor appetite, failure to thrive.

2-6 years: Dysphoric mood, somatic symptoms, withdrawn or aggressive behavior, toilet-training problems, separation problems, drop below weight gain age and sex norms, less active than usual.

7-11 years: Vague physical complaints, school and social problems, low self-esteem, strong fears or phobias, disturbed sleep, loss of energy, poor appetite, sadness.

12-21 years: Negative and antisocial behavior, withdrawal from family and peer activities, school problems, substance abuse, recurrent thoughts of death or suicide, difficulty in concentration, self-devaluation, excessive guilt, significant gain or loss of weight, loneliness, hopelessness.
While this list is by no means complete and the boundaries are somewhat fluid, it does attempt to reflect the cognitive development generally attributed to these age groups.

Prevalence

Estimates of the frequency of child and adolescent depression among the general population vary considerably. To a large degree this variability may be a function of differences in the definition and measurement of depression. Of a large group of preschool children referred for assessment in a psychiatric clinic, as an example, four percent had possible depression and only one percent had a major depressive disorder (Kashani et al., 1987). In another study, estimates were that .85% of child psychiatric patients under the age of 10 years had a primary diagnosis of depression. In that study, the rate rose with age and more than doubled (to 1.7%) for 10-14 year-olds, and further increased to 7.6% among 18-19 year-olds. This compares with an adult rate of 14.8% for a primary diagnosis among 25-44 year-old clients (Orvaschel, 1983). Kaplan, Hong & Weinhold (1984) administered the Beck Depression Inventory (BDI) to 385 high school students and found that about 9% were moderately to severely depressed. Teri (1982b) gave the BDI to 568 high school students and concluded that 27% were moderately depressed and another 5% were severely depressed. Kandel & Davies (1982) reported that 19.7% of the people in their sample felt sad or depressed. Worchel, Nolan, & Wilson (1987) found that 21% of the subjects reported mild to moderate levels, and 7% reported severe levels of depression while Lamb and Pusker (1991) found that 15.9% of their adolescent patients were depressed. While studies have reported diagnosis rates which
have varied from near zero in a large nonclinical sample of children aged from 10 to 11 years (Rutter, Tizard & Whitmore, 1970) to 57% in a clinical sample of children 8 to 13 years old (Kovacs, Feinberg, Crouse-Novak, Paulauskas, Pollack, & Finkelstein, 1984), fourteen studies of nonclinical samples reported an average of 7% clinically depressed while studies based on clinical samples naturally tended to yield higher depression rates, averaging 42% across six studies (Petersen, Compas, Brooks-Gunn, Stemmler, Ey, & Grant, 1993).

Although there do not appear to be age variations in community samples within the adolescent decade, depressive diagnoses as well as depressed mood appear to increase dramatically in adolescence compared with childhood (Fleming & Offord, 1990; Rutter, et al., 1976; Rutter, 1986) and preadolescent or adolescent onset of clinical depression is considered to be a serious risk factor for adult depression and perhaps other mental disorders as well (Harrington, Fudge, Rutter, & Pickles, 1990; Kovacs, Feinberg, Crouse-Novak, Paulauskas, & Finkelstein, 1984, Kovacs, Feinberg, Crouse-Novak, Paulauskas, Pollack, & Finkelstein, 1984).

Current evidence suggests that the prevalence of major depression, substance abuse, and offending behavior, as well as incidence of suicide, continues to increase in adolescent populations. There are also indications that problem behaviors among younger children are becoming more common (Prosser & McArdle, 1996). Simons & Murphy (1985) completed a study of more than 400 high school students in which 32% of Males and 46% of females reported that they had considered suicide. Doll (1996), in a review of
12 epidemiological studies, published 1987-1990, that describe the prevalence of childhood and adolescent psychiatric disorders, found that in a typical school of 1000 students one could expect to have between 180 and 200 students with diagnosable psychiatric disorders. Clinicians have further observed that depressed affect is a frequent accompaniment of such disorders as school refusal, separation anxiety, obsessive compulsive disorder, or psychosis (Rutter & Garmezy, 1983).

Theoretical Approaches

Given the acceptance of depression as an adolescent disorder whose prevalence parallels that of adulthood what then are its roots? A variety of theories have been postulated regarding the origin and treatment of depression. Of these, the most prominent have been put forth by genetic-biological, psychoanalytic, cognitive-behavioral, and social learning theorists, but these traditional theories have failed to encompass all categories of adolescents suffering from this disorder.

Depression, in a clinical sense, involves emotions that are either devastating, persistent, and out of proportion to the situation, or exist with no apparent accompanying loss (Gelfand, Jensen, & Drew, 1988). Signs of clinically significant depression include behavioral changes; lack of enjoyment in previously preferred activities; withdrawal from friends and social activities; sadness; and pessimistic statements about self, others, and the world. The victim may complain of fatigue, disturbed sleep patterns, unexplained awakening, difficulty in concentrating and remembering, changing eating habits, and recurrent thoughts of suicide or death. Physical complaints may also be present.
Some affective disorders tend to run in families which might suggest a genetic-biochemical basis for these disorders. One study found that both members of pairs of identical twins had an affective disorder in 69.2% of the cases compared with only 13.3% for fraternal twins (Gershon, et al., 1976). However, the fact that at least 30 percent of the cases did not show both members were similarly afflicted indicates that other, nongenetic factors also contribute to the development of affective problems. Affective disorder was also found to be significantly more frequent among adoptees with a depressed biological parent than was the case for people with normal parents or those with parents suffering from other types of psychological disturbance (Cadoret, 1978). Additionally, research has shown that particular types of affective disorders seem to be transmitted within families and that close relatives of a person with unipolar depression are at greater risk for developing a similar disorder.

The effectiveness of antidepressant medication such as Zoloft, Prozac, and others also suggests that some depression may have a biochemical basis. Current research indicates that medication is most beneficial for appetite and weight issues, certain insomnias, and morning mood worsening, onset of depression, and family history of good response to such medications. It is very likely that there are various forms of depression, and that these forms may vary biologically. A complication in the use of antidepressants with children is their differing response when compared with adults. Drugs such as lithium and monoamine inhibitors (MAO) have relieved symptoms in adults but have produced mixed results in children and adolescents. It may be prudent to view the use of
antidepressants in the same way that one might view the use of medication such as Ritalin in Attention Deficit Disorder or librium to relieve the symptoms of anxiety. Each may alleviate the symptoms while masking the true cause. As evidenced in research on ADHD, medication appears effective in calming the child who takes it, but does not address the underlying issues.

Additionally, scientists have speculated that depression stems from some malfunction of the neurotransmitters (i.e. norepinephrine, serotonin, and dopamine) in the brain. More recent research indicates that there may be both receptor and neurotransmitter involvement in hormonal responses in depression. It is very likely that there are various forms of depression, and that these forms may vary biologically. As one review concluded, “There may be multiple biochemical as well as psychological pathways to depression” (McNeal & Cimbolic, 1986).

In contrast to the genetic-biochemical theory, Freud dealt with depression in adults psychoanalytically and his psychoanalytic theories were later modified and revised to include children and adolescents. Freud believed that depression began with a predisposition toward over-reliance on oral stimulation as the source of pleasure and reassurance. This predisposition was thought to develop excessive needs for physical contact and reassurance, making the child highly vulnerable to any form of real or perceived rejection (Malmquist, 1977). Events such as the birth of a sibling, harsh weaning methods, or more subtle forms of loss of love and attention from parents may constitute traumatic events, leaving a psychological scar. The resultant feelings of both
love and hate for the parent set the stage for experiences later in life when the child, once again, experiences a blow to self-esteem. The basic conflict reoccurs and manifests itself in depression.

The psychoanalytic explanation is very difficult to verify, and troubled people are very suggestible, making it possible that subtle input from psychoanalysts is reflected in their patients' reports on their early experiences. When there is so much opportunity for memory failure and for distortions, patients' recollections may prove unreliable indicators of the causes of depression (Gelfand, Jenson, & Drew, 1988).

In contrast, cognitive theorists place no emphasis on unconscious conflict. A.T. Beck's (1977) cognitive theory of depression states that the individual is predisposed to depression through early trauma. Beck's theory assumes that later depressive reactions are then triggered by another major loss or disappointment. Beck (Kovacs & Beck, 1977) describe a "cognitive triad" of distorted depressive thinking regarding (1) oneself, (2) the situation, and (3) the future.

Beck's theory does not, however, explain how early stress produces disordered thinking. Early loss does not always lead to later depression, and highly stressing events such as the death of a parent are not invariably found among people who become depressed (Crook & Eliot, 1980).

Contrary to the cognitive theorists' conclusions that a traumatic event, early in life, is the precursor to clinical depression, learning theorists believe that this affective disorder is the product of different learning mechanisms in the production of depressed behavior.
The loss of predictable positive reinforcement acts as the trigger in the reinforcement approach postulated by theorists such as Ferster (1974) and Lewinsohn (1974). Both have suggested that depression may stem from a serious decrease in reinforcing events that have previously maintained the person's behavior and that apathy and depressed affect may result. Complaints about feelings of worthlessness, guilt, and suicidal talk may elicit attention and concern from others and may, in part, compensate for the decrease in reinforcement for more appropriate behaviors.

M.E.P. Seligman (1975) offered a somewhat different theory when he proposed the concept of learned helplessness. He postulated that early learning of helpless reactions to unavoidable stress caused depression. People who experience inescapable and uncontrollable tragedies may become convinced that they are not in control of their lives, so they give up helplessly.

In the case of the reinforcement approach, research does not generally support the fact that early loss always leads to later depression and that distressing events such as the loss of a parent are universally found among those who become depressed. Furthermore, Seligman's position is minimized by the fact that it is impossible to predict which children will become vulnerable to learned helplessness and which will resist (Miller & Norman, 1979). Also, there are wide individual differences in how people respond to inescapable noxious events and no inescapable major stress is observable in the life histories of some depressed people.
While each of these theoretical perspectives can account for why some children and adolescents become depressed, there are still other adolescents who become depressed without a significant trauma or loss and many who experience such an event but exhibit none of the symptoms of depression at that time or when later traumas surface. None of these theories have accounted for this disparity and none have satisfactorily dealt with the twice greater instances of depression in females over males nor have they explained the increase in depression with age among the adolescent population.

There may yet be another piece to this behavioral puzzle which may support the social learning or cognitive theorists position while offering a possible answer to the criticisms regarding the lack of a pattern mentioned above. In a study of sex-role attributes and their impact on self-perception and predisposition to depression, Wilson and Cairns (1988) explored the possibility that there may be a connection to the development of sex-role attributes and differential vulnerability to depression. The fact that affective disorders, such as depression, are found in statistically greater numbers in females than males and that the converse is true for behavioral disorders begs the question. Is there a relationship between the perceived roles of males and females and their susceptibility to certain disorders like depression? This study will attempt to look at those gender roles and determine whether those with certain sex role attributes, regardless of sex, are more prone to depression while others are not.
RELATED LITERATURE

Gender Differences in Depression

All evidence suggests that increases in depressive disorders are greater for girls than for boys during adolescence (e.g., Kandel & Davies, 1982, Webb & VanDevere, 1985, Navon, et al., 1986, Kashani et al., 1987, Bryan & Petrangelo, 1989, Allgood-Merten, et al., 1990, Gore, et al., 1993, Inderbitzen, et al., 1995, Powell et al., 1995) and that the gender difference that emerges by age 14-15 years appears to persist into adulthood. Many explanations have been put forth as to why this is the case. Leadbetter, et al. (1995), in a review of research findings on gender differences found that adolescent girls show greater interpersonal depressive vulnerabilities and greater reactivity to stressful events involving others and are more likely to exhibit internalizing than externalizing syndromes. McFarlane, et al. (1995), in a study of 682 Canadian 10th graders found that among factors that increased vulnerability to depression during adolescence were being female and exposure to stressors. Lewinsohn, et al. (1994) studied 1508 adolescents over the course of one year and found that young women were more likely to be, to become, and to have been depressed.

Many scholars have considered whether the gender difference is a true difference in depression or whether it can be explained by artifacts such as different styles of responding to questions and differences in openness. These examinations have concluded
that the gender difference appears to be a true difference in the experience of depression (Gove & Tudor, 1973; Nolen-Hoeksema, 1987; Nolen-Hoeksema, Girgus, & Seligman, 1991; Weissman & Klerman, 1977). Men and women have different response styles in which men distract themselves, whereas women ruminate on their depressed mood and therefore amplify it (Nolen-Hoeksema, 1987). Sex role socialization in early adolescence, related to the biological changes of puberty that heighten an identity with one’s gender, is thought to produce the observed change in these gender differences by midadolescence.

Another explanation for increased experience of depression among girls is that girls experience more challenges in early adolescence (Petersen, Sarigiani, & Kennedy, 1991). For example girls are more likely to go through puberty before or during the transition to secondary school (Petersen, Kennedy, & Sullivan, 1991; Simmons & Blythe, 1987). Nolen-Hoeksema & Girgus (1994) in a review of recent studies on gender differences concluded that the prevailing evidence suggests that girls are more likely than boys to carry risk factors for depression even before early adolescence, but these risk factors lead to depression only in the face of challenges that increase in prevalence in early adolescence.

