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The acceptability of treatments for adolescent depression to a multi-ethnic sample of girls

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The Acceptability of Treatments for Adolescent Depression to a Multi-Ethnic Sample
of Girls

by

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A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Arts
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The Acceptability of Treatments for Adolescent Depression to a Multi-Ethnic Sample of Girls

Nicole Caporino

ABSTRACT

An efficacious treatment is diminished in value if clients will not seek it out and adhere to it (Kazdin, 1978). Thus, the acceptability of a treatment to consumers is an important indicator of the quality/effectiveness of the treatment (APA, 2002). The purpose of this study was to examine acceptability of treatments for depression to adolescent females and to explore factors that might be associated with acceptability. Sixty-seven high school students (36 Hispanic and 31 non-Hispanic White) were recruited from communities in New Jersey and Florida, and interviewed by telephone. Participants were presented with a vignette describing a depressed adolescent and asked to use the Abbreviated Acceptability Rating Profile to indicate their opinion of four single treatments (cognitive-behavioral therapy, interpersonal therapy, family therapy, and pharmacotherapy) for depression and three treatment combinations. Consistent with hypotheses, psychotherapy approaches were generally more acceptable to adolescents than combinations of psychotherapy and pharmacotherapy. Pharmacotherapy used alone was not acceptable, on average. There was preliminary evidence to support the hypotheses that treatment acceptability is related to ethnicity, acculturation, and perceived causes of depression; however, contrary to expectations, treatment acceptability was not associated with symptom severity in this study. Implications for increasing the utilization of mental health services in this population are discussed and directions for future research are offered.

Introduction

Depression Among Adolescents

Unipolar depression refers to Major Depressive Disorder (MDD), Dysthymic Disorder (DD), or “double depression” (both MDD and DD), and is characterized by feelings of sadness and/or loss of interest or pleasure. Other symptoms include loss of energy, feelings of guilt or worthlessness, diminished ability to concentrate, significant changes in weight/appetite, sleep disturbances, psychomotor agitation or retardation, and recurrent thoughts of death (Diagnostic and Statistical Manual of Mental Disorders—Fourth Edition, 1994). The phenomenology of depression in adolescence differs from that of depression in childhood. For example, depressed adolescents have significantly higher rates of hypersomnia and weight change than depressed children (Kovacs, 1996; Ryan et al., 1987) whereas depressed children are more likely than depressed adolescents to make somatic complaints (Kashani, Rosenberg, & Reid, 1989; Ryan et al., 1987) and show more irritability and uncooperativeness (Kashani, Holcomb, & Orvaschel, 1986). Depressed adolescents are more likely than depressed children to have impaired functioning (Birmaher et al., 1996).

Prevalence. Conclusions on the prevalence of depression among adolescents are difficult to make since studies of this population are limited and have employed various methods (Stark, Boswell Sander, Yancy, Bronik, & Hoke, 2000). Some investigators have reported rates of both MDD and DD whereas others have reported only rates of MDD. According to Essau & Dobson (1999), the point prevalence of MDD among is adolescents is 1 in 20 (MDD affects 1 in 20 adolescents at any one time). Earlier studies yielded estimates of point prevalence ranging from 4% to 8% (Lewinsohn, Clark, Seeley, & Rohde, 1994; Kashani et al., 1987a, 1987b). Reports of one-year prevalence of MDD

among adolescents reach as high as 8.3% (Garrison et al., 1997; Anderson & McGee, 1994; Lewinsohn et al., 1994). By 18 years of age, approximately 20% of teens will have experienced at least one episode of major depression (Lewinsohn, Hops, Roberts, Seeley, & Andrews, 1993; Lewinsohn, Rohde, & Seeley, 1998).

Consequences of Depression. Unipolar depression in adolescence is associated with impairments in interpersonal functioning, poor academic performance, arrests, early childbearing, cigarette smoking, and reduced life satisfaction (see Birmaher et al., 1996 for a review; Reinherz, Giaconia, Hauf, Wasserman, & Silverman, 1999). Longitudinal studies consistently show that depressive disorders in adolescence predict the occurrence of depressive disorders in adulthood and are associated with long-term psychosocial impairment (Essau, Conradt, & Petermann, 1999).

Adolescent depression is also associated with suicidality (Shaffer, Gould, & Fisher, 1996; Gould et al., 1998) and is thus a major public health concern. Approximately 500,000 adolescents in the United States attempt suicide each year (Shaffer, Gould, & Fisher, 1996; Gould et al., 1998), making suicide the third leading cause of death among adolescents in this country (Kochanek, Murphy, Anderson, Scott, 2004). Almost 2000 adolescents, approximately one half of whom suffer from major depression, die as a result of suicide each year (Shaffer, Gould, & Fisher, 1996; Gould et al., 1998). Adolescents with a mood disorder are 11 to 27 times more likely to die by suicide than adolescents without a mood disorder (Groholt et al., 1998; Shaffer et al., 1996; Brent et al., 1993; Brent et al., 1988; Shafii et al., 1988; Beautrais, Joyce, & Mulder, 1996).

