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Accuracy of Adult Perceptions of Depression in Adolescents

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Abstract

This experiment was designed to examine the effectiveness of educational pamphlets in improving adults' ability to detect adolescent depression. One hundred and one participants read a vignette about a depressed teenager and reported their ratings of perceived depression. Prior to reading the vignette, some participants received an educational pamphlet about depression and another group received no information. The hypothesis that participants who read the pamphlet would exhibit greater accuracy in their depression ratings as compared to control participants was not supported. Further research is needed to investigate effective methods of educating laypeople about adolescent depression.

Accuracy of Adult Perceptions of Depression in Adolescents

Adolescent depression is a major mental disorder that can interfere with many facets of adolescent life. The prevalence of depression is approximately 2% in childhood and increases to approximately 8% by the teenage years. The results of one study (Hereunder & Cox, as cited in Bhatia, 2007) conducted on a large sample of high school students who were given the Beck Depression Inventory indicated that one-third of the students were mildly to clinically depressed. Depressed adolescents may appear to be irritable and argumentative towards their parents and teachers and may withdraw from their peers (Bhatia, 2007). Adolescent depression is also related to other negative consequences such as behavioral problems, social withdrawal, and a negative outlook on life. Various studies have suggested that adolescent depression is associated with increased risk of suicidal behaviors (Bhatia, 2007; Breland, 2004). In fact, it has been reported that half of adolescents diagnosed with depression also admit to having suicidal ideations (Powell & Northern, 2006). Adolescent depression rarely occurs alone. One study found that teenagers who were diagnosed as clinically depressed also presented with symptoms of anxiety and conduct disorders (Hale, Van Der Valk, Engels, & Meeus, 2005).

The ability of adults to accurately identify depression in adolescents is important because of the many key roles that adults play in adolescent lives. Adults act as caregivers, instructors, and models of social behaviors. However, due to the struggle for autonomy and other developmental changes occurring during puberty, an adult figure may not be the first person whom an adolescent will seek help from when he or she is experiencing depressive symptoms (Moor et al., 2007). This resistance to seeking help

from adults may result in a lack of early intervention or treatment for depression.

Adolescent depression is often underdiagnosed and underrated among non-clinical persons. Auger (2007) found that teachers were not able to accurately identify depression in those students who had described themselves as highly depressed by self report. It has been reported that nearly 70% of children and adolescents with depression do not receive adequate diagnosis and treatment (Bhatia, 2007). One factor contributing to underdiagnosis is the limited knowledge that laypersons have about depression. Mehl (2006) found that participants were more likely to accurately identify someone as being depressed only when the person exhibited severe symptoms, such as social isolation.

Early intervention for adolescents suffering from depression improves the prognosis and effectiveness of treatment; therefore, there is a critical need for those who often interact with adolescents be able to identify depression in this population (Bhatia, 2007).

Risk Factors for Adolescent Depression

Familial Factors

Parental support has been found to be a predictor of adolescent depression (Millikan, 2007; Shuli et al., 2006; Young, Berenson, Cohen, & Garcia et al., 2005). Parental support is the level of acceptance or warmth that parents express toward their children (Bean, Barber, & Crane, 2006). Several studies have cited parental support as a critical feature in the normal development of children and adolescents (Allen et al., 2006; Bean et al., 2006; Millikan, 2007). In a study conducted among adolescents and their caregivers, Bean (2006) found that participants who perceived higher levels of parental support reported lower depressive symptoms. Studies have also identified intrusive

methods of parental control to be a risk factor for adolescents' development of depression. Allen et al. (2006) posited that when parents attempt to undermine their child's autonomy, it causes the child to feel frustrated and stressed, thereby increasing the child's chances for developing depressive symptoms.

Research has shown that adolescent perception of family dynamics has a more direct association with adolescent functioning than does parent-reported functioning of a child. Millikan, Wamboldt, and Bihun (2002) found that adolescents' perceptions of their families were associated with their depressive symptoms and neuroticism. These researchers also found that adolescents who described themselves as neurotic were also more likely to have a negative perception of their families. These findings are consistent with previous research that identified a relationship between dysfunctional families and depressive symptoms in adolescence (Allen et al., 2006).

Family dynamics not only affect the development of depression in adolescents but can also influence whether or not the adolescent will receive treatment (Wisdom & Agnor, 2006). Families who are unsupportive may unknowingly exacerbate the adolescent's depressive symptoms. Parents who regard depression as a weakness may stigmatize the child and hinder parent-child communication, thus making it more difficult for the adolescent to disclose his or her problems.

Having a parent with a history of depression is one of the strongest predictors of depression in adolescents. Children of depressed parents are up to three times more likely to exhibit symptoms of depression. In one study, researchers found that children of depressed mothers exhibited more symptoms of depression than a control group (Wagner, 2006). The findings also indicated that the children's depressive symptoms improved

when the mothers responded favorably to treatment. The results of twin studies have shown that depressive symptoms are heritable beginning in adolescence and continue into adulthood (Hankin, 2005).