One such challenge, having a strong caring orientation or involvement in family problems, is particularly harmful to girls according to a study conducted by Gore, et al., 1993) in which they found that girls (in a study of 524 boys and 684 girls in grades 9-12) had higher levels of interpersonal caring orientation and involvement in the problems of significant others and that this accounted for 25% of the gender differences in stress that
resulted in elevated levels of depressed mood. Campbell, Byrne, & Baron (1992), in a study of 207 French-Canadian high school students revealed lower mean scores for males than females on all interpretable Reynolds Adolescent Depression Scale (RADS) and Beck Depression Inventory (BDI) items and in a followup longitudinal study of 153 French-Canadian high school students (Baron & Campbell, 1993) separate discriminant function analyses of both the RADS and BDI yielded lower mean scores for males on all interpretable items. The differences between the sexes have been identified at even earlier ages. Boggiano & Barrett (1992), in a study of 127 3rd-grade children, found that girls were more extrinsic in their orientation and thus suggested they were more susceptible to helplessness and depression.

Ethnicity and Adolescent Depression

Unlike the differences between males and females in rates of depression it is less clear whether depression and depressed mood may be higher among adolescents in some ethnic groups or other subgroups than others. In a review of community studies of adolescent depression, Fleming and Offord (1990) reported that in two of five studies where race was examined, African-American adolescents had higher rates of depression and depressed mood than Whites. On the other hand, Nettles and Pleck (1993) reviewed several studies and concluded that although African-American youths are at greater risk for many negative behavioral and health outcomes, rates of depressive symptoms in African-American samples are typically lower than Caucasian youth. Dornbusch, Mont-Reynard, Ritter, Chen, & Steinberg (1991) reported that Caucasian and Asian-American
youth reported more depressive symptoms than African-American or Hispanic-American adolescents, even after controlling for levels of stressful life events.

Dukes & Martinez (1994) examined the impact of ethgender, the combination of race and gender, on global and public domain aspects of adolescent self-esteem among ten ethgender combinations. Of 18,612 junior high and high school students in that study Black and Hispanic males had the highest levels of global self-esteem, and Asian and Hispanic females the lowest. On public domain aspects White and Black males had the highest scores. Females (except Blacks) had lower levels of both global and public domain self-esteem than did males. Flannery, et al. (1994) examined the interpersonal (peer pressure, parental monitoring, peer substance use, parent-child involvement, and school adjustment) and intrapersonal (self-efficacy, impulsivity, aggression, depression, and academic achievement) risk for substance use in 1,170 Caucasian and Hispanic 6th and 7th graders, equally divided by gender. In all groups, interpersonal variables accounted for more variance in predicting risk (49% for Hispanic males) than intrapersonal variables (0% for Hispanic females). Findings were consistent across gender and ethnicity.

Rates among Native-American adolescents appear to be elevated (Beiser & Attneave, 1982). High rates of depressive symptoms have been reported especially among Native Americans in boarding schools (Manson, Ackerson, Dick, Baron, & Fleming, 1990). Furthermore, adolescents living in rural areas may be at greater risk for depression compared to those in urban or suburban areas (Sarigiani, Wilson, Petersen, and Vicary, 1990; Petersen, Bingham, Stemmler, & Crockett, 1991).
Early Family Socialization

While significant research has been done on the effects of sex role orientation on the mental health of adolescents, it may be equally important to understand why certain sex role attributes are valued more than others and how certain attributes may contribute to the absence or presence of depressive symptoms in early adolescence. The child's initial and most lasting exposure to sex roles most certainly comes from the family and there are many studies which indicate that this link is instrumental in the development of sex role attributes in children at a very early age. Fagot & Leinbach (1989) found that children who received early socialization emphasizing gender and who labeled according to gender early remained more aware of cultural sex stereotypes at age four than those children who were late labelers. Their findings as well as those of Werbach, et al (1992), Peters (1994), and Crouter, et al (1995) also indicate that the child's construction of gender schema reflects back the behavioral, cognitive, and affective dimensions received from the familial environment. Mischel (1966) found that children initially acquired sex-typed behaviors as a function of reinforcement and modeling while Weinrab, et al. (1984) found that awareness of sex-role stereotypes was reliably observed in children as young as 26 months; by 36 months the majority were aware of sex-role stereotypes. Lloyd (1991) found that children in the first year of school were able to identify masculine and feminine toys as well as typically male and female responsibilities in the home and in the workplace. Social learning theory and modeling, as discussed by Bandura (1982), also reflects the importance of the family in early childhood development of sex-role perceptions.
Block (1983) reviewed literature on the differential socialization of the sexes and found that both mothers and fathers press achievement and competition more on their sons than on their daughters and that they encourage their sons more than daughters to control the expression of affect, to be independent, and to assume personal responsibility. Fathers, more than mothers, were also less accepting of behaviors deviating from the traditional masculine stereotype. At the same time, the relationship of parents with daughters was characterized by greater warmth, expectations of ladylike behavior, greater confidence in trustworthiness, greater reluctance to punish daughters and more pressure to be nurturant, obedient, and responsible while boys received more pressure from parents and the larger culture to achieve and be self-reliant. Boys not only receive more negative feedback, including physical punishment from parents, but also receive more positive feedback and fathers of boys responded contingently and positively to sons more than twice as much as fathers of daughters. Emihivich, et al (1984) found a strong positive relationship between fathers’ and sons’ sex-role beliefs, especially among fathers of adolescent boys.

Serbin, et al (1993) investigated the contributions of cognitive and environmental factors to the development of sex-typing during middle childhood in 558 5-13 year-olds and found that knowledge of stereotypes, flexibility, and sex-typed personal preferences all increased with age during middle childhood and that affective elements, such as sex-typed preferences for activities, occupations, and peers, were more consistently related to sex-typing of the home environment. Yarrow (1984), in a study of mother-infant interactions,
found that mothers of males were observed to interact more frequently with their male infants, at higher intensity levels, and with richer, more varied behavior. According to Block, studies of sex-differentiated parental socialization behaviors generally report boys are given more freedom to explore than girls.

**Peer Conformity**

While sex-role education and role modeling has been found to be extensive in the environment of the family, Pleck (1975) has suggested that the second sex-role phase consists of traditional sex-typed masculine-feminine development which peaks in early adolescence. In this phase adolescents learn the rules of sex-role differentiation and are motivated to make others and themselves conform to them and are more rigid and intolerant of deviations from sex role norms in themselves and others. The implication of this model of sex-role development is that those who do adhere to stringent masculine and feminine guidelines may develop traits which may not be conducive to positive adjustment in early adolescence. Rather, masculine and feminine sex-typed adolescents, because of their conformity to sex-role norms, may have positive self images (Lamke, 1982b).

In contrast to the phasic models of sex-role development, Lerner, Sorell, and Brackney (1981) provide a perspective from which an alternative prediction concerning the relationship between sex-role orientation and adjustment in adolescence can be made. They suggest that an individual’s self-definition should be compatible with the demands society places on the individual and that the masculinity-femininity distinctions between males and females may no longer be adaptive to current demands. They further suggest
that within the American sociocultural milieu masculine traits and behaviors are highly valued and rewarded. However, relatively little is known about gender identity development during adolescence and about how biological, social, and psychological factors interact during this period (Condry, 1984) and more needs to be known about the differential treatment of adolescent males and females, and how such social interactions change from the period of middle childhood to puberty.

In a study by Massad (1981) 8th- and 11th-grade adolescents completed the Personal Attributes Questionnaire (PAQ), Piers-Harris Children’s Self-Concept Scale, and the Peer Interaction Rating Scale (PIRS). Employing analysis of variance procedures, high masculine males were found to have high self-acceptance, as measured by the Piers-Harris, and overall high peer acceptance, as measured by the PIRS. For females, both masculine and feminine characteristics were associated with high self-acceptance. For females, as well, high peer acceptance was associated with a balance between masculinity and femininity, particularly high levels of both dimensions. Schneider & Coults (1985), in a study of 858 10th and 12th graders, found that males were especially susceptible to the anti-intellectual influences from peers. Richardson (1988), in a study of 408 adolescent students and 393 teachers utilizing the Bem Sex-role Inventory found a marked differentiation of males and females by both students and teachers with students being more rigidly sex-typed in their responses than teachers.

Feiring & Lewis (1991) studied the development of social networks from middle childhood to early adolescence among 100 children from the ages of 9 to 13 years and
found that, at thirteen, networks became more age segregated and that for adolescent girls, but not boys, the friendship network was related to specific types of self-perceived competence and Thorne & Luria (1986) found that extensive segregation between boys and girls in elementary schools, and distinctive social relations within their separate groups, provided gender-differentiated contexts for learning which helped lay the foundation for the more overtly sexual scripts of adolescence and adulthood. Eder & Parker (1987) analyzed the role of extracurricular activities in middle- and high schools in the promotion of gender differences and found that male athletes were encouraged to be achievement-oriented and competitive, and cheerleaders were reminded of the importance of appearance and emotion management. These values were incorporated into the informal peer culture of the school.

Societal Expectations

Beyond the immediate impact of family and peers are the societal expectations of males and females and the resultant impact on sex role orientation and mental health. Males and females grow up in psychological learning contexts that are importantly different and these differing contexts have large implications for the subsequent psychological functioning of males and females (Block, 1983). Lind & Connole (1985) investigated sex differences in 3 components of decision control in a series of studies utilizing 4-, 9-, and 14-year-olds; 160 subjects within each age group. Their findings indicated that at the behavioral level, boys controlled more decisions than girls, especially in the oldest grouping. In the area of self-perception, girls were less likely to perceive
themselves as decision controllers compared to their male counterparts in the oldest age grouping.

In terms of those who question role acceptance, Steiner-Adair (1986), in a study of thirty-two 14-18 year-olds, found that subjects able to identify and reject contemporary cultural values and ideal images of women that were unsupportive of female adolescent developmental needs were not prone to eating disorders. In contrast, Aube & Koestner (1992) used a prospective longitudinal study to investigate the long-term developmental implications of gender-related interests and traits and found that harsher consequences follow when adolescent boys endorse nontraditional gender-related interests and undesirable traits than when girls do and Gue (1985) found that culture is a factor in the development of sex-role traits for women.

Lemkau & Landau (1986) discussed the “selfless syndrome” when characterizing women psychotherapy clients who have followed cultural prescriptions to seek satisfaction via self-denial and fulfilling the needs of others to the exclusion of their own. Moreland & Schwebel (1981) postulated that men’s internalized concepts of the male role model, societal expectations, and occupational institutions contribute to inhibiting men as fathers.

Dweck, Davidson, Nelson, and Enna (1978) looked at the classroom and found that girls are more prone than boys to show decreased persistence or impaired performance following failure, the threat of failure, or increased evaluative pressure. They attribute this to the pattern of evaluative feedback given to boys and girls in the classroom and the tendency for girls to view feedback as indicative of their level of ability. Positive
feedback was used in a way that would make it more indicative of ability for boys than for girls and that there was a consistent chance for girls to underestimate their chances for success and for boys to overestimate them. They concluded that their analysis implied that for girls, more than boys, academic failures will have a cumulative and long-term effect on their confidence.

Block (1983) found that teachers were not only more likely to respond to boys, but they reprimanded them in much more solution-advancing ways, providing more specific information and that girls in the high-achievement condition received the lowest levels of supportive, ego-enhancing feedback; they also received fewer laudatory attributional statements and significantly more disparaging attributional statements. Block also found that in the differential socialization of the sexes, the defensiveness scales of psychological inventories suggested that self-images of males, in contrast to those of females, included stronger feelings of being able to control (or to manipulate) the external world.

Rekers, et al (1989) investigated the sex typing of activities among 65 male and 68 female junior and senior high school students and found that masculine activities included sports-related activities and activities dealing with mechanics and building. Feminine activities were domestic in nature and included more sedentary activities. Davies (1986) studied the effect of sex-typed labeling of a task on the performance of 36 children (aged 11, 13, and 16 years) and found that subjects performed better at tasks labeled sex-appropriate than those labeled sex-inappropriate. In a similar study Pierce & Edwards
(1988) analyzed the gender differences in written fantasy stories of 133 boys and 133 girls (all aged 9-14 years). Both sexes showed significant differences in conflict resolutions they created. Boys used more violent resolutions by male characters to solve problems, while girls used more reasoning and analysis. Stories written by both sexes were, more often than not, sex-role stereotyped, with female characters in traditional occupations and passive activities.

Smith & Russell (1984) analyzed children’s beliefs about sex differences and investigated how these are related to age and gender. 202 males and females aged 7, 10, and 15 years were asked to give explanations for their beliefs about sex differences. Younger subjects were more likely than older subjects to emphasize biological and physical factors. Significant gender differences were also found, especially for 15 year-olds. Females were much more likely to attribute sex differences to social factors and males to biological factors. Females were also more likely to have experienced conflicts between their own values about sex-role behavior and those of society.

Brinn, et al (1984) asked 10 boys and girls from each of four grade levels (2, 5, 8, and 11) to examine drawings of activities scaled for sex-role stereotypy and select those activities in which they would like to engage. All subjects expressed an increasing preference for masculine items and a decreasing preference for feminine items with increments in grade level. Goldman & Goldman (1983) interviewed 838 children (aged 5-15 years) in Australia, England, North America, and Sweden to find out how children perceive differences between mothers and fathers and how children perceive the roles of
mother and father. Mother was seen as predominantly concerned with domestic duties, care of children, and low-status occupations, while father was seen overwhelmingly in a leisure role, occupier of high-status occupations, and playing authority/leadership roles in the family.