Gender and adolescent depression. Among adolescents, girls are approximately twice as likely to suffer from MDD as boys (Essau & Dobson, 1999; Hankin et al., 1998; Lewinsohn et al., 1994; Lewinsohn et al., 1993). This gender difference in the rate of depression does not emerge until mid-adolescence; in fact, results from studies of preadolescent children consistently show that depression is more prevalent among boys than girls (Anderson, Williams, McGee, & Silva, 1987; Angold, Costello, & Worthman, 1998; Nolen-Hoeksema, Girgus, & Seligman, 1991; Nolen-Hoeksema, Girgus, & Seligman, 1992). Possible explanations for females' increased risk for depression

include early traumatic experiences (e.g., physical and/or sexual abuse; Cutler & Nolen-Hoeksema, 1991), hormonal changes affecting reactions to stress (e.g., Parker & Brotchie, 2004), cognitive style, (e.g., Mazure, Bruce, Maciejewski, & Jacobs, 2000), ruminative coping (Nolen-Hoeksema, 1991), body image dissatisfaction (e.g., Marcotte, Fortin, Potvin, & Papillon, 2002), poor self-esteem (e.g., Kling, Hyde, Showers, & Buswell, 1999), social roles/cultural norms (e.g., Nolen-Hoeksema, Larson, & Grayson, 1999), and pre-existing anxiety disorders (e.g., Simonds & Whiffen, 2003). (See Kuehner, 2003 for a comprehensive review.) More female than male adolescents have suicidal ideation and make suicide attempts but more male than female adolescents die by suicide (CDC, 2002; Lewinsohn, Rohde, Seeley, & Baldwin, 2001; Gould et al., 1998; Lewinsohn et al., 1996; Garrison et al., 1993; Bingham, Bennion, Openshaw, & Adama, 1994; Deykin & Buka, 1994; Rich, Kirpatrick-Smith, Bonner, & Jans, 1992; Anderson, 2002).

Ethnicity/culture and adolescent depression. Data from the Centers for Disease Control and Prevention's (CDC) Youth Risk Behavior Surveillance System (YRBSS) consistently indicate that Hispanic adolescents are more likely than African American or non-Hispanic White adolescents to make a suicide plan and to attempt suicide (CDC, 2004, 2002, 2000, 1998, 1996, 1995). Hispanic females, in particular, appear to be most at risk for suicide attempts (Rew, Thomas, Horner, Resnick, & Beuhring, 2001; Roberts & Chen, 1997; Roberts, Chen, & Roberts, 1995). According to results from a study by Rew et al. (2001), adolescent Hispanic females have a 19.3% prevalence of suicide attempts, which is significantly higher than that of any other ethnic-gender group. Not surprisingly, some studies have shown that Hispanic adolescents are more likely to be depressed than adolescents of other ethnic groups (Wight, Aneshensel, Botticello, & Sepulveda, 2005; Roberts, 2000; Roberts, Roberts, & Chen, 1997; Roberts & Sobhan, 1992; Emslie et al., 1990). Wight et al. (2005), for example, found depression to be more prevalent among Hispanics than non-Hispanic Whites, Asian Pacific Islanders, and "other" ethnic groups, even after controlling for age, sex, family structure, and household income. The number of youths who experience a depressive episode by the end of high school is estimated to be more than three times higher for Hispanics than non-Hispanic

Whites (Danziger, Sandefur, & Weinberg, 1994). One explanation for the relatively high prevalence rates of depression and suicidality among Hispanic youths is that as members of an ethnic minority group, they often struggle with acculturative stress (e.g., prejudice/discrimination, disruption of social support), which has been found to be related to psychopathology and suicidal behavior (Canino & Roberts, 2001; Vega, Gil, Zimmerman, & Warheit, 1993; Hovey & King, 1996).

Treatment of Adolescent Depression

A number of treatments have been developed for adolescent depression, each based on a different etiological theory. These treatments vary in the degree to which their use is supported by empirical findings.

Efficacy. Cognitive-behavioral therapy (CBT) and interpersonal psychotherapy (IPT) have been identified as evidence-based treatments for adolescent depression (see Kazdin, 2004; Asarnow, Jaycox, & Tompson, 2001; Cuijpers, 1998; Kaslow & Thompson, 1998 for reviews). There is some evidence for the effectiveness of family therapy in treating adolescent depression (Brent et al., 1997; Diamond, Reis, Diamond, Siqueland, & Isaacs, 2002), although more research is needed. With the exception of IPT, psychodynamic therapies for adolescent depression have not been tested empirically.

Two interventions for adolescents with MDD that have been the source of much controversy are pharmacotherapy and electroconvulsive therapy (ECT). No controlled studies of ECT with adolescents have been published. Rey and Walter (1997) reviewed 60 reports of ECT and concluded that it may benefit depressed clients 18 years of age or younger but emphasized that most of the reports did not have sufficient outcome data. ECT has been fiercely debated because its adverse effects are considerable and include impairment of memory and new learning, tardive seizures, prolonged seizures, and risks associated with general anesthesia (AACAP, 2004). Baldwin and Oxlad (1996) concluded from a review of 217 child/adolescent cases that ECT might even exacerbate an existing psychological crisis.