Gender

Gender differences in depression generally do not emerge until adolescence (Eberhart, Shih, Hammen, & Brennan, 2006; Li, DiGiuseppe & Froh, 2006). According to the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM IV*-TR; American Psychiatric Association, 2000) adolescent girls are twice as likely to be diagnosed with major depressive disorder than boys. Researchers have posited several explanations to account for this difference. Negative self-perceptions, higher levels of vulnerability, increased pressure to conform to gender roles, and insecure attachments in peer relationships have all been suggested as explanations for a higher incidence of adolescent depression among females relative to males (Eberhart et al., 2006). Girls may be more likely to use coping mechanisms that involve ruminating when faced with stressful life events. This coping mechanism may increase their vulnerability to develop depression (Ellen et al., 2006). Negative attributional style, poor body image, and stereotyped gender roles are also risk factors that increase the likelihood of females developing depression (Lyons, Carlson, Thurm, Grant, & Gipson, 2006). One theory, sometimes referred to as the diathesis-stress model, is that teenage girls have a higher risk for depression than teenage boys because of their increased levels of depression vulnerability factors (Eberhart et al., 2006; Garber, 2006; Lyons, et al., 2006). Vulnerability factors are characterized as negative self-perception, insecure attachment, parent characteristics and parent-child relationships, and identifying with stereotypical gender roles (Eberhart et al.,

2006; Lyons et al., 2006). According to this theory, adolescent girls and boys are faced with the same types of risk factors. However, girls have a greater chance of becoming depressed because they generally experience more of these vulnerability factors.

Eberhart et al. (2006) conducted a study to gain a better understanding of why adolescent girls were more vulnerable to depression than boys. They found that parental characteristics affected boys and girls in the same manner with respect to depressive diagnoses. However, paternal depression was more strongly linked to depression in boys than in girls. The results also showed that girls reported more negative self-perceptions in the categories of achievement, self-worth, and appearance. Consequently these negative self-perceptions increased adolescent girls' risk for developing depression.

These findings expand upon previous research which suggests that girls are socialized to have negative self-perceptions and have more pressure to conform to gender roles than boys (Eberhart et al., 2006; Li, DiGiuseppe & Froh, 2006). In a study examining body dissatisfaction in adolescents, 24% to 46% of adolescent girls reported being unhappy with their bodies compared to 12% to 26% of adolescent boys (Paxton, Eisenberg, & Neumar-Staizner, 2006). Results of a study conducted by Lyons and colleagues (2006) indicated a correlation between body image and gender roles. Several measures, such as the Children's Depression Inventory, Children's Attributional Style Questionnaire, Children's Sex Role Inventory, the Multidimensional Body-Self Relations Questionnaire, and Stressful Life Events Inventory were given to students in kindergarten through fourth grade. Poor body image and identifying with a strong feminine gender role were more common in girls and more likely to lead to depression in adolescence. These findings are consistent with previous studies that show that negative self-perceptions

occur before the onset of puberty (Lyons et al., 2006). Moreover, these findings support the idea that girls are at risk for developing a negative body image. In a study of elementary school-aged children, researchers found that when asked about body image, girls were more likely to exhibit a bias towards thinness and be less satisfied with their own bodies than boys (Lyons et al., 2006). Negative self-perceptions and body images are also present among minority adolescents. African American girls, who research has suggested have a more positive body image than White women, have recently reported more negative self-perceptions than African American boys (Lyons et al., 2006).

Adolescent and adult males are less likely to report depressive symptoms than teenage girls and women. Men may also deal with their depression differently. Girls may be more likely to ruminate, or worry excessively about problems, whereas adolescent boys and adult men may be more likely to use distractive coping tools, such as exercising (Li et al., 2006; Pruitt, 2007). It has been theorized that rumination as a coping skill is a result of conforming to stereotypical gender roles (Li et al., 2006). The use of distraction as a coping mechanism by males may be effective as an immediate coping tool. However, it may lead to the development of other behavioral problems such as aggressiveness and substance abuse (Pruitt, 2007). Although girls have a greater likelihood of becoming depressed, adolescent boys tend to have more lethal risks associated with depression (Pruitt, 2007). Adolescent boys and older men are less likely to report depression. Yet, they have higher rates of suicide (Pruitt, 2007).

Personality Characteristics

Personality and temperament have also been identified as risk factors for adolescent depression. According to cognitive theory, depression is a result of a

dysfunction in thinking, particularly in the way one copes with stressful life events. Personality types may influence the way adolescents handle stressful life events. Neuroticism has often been linked with depression in adolescence (Hankin, 2005). Adolescence is a time of growth and change, physically and socially; those with neurotic personality types would have a difficult time adjusting to this change, thereby increasing their chances for depression. For example, one study examined the relationship between perfectionist personality types and depression in adolescents (Rice, Leever, Noggle, & Chad, 2007). Rice et al. found a relationship between specific types of perfectionism, such as concern about mistakes, and depression in adolescents.