**Sex Role Attributes and Adolescent Depression**

With all of the influences and constraints imposed by family, peers, and society what is the impact on boys and girls who follow this blueprint and those who don’t? While much has been written regarding the disparity between adolescent boys and girls in the incidence of depression, there has been little to explain why some girls do not become depressed while some boys do. If gender, alone, was the determining factor then one could surmise that this contradiction would not exist. In an effort to explain this, researchers have begun to explore the differences between sex and gender role attributes. Money (1994) attempted to describe the difference in an article addressing gender identity disorder in childhood and adolescence. In it he defined sex as a person’s biology; gender as what a person becomes socially; gender identity as a person’s perception of his or her own maleness or femaleness; and gender role as the cultural stereotype of what is masculine or feminine. It is when these are not in concert that gender identity problems occur. Rogers (1951) self-theory also addressed this difference. He stated that the accurate perception and subsequent integration of social expectations with personal values are essential to adaptive development. Since sex role stereotypes constitute social expectations for sex-appropriate behavior (Cottrell, 1942; Weisstein, 1969) these
stereotypes serve as potential sources of conflict with personal values. That is, if sex role stereotypes do not correspond with what people think of themselves, with what they think others want them to be, or with what they ideally would like to be, then according to Rogerian theory, psychological conflict results.

Deutsch & Gilbert (1975) detailed this in a study of 128 college men and women. The subjects were asked to complete the Bem Sex-Role Inventory in order to describe their concepts of real self, ideal self, ideal other sex, and belief about the other sex’s ideal other. Women’s sex role concepts regarding their real self, their ideal self and their belief of what the other sex desires were highly dissimilar while those of the men were highly similar. They found that the average college woman in their study saw themselves as slightly feminine, wanting to be more androgynous but believing that she would be more desirable to men if she were extremely feminine. The congruence of male subjects responses further indicated to the authors that masculinity was more, not less, adjustive than androgyny for males, and that the acquisition of masculine traits for women may be more adjustive in the social context of a male-oriented culture. Evidence (Block, 1973) suggests that masculinity is indeed the cultural norm according to the authors and that masculine characteristics are the clinical standard for mental health. Their data showed that the few females describing themselves as masculine were well adjusted relative to other women.

Several contrasting hypotheses conceptualizing links between sex-role constructs and mental health have been argued. The earliest, termed the traditional hypothesis held
that appropriately sex-typed people (masculine males and feminine females) were psychologically healthier because their behavior and attitudes were consonant with stereotypes and expectations (Pleck, 1975; Erikson, 1968; Kagan, 1964; Kohlberg, 1966; and Mussen, 1969). They noted that in all societies men and women hold distinctive sex roles by which their behavior is directed. Although all of these theorists agree that the goal is to acquire sex-typed behavior, there is less congruence on the process of sex role development (Markstrom-Adams, 1989). According to Kohlberg, development of an appropriate sex role is embedded in cognitive organization, not cultural norms or biology. The child observes the behavior of others, and internally selects and organizes gender-specific traits. Kagan suggests that the individual internalizes a standard of appropriate sex roles and behaves according to this standard. Mussen, asserts that a comprehensive theory of sex typing needs components of the cognitive-developmental model, the identification model, and the social-learning model. Implicit is the notion that the child identifies with same sex adult members of society and adopts gender-specific traits. Constantinople (1973) disputed the bipolar view of sex roles and argued that the traits of masculinity and femininity best operate on two separate, independent dimensions.

Bem (1974) proposed a multidimensional model of sex roles with masculine individuals high on masculinity, feminine individuals high on femininity and androgynous individuals showing a balance of both. Refinements by Spence, et al. (1975) differentiated between those high in both traits (androgynous) and those low in both (undifferentiated).
Masculine traits have been characterized by such descriptions as determination to succeed, mastery of the external world, vocational identity, ideological identity, physical competence, directed, achievement motivation, independent, competitiveness, and self-aggrandizement while feminine traits have been described with terms such as empathy, tolerance, social relations, interpersonal identity, sensitivity, nurturance, and warmth in relationships (Lorr & Manning, 1978). These two categories of attributes have also been referred to as instrumental and expressive traits (Parsons, 1955) and these terms continue to predominate in current research. It is around these categories (instrumentality and expressiveness) along with androgyny, and undifferentiated categories that much research has been conducted and several contrasting hypotheses offered conceptualizing links between sex-role constructs and depression.

One of the most influential hypotheses proposes that androgynous individuals are less vulnerable to depression because their relatively high levels of both instrumental and expressive traits give rise to more flexible coping processes than sex-typical traits whose exclusive masculinity or femininity would limit skills and behavior (Bem, 1974; Spence & Helmreich, 1978). Baubomb & Danker-Brown (1979) found support for this position in a study of 160 college students in which half were given unsolvable concept formation problems and the other half solvable ones. While feminine sex-typed and masculine sex-typed students showed cognitive and motivational deficits as well as dysphoric mood in the helpless condition; helpless androgynous students showed only dysphoric mood.
Avery (1982), in a study to assess the relationship between sex-role orientation and loneliness in adolescence, found that androgynous individuals were significantly less lonely than masculine, feminine, and undifferentiated (low instrumentality and low expressiveness). Lamke (1982) and Napholz (1994) looked at the differences in self-esteem and depression among the four sex-role orientation groups (undifferentiated, androgynous, expressive and instrumental) and found that the feminine (expressive) group and the undifferentiated group had significantly higher depression and lower self-esteem scores compared to their androgynous counterparts. Androgynous individuals also demonstrated better health behaviors than did expressive, instrumental, and undifferentiated groups in studies conducted by Asuncion (1991), Shifren, Bauserman, & Carter (1993).

In apparent contrast, Spangenberg & Lategan (1993) found that androgynous females displayed significantly better coping skills than female subjects with feminine, masculine or undifferentiated orientations. However, no significant difference was found between the coping abilities of androgynous and masculine male subjects duplicating findings by Jones, et al. (1978), Silvern and Ryan (1979), and Deutsch & Gilbert (1975) who found a distinction between men and women with androgyne associated to superior adjustment only among women while instrumentality was associated with good adjustment in men. Markstrom-Adams (1989) and Ramanaiah, et al. (1995) found that masculinity and the masculine component of androgyne are most associated with both male and female adolescents’ psychosocial well being. Further support of this distinction was made by
Marsh & Byrne (1991) who found that the feminine components of androgyny contributed more positively to self-concept facets that were sterotypically feminine and that the effect of feminine characteristics were nil in research using global self measures. These latter studies point to the possibility that the masculine or instrumental component of androgyny may be the strongest correlate to mental health, with femininity not involved to any great extent as previously reported according to Taylor and Hall (1982). Rose & Montemayor (1994) reported that androgynous adolescents had the highest perceived scholastic competency, close friendship competency, and global self-worth. Masculinity predicted perceived scholastic competency and close friendship competency in girls and boys and perceived global self-worth in girls.

In some cases femininity or expressiveness was found to produce lower scores in perceived competence and higher scores in depressive symptoms. Napholz (1994), in a study of 98 female registered nurses, found that depression was greater among subjects with high levels of expressive characteristics compared with women who had cross-typed or androgynous orientations. Ruble, et al. (1993) found that expressive girls may be more susceptible to self-evaluative concerns, particularly as reflected in lower expectations for future success, more maladaptive causal attributions for success or failure outcomes and negative behavioral and evaluative reactions to failure than their instrumental or androgynous counterparts. Johnson, et al. (1996), in a study of 321 female college students found that subjects with higher levels of self-rated social desirability and lower levels of masculinity reported a higher prevalence of eating-disorder behaviors and
attitudes with subjects categorized as undifferentiated having the most pathological responses. Thornton & Leo (1992) examined the influence of gender role typing and multiple role involvement with regard to specific mental health concerns in 160 women and found that those with feminine or undifferentiated gender typing displayed greater depression and anxiety than did masculine-typed or androgynous women.

The correlation between masculinity or instrumentality and mental health has also been extensively studied. Lamke (1982b) studied 119 junior high school students (ages 12-15 years) to determine if self-esteem differences exist between sex-role categories and whether masculinity and femininity are correlated with self-esteem. She found that masculinity was the primary predictor of adjustment and is related to high levels of self-esteem for both males and females and Hollinger, et al. (1985) found similar results in a study of 260 high school students. Whitley (1983), in a meta-analysis which looked at the bipolar notion of sex roles, the androgyny model, and the masculinity model, found that, gender aside, psychological masculinity received the most support as relates to the relation between sex roles and self-esteem.

LaTorre, et al. (1983) found that junior high school is the transition period to a more instrumental environment and Wilson and Cairns (1988) reported that the instrumental attributes of masculinity influence this process and are thus related to the development of perceived competence and self-esteem, and that the variation between the sexes in masculinity may bring about the sex difference in depression. In their three studies investigating the relationship of sex-role traits to age trends and differences in
depression in adolescents, Wilson & Cairns found that females had a significantly higher rate of depressive symptoms and that masculinity was negatively correlated with the level of symptoms in males and females. The results further showed that low levels of masculinity were associated in both males and females with more frequent occurrence of such symptoms as sleep loss, feeling under strain, and regarding oneself as a worthless person. Questions dealing with perceived competence and, most specifically perceived cognitive competence showed the greatest variance according to the authors.

The studies further indicated that females had significantly higher depression scores than males and that there was a significant increase in depression scores with age. The studies also indicated higher levels of depression scores for females in the teenage but not pre-teenage group, where males had slightly more symptoms.

Taylor & Hall (1982) and Baucomb & Danker-Brown (1984) also found no evidence of interaction effects favoring the balanced over the sex-typed and that the consistency and strength of the masculinity effect relative to the femininity effect suggests that masculinity rather than androgyny predicts psychological well-being. Hollinger (1985), in a study of 260 gifted high school sophomores and juniors found that self-perceptions of stereo typically masculine instrumentality consistently emerged as the central contributor to social self-esteem.

In a study conducted by Wells (1980), however, the results were more ambivalent. Wells conducted his study of subjects between the ages of 14 and 18, asking them to complete three scales form the Offer Self-Image Questionnaire for Adolescents (Mastery
of the External World, Social Relations, and Superior Adjustment) and the Rosenberg Self-Esteem Scale. Masculine subjects scored the highest on mastery of the external world and masculinity was found to predict mastery of the world for both sexes. In social relations, for both sexes, androgynous and feminine subjects had significantly better social relations. For boys, high femininity predicted superior social relations. Androgynous subjects of both sexes had the highest superior adjustment and undifferentiated, the lowest. For girls, high masculinity predicted superior adjustment. For girls, as well, high masculinity was found to predict high self-esteem, while for boys, neither masculinity nor femininity predicted self-esteem.

A 1996 study by Obeidallah, et al. on individual differences in depressive symptoms as a function of young adolescent females’ gender role orientations and the degree of sex typing in their parents’ marital roles found that subjects who rated themselves as more masculine and their parents’ marriage as more egalitarian were significantly lower in depression than other subjects. Waelde, et al. (1994) reported that in a study of 537 undergraduates, masculinity was negatively associated with suicidality for both men and women and Sorrell, et al. (1993) found that psychological masculinity was the major factor distinguishing alcoholic from nonalcoholic subjects as a predictor of self-esteem and successful coping styles.

As can be seen from the research cited above, the evidence for the traditional, androgynous, or masculine (instrumentality) theories is ambivalent. The intent of this research then, was to examine the impact of sex-role attributes on adolescent self-
perception and predisposition to depression and to determine whether masculine (instrumental) traits were significant in the absence of depressive symptomatology in early adolescence while feminine (expressive) traits were implicated.

**Hypotheses**

1. It is hypothesized that Instrumentality, as measured by the Personal Attributes Questionnaire (See Chapter III, Methods and Procedures) is positively related to perceived competence, as measured by the Perceived Competence Scale (See Chapter III, Methods and Procedures).

2. It is hypothesized that Expressiveness, as measured by the Personal Attributes Questionnaire, is inversely related to perceived competence, as measured by the Perceived Competence Scale.

3. It is hypothesized that perceived competence, as measured by the Perceived Competence Scale, is inversely related to depression, as measured by the Children’s Depression Inventory (See Chapter III, Methods and Procedures).

4. It is hypothesized that depression, as measured by the Children’s Depression Inventory, is inversely related to Instrumentality, as measured by the Personal Attributes Questionnaire, and is positively related to Expressiveness, as measured by the Personal Attributes Questionnaire.

5. It is hypothesized that the relationship between perceived competence, as measured by the Perceived Competence Scale, and depression, as measured by the
Children’s Depression Inventory, is mediated by sex-role attributes, as measured by the Personal Attributes Questionnaire.

6. It is hypothesized that, for expressive individuals, perceived competence, as measured by the Perceived Competence Scale, will decrease and depression, as measured by the Children’s Depression Inventory, will increase as a function of age (from ages 11 to 14).

7. It is hypothesized that girls are more likely to display expressive attributes than boys, as measured by the Personal Attributes Questionnaire.
METHODS AND PROCEDURES

Subjects

Subjects in this study were drawn from middle schools within Dade County Public Schools, with administrative offices in Miami, Florida. All middle schools were asked if they would be willing to participate. The first three schools to respond positively were selected. Within these schools, principals were asked to select classes (one 6th, one 7th, and one 8th grade class) which were most representative and heterogeneous. In one school social studies classes were selected; in two others, block classes were picked. All students within these classes were given consent forms to be signed by their parents. All who returned a signed parental consent form were then asked to sign a personal assent to voluntarily participate. Of the 283 students originally solicited, 41 were excluded for parental non-consent, two were excluded for declining to participate after parental consent was given, and five were excluded for exceeding the targeted age range, leaving a total of 235 students participating.

Middle schools were selected because they were populated by students in the age range to be studied (ages 11-14 years). The students participated in their classrooms during school hours with the teacher in attendance. The total time for administration was approximately forty five minutes and involved the use of three questionnaires.
**Instruments**

**Personal Attributes Questionnaire**

The Personal Attributes Questionnaire (PAQ), developed by Spence, Helmreich, and Stapp (1974) and amended (Spence & Helmreich, 1978) was chosen to measure sex-role attributes. The PAQ is a self-report instrument assessing limited types of abstract personality traits that stereo typically and in self-report have been found to be gender differentiating. It consists of 24 items, each of which consists of a pair of bipolar descriptors linked in a 5-point scale. Eight of the pairs of descriptors assess instrumental attributes (for example, 'not at all competitive/very competitive') which collectively provide a measure of psychological masculinity. Femininity is measured by eight expressive pairs (for example, 'not at all kind/very kind'). A third set of eight pairs of descriptors, the masculinity-femininity scale, contains items that were judged to be differentially socially desirable for the two sexes (for example, 'very little need for security/very strong need for security').

The PAQ has been extensively used in studies of sex-role attributes; its reliability and validity have been discussed in detail in Spence & Helmreich (1978) and more recently by Spence (1984). Correlations between the several PAQ scales and several other measures are reported in Spence, Helmreich, and Stapp (1975). These include a self-esteem/social competency inventory, a sex-role attitudes scale, and a measure of trait stereotypes. Runge, et al. (1981) found significant sex differences in the predicted direction for all scales, as did Keyes (1984), Bursik (1995), Rechtien (1995). Cronbach
alphas have been determined to be .85, .82, and .78 for the 8-item I, E, and I-E scales, respectively. Correlations between the short scales and the original scale in the 55-item PAQ have been calculated as .93, .93, and .91 for I, E, and I-E, respectively. Confirmatory factor analyses from samples of adolescents and middle-aged males and females indicate that the I and E scales are each unifactorial (e.g., Helmreich, Spence, & Wilhelm, 1981). The I-E scale, consisting of two instrumental items (aggressive and dominant) rated somewhat desirable for men but somewhat undesirable for women and items suggesting (lack of) emotional vulnerability, somewhat desirable for men but not women. Because of its mixed content, it has been seldom used by the authors and was not used in this study.

Spence and Helmreich (1978) recommended a median split method to classify subjects into four sex-role types. Those who are above the median masculinity score and below the median femininity score are classified as masculine or instrumentally sex-typed; those below the median masculinity score are classified as feminine or expressively sex-typed; those above both median scores are classified as androgynous; and those below both median scores are classified as undifferentiated. If ns are unequal, as in this study, the median for each group (instrumental and expressive) is determined and then the median of the medians. In this case the median for instrumentality (PAQINST) was computed to be 22.2 and that for expressiveness (PAQEXP) was found to be 23.1.
Perceived Competence Scale

The original Perceived Competence Scale (Harter, 1982) was devised in order to tap children's domain-specific judgements of their competence, as well as a global perception of their worth or esteem as a person. Thus the scale tapped three competence domains, scholastic competence, social competence, athletic competence, as well as one's sense of global self-esteem or self-worth. These four subscales each yielded a separate score, allowing one to examine a profile of the child's evaluative judgements. In the revision (Harter, 1985) two subscales have been added to the original four. These are physical appearance and behavioral conduct. These scales do not necessarily involve competence in the form of actual skills but rather children's perceptions of themselves.

Each of the six subscales contains six items, constituting a total of 36 items. Within each subscale, three of the items are worded such that the first part of the statement reflects high competence or adequacy, and three items are worded such that the first part of the statement reflects low competency or adequacy. The six subscale items are presented in the following order for the first six items of the scale, and then continue to repeat themselves in that order throughout the instrument; (1) Scholastic Competence, (2) Social Competence, (3) Athletic Competence, (4) Physical Appearance, (5) Behavioral conduct, and (6) Global Self-Worth. Items are scored either 4, 3, 2, or 1, where 4 represents the most adequate self-judgement and 1 represents the least adequate self-adjustment. Items within each subscale are counter-balanced such that three items are worded with the most adequate statement on the left and three are worded with the
most adequate statement on the right. Thus, the item scores for those with the most adequate score on the left are 4, 3, 2, 1 and those with the most adequate scores on the right are 1, 2, 3, 4.

The internal consistencies for all six subscales, utilizing Cronbach's Alpha, range from .71 to .86 across four samples of 3rd through 8th grade boys and girls.

**Children's Depression Inventory**

The Children's Depression Inventory (CDI) developed by Maria Kovacs (1977) is a 27-item, self-report, symptom-oriented scale that was designed for school-aged children and adolescents. The instrument quantifies a range of depressive symptoms including disturbed mood, hedonic capacity, vegetative functions, self-evaluation, and interpersonal behaviors. Each CDI item consists of three choices, keyed from 0 to 2 in the direction of increasing severity. Thus the total score can range from 0 to 54. About 50% of the items start with the choice that reflects the greatest symptom severity; for the rest, the sequence of choices is reversed. The respondent is instructed to select the one sentence which best describes him or her for the past two weeks.

In addition to the total CDI score, five factor scales may be scored. The scales are Negative Mood, Interpersonal Problems, Ineffectiveness, Anhedonia, and Negative Self-Esteem. To score the factor scales, a letter is printed next to each item on the scoring sheet. Adding the individual item scores for each letter results in the score for each scale.
Two samples were used to establish the reliability of the Children’s Depression Inventory. One group consisted of 75 youths consecutively referred to a child guidance center who were recruited into a descriptive clinical research project. Subjects were between the ages of 8 and 13-years without evidence of mental retardation or major systemic illness and living with parents or guardians. The medical pediatric sample consisted of 80 children who had recently been diagnosed with insulin-dependent diabetes mellitus (IDDM) who were consecutive admissions to a pediatric metabolic unit; were also recruited into a descriptive research study; and met the same criteria as the psychiatric group. The internal consistency of the CDI was analyzed by means of coefficient alpha. In the psychiatric sample the coefficient was .86, and in the pediatric-medical outpatient group, .70. The latter group’s CDIs were re-examined to assess if time-of-testing was salient. Using data gathered 1 year after the IDDM was diagnosed (n=61), the internal consistency was higher with a coefficient alpha of .82.

Statistical Analyses

Hypothesis 1: Instrumentality (as measured by the Personal Attributes Questionnaire) is positively related to perceived competence (as measured by the Perceived Competence Scale). This hypothesis is tested with a simple Pearson correlation of each measure. In addition to the sample population, correlations will also be run for instrumental, expressive, androgynous and undifferentiated subsamples.

Hypothesis 2: Expressiveness (as measured by the Personal Attributes Questionnaire) is inversely related to perceived competence (as measured by the Perceived
Competence Scale). This hypothesis is tested with a simple Pearson correlation of each measure. In addition to the sample population, correlations will also be run for instrumental, expressive, androgynous, and undifferentiated subsamples.

Hypothesis 3: Perceived competence (as measured by the Perceived Competence Scale) is inversely related to depression (as measured by the Children's Depression Inventory). This hypothesis is tested with a simple Pearson correlation. In addition to the sample population, correlations will also be run for instrumental, expressive, androgynous, and undifferentiated subsamples.

Hypothesis 4: Depression (as measured by the Children's Depression Inventory) is inversely related to Instrumentality (as measured by the Personal Attributes Questionnaire) and positively related to Expressiveness (as measured by the Personal Attributes Questionnaire). This hypothesis is tested with two distinct simple Pearson correlations of each measure. In addition to the sample population, correlations will also be run for instrumental, expressive, androgynous, and undifferentiated subsamples.

Hypothesis 5: The relationship between competence (as measured by the Perceived Competence Scale) and Depression (as measured by the Children's Depression Inventory) is mediated by sex-role attributes (as measured by the Personal Attributes Questionnaire). After examining the criteria for a mediating variable, this hypothesis is tested with a step-wise hierarchical regression examining the contribution of perceived competence to depression after controlling for the contribution to variance of sex-role attributes. Perfect mediation holds if the independent variable has no effect when the mediator is controlled.
Hypothesis 6: For expressive individuals, perceived competence (as measured by the Perceived Competence Scale) will decrease and depression (as measured by the Children's Depression Inventory) will increase as a function of age (from ages 11 to 14-years). This hypothesis will be tested with a 4X2 Manova with between group factors being age (11/12/13/14) and sex-role attributes (instrumental/expressive) and dependent variables being the Personal Attributes Questionnaire, the Perceived Competence Scale, and the Children's Depression Inventory.

Hypothesis 7: Girls are more likely to display expressive attributes than boys (as measured by the Personal Attributes Questionnaire). This hypothesis is tested with a t test comparing average expressive scores of each gender.
RESULTS

This study was designed to examine the relationship between sex-role attributes, perceived competence, and depression in early adolescence. Sex-role attributes were categorized as instrumental, expressive, androgynous, or undifferentiated traits, based upon established criteria. Perceived competence was measured by subject report in areas of perceived athletic, scholastic, and social competence as well as perceived physical attractiveness, behavioral conduct and global self-worth. Depressive levels were measured by subject-reported symptoms of negative mood, interpersonal problems, ineffectiveness, anhedonia, negative self-esteem. In addition, subjects’ total reported depression score was calculated.

Sample Characteristics

Appendix A, Table 1.1 displays the demographics of the sample. The 235 subjects in this study were 11, 12, 13 and 14 year-old boys and girls from three middle schools in the Dade County Public School District. They had a mean age of 12.64 (S.D.=0.91) years. Females represented 57% of the subject population and males 43%. The majority of the students (74%) were Hispanic; 10% were Black (non Hispanic); 12% were White (non Hispanic); 1% were Asian; and 2.5% identified themselves as biracial. Eleven year-olds represented 15% of the sample; 12 year-olds, 24%; 13 year-olds, 42%; and 14 year-olds, 19%. Sixth grade students made up 29% of the study population; 7th grade, 41%; and 8th grade, 29%. Sex role orientation demographics in this sample indicate that 19%
of the students participating were identified as instrumental; 20% were identified as expressive; 30% were identified as androgynous; and 31% were identified as undifferentiated. Please refer to the Methods Section for a full description of these categories, as well as how they were calculated.

**Dependent Variables**

Appendix A, Tables 2.1, 2.2 and 2.3 display the mean, standard deviation, and range for each of the dependent variables used in testing each of the hypotheses. Please refer to the Methods Section for a full description of the psychometrics of each instrument utilized.

**Hypothesis #1:** Instrumentality (as measured by the Personal Attributes Questionnaire) is positively correlated to perceived competence (as measured by the Perceived Competence Scale).

Appendix A, Tables 3.1, 3.2, 3.3 and 3.4 display the relationship between instrumentality and perceived competence. Overall, in the entire sample (n=235), instrumentality is positively correlated (p<.01) with perceived athleticism, perceived physical appearance, perceived social competence, perceived scholastic ability, and overall perceived competence. However, in the overall sample, instrumentality failed to show significant correlation with behavioral conduct.

Within the sample, among those subjects (n=44) fitting Spence's description of instrumental individuals (high instrumentality and low expressiveness), instrumentality failed to achieve significance in its correlation with any competence subscale (all p's >.10).
while among those subjects (n=46) fitting Spence’s description of expressive individuals, their expressed instrumentality was significantly correlated with overall perceived competence (p<.01). Further, among these subjects, instrumentality was significantly correlated with perceived social competence (p<.05) and was marginally correlated with perceived scholastic ability, perceived athletic ability, and perceived physical appearance (p<.08) while failing to show significant correlation with perceived behavioral conduct (p>.08).

Among those subjects (n=71) fitting Spence’s description of androgynous individuals (high instrumentality and high expressiveness), their expressed instrumentality was significantly correlated with perceived athletic competence (p<.01) and with overall perceived competence (p<.05). However, among the androgynous subset, their expressed instrumentality failed to show significant correlation with perceived physical appearance, perceived scholastic ability, perceived social competence, and perceived behavioral conduct (all p’s >.10).

Among those subjects (n=74) fitting Spence’s description of undifferentiated individuals (low instrumentality and low expressiveness), their expressed instrumentality was significantly correlated with perceived athletic competence, perceived physical appearance, perceived behavioral conduct, and perceived scholastic ability (all p’s<.01). In addition, among these undifferentiated subjects, instrumentality was significantly (see Appendix A, Table 3.1) correlated with perceived social competence and overall perceived competence (p’s<.05).
While the correlation between PAQ Instrumentality and perceived athletic competence failed to meet the test of statistical significance (p>.05), the correlation suggested a relationship. Appendix A, Table 3.2 examines, using regression, the contribution of expressive subjects' perceived athletic ability to their PAQ Instrumentality. As suggested, the association is marginally significant (p>.06), with expressive subjects' perceived athletic ability contributing 7.8% to the variance in subjects' Instrumentality.

Likewise, while the correlation between PAQ Instrumentality and perceived physical appearance failed to meet the test of statistical significance (p>.05), the correlation suggested a relationship. Appendix A, Table 3.3 examines, using regression, the contribution of expressive subjects' perceived physical appearance to the subjects' PAQ Instrumentality. As suggested, the association is marginally significant (p<.051), with the expressive subjects' perceived physical appearance contributing nearly 8% to the variance in subjects' Instrumentality.

Finally, while the correlation between PAQ Instrumentality and perceived scholastic ability failed to meet the test of statistical significance (p>.05), the correlation also suggested a relationship. Appendix A, Table 3.4 examines, again using regression, the contribution of perceived scholastic ability to the expressive subjects' PAQ Instrumentality. This association is also marginally significant (p<.079), with expressive subjects' perceived scholastic ability contributing nearly 6.5% of the variance in subjects' Instrumentality.
Inasmuch as instrumentality was positively correlated with perceived competence in the entire sample; and that expressed instrumentality within the subset of androgynous and undifferentiated subjects was positively correlated with various competency subscales, Hypothesis 1 is supported in this sample.