Excessive emotional dependence in relationships has also been identified as a risk factor for depression in adolescents (Allen et al., 2006). Allen and colleagues examined patterns of social interactions with peers and parents among adolescents to determine whether specific social behaviors were associated with increased levels of depressive symptoms in adolescence. Findings suggested that autonomy-undermining parental relationships and peer relationships characterized by withdrawn, angry and excessively dependent behaviors predicted increases in depressive symptoms in adolescents. It was also found that withdrawal in adolescence was a precursor to depression as well as a consequence. These findings (Allen et al. 2006) are consistent with previous research that suggests that an elevated level of emotional dependency on others is predictive of depression in adolescence and adulthood (Bhatia, 2007; Rice et al., 2007).

Stressful Events

Researchers have implied that depression in adolescence is usually triggered by some type of stressful life event (Steinhausen, Haslimeier, & Metzke, 2007). A stressful

event can be defined as environmental events or chronic conditions that objectively threaten the physical and/or psychological health of individuals (Hankin, 2005). Research has indicated that almost all individuals with depressive disorders will have had at least one stressful life event that occurred within the month prior to the onset of depression.

The stress-generation theory promotes more of a complementary, bidirectional relationship between stress and depression rather than a causal relationship. According to the stress-generation theory, some individuals' personalities and behaviors generate stressful circumstances and additional events for them that exacerbate their depressive symptoms. In a three-wave longitudinal study of high school students, researchers found that depressive symptoms at baseline predicted later increases of stressors at the following six-month time point. Researchers also found that stressors at the same wave were simultaneously associated with depressive symptoms, indicating a bidirectional relationship between stress and depression (Hankin, 2005).

Depressive Symptoms

Epidemiology

Studies of diagnosed clinical levels of depression have indicated that the rates of depression are low in childhood and generally increase to near-adult prevalence levels in adolescence. According to Kessler and colleagues (2005), prevalence rates of major depression among 15- to 18-year olds are 14% compared to an adult prevalence rate of 16% (as cited in Hankin, 2005).

Stability of Symptoms. Symptom stability refers to the changes in the expression of depression symptoms over time. It has significant clinical implications because it affects diagnosis and treatment of depression. Researchers have suggested that symptom

stability among adolescents is inconsistent and subject to the effects of external factors such as relationship changes (Lewinsohn, Pettit, Joiner & Seeley, 2003; Tram & Cole, 2006). In a longitudinal study, Tram and Cole examined the stability of depressive symptoms in adolescents during a period of several transitions, such as grade changes. The researchers followed a large sample of fifth and sixth graders, their parents, and their peers over a period of four years. Twice a year, researchers assessed the students' depression ratings and compared the stability of symptoms at each time point. Tram and Cole found that stability of depressive symptoms was lowest during naturally-occurring changes, such as transitioning to middle school and experiencing hormonal changes. They found that the stability of the depressive symptoms was high at baseline but diminished during the time when the participants moved from elementary to middle school (a time of transition). No significant gender differences emerged from this study. Results from this study suggest that intervention for adolescent depression during times of transition or other difficult developmental periods would be timely.

Researchers have suggested that early intervention in depression in children and adolescents increases the chances of a more favorable outcome. It is important to note that previous studies have also found that depressive symptoms are not always as stable in adolescents as they are in adults (Bhatia, 2007; Tram & Cole, 2006).

Consistent with previous studies that suggest that past depression is the best predictor of future depression is the notion that adolescent depression presents with several other psychological problems (Tram & Cole, 2006). Adolescents with a history of depression are at greater risk of experiencing psychosocial difficulties, such as a limited capacity for intimacy, a loss of social supports, and increased use of alcohol and drugs

(Ward et al., 2006). However, research is conflicting in indicating whether these difficulties in recovery are consequences or precipitating factors of depression.

In a review of literature pertaining to adolescent depression, Hankin (2005) found that adult depression was usually preceded by adolescent depression. One study conducted by Kim-Cohen and colleagues followed a birth cohort of individuals for 26 years (as cited in Hankin, 2005) at the age 26, only 25% of this sample had experienced the onset of depression in adulthood .

Adult Knowledge of Adolescent Depression

Layperson's Understanding of Depression

Depression often goes undetected by the sufferer and tends to be underdiagnosed by physicians. Studies have shown that there is a lack of understanding about depression and treatment among the general population (Tylee, 2001). In one community study researchers conducted door-to-door interviews and participants completed a Mini-Neuropsychiatric Interview (Tylee, 2001). Six percent of the participants interviewed had recently experienced a depressive episode. Yet, 43% of those whom researchers identified as having depression had never sought treatment. Those individuals who had sought treatment did so from their primary physician and not from a therapist or mental health professional.