**Hypothesis #2:** Expressiveness (as measured by the Personal Attributes Questionnaire) is inversely related to perceived competence (as measured by the Perceived Competence Scale).

Appendix A, Tables 4.1 and 4.2 display the relationship between expressiveness and perceived competence. Among those subjects (n=46) identified as highly expressive, expressiveness was significantly inversely correlated with perceived physical appearance (p<.05), as well as inversely correlated (though failing to meet significance) with perceived social competence, perceived behavioral conduct, and overall perceived competence (See Appendix A, Table 4.1). Among those subjects (n=71) identified as androgynous (highly instrumental and highly expressive) traits, expressiveness was significantly inversely correlated with perceived athletic ability (p<.05), as well as inversely correlated (though failing to meet significance) with perceived physical appearance, perceived scholastic competence, perceived social competence, and overall perceived competence (p>.05).

While the correlation between PAQ Expressiveness and perceived physical appearance failed to meet the test of statistical significance (p>.05), the correlation suggested a relationship. Appendix A, Table 4.2 examines, using regression, the contribution of expressive subjects’ perceived physical appearance to the subjects’ PAQ
Expressiveness. As suggested, the association is marginally significant (p<.056) with expressive subjects’ perceived physical appearance contributing 8% to the variance in subjects’ Expressiveness.

Inasmuch as expressiveness was negatively correlated within the subsets of expressive and androgynous with various competency subscales, Hypothesis 2 cannot be rejected in this sample.

**Hypothesis #3:** Perceived competence (as measured by Global Self-Worth on the Perceived Competence Scale) is inversely related to depression (as measured by the Children’s Depression Inventory)

Overall, in the entire sample (n=235), perceived competence (PCS Global) is significantly inversely correlate with the subscales of anhedonia, negative self-esteem, ineffectiveness, negative mood, problem solving, and total depression (all p’s<.01) as measured by the Children’s Depression Inventory. Among those subjects (n=44) fitting Spence’s description of highly instrumental traits and (n=46) highly expressive traits, perceived competence is significantly inversely correlated with all previously mentioned measures of depression (all p’s <.01) except for problem solving for those identified as highly expressive.

Among those subjects (n=71) fitting Spence’s description of androgynous (highly instrumental and highly expressive) individuals, their expressed perceived competence is significantly inversely correlated with total depression as measured by the Children’s Depression Inventory (p<.01). Further, among these androgynous subjects, their
expressed perceived competence is significantly inversely correlated with negative mood (p<.05). Perceived competence is also marginally inversely correlated with problem solving (p<.06).

Among those subjects (n=74) fitting Spence’s description of undifferentiated (low instrumentality and low expressiveness) individuals, their expressed perceived competence is significantly inversely correlated with anhedonia, negative self-esteem, negative mood, problem solving, total depression (all p’s<.01) and ineffectiveness (p<.05) (See Appendix A, Table 5.1).

While the correlation between PCS Global for androgynous subjects and problem solving failed to meet the test of statistical significance (p>.05), the correlation suggested a relationship. Appendix A, Table 5.2 examines, using regression, the contribution of androgynous subjects’ problem solving to their global self-worth score. As suggested, the association is marginally significant (p<.060) with androgynous subjects’ problem solving contributing 5% to the variance in androgynous subjects’ global self-worth score.

Inasmuch as perceived competence is negatively correlated with depression in the entire sample; and that perceived competence is further negatively correlated within subset populations with various depression subscales, hypothesis 3 is supported in this sample. 

**Hypothesis #4:** Depression (as measured by the Children’s Depression Inventory) is inversely related to instrumentality (as measured by the Personal Attributes Questionnaire) and positively related to expressiveness (as measured by the Personal Attributes Questionnaire)
Analysis of Hypothesis 4 yields mixed results. In the entire sample (n=235), instrumentality is significantly inversely correlated with anhedonia, negative self-esteem, ineffectiveness, negative mood, problem solving, and total depression as measured by the Children’s Depression Inventory (all p’s <.01). Expressiveness, however, is also significantly inversely correlated with anhedonia, negative mood, problem solving, and total depression (all p’s <.01) as well as with negative self-esteem (p <.05) (See Appendix A, Table 6.1).

Among those subjects (n=44) fitting Spence’s description of highly instrumental individuals, their expressed instrumentality was not significantly correlated with any of the subscales measured in the Children’s Depression Inventory but their expressed expressiveness was significantly inversely correlated with anhedonia, problem solving, and total depression (all p’s <.01) as well as ineffectiveness (p <.05). Among this subset of instrumental individuals, their expressed expressiveness was inversely correlated with negative self-esteem and negative mood, but this correlation failed to meet significance (p > .05) (See Appendix A, Table 6.2). In contrast, among those subjects (n=46) fitting Spence’s description of expressive individuals, their expressed instrumentality was significantly inversely correlated to anhedonia, negative mood, problem solving, and total depression (all p’s <.01) and with negative self-esteem and ineffectiveness (p’s<.05) as measured by the Children’s Depression Inventory. With the same subjects, expressiveness was positively correlated with anhedonia, negative self-esteem, ineffectiveness, negative mood, and total depression, but the correlations failed to meet significance (all p’s>.05).
Only problem solving showed an inverse albeit insignificant correlation ($p>.05$) with expressiveness in this subset of the sample (See Appendix A, Table 6.3).

Among those subjects ($n=71$), fitting Spence's description of androgynous individuals, their expressed instrumentality showed no significant inverse correlations with any of the subscales on the Children's Depression Inventory (all $p's>.05$). Further, their expressed expressiveness showed no significant positive correlations with any subscale of the Children's Depression Inventory (all $p's>.05$) (See Appendix A, Table 6.4).

Among those subjects ($n=74$) fitting Spence's description of undifferentiated individuals, their expressed instrumentality was significantly inversely correlated with anhedonia, negative self-esteem, ineffectiveness, negative mood, problem solving and total depression as measured by the Children's Depression Inventory (all $p's<.01$). Among undifferentiated subjects, their expressed expressiveness was also significantly inversely correlated with anhedonia, negative mood, problem solving, and total depression (all $p's<.01$) as well as negative self-esteem ($p<.05$) (See Appendix A, Table 6.5).

Inasmuch as expressed instrumentality is significantly negatively correlated with all depression subscales in both the overall sample and the subsamples of undifferentiated and expressive subjects, Hypothesis 4 cannot be rejected in this sample.

While not a question included in the original dissertation proposal, curiosity dictated the examination of sex role attributes association with depression by gender. Appendix A, Table 6.6 presents that examination. Of those subjects identified as instrumental ($n=44$) 11% responded with scores in the above average range or higher on
the Children's Depression Inventory. Boys in this category were at 9% and girls at 20%. Subjects identified as expressive (n=46) included 15% with above average or higher scores. Of these boys were at 33% and girls at 15%. Androgynous subjects (n=71) reported 6% of their scores in the above average range or higher with boys at 12% and girls at 2%. Undifferentiated subjects (n=74) indicated that 22% had scores in the above average range or higher with boys at 23% and girls at 21%.

**Hypothesis #5**: The relationship between competence (as measured by the Perceived Competence Scale) and depression (as measured by the Children's Depression Inventory) is mediated by sex-role attributes (as measured by the Personal Attributes Questionnaire).

A variable functions as a mediator when it meets the following criteria: (a) variations in the levels of the independent variable significantly account for variations in the mediator; (b) variations in the mediator significantly account for variations in the dependent variable; and (c) when a & b are controlled, the relation between the independent and dependent variables is no longer significant (Baron & Kenny, 1986).

Previous examination in this study showed a significant correlation between perceived competence (PCSGLOBE) and sex role attributes (Instrumentality and Expressiveness) and sex role attributes, in turn, were significantly correlated with scores in depression (CDITOT). Additionally, PCS Globe is significantly correlated with CDITOT scores. Therefore, the basic criteria for examination of potential mediation are met. (See Appendix A, Tables 3.1, 3.2, and 3.3). Appendix A, Tables 7.1, 7.2, 7.3, and 7.4 examine the hypothesized mediation between perceived competence and depression by sex role.
attributes. Appendix A, Tables 7.1 and 7.2 look at the specific sex role attribute of instrumentality. Appendix A, Tables 7.3 and 7.4 look at the specific sex role attribute of expressiveness. Appendix A, Table 7.1 shows a significant correlation between each of the three variables (all p’s < .01), meeting the first two criteria of mediation (Baron & Kenney, 1986). Appendix A, Table 7.2 displays the result of regression analysis controlling for the sex role attribute of instrumentality.

In step one of this step-wise analysis, the independent variable of perceived competence (PCSGLOBE) is the only variable in the equations designed to predict subject depression (CDITOT). The overall regression equation proves significant (p<.001), as does the predictive ability of perceived competence (p<.001). In this equation, subjects’ perceived competence accounts for 34.7% of the variance in subjects’ overall depression.

In step two, the independent variable of subjects’ expressed instrumentality is added to the equation. The addition of the independent variable of instrumentality contributes an additional 1.8% to the explained variance in subjects’ overall depression. The equation remains significant (p<.001) and the regression now explains 36.5% of the variance. While subjects’ expressed instrumentality proves to be a significant independent predictor of overall depression (p<.01), subjects’ perceived competence maintains its significant contribution to overall depression (p<.001). Therefore, subjects’ instrumentality does not mediate the relationship between perceived competence and depression.

Appendix A, Tables 7.3 and 7.4 examine the specific sex role attribute of expressiveness. Appendix A, Table 7.3 shows a significant correlation between each of
the three variables (all p’s <.01), meeting the first two criteria of mediation (Baron & Kenney, 1986). Appendix A, Table 7.4 displays the result of regression analyses controlling for the sex role attribute of expressiveness. In step one of this step-wise analysis, the independent variable of perceived competence (PCSGLOBE) is once again the only variable in the equation designed to predict subject depression (CDITOT). The overall regression equation proves significant (p<.001), as does the predictive ability of perceived competence (p<.001). In this equation, subjects’ perceived competence once again accounts for 34.7% of the variance in subjects’ overall depression.

In step two, the independent variable of subjects’ expressed expressiveness is added to the equation. The addition of the independent variable of expressiveness contributes an additional 1% to the explained variance in subjects’ overall depression. The equation remains significant (p<.001) and the regression now explains 35.7% of the variance. While subjects’ expressed expressiveness loses it’s significance as an independent predictor of overall depression (p<.06), subjects’ perceived competence maintains its significant contribution to overall depression (p<.001). Therefore subjects’ expressiveness also does not mediate the relationship between perceived competence and depression.

Inasmuch as the relationship between competence and depression maintains its significance after controlling for the suspected mediation effect of sex role attributes, Hypothesis 5 is not supported in this sample.
Hypothesis #6: For expressive individuals, perceived competence (as measured by the Perceived Competence Scale) will decrease and depression (as measured by the Children’s Depression Inventory) will increase as a function of age (ages 11 to 14).

Analysis of Hypothesis 6 yields mixed results. Appendix A, Table 8.1 examines the perceived competence scores of those subjects identified as expressive individuals across the four age groups. Perceived competence did not decrease between the age groups. Indeed, on its face, it would appear that perceived competence actually increases with age, with a particular burst in perceived competence occurring at age 12. While there is a significant difference between 12 year-olds and other age groups it fails to prove significant and its interpretation is questionable given the small sample size.

Appendix A, Table 8.2 examines the depression scores of those subjects identified as expressive individuals across the four age groups. Again, on its face, it would appear that depression scores increase as the subjects age except for 12 year-olds. However, the rise in depression scores fails to achieve statistical significance. Inasmuch as depression scores do not increase across age groups, Hypothesis 6 cannot be supported in this sample.

Hypothesis #7: Girls are more likely to display expressive attributes than boys (as measured by the Personal Attributes Questionnaire).

Appendix A, Table 9.1 examines the mean expressive scores of each gender. The difference between means is significant (p <.001). Hypothesis 7 is supported in this sample.
DISCUSSION

This study was conducted in the Dade County Public Schools of southern Florida utilizing 235 students in the sixth, seventh, and eighth grades who were identified as instrumental, expressive, androgynous, or undifferentiated with regard to sex-role attributes. The study was designed to determine the effects of sex-role attributes on self-perception and predisposition to depression in early adolescence. More specifically, the study asked whether expressive attributes were implicated in lower self-perception and greater depressive symptomatology while the reverse was true for those with instrumental attributes.

The results of the study confirmed that instrumental traits were not implicated in lowered self-perception and increased predisposition to depression. Instrumentality for the entire sample was, in fact, significantly correlated with higher overall perceived competence and significantly inversely correlated with depressive symptomatology. Within the subgroups of instrumental, expressive, androgynous, and undifferentiated individuals only the responses of instrumental individuals failed to achieve significance in the correlation of instrumentality and overall perceived competence. This is apparently due to the regular use of instrumentality in their day to day lives as well as the restricted (by definition) range of instrumental scores by these individuals and the comparatively small number of subjects identified as instrumental. A larger number of androgynous
individuals utilized the same restricted range for instrumentality but the correlation of instrumentality and self-perception was significant indicating that a larger instrumental subgroup might have also achieved significance in its correlation with overall perceived competence.