One reason people do not seek treatment for depression is because of the stigma associated with the disorder (Kendrick, Anderson, & Moore, 2007; Tylee, 2001). According to Kendrick et al. (2007), men are the most affected by this stigma because they often associate mental illness with weakness. Kendrick et al. examined the perspectives of young African American men regarding mental illnesses and depression.

Many of the participants did not associate their depressive symptoms with an actual depressive disorder. The participants considered their depressed symptoms and mood a normal occurrence. The participants also considered depression to be a weakness.

Differences in Manifestation of Adolescent Depression

One critical barrier in the ability of adults to accurately identify depression in adolescents is the lack of knowledge and understanding of depressive symptoms in adolescents. The symptoms of depression in youths are similar to those in adults (*DSM-IV-TR*, 2000). However, researchers have studied the accuracy of this assertion. Relative to adults, it has been found that adolescents differ not only the way depressive symptoms develop but in the manner that adolescents in teens report their symptoms (Hankin, 2005).

For example, depressed adolescents may still have the capacity to experience pleasure whereas adults are more likely to present with a sad or flat affect (Powell & Northern, 2002). In comparison to adults, the different manifestation of depression in adolescents is dependent upon the developmental stage of the young person (Bhatia, et al, 2007). One example is the cognitive differences between adults and adolescents. Adults may be able to change their negative beliefs and alter their cognitive perceptions whereas younger adolescents lack the experience to fully understand life events or their feelings about these events. In addition, younger adolescents may describe their symptoms somatically (i.e., through physical complaints) due to their inability to understand and effectively communicate their cognitive state. Depressed adolescents may become isolative, irritable, and angry towards their parents (Crowe, Ward, Dunnachie & Roberts, 2006; Powell & Northern, 2002). Depressed adolescent boys, in particular, are more

likely to present with antisocial behavior, substance abuse, restlessness, and withdrawal (Pruitt, 2007).

In a study of depressed adolescents attending an outpatient mental facility, Crowe and colleagues (2006) found that adolescents commonly listed feeling grumpy and irritable on the Mood and Feeling Questionnaire (MFQ). The MFQ (Angold et al., 1987 as cited in Crowe et al., 2006) was used to identify specific depressive symptoms and behaviors that the adolescent may have experienced over a two-week period. These researchers also found that irritability and suicidal ideations among adolescents increased with the severity of the depression. The positive relationship between suicide and adolescent depression is one important reason why laypersons need to be knowledgeable about how depressive symptoms manifest in adolescents. Crowe and colleagues (2006) indicated that knowledge of the differences between adolescent and adult depressive symptoms is also vital because of the social and educational consequences of the disorder. Adolescents may withdraw from their friends and activities and often their grades suffer during depressive episodes (Koplewicz, 2002). It also of importance that adults are aware of the familial risks factors associated with depression in adolescents (Li et al., 2006).

Co-Existence with Other Symptoms

It is more the exception than the rule for adolescent depression to emerge without accompanying disorders. The majority of children with depressive disorders suffer from other psychiatric disorders (Klomek & Mufson, 2006). Comorbid disorders in depressed children raise concern because they appear to increase the risk for recurrent depression, influence the duration of the depressive episode, and add to the risk of suicide attempts or

behaviors (Moretti et al., 1985).

Hale et al. (2005) posited that adolescent depression and aggression often exist simultaneously. Because aggression often accompanies adolescent depression, depressed adolescents are often misdiagnosed as having conduct disorder alone. Other problems that can occur with depression are poor grades, suicide, ahedonia (lack of ability to experience pleasure) and lowered self-esteem (Eberhart et al., 2006). Because adolescent depression often presents with other disorders and behaviors including aggression and irritability, laypeople may not recognize problem behaviors, low self-esteem and irritability as symptoms of depression.

Detecting Depression

Depressed adolescents may not always present with severe symptoms of depression. This can present a problem given that studies have shown that adults have problems detecting moderate depressive symptoms. Mehl (2006) conducted a study examining the ability of non-clinicians to detect subclinical depression in participants. Judges listened to transcripts of participants' day-to-day activities over a seven-day period. Results showed that judges could not accurately differentiate participants with low levels of depression from those with more severe levels. However, judges were more accurate in their discrimination between moderate and severe depression symptoms. These findings reinforce the notion that adults have a difficult time assessing depression symptoms.

Auger (2004) conducted a study to determine the ability of teachers to identify students who reported depressive symptoms. Teachers were unable to identify students who reported high levels of depressive symptoms. In addition, regular education teachers

were significantly better at detecting self-reported depressive symptoms among students than were special education teachers. Teachers who considered themselves familiar with the students had more similar ratings of depression with the students' self-report than did those teachers who were not familiar with the students. In fact, teachers who spent more than five hours a week with their students provided depressive student ratings that were more congruent with the students' self-reported depressive score.