The results comparing instrumentality to depression were even more compelling. All measures of depression were significantly inversely correlated with instrumentality for the entire sample population as well as the expressive and undifferentiated subgroups. While instrumental and androgynous subgroups failed to achieve the same level of significance, their acceptance of instrumentality as a daily form of coping and the restricted range of instrumentality scores would, once again, seem to play a primary role. Androgynous individuals indicated a non-significant inverse correlation between instrumentality and depression but a non-significant positive correlation between expressiveness and depression on most subscales. This appears to speak to the use of both coping styles by these individuals and an apparent recognition that instrumentality works best in coping with most potentially depression provoking situations.

The results regarding expressiveness and its relationship to perceived competence and depression were less clear. While the total sample reported a positive relationship between instrumentality and perceived competence their endorsement of an inverse correlation between expressiveness and perceived competence was not evident. The total sample, in fact, reported a significant positive correlation between expressiveness and overall perceived competence as well as other subscales. This, again, may represent the
use of expressive responses in those situations where instrumental or problem focused interventions are not appropriate. The fact that expressive and androgynous subgroups did report non-significant inverse correlations for overall perceived competence and other subscales appears to reflect a perception that expressive or emotion focused traits are not positively correlated with perceived competence.

The relationship of expressiveness to depression was also equivocal. While not as strong as the instrumental findings, a significant inverse relationship was found for the total sample, in apparent contradiction to this study's hypothesis. However, as with self-perception, expressive and androgynous subgroups, once again, reported non-significant positive correlations between expressiveness and most depressive subscales in contradiction to the overall findings and an apparent reflection that those who use these traits or responses most do not see them as an inoculation against depression.

Perceived competence was found to have a significant inverse relationship with depression, as expected. Results of all depression subscales for the total sample showed a significant inverse correlation as did the results for most subscales for the instrumental, expressive, and undifferentiated subgroups. Only the androgynous subgroup showed a non-significant but still inverse correlation on most subscale scores. All subgroups, however, showed a significant inverse relationship between overall perceived competence and total depression.

While both perceived competence and instrumental attributes were found to have a significant inverse correlation with depression, the hypothesis that instrumental attributes
mediated the relationship between perceived competence and depression was not borne out and subjects' perceived competence maintained its significant contribution to overall depression indicating that instrumentality and perceived competence make significant independent contributions. The same was not true for expressive attributes as they lost significance when both perceived competence and expressiveness were controlled for leaving a significant inverse correlation between perceived competence and depression.

It was also hypothesized that for expressive individuals, perceived competence would decrease and depression scores increase as a function of age. Results, however, indicated that perceived competence scores actually remained fairly constant over the span of 11 to 14 years of age. While there was a significant difference between 12 year-olds and other age groups it failed to prove significant and its interpretation was questionable given the small cell sizes for 11- and 12 year-olds. The results regarding the change in depressive scores with age reflected an increase, except for 12 year-olds, but this increase failed to achieve statistical significance and, again, can apparently be attributed to small cell sizes for 11- and 12-year-olds.

The study results reflecting higher scores in perceived competence and lower depression scores for those identified as instrumental are consistent with a previous studies conducted by Wilson & Cairns (1988), Lamke (1982b), Whitley (1983), Waelde, et al. (1994) and Sorrell, et al. (1993) but in contradiction to the findings that the results apply to both males and females. In contradiction to the studies mentioned above, instrumentality was found to be most effective for boys with androgyny the most effective
style for girls. These results compare favorably to Spangenberg and Lategan (1993),
Jones, et al. (1978), Silvern and Ryan (1979), and Deutsch and Gilbert (1975) who found
that androgyny was associated with superior adjustment only in females with
instrumentality favorably associated with males. The results are in contradiction with the
results of studies conducted by Spence et al. (1975), Spence and Helmreich (1978),
Baucomb and Danker-Brown (1979), Napholz (1994), Assuncion (1991), and Shifren, et
al. (1993) who reported that androgyny was responsible for better outcomes in both males
and females.

The results of this study also partially supported the findings of those who have
postulated that instrumentality and the instrumental component of androgyny are most
associated with both male and female adolescents’ psychosocial well being (Markstrom-
Adams, 1989, Ramanaiah, et al., 1995). While the studies results confirmed psychological
androgyny for females the results found in favor of instrumentality with males. Like
Marsh & Byrne (1991), the study found that feminine or expressive components of
androgyny contributed more positively to self-concept facets that were stereo typically
feminine.

The results of this study, then, embraced parts of both the instrumental and
androgynous positions. While instrumentality was the clearest indicator of psychological
well-being in males, androgyny signaled that role for females. Instrumental males and
androgynous females reported the fewest elevated scores on the Children’s Depression
Inventory with instrumental males at 9% and androgynous females at 2%. The figure for
androgynous females is particularly important given the literature which reflects a significantly greater prevalence of depression for females than males in addition to the much higher corresponding numbers of elevated CDI scores for instrumental (20%), expressive (15%), and undifferentiated (21%) females in this study.

What the results may also be saying is that sex role attributes may more accurately reflect coping styles. It may be that instrumental traits can be seen as problem focused traits used to deal with controllable components of depression while expressive traits are used for the emotion focused aspects of depression when control is not possible. The fact that most factors regarding depression are controllable and therefore best combated by problem focused responses may position those with instrumental traits or the instrumental components of androgyny to best deal with depression in most circumstances. This might also explain the relatively high percentage of elevated depression scores for those identified as undifferentiated where a dearth of both traits appears to exist. Importantly, what is also reelected is a awareness by all groups that a coping style other than the individual's predominant style exists. If these results are generalizable to other studies and other populations this may indicate a significant finding regarding how we might view family, peer and societal influences and what support we might offer to females and males in terms of coping skills as they develop at home and in the schools. Whether this is true for females due to the instrumental component of androgyny as reported by Markstrom-Adams (1989), Ramanaiah (1995) or Marsh & Byrne (1991) is beyond the purview of this study but it seems clear that an androgynous orientation by females may offer a wider
range of coping skills when dealing with issues in an instrumentally oriented society such as ours. Likewise, those individuals exhibiting an undifferentiated or, to a lesser degree, expressive orientation may feel less capable of coping with the expectations of family, peers and society and reflect less problem focused skills. This understanding may also help in our interactions with adolescents exhibiting these orientations so that we might minimize their exposure to situations which might result in depressive episodes while encouraging the adaptation of a wider array of coping skills.

Lastly, while significant decreases in perceived competence and increases in depressive symptomatology did not occur with age as hypothesized, it is important to point out that depressive scores did increase with age overall and that the difference between ages 12 and 14 was marginally significant (p < .10). It is possible that with larger expressive samples of 11 and 12 year-olds (n=5 and n=7) the results may have supported the hypothesis for perceived competence and depression.

Limitations of the Study

The study was a cross-sectional one and therefore a picture of individual subjects at specific ages. If it is true that depression, for certain adolescents, increases with age then a longitudinal study may more accurately identify the characteristics of those who become more susceptible to depression and how that changes over time.

The study was also limited by the population characteristics of south Florida. While representative of the area from which the sample was drawn, the percentage of Hispanic respondents is not representative of the general population. Even though
existing literature is equivocal regarding the incidence of adolescent depression by ethnicity, the uniqueness of this sample leaves its responses open to question.

Lastly, since socioeconomic status was not controlled for it is difficult to know what impact this might have on the results of this study. While every effort was made to gather a representative sample it is not known whether this occurred. Schools were chosen from the inner city of Miami, an affluent suburb, and a middle class area but these representations may not be fully inclusive.

Considerations Related to Generalization

As indicated previously, Hispanics were over represented in this study compared to the general population. In addition, multiple Hispanic populations were included but not distinguished in the results. Students included in this study represented Central America, South America, Cuba, and Mexico and significant differences are evident among these areas. Specifically, the Cuban-American population in this area has adopted a much more colonial orientation while those of most other countries have elected to assimilate into the larger culture. Since literature is quite limited regarding the adolescent Cuban-American population and since they represent the vast majority of Hispanic subjects in this study, it is difficult to know how generalizable their responses might be to the greater Hispanic population or the general population.

Lastly, given that quality of education can have a direct impact on self-esteem which, in turn, can impact depressive symptomatology and given that educational policies
are primarily driven by individual states and that states vary in their quality of education, care should be taken in generalizing the results of this study to the population at large.

**Implications for Future Research**

The differences between adolescent boys and girls in the incidence of depression is well documented in the literature but what is less clear is why some adolescents do not become depressed in the face of significant loss or trauma while others do become depressed without these negative events. While this study has attempted to identify the impact of sex role attributes on predisposition to depression, it represents only one step in identifying the root cause(s) so that proper education and treatment can be employed.

As mentioned earlier, a longitudinal study following boys and girls through the significant years of eleven to fourteen, may more completely identify changes that occur as relates to sex role attributes and their impact on perceived competence and predisposition to depression. A study of this kind would certainly help clarify what happens between eleven years of age when incidence of the levels of depressive symptomatology are essentially equal between boys and girls and age sixteen when the incidence of depression with girls is nearly twice that of boys.

The impact of specific sex-role attributes on adolescent depression could be further clarified by identifying the sex role attributes of previously diagnosed depressive adolescents in the age range of eleven to fourteen years. In this way, a much clearer picture could be developed as to the impact of each of the orientations detailed in this study. Is it true that instrumental boys and androgynous boys and girls are not represented
in this population while undifferentiated boys and girls and expressive girls are? Does this explain the fact that the theories of Seligman and Beck do not always fit who will become depressed and who will not? Are their theories, in combination with sex role attributes, a more appropriate and inclusive measure of potential depression during adolescence.

It may also be important to look at the coping styles of each of these sex role orientations to determine what protects some adolescents from depression and what causes some adolescents to utilize certain coping styles and not others. How are these coping styles developed in the face of familial, peer, and societal pressure and why do some adolescents effectively cope while others do not.

Implications for Schools

If it is true that one’s sex role orientation plays a significant role in levels of perceived competence and predisposition to depression in early adolescence then education’s recognition of this fact and it’s responses to adolescents can play a critical role. If, as indicated earlier in this study, boys receive more praise, indications of acceptance and feedback than girls (Block, 1983; D’Ambrosio & Hammer, 1996; Dweck, Davidson, Nelson, & Emma, 1978) then one could conclude that schools are participating in the recognition of instrumental orientation as one of higher value. This then might serve to perpetuate the results of this study in which instrumental boys and boys and girls with an androgynous sex role orientation had the highest levels of perceived competence and the lowest levels of depressive symptomatology while expressive girls and undifferentiated boys and girls showed the reverse effect. In addition, the lack of
recognition of depressive tendencies amongst those who do not receive the most praise, acceptance and feedback only serves to compound the problem.

Encouraging a wide variety of approaches and coping styles while recognizing and supporting those who exhibit less confidence and self-assurance might serve to decrease the ever growing rates of depression and suicide during early adolescence. This approach would also help to negate those studies which indicate that boys are recognized more in class, encouraged more in certain subjects, and viewed with greater expectations. Offering the same attention to girls and boys and encouraging those who appear to have a more expressive or undifferentiated orientation seems to be essential to the success of each student and indeed the responsibility of schools to their students and the community.

From a less esoteric perspective, there are practical reasons why schools must be involved in the identification of and assistance to depressed students. Studies referred to in this paper as well as others not mentioned report that approximately 7% of those students we see are depressed and the number increases to 42% in clinical samples. Petersen, et al. (1993) and Doll (1996) found that 18-20% of children and adolescents have diagnosable psychiatric disorders. Those students who are depressed frequently manifest somatic complaints which result in absence from school and decreased learning. Depressed students regularly experience a lack of concentration as a hallmark symptom of depression and students who are not able to concentrate don’t learn. Most importantly, many students who present with depressive symptoms experience suicidal ideation or attempt suicide at some point. As discussed earlier, Simons and Murphy (1985), in a
study of 400 high school students, found that 32% of males and 46% of females reported that they had considered suicide. The present study found that 13% of the population surveyed reported elevated levels of depression with 3% exceptionally elevated. 28% of this same population reported thinking about suicide in the last two weeks and 3% indicated that they wanted to commit suicide.
Appendix A

Table 1.1. Sample characteristics

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic</td>
<td>174</td>
<td>74%</td>
</tr>
<tr>
<td>Black (non Hispanic)</td>
<td>24</td>
<td>10%</td>
</tr>
<tr>
<td>White (non Hispanic)</td>
<td>28</td>
<td>12%</td>
</tr>
<tr>
<td>Asian American</td>
<td>3</td>
<td>1%</td>
</tr>
<tr>
<td>Other¹</td>
<td>6</td>
<td>3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>6th grade</td>
<td>69</td>
<td>29%</td>
</tr>
<tr>
<td>7th grade</td>
<td>97</td>
<td>41%</td>
</tr>
<tr>
<td>8th grade</td>
<td>69</td>
<td>29%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 years</td>
<td>36</td>
<td>15%</td>
</tr>
<tr>
<td>12 years</td>
<td>56</td>
<td>24%</td>
</tr>
<tr>
<td>13 years</td>
<td>99</td>
<td>42%</td>
</tr>
<tr>
<td>14 years</td>
<td>44</td>
<td>19%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sex-Role Orientation²</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instrumental</td>
<td>44</td>
<td>19%</td>
</tr>
<tr>
<td>Expressive</td>
<td>46</td>
<td>20%</td>
</tr>
<tr>
<td>Androgynous</td>
<td>71</td>
<td>30%</td>
</tr>
<tr>
<td>Undifferentiated</td>
<td>74</td>
<td>31%</td>
</tr>
</tbody>
</table>

¹ Asian Hispanic - 3  German/Pakistani - 1  Asian Jamaican - 2

² See Methodology Section for details
Table 2.1 Dependent Variable Initial Statistics  *Children's Depression Inventory*