In a related study, Moor et al. (2007) examined the extent to which teachers reported depressive illness in their students and the effect of training on their ability to detect depression. Teachers attended a two-hour workshop about adolescent depression and completed a questionnaire about depression and also identified the students they thought were *probably* or *possibly* depressed. Prior to attending the training workshop, the control group was asked to identify the students which they perceived to be depressed; the experimental group was asked to identify the students who they thought exhibited depressive symptoms after they had attended the training workshop. Interestingly, results indicated that teachers' ability to identify their depressed pupils was not improved by the educational intervention. Unrecognized depression remained unrecognized. However, the workshop influenced the teachers' knowledge and attitudes about depression.

Rationale for Study

The significant emotional, psychosocial, and behavioral consequences of adolescent depression make it desirable for laypeople to understand the etiology and manifestation of the illness. Depression can be a debilitating disorder that affects many facets of adolescents' life and if left untreated can lead to suicide. In 2000, the director of

the National Institute of Mental Health stated that nearly one-third to one-half of those who committed suicide were depressed and often were not receiving treatment (Kendrick, 2007). Depression in adolescence can be more debilitating than depression experienced in adulthood. Adults possess the maturity and life experience to be able to function in their daily activities even in the midst of a depressive episode, whereas a 13-year old does not have the same coping skills (Koplewicz, 2002).

In a study conducted in the United Kingdom, researchers sought to understand public attitudes about depression and to change misconceptions that the general public held (Tylee, 2001). They conducted a country-wide survey and found that the majority of participants were misinformed about the symptoms and treatment for depression. Furthermore, over half responded that they would be embarrassed to seek help from their primary care physician if they suffered from depressive symptoms.

As a result of these findings a group of psychiatrists and general practitioners developed the Defeat Depression Campaign (Tylee, 2001), which was a public awareness campaign that transmitted information about depression through various media outlets and pamphlets. Shortly thereafter the original opinion survey was redistributed to the general public. Results indicated a positive change in respondents' attitude. Studies like this suggest that re-educating the public is a viable method for improving the detection and treatment of adolescent depression. One method to decrease the misconceptions related to depression and increase knowledge about the disorder is to educate laypeople about the symptoms of adolescent depression. Given how widespread depression is, it would be in society's best interest for people to be as knowledgeable as possible about the disorder. Providing education materials to adults may improve the chances for early

recognition and diagnosis of adolescent depression. The earlier depression is detected in adolescence the better the prognosis for that individual. The research cited above supports the ideas that adults are not well informed about how depression manifests in adolescents and that there is less than ideal early detection and treatment of adolescent depression. Therefore, the present study sought to provide evidence for the notion that psychoeducation related to symptoms of adolescent depression would increase the accurate detection of adolescent depression among laypeople. It was hoped that information about how depression manifests itself in youngsters will result in earlier interventions and diagnoses for adolescents at risk for developing mood disorders.

Method

Participants

Participants were 101 adults who volunteered through a church in the South Florida community (56 women, 45 men). Their mean age was 39.7 years. Materials were completed during church gatherings. Based on guidelines described by Cohen (1988), a minimum of 80 participants were needed to detect a medium effect with a power of .85.

Materials

Vignette. The vignette was a fictional account of a teenager exhibiting depressive symptoms that would meet the criteria for a diagnosis of depression as listed by the *DSM-IV TR* (APA, 2000). Specifically, the vignette was written in such a manner as to depict a teenager who would meet criteria for a diagnosis of Major Depressive Disorder, Single Episode, Moderate without psychotic features. The vignette can be viewed in Appendix A.

Adult Depression Rating Scale (ADRS). The ADRS is composed of questions that

assess the participants' rating of depression of the main character in the vignette. The ADRS is an adaptation of the Parents' Rating Scale developed by Sullivan (1976). The ADRS consists of 10 items that are rated on a 5-point Likert scale. Items consist of questions such as, "Ashley's mother should seek professional help for her daughter." Responses range from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). Questions 1 through 9 were averaged to create a depression accuracy scale score (DEPACC; $\alpha = .74$), with higher scores indicate a more accurate rating. Responses that are considered accurate, for the purposes of the present study, can be viewed in Appendix B. Questions 1 through 9 and question 10 were analyzed separately because of the differences in wording and scoring. Higher scores indicate a more accurate rating on the depression accuracy scale score (i.e., questions one through nine)

For purposes of the current study, question 10 of the ADRS, "Please rate Ashley's behaviors" represents a depression scenario evaluation score (DSEV). This score is indicative of participants' ability to recognize the symptoms of moderate depression. As indicated in Appendix B, the accurate response is "Appears moderately depressed", whereas all other responses were considered inaccurate (i.e., for question 10, the correct rating is the number three).