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative Mood</td>
<td>1.76</td>
<td>1.80</td>
<td>0.00</td>
<td>11.00</td>
</tr>
<tr>
<td>Interpersonal Problems</td>
<td>0.75</td>
<td>1.21</td>
<td>0.00</td>
<td>8.00</td>
</tr>
<tr>
<td>Ineffectiveness</td>
<td>1.60</td>
<td>1.64</td>
<td>0.00</td>
<td>7.00</td>
</tr>
<tr>
<td>Anhedonia</td>
<td>2.65</td>
<td>2.43</td>
<td>0.00</td>
<td>16.00</td>
</tr>
<tr>
<td>Negative Self-Esteem</td>
<td>1.42</td>
<td>1.61</td>
<td>0.00</td>
<td>10.00</td>
</tr>
<tr>
<td>Total Score</td>
<td>8.17</td>
<td>6.72</td>
<td>0.00</td>
<td>49.00</td>
</tr>
<tr>
<td>Subscale</td>
<td>Mean</td>
<td>Standard Deviation</td>
<td>Minimum</td>
<td>Maximum</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------</td>
<td>--------------------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>Scholastic Competence</td>
<td>2.99</td>
<td>0.67</td>
<td>1.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Social Acceptance</td>
<td>3.06</td>
<td>1.17</td>
<td>0.68</td>
<td>4.00</td>
</tr>
<tr>
<td>Athletic Competence</td>
<td>2.87</td>
<td>1.00</td>
<td>0.72</td>
<td>4.00</td>
</tr>
<tr>
<td>Physical Appearance</td>
<td>2.72</td>
<td>1.00</td>
<td>0.78</td>
<td>4.00</td>
</tr>
<tr>
<td>Behavioral Conduct</td>
<td>3.03</td>
<td>1.00</td>
<td>0.69</td>
<td>4.00</td>
</tr>
<tr>
<td>Global Self-Worth</td>
<td>3.27</td>
<td>1.33</td>
<td>0.60</td>
<td>4.00</td>
</tr>
<tr>
<td>Subscale</td>
<td>Mean</td>
<td>Standard Deviation</td>
<td>Minimum</td>
<td>Maximum</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------</td>
<td>--------------------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>Instrumental</td>
<td>21.93</td>
<td>4.00</td>
<td>4.89</td>
<td>32.00</td>
</tr>
<tr>
<td>Expressive</td>
<td>22.90</td>
<td>0.00</td>
<td>4.92</td>
<td>32.00</td>
</tr>
<tr>
<td>Instrumental-Expressive</td>
<td>16.30</td>
<td>5.00</td>
<td>4.26</td>
<td>29.00</td>
</tr>
</tbody>
</table>
Table 3.1 Correlations of Perceived Competence Scales with Instrumentality (PAQINST) Scores for Total, Instrumental, Expressive, Androgynous, and Undifferentiated Subjects

<table>
<thead>
<tr>
<th></th>
<th>PAQINST Total (n=235)</th>
<th>PAQINST Instrumental (n=44)</th>
<th>PAQINST Expressive (n=46)</th>
<th>PAQINST Androgynous (n=71)</th>
<th>PAQINST Undifferent. (n=74)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athletic Competence</td>
<td>.429**</td>
<td>.145</td>
<td>.279</td>
<td>.266**</td>
<td>.471**</td>
</tr>
<tr>
<td>Physical Appearance</td>
<td>.253**</td>
<td>-.043</td>
<td>.260</td>
<td>.134</td>
<td>.321**</td>
</tr>
<tr>
<td>Scholastic Ability</td>
<td>.253**</td>
<td>.230</td>
<td>.274</td>
<td>.122</td>
<td>.343**</td>
</tr>
<tr>
<td>Social Competence</td>
<td>.355**</td>
<td>.222</td>
<td>.308*</td>
<td>.184</td>
<td>.266*</td>
</tr>
<tr>
<td>Behavioral Conduct</td>
<td>.104</td>
<td>.093</td>
<td>.183</td>
<td>-.015</td>
<td>.274**</td>
</tr>
<tr>
<td>Global Self-Worth</td>
<td>.331**</td>
<td>.071</td>
<td>.422**</td>
<td>.252*</td>
<td>.260*</td>
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</tbody>
</table>

** Significance p<.01
* Significance p<.05
Table 3.2 Regression of Perceived Athletic Competence On Instrumentality (PAQINST) Scores for Expressive Subjects

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>.279</td>
</tr>
<tr>
<td>R Square</td>
<td>.078</td>
</tr>
<tr>
<td>Adj. R Square</td>
<td>.057</td>
</tr>
<tr>
<td>Standard Error</td>
<td>.796</td>
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</tbody>
</table>

**Analysis of Variance**

<table>
<thead>
<tr>
<th>Source</th>
<th>DF</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1</td>
<td>2.36</td>
<td>2.36</td>
</tr>
<tr>
<td>Residual</td>
<td>44</td>
<td>27.90</td>
<td>.63</td>
</tr>
</tbody>
</table>

F=3.72        Significance of F=.060
Table 3.3 Regression of Perceived Physical Appearance on Instrumentality (PAQINST) Scores for Expressive Subjects

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>.260</td>
</tr>
<tr>
<td>R Square</td>
<td>.068</td>
</tr>
<tr>
<td>Adj. R Square</td>
<td>.046</td>
</tr>
<tr>
<td>Standard Error</td>
<td>.753</td>
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</tbody>
</table>

Analysis of Variance

<table>
<thead>
<tr>
<th>Source</th>
<th>DF</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1</td>
<td>1.81</td>
<td>1.81</td>
</tr>
<tr>
<td>Residual</td>
<td>44</td>
<td>24.98</td>
<td>.57</td>
</tr>
</tbody>
</table>

F=3.19  Significance of F=.081
Table 3.4 Regression of Perceived Scholastic Ability on Instrumentality (PAQINST) scores for Expressive Subjects

| Multiple R | .274 |
| R Square   | .075 |
| Adj. R Square | .054 |
| Standard Error | .573 |

Analysis of Variance

<table>
<thead>
<tr>
<th>Source</th>
<th>DF</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1</td>
<td>1.17</td>
<td>1.17</td>
</tr>
<tr>
<td>Residual</td>
<td>44</td>
<td>14.43</td>
<td>.33</td>
</tr>
</tbody>
</table>

F=3.56    Significance of F=.066
Table 4.1 Correlations of Perceived Competence Scales with Expressiveness (PAQEXP) Scores for Total, Instrumental, Expressive, Androgynous, and Undifferentiated Subjects.

<table>
<thead>
<tr>
<th></th>
<th>PAQEXP Total (n=235)</th>
<th>PAQEXP Instrumental (n=44)</th>
<th>PAQEXP Expressive (n=46)</th>
<th>PAQEXP Androgynous (n=71)</th>
<th>PAQEXP Undifferentiated (n=74)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athletic Ability</td>
<td>.051</td>
<td>.223</td>
<td>.084</td>
<td>-.237*</td>
<td>-.020</td>
</tr>
<tr>
<td>Physical Appearance</td>
<td>.031</td>
<td>.287</td>
<td>-.284</td>
<td>-.110</td>
<td>.122</td>
</tr>
<tr>
<td>Scholastic Ability</td>
<td>.241**</td>
<td>.474**</td>
<td>.139</td>
<td>-.053</td>
<td>.093</td>
</tr>
<tr>
<td>Social Competence</td>
<td>.211**</td>
<td>.308*</td>
<td>-.110</td>
<td>-.114</td>
<td>.074</td>
</tr>
<tr>
<td>Behavioral Conduct</td>
<td>.395**</td>
<td>.351**</td>
<td>-.101</td>
<td>.316**</td>
<td>.307</td>
</tr>
<tr>
<td>Global Self-Worth</td>
<td>.331**</td>
<td>.412**</td>
<td>-.017</td>
<td>-.006</td>
<td>.411**</td>
</tr>
</tbody>
</table>

**Significance p<.01
*Significance p<.05
Table 4.2 Regression of Perceived Physical Appearance on Expressive (PAQEXP) scores for Expressive Subjects

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>.284</td>
</tr>
<tr>
<td>R Square</td>
<td>.080</td>
</tr>
<tr>
<td>Adj. R Square</td>
<td>.060</td>
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<tr>
<td>Standard Error</td>
<td>.748</td>
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Analysis of Variance

<table>
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<tr>
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<th>Sum of Squares</th>
<th>Mean Squares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1</td>
<td>2.16</td>
<td>2.16</td>
</tr>
<tr>
<td>Residual</td>
<td>44</td>
<td>24.63</td>
<td>.56</td>
</tr>
</tbody>
</table>

F=3.85          Significance of F=.056
Table 5.1 Correlations of Global Self-Worth (PCS Global) with Depression Subscales for Total, Instrumental, Expressive, Androgynous, and Undifferentiated Subjects

<table>
<thead>
<tr>
<th></th>
<th>PCS Global Total (n=235)</th>
<th>PCS Global Instrumental (n=44)</th>
<th>PCS Global Expressive (n=46)</th>
<th>PCS Global Androgynous (n=71)</th>
<th>PCS Global Undifferent (n=74)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anhedonia</td>
<td>-.534**</td>
<td>-.603**</td>
<td>-.657**</td>
<td>-.190</td>
<td>-.517**</td>
</tr>
<tr>
<td>Negative Self-Esteem</td>
<td>-.519**</td>
<td>-.532**</td>
<td>-.728**</td>
<td>-.207</td>
<td>-.531**</td>
</tr>
<tr>
<td>Ineffectiveness</td>
<td>-.414**</td>
<td>-.670**</td>
<td>-.597**</td>
<td>-.203</td>
<td>-.285*</td>
</tr>
<tr>
<td>Negative Mood</td>
<td>-.420**</td>
<td>-.472**</td>
<td>-.421**</td>
<td>-.291*</td>
<td>-.407**</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>-.325**</td>
<td>-.403**</td>
<td>-.245</td>
<td>-.225</td>
<td>-.323**</td>
</tr>
<tr>
<td>Total Depression</td>
<td>-.589**</td>
<td>-.678**</td>
<td>-.766**</td>
<td>-.329**</td>
<td>-.524**</td>
</tr>
</tbody>
</table>

** Significance p<.01
* Significance p<.05
### Table 5.2 Regression of Problem Solving on Global Self-Worth Scores for Androgynous Subjects

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>.225</td>
</tr>
<tr>
<td>R Square</td>
<td>.050</td>
</tr>
<tr>
<td>Adj. R Square</td>
<td>.037</td>
</tr>
<tr>
<td>Standard Error</td>
<td>.843</td>
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</tbody>
</table>

#### Analysis of Variance

<table>
<thead>
<tr>
<th>Source</th>
<th>DF</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1</td>
<td>2.61</td>
<td>2.61</td>
</tr>
<tr>
<td>Residual</td>
<td>69</td>
<td>49.06</td>
<td>.71</td>
</tr>
</tbody>
</table>

F = 3.67  
Significance of F = .060
Table 6.1 Correlations of Depression Measures with Instrumentality (PAQINST) and Expressiveness (PAQEXP) for All Subjects

<table>
<thead>
<tr>
<th></th>
<th>PAQINST Total (n=235)</th>
<th>PAQEXP Total (n=235)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anhedonia</td>
<td>-.302**</td>
<td>-.293**</td>
</tr>
<tr>
<td>Negative Self-Esteem</td>
<td>-.226**</td>
<td>-.154*</td>
</tr>
<tr>
<td>Ineffectiveness</td>
<td>-.189**</td>
<td>-.111</td>
</tr>
<tr>
<td>Negative Mood</td>
<td>-.316**</td>
<td>-.170**</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>-.170**</td>
<td>-.421**</td>
</tr>
<tr>
<td>Total Depression</td>
<td>-.324**</td>
<td>-.290**</td>
</tr>
</tbody>
</table>

** Significance p<.01
* Significance p<.05
Table 6.2 Correlations of Depression Measures with Instrumentality (PAQINST) and Expressiveness (PAQEXP) for Instrumental Subjects

<table>
<thead>
<tr>
<th></th>
<th>PAQINST (n=44)</th>
<th>PAQEXP (n=44)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anhedonia</td>
<td>.101</td>
<td>-.529**</td>
</tr>
<tr>
<td>Negative Self-Esteem</td>
<td>-.016</td>
<td>-.207</td>
</tr>
<tr>
<td>Ineffectiveness</td>
<td>.055</td>
<td>-.340*</td>
</tr>
<tr>
<td>Negative Mood</td>
<td>.027</td>
<td>-.206</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>.089</td>
<td>-.633**</td>
</tr>
<tr>
<td>Total Depression</td>
<td>.072</td>
<td>-.494**</td>
</tr>
</tbody>
</table>

** Significant p<.01  
* Significant p<.05
Table 6.3 Correlations of Depression Measures with Instrumentality (PAQINST) and Expressiveness (PAQEXP) for Expressive Subjects

<table>
<thead>
<tr>
<th></th>
<th>PAQINST (n=46)</th>
<th>PAQEXP (n=46)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anhedonia</td>
<td>-.437**</td>
<td>.169</td>
</tr>
<tr>
<td>Negative Self-Esteem</td>
<td>-.375*</td>
<td>.071</td>
</tr>
<tr>
<td>Ineffectiveness</td>
<td>-.327*</td>
<td>.100</td>
</tr>
<tr>
<td>Negative Mood</td>
<td>-.435**</td>
<td>.050</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>-.423**</td>
<td>-.188</td>
</tr>
<tr>
<td>Total Depression</td>
<td>-.538**</td>
<td>.102</td>
</tr>
</tbody>
</table>