Adolescent Depression Pamphlet. To assist participants in their depression ratings and judgments, the pamphlet consisted of a brief set of behavioral descriptors providing behaviors characteristic and behaviors not characteristic of depression (see Appendix C). The behavioral examples were adapted from a set of behavioral descriptors for internalizing disorders provided by Walker and Severson (see Appendix E) as a part of their Systematic Screening for Behavior Disorders protocol (as cited in Auger, 2004).

These behavioral descriptors have been found to have strong interrater agreement and good test-retest reliability (Walker & Severson, 1990).

Demographic Data Sheet. The demographic data sheet consisted of non-identifying questions. Participants were asked to provide their age, gender, and ethnicity. The demographic data sheet can be viewed in Appendix D.

Debriefing. A debriefing letter was given to participants detailing the purpose of the study (see Appendix F).

Procedure

Participants were randomly assigned to either the pamphlet group or the control group. The pamphlet group read the Adolescent Depression Pamphlet prior to reading the vignette and the control group did not receive a pamphlet at any time during the study. Both groups read the vignette about the teenager exhibiting depressive symptoms. After reading the vignette, both groups completed the ADRS and rated the symptoms of the teenager described in the vignette.

Hypotheses and Analyses

It was hypothesized that the experimental group would have higher accuracy ratings than the control group on the ADRS. These results were analyzed with *t* tests.

Results

An independent samples *t* test showed no statistically significant difference on the DEPACC between the pamphlet (M = 3.58, SD = .66) and non-pamphlet group (M = 3.41, SD = .77). For the DSEV, two one-sample *t* tests were conducted. In these cases, a statistically non-significant finding would indicate that a group's mean score was closer to the most accurate appraisal of the scenario (i.e., the test value of number three).

Results showed a nonsignificant difference between non-pamphlet group mean score and the test value [M = 3.02, SD = .94, t (44) = .158, p > .05]. The pamphlet group's mean score was statistically different from the test value [(M = 3.46, SD = .97, t (47) = 3.28, p < .05]

Discussion

The aim of this study was to examine the effect of reading educational material on the accuracy of adult's rating of depression in adolescents. The present findings fail to support the hypothesis that adults who received a pamphlet of educational material would be more accurate in their understanding of adolescent depression than adults who did not receive a pamphlet. There was no significant difference between the pamphlet and non-pamphlet groups on the DEPACC. For the DSEV, the non-pamphlet group had an accurate average appraisal of a scenario dealing with adolescent depression. The pamphlet group, on average, overrated the severity of depression depicted in the scenario on the DSEV. One explanation for this inconsistency is that the pamphlet's title may have prompted the participants to overestimate Ashley's symptoms. Participants were not informed prior to completing the study that they were being judged on their ability to detect depression in adolescents in order to not bias their answers; however the title of the pamphlet contained the word "depression" perhaps prompting the participants to identify Ashley as depressed.

While the study findings did not support the study hypothesis, the results are in line with previous research which has shown that adults have a difficult time identifying depression in persons when the symptoms are not severe (e.g., Mehl, 2006). In the vignette, Ashley meets the criteria for Major Depressive Episode- irritability, ahedonia,

significant weight loss, hypersomnia, feelings of worthlessness, and difficulty concentrating. However, her symptoms are not debilitating, thus enabling her to receive the moderate specifier. Perhaps, the lack of functional impairment made it difficult for participants to accurately detect Ashley's depression. As previously stated, depression in adolescence may present differently than depression in adulthood. Adults may become reclusive and withdrawn and miss work. However, adolescents experiencing depression lack the freedom to miss school. Although symptoms such as self-mutilation and suicide attempts are red flags for depression in adolescents, milder symptoms, such as those listed above, are just as important in identifying depression. Because severity of symptoms seems to have a significant impact on the ability of adults to detect depression, future replications of this study should include information about severity of depressive symptoms with examples of mild, moderate, and severe depression present.

The educational pamphlet did not seem to improve the ability to accurately identify depression in adolescents. One explanation for these findings is that the pamphlet may not have been as informative as needed. Information about mild, moderate, and severe depressive symptoms may have been beneficial to the pamphlet group in accurately identifying the level of Ashley's depression. Also, the pamphlet was adapted from a previous study conducted with teachers (Auger, 2004). In that study, the teachers were assessing depressive symptoms in students with whom they had some level of personal interaction. It was found that teachers who had spent the most time with a student were more accurate at detecting his or her depression than teachers who had little to no personal interaction with said student. The participants in the present study were being asked to detect symptoms in a fictional character with whom they had no

observational history to base their assumptions.