** Significance p<.01
* Significance p<.05
<table>
<thead>
<tr>
<th></th>
<th>PAQINST (n=71)</th>
<th>PAQEXP (n=71)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anhedonia</td>
<td>-.141</td>
<td>.042</td>
</tr>
<tr>
<td>Negative Self-Esteem</td>
<td>.176</td>
<td>.113</td>
</tr>
<tr>
<td>Ineffectiveness</td>
<td>-.008</td>
<td>.032</td>
</tr>
<tr>
<td>Negative Mood</td>
<td>-.189</td>
<td>.013</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>.086</td>
<td>-.145</td>
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<tr>
<td>Total Depression</td>
<td>-.034</td>
<td>-.038</td>
</tr>
</tbody>
</table>

** Significance p<.01
* Significance p<.05
Table 6.5 Correlations Depression Measures with Instrumentality (PAQINST) and Expressiveness (PAQEXP) for Undifferentiated Subjects

<table>
<thead>
<tr>
<th></th>
<th>PAQINST (n=74)</th>
<th>PAQEXP (n=74)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anhedonia</td>
<td>-.375**</td>
<td>-.350**</td>
</tr>
<tr>
<td>Negative Self-Esteem</td>
<td>-.331**</td>
<td>-.297*</td>
</tr>
<tr>
<td>Ineffectiveness</td>
<td>-.324**</td>
<td>-.043</td>
</tr>
<tr>
<td>Negative Mood</td>
<td>-.573**</td>
<td>-.301**</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>-.487**</td>
<td>-.469**</td>
</tr>
<tr>
<td>Total Depression</td>
<td>-.511**</td>
<td>-.362**</td>
</tr>
</tbody>
</table>

** Significance p<.01
* Significance p<.05
Table 6.6 Above Average and Higher Depression Scores by Sex Role Attribute

<table>
<thead>
<tr>
<th>Sex Role Attribute</th>
<th>Sample Size</th>
<th>CDI Scores Above Average or Higher</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Instrumental</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>11%</td>
</tr>
<tr>
<td>Males</td>
<td>34</td>
<td>9%</td>
</tr>
<tr>
<td>Females</td>
<td>10</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Expressive</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>15%</td>
</tr>
<tr>
<td>Males</td>
<td>6</td>
<td>33%</td>
</tr>
<tr>
<td>Females</td>
<td>40</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Androgynous</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>71</td>
<td>6%</td>
</tr>
<tr>
<td>Males</td>
<td>25</td>
<td>12%</td>
</tr>
<tr>
<td>Females</td>
<td>46</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Undifferentiated</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>74</td>
<td>22%</td>
</tr>
<tr>
<td>Males</td>
<td>35</td>
<td>23%</td>
</tr>
<tr>
<td>Females</td>
<td>39</td>
<td>21%</td>
</tr>
</tbody>
</table>
Table 7.1 Examination of Instrumentality (PAQINST) as Mediator Between Perceived Competence (PCSGLOBE) and Depression (CDITOT)

<table>
<thead>
<tr>
<th></th>
<th>PCSGLOBE</th>
<th>CDITOT</th>
<th>PAQINST</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCSGLOBE</td>
<td>1.00</td>
<td>-.589**</td>
<td>.331**</td>
</tr>
<tr>
<td>CDITOT</td>
<td></td>
<td>1.00</td>
<td>-.324**</td>
</tr>
<tr>
<td>PAQINST</td>
<td></td>
<td></td>
<td>1.00</td>
</tr>
</tbody>
</table>

Significance p<.01
Table 7.2 Regression Testing Independent Contribution of Instrumentality to Changes in Depression

**STEP ONE:** Global Self-Worth (PCS Globe) only variable in equation

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>.589</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R Square</td>
<td>.347</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adj. R Square</td>
<td>.344</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Error</td>
<td>5.472</td>
<td></td>
<td></td>
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</tbody>
</table>

**Analysis of Variance**

<table>
<thead>
<tr>
<th>Source</th>
<th>DF</th>
<th>Sums of Squares</th>
<th>Mean Squares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1</td>
<td>3702.06</td>
<td>3702.06</td>
</tr>
<tr>
<td>Residual</td>
<td>233</td>
<td>6977.88</td>
<td>29.95</td>
</tr>
<tr>
<td>Total</td>
<td>234</td>
<td>10679.94</td>
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</tr>
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</table>

F=123.62 Significance of F<.001

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>Beta</th>
<th>T</th>
<th>Sig. T</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCSGLOBE</td>
<td>-6.65</td>
<td>.60</td>
<td>-.59</td>
<td>-11.12</td>
<td>.000</td>
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<tr>
<td>(Constant)</td>
<td>29.86</td>
<td>1.99</td>
<td></td>
<td>15.00</td>
<td>.000</td>
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</tbody>
</table>

**STEP TWO:** Instrumentality (PAQINST) added to the equation

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>.604</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R Square</td>
<td>.365</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adj. R Square</td>
<td>.360</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Error</td>
<td>5.405</td>
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</tbody>
</table>

**Analysis of Variance**

<table>
<thead>
<tr>
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<th>DF</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>2</td>
<td>3902.17</td>
<td>1951.06</td>
</tr>
<tr>
<td>Residual</td>
<td>232</td>
<td>6777.82</td>
<td>29.22</td>
</tr>
</tbody>
</table>

F=66.78 Significance of F < .001

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>Beta</th>
<th>T</th>
<th>Sig. T</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCSGLOBE</td>
<td>-6.11</td>
<td>.63</td>
<td>-.54</td>
<td>-9.76</td>
<td>.0000</td>
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<tr>
<td>PAQINST</td>
<td>-.20</td>
<td>.08</td>
<td>-.15</td>
<td>-2.62</td>
<td>.0095</td>
</tr>
<tr>
<td>(Constant)</td>
<td>32.48</td>
<td>2.20</td>
<td></td>
<td>14.73</td>
<td>.0000</td>
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</tbody>
</table>
Table 7.3 Examination of Expressiveness (PAQEXP) as Mediator Between Perceived Competence (PCSGLOBE) and Depression (CDITOT)

<table>
<thead>
<tr>
<th></th>
<th>PCSGLOBE</th>
<th>CDITOT</th>
<th>PAQEXP</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCSGLOBE</td>
<td>1.00</td>
<td>-.589**</td>
<td>.331**</td>
</tr>
<tr>
<td>CDITOT</td>
<td></td>
<td>1.00</td>
<td>-.290**</td>
</tr>
<tr>
<td>PAQEXP</td>
<td></td>
<td></td>
<td>1.00</td>
</tr>
</tbody>
</table>

Significance p<.01
Table 7.4 Regression Testing Independent Contribution of Expressiveness to Changes in Depression

STEP ONE: Global Self-Worth (PCSGlobe) only variable in equation

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>Beta</th>
<th>T</th>
<th>Sig. T</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCSGLOBE</td>
<td>-6.65</td>
<td>.60</td>
<td>-.59</td>
<td>-11.12</td>
<td>.000</td>
</tr>
<tr>
<td>(Constant)</td>
<td>29.89</td>
<td>1.99</td>
<td>15.00</td>
<td>.000</td>
<td></td>
</tr>
</tbody>
</table>

Analysis of Variance

<table>
<thead>
<tr>
<th>Source</th>
<th>DF</th>
<th>Sums of Squares</th>
<th>Mean Squares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1</td>
<td>3702.06</td>
<td>3702.06</td>
</tr>
<tr>
<td>Residual</td>
<td>233</td>
<td>6977.88</td>
<td>29.95</td>
</tr>
<tr>
<td>F=123.62</td>
<td></td>
<td>Significance of F &lt; .001</td>
<td></td>
</tr>
</tbody>
</table>

STEP TWO: Expressiveness (PAQEXP) added to equation

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>Beta</th>
<th>T</th>
<th>Sig. T</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCSGLOBE</td>
<td>-6.25</td>
<td>.63</td>
<td>-.55</td>
<td>-9.92</td>
<td>.0000</td>
</tr>
<tr>
<td>PAQEXP</td>
<td>-.15</td>
<td>.08</td>
<td>-.11</td>
<td>-1.92</td>
<td>.0571</td>
</tr>
<tr>
<td>(Constant)</td>
<td>31.90</td>
<td>2.24</td>
<td>14.22</td>
<td>.0000</td>
<td></td>
</tr>
</tbody>
</table>

Analysis of Variance

<table>
<thead>
<tr>
<th>Source</th>
<th>DF</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>2</td>
<td>3810.28</td>
<td>1905.14</td>
</tr>
<tr>
<td>Residual</td>
<td>232</td>
<td>6869.67</td>
<td>29.61</td>
</tr>
<tr>
<td>F=64.34</td>
<td></td>
<td>Significance of F &lt; .001</td>
<td></td>
</tr>
</tbody>
</table>
Table 8.1 Manova Analyzing Difference in Perceived Competence (PCSGLOBE) in Expressive Subjects Among Age Levels.

<table>
<thead>
<tr>
<th>Age</th>
<th>Mean</th>
<th>(n=46)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>3.00</td>
<td>(n=5)</td>
</tr>
<tr>
<td>12</td>
<td>3.71</td>
<td>(n=7)</td>
</tr>
<tr>
<td>13</td>
<td>3.21</td>
<td>(n=22)</td>
</tr>
<tr>
<td>14</td>
<td>3.04</td>
<td>(n=12)</td>
</tr>
</tbody>
</table>

Analysis of Variance

<table>
<thead>
<tr>
<th>PCSGLOBE</th>
<th>Sum of Squares</th>
<th>DF</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2.34</td>
<td>3</td>
<td>.778</td>
<td>2.09</td>
<td>.115</td>
</tr>
<tr>
<td>Within Groups</td>
<td>15.61</td>
<td>42</td>
<td>.372</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>17.95</td>
<td>45</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Post Hoc Tests (Tukey HSD)

<table>
<thead>
<tr>
<th>(I)Age</th>
<th>(J)Age</th>
<th>Std. Error</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>12</td>
<td>.357</td>
<td>.204</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>.302</td>
<td>.896</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>.325</td>
<td>.999</td>
</tr>
<tr>
<td>12</td>
<td>11</td>
<td>.357</td>
<td>.204</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>.265</td>
<td>.244</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>.290</td>
<td>.110</td>
</tr>
<tr>
<td>13</td>
<td>11</td>
<td>.302</td>
<td>.896</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>.265</td>
<td>.244</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>.219</td>
<td>.864</td>
</tr>
<tr>
<td>14</td>
<td>11</td>
<td>.325</td>
<td>.999</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>.290</td>
<td>.110</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>.219</td>
<td>.864</td>
</tr>
</tbody>
</table>
Table 8.2 Manova Analyzing Difference in Depression (CDITOT) in Expressive Subjects Among Age Levels

<table>
<thead>
<tr>
<th>Age</th>
<th>Mean</th>
<th>(n=46)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>6.40</td>
<td>(n=5)</td>
</tr>
<tr>
<td>12</td>
<td>5.29</td>
<td>(n=7)</td>
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<tr>
<td>13</td>
<td>8.95</td>
<td>(n=22)</td>
</tr>
<tr>
<td>14</td>
<td>10.67</td>
<td>(n=12)</td>
</tr>
</tbody>
</table>

Analysis of Variance

<table>
<thead>
<tr>
<th>CDITOT</th>
<th>Sum of Squares</th>
<th>DF</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>155.06</td>
<td>3</td>
<td>51.69</td>
<td>1.59</td>
<td>.206</td>
</tr>
<tr>
<td>Within Groups</td>
<td>1364.25</td>
<td>42</td>
<td>32.48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1519.30</td>
<td>45</td>
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</table>

Post Hoc Tests

<table>
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<tr>
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<th>(J)Age</th>
<th>Std. Error</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>12</td>
<td>3.34</td>
<td>.987</td>
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<tr>
<td></td>
<td>13</td>
<td>2.82</td>
<td>.802</td>
</tr>
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<td>14</td>
<td>3.03</td>
<td>.502</td>
</tr>
<tr>
<td>12</td>
<td>11</td>
<td>3.34</td>
<td>.987</td>
</tr>
<tr>
<td></td>
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<td>2.47</td>
<td>.456</td>
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<tr>
<td></td>
<td>14</td>
<td>2.71</td>
<td>.210</td>
</tr>
<tr>
<td>13</td>
<td>11</td>
<td>2.82</td>
<td>.802</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>2.47</td>
<td>.456</td>
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<tr>
<td></td>
<td>14</td>
<td>2.05</td>
<td>.837</td>
</tr>
<tr>
<td>14</td>
<td>11</td>
<td>3.03</td>
<td>.502</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>2.71</td>
<td>.210</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>2.05</td>
<td>.837</td>
</tr>
</tbody>
</table>
Table 9.1 ANOVA Examining PAQ Expressive Scores by Gender.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Mean</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>20.58</td>
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</tr>
<tr>
<td>Female</td>
<td>24.56</td>
<td>135</td>
</tr>
<tr>
<td>Total</td>
<td>22.86</td>
<td>235</td>
</tr>
</tbody>
</table>

Analysis of Variance

<table>
<thead>
<tr>
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<th>DF</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAQEXP Main Effects Gender</td>
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<td>907.95</td>
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<tr>
<td>Model</td>
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<td>1</td>
<td>907.95</td>
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<td>4859.69</td>
<td>233</td>
<td>20.86</td>
<td></td>
</tr>
</tbody>
</table>
REFERENCES