Another limitation that may have impacted the study results was that there was no assessment of participants' amount of interaction with teens. Future research would benefit from the collection of such information as this may be a factor that is associated with an adult's ability to detect adolescent depression.

Results from a previous study (Tylee, 2001) suggest that informative material about depression can be helpful in changing q layperson's attitude about depression. The anti-depression campaign study material was disseminated over a period of five years via various media outlets. This suggests that for future studies, educational material should be provided to participants over a longer period of time rather than at one sitting.

Research about what methods are most effective in aiding adults' ability to detect depression is limited and contradictory. A similar study conducted by Moor and colleagues (2007) also found that educational training had no effect on the ability of teachers to recognize their depressed students. Attending a workshop on adolescent depression did not improve teachers' accuracy rating of depression but it did affect their attitudes about the illness. These findings suggest that the educational material used may be more effective in informing participants about depression and removing the stigma associated with it rather than increasing their ability to accurately detect it. Interestingly, participants in the present study were able to identify Ashley as being depressed. However, an attitude questionnaire would have been beneficial to evaluate if the material had an influence on participants' beliefs and thoughts about depression.

Another concern for this study is that the participants were not very diverse in ethnicity; 98% of participants were African American. Studies have shown that African-

Americans may tend to view depression negatively, which may be associated with a reluctance to identify someone as suffering from depression (Mahan, 2005). Results from a survey conducted by the National Mental Health Association found that 63% of African Americans thought depression was caused by personal weakness (as cited in Mahan, 2005). Anglin, Link, and Phelan (2006) found that African Americans were more likely to stigmatize mental illnesses, such as depression, than Caucasians. Future research would benefit from study replications with more ethnically diverse participant pools.

The fact that the pamphlet group's score on the DEPACC was not statistically different from the non-pamphlet group raises the question of whether an educational pamphlet alone is sufficient to help laypeople identify depression in adolescents. These study results are important for clinicians because they show a need for more research to be conducted in the area of developing appropriate informational material and interventions to educate laypersons about depression in adolescents. Early detection ensures a better prognosis, which is beneficial to the client, medical doctors, psychiatrists, psychologists and others in the mental health field.

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Appendix A

Vignette

Ashley Jones is a 14-year old living in a single parent home. Over the past month, Ashley has been experiencing difficulty concentrating on her assignments. Despite her lack of concentration, Ashley's grades have not declined. Ashley's track team coach has expressed that Ashley continues to attend practice, however her performance has deteriorated, she appears more sluggish and has a nonchalant attitude in regards to practice. Ashley has also been spending less time with her friends. When her mother asks why Ashley is no longer spending her free time with her friends, Ashley lashes out at her mother and becomes extremely verbally aggressive. Ashley's mother also has become concerned because of Ashley's increased irritability. Ashley often complains to friends that she does not feel "pretty enough". Her mother has also noticed that Ashley has gained a significant amount of weight and sleeps most of the day.

Appendix B

Adult Depression Rating Scale

The following questions will take about 10 minutes for you to answer. Please answer them as honestly as you can.

1 (strongly disagree) 2 (somewhat disagree) 3 (neither disagree nor agree) 4 (Somewhat agree) 5 (Strongly agree)

1) Ashley is exhibiting typical mood patterns of a teenager 1 2 3 4 5

(Accurate = 1)

2) Ashley's mother should seek professional help for her daughter 1 2 3 4 5

(Accurate = 5)

3) Ashley will get over her "phase" in a few days 1 2 3 4 5

(Accurate =1)

4) I believe Ashley is depressed 1 2 3 4 5

(Accurate = 5)

5) Ashley's behavior is normal for adolescents 1 2 3 4 5

(Accurate = 1)

6) Ashley is experiencing normal feelings of self doubt that 1 2 3 4 5

(Accurate= 1/2)

adolescent girls go through

7) Ashley is experiencing depressive symptoms 1 2 3 4 5

(Accurate = 5)

8) Ashley is lazy and exaggerating her illness. 1 2 3 4 5

(Accurate = 1)

9) Ashley's change in the amount of time spent with 1 2 3 4 5

(Accurate = 1)

friends is standard for teens

10) Please rate Ashley's behaviors

1	2	3	4	5
Does not appear at all depressed		Appears moderately depressed		Appears extremely depressed

(Accurate = 3)

Appendix C

Pamphlet

Youth with depression tend to display certain behavior patterns. Below are examples of behaviors that may be indicative of depressed mood, as well as examples of behaviors not characteristic of depressed mood.

Behaviors characteristic of depression:

- having a low or restricted activity level
- not talking with other children
- being shy, timid, and/or unassertive
- saying negative things about himself/herself
- acting in a fearful manner
- not participating in activities
- being unresponsive to social initiations
- displaying a sad and unhappy appearance
- displaying an irritable appearance
- complaining of having physical pains
- appearing preoccupied and inattentive

Behaviors not characteristic of depression:

- initiating social interactions with peers
- having conversations
- having normal rates of social interaction
- displaying positive social behavior toward
- participating in activities
- resolving peer conflicts in an appropriate manner
- joining in with others
- frequent smiles; an appearance of being happy having a normal activity level

Appendix D

Demographic Data

Please fill in the following demographic information. You should **not** write your name on this.

Age ____

Sex (please circle one) Male Female

Ethnicity ____**WHITE**.

_____ **BLACK OR AFRICAN AMERICAN**

_____ **NATIVE AMERICAL/ESKIMO/ALEUT**

_____ **HISPANIC**

_____ **NON-HISPANIC**

_____ **ASIAN/PACIFIC ISLANDER**

_____ **OTHER** (Please specify)

_____

Appendix E

TEACHER QUESTIONNAIRE

Depressed Mood Research Study

The following information will be used only for the purposes of this research project. Your responses will be completely confidential and will not be shared with students, parents, or other staff.

Name_____

Background Information

(1) How many years of teaching experience do you have?
__ 0 to 2 years
__ 3 to 5 years
__ 6 to 10 years
__ 11 to 20 years
__ More than 20 years

(2) How much education/training do you have regarding childhood depression?
__ No formal education or training
__ One or more classes where childhood depression was included as a topic
__ A class specifically on childhood psychopathology or a workshop specifically on childhood depression

(3) Respond to the statement "I can recognize depression in my students:"
__ Strongly agree
__ Agree
__ Disagree
__ Strongly disagree

(4) Over the course of your career, how many students would you estimate you have had in your classes who you know had a diagnosis of depression? ____

(5) Check all of the following that describe your personal experience with depression:
__ I have had depression myself
__ I have a close friend or member of my immediate family who has had depression

(6) Check all of the following that describe your personal beliefs about childhood depression:
__ Childhood depression is very rare (occurs in less than 1% of children)
__ Childhood depression occurs among a small but significant number of children (occurs in between 1% and 10% of children)
__ Childhood depression is more common than people think (occurs in more than 10% of children)
__ Childhood depression is a biological disorder caused by some type of chemical imbalance in the brain
__ Childhood depression is caused by negative life events, such as a death of a family member or the divorce of one's parents

Youth with depression tend to display certain behavior patterns. Below are examples of behaviors that may be indicative of depressed mood, as well as examples of behaviors <u>not</u> characteristic of depressed mood.

Behaviors characteristic of depression:

- having a low or restricted activity level
- not talking with other children
- being shy, timid, and/or unassertive
- saying negative things about himself/herself
- acting in a fearful manner
- not participating in activities
- being unresponsive to social initiations by others
- displaying a sad and unhappy appearance
- displaying an irritable appearance
- complaining of having physical pains
- appearing preoccupied and inattentive

Behaviors <u>not</u> characteristic of depression:

- initiating social interactions with peers
- having conversations
- having normal rates of social interaction
- displaying positive social behavior toward others
- participating in activities
- resolving peer conflicts in an appropriate manner
- joining in with others
- frequent smiles; an appearance of being happy
- having a normal activity level

The following list contains the names of some of the students in your classes. Using the behavioral examples above as a guide, please rate how depressed each student appears to be on a scale of 1 to 5. Also please provide your judgment of how well you know the student using a 1 to 5 scale. These ratings will only be used for the purposes of this study and will be kept completely confidential.

Please rate each of these students from 1 to 5, using the following scales:

1	2	3	4	5
Does not appear at all depressed		Appears moderately depressed		Appears extremely depressed

1	2	3	4	5
Not at all familiar with this student		Moderately familiar with this student		Very familiar with this student

Example: If you view a student as being <u>not at all</u> depressed and you believe you are <u>very</u> familiar with the student, you would rate the student like this:

Depression <u>Rating</u>: ◯ 1 2 3 4 5

Familiarity <u>Rating</u>: 1 2 3 4 5 ◯

Student <u>Name</u>	Depression <u>Rating</u>	Familiarity <u>Rating</u>
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5

Please rate each of these students from 1 to 5, using the following scales:

1	2	3	4	5
Does not appear at all depressed		Appears moderately depressed		Appears extremely depressed

1	2	3	4	5
Not at all familiar with this student		Moderately familiar with this student		Very familiar with this student

Student Name	Depression Rating	Familiarity Rating
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5

Please review the list of students provided on the previous pages and write down the names of all of those students who you believe are depressed to a degree that some type of intervention would be helpful.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Appendix F

Debriefing

Thank you for completing the forms. The majority of the questions concerned your perception of the teenager in the story. The purpose of this study is to understand how adults perceive depression in adolescents. We will also determine if those participants who received informative literature performed differently on the questionnaire than those participants who did not receive informative literature.

April Scott is in charge of this study. If you would like to talk with her she can be reached at 305-899-3673.