With respect to pharmacotherapy, tricyclic antidepressants are commonly prescribed for adolescents despite the lack of evidence supporting their use with this population (Burns, Hoagwood, & Mrazek, 1999). Several randomized controlled trials have shown selective serotonin reuptake inhibitors (SSRIs) to be effective in treating adolescent depression (e.g., Wagner et al., 2003, 2004; Emslie, Heiligenstein, & Wagner, 2002; Keller et al., 2001; Emslie et al., 1997; Simeon Dinicola, Ferguson, & Copping, 1990). However, results from more recent trials and re-examinations of data from earlier trials have suggested that SSRIs are ineffective and are associated with double the rate of suicidality and aggression/hostility compared to placebo (see Whittington, Kendall, & Pilling, 2005 for a review). These findings have caused regulatory agencies in the United States, the United Kingdom, and Canada to step in and designate certain SSRIs as contraindicated for persons less than 18 years of age. (Whittington, Kendall, & Pilling, 2005). The Food and Drug Administration (FDA) has directed all antidepressant drug manufacturers to label their products with a ‘black-box’ warning about the increased risk of suicidality (Food and Drug Administration, 2004). Still, many mental health professionals consider pharmacotherapy for depressed adolescents to be an evidence-based practice (e.g., Asarnow et al., 2005).

The most recent data on the use of SSRIs with adolescents comes from the Treatment for Adolescents with Depression Study (TADS, 2004). This randomized controlled trial compared fluoxetine, cognitive-behavioral therapy, and their combination. Results suggested that fluoxetine with CBT is superior to both fluoxetine alone and CBT alone and combining the two appeared to reduce the risk of suicidality down to the level of placebo. The cognitive-behavioral intervention in this study, however, has been criticized for being over structured and devoting too little time to cognitive restructuring (Hollon, Garber, & Shelton, 2005). In addition, the overall treatment was delivered in fewer sessions than the CBT evaluated in prior studies despite the fact that it included more components (Hollon, Garber, & Shelton, 2005).

Before the TADS study, there were no major trials of the combination of psychotherapy and pharmacotherapy in the treatment of adolescent depression. According to Kratochvil, Simons, Vitiello et al. (2005), there are several reasons why

combined treatments may be superior to single treatments. First, two treatments provide a greater “dose” and might thus speed recovery. Second, two treatments may target different symptoms of a disorder such that their combination is required to maximize outcome. Third, in the case of a partial response, adding a second treatment may improve symptoms targeted by the first treatment. Fourth, combined treatments may be more likely to improve conditions that are comorbid with depression. However, findings from studies comparing single and combined treatments for adult depression have been mixed (Keller et al., 2000; Hollon et al., 1992; Murphy et al., 1984).

One criticism of treatment-outcome studies in general is that racial/ethnic minorities, especially Hispanic Americans, are often not adequately represented (Case & Smith, 2003, 2000; Rossello & Bernal, 1999; Miranda, Azocar, Organista, Munoz, & Lieberman, 1996; Bernal, 1993; Navarro, 1993). The under-inclusion of certain minority groups limits the external validity of research on psychological interventions, since findings can typically only be generalized to middle class, non-Hispanic Whites (Rossello & Bernal, 1999). Few studies have evaluated treatments developed or adapted specifically for use with a particular minority population.

Efficacy with Hispanic adolescents. Only two depression treatment-outcome studies to date have sampled Hispanic adolescents exclusively. Rossello and Bernal (1999) tested a cognitive-behavioral treatment and an interpersonal psychotherapy treatment adapted for depressed Puerto Rican adolescents using a framework that considers eight culturally sensitive elements of intervention: language, persons, metaphors, content, concepts, goals, methods, and context. Results suggested that the two treatments were superior to a waitlist control condition in reducing depressive symptoms. 82% of adolescents in the IPT condition and 59% of those in the CBT condition were considered to be functional after treatment.

Rossello and Bernal (2005) have reported preliminary findings from a second trial, in which they crossed treatment type (CBT versus IPT) with format (group versus individual). Again, both IPT and CBT significantly reduced depression symptoms from pretreatment to posttreatment, this time with CBT showing a definite advantage over IPT. There were no differences in efficacy between the two treatment formats.

Conclusions. In summary, the results of empirical studies have shown several different therapies and combinations of therapies to be promising in the treatment of adolescent depression. There is a strong evidence base for both CBT and IPT (Kazdin, 2004; Asarnow, Jaycox, & Tompson, 2001; Cuijpers, 1998; Kaslow & Thompson, 1998), with culturally sensitive adaptations of these treatments receiving some support for use with Hispanic adolescents (Rossello & Bernal, 1999). The results from a couple of randomized controlled trials offer preliminary support for the use of family therapy in treating depressed adolescents (Brent et al., 1997; Diamond, Reis, Diamond, Siqueland, & Isaacs, 2002). Although the use of pharmacological treatments with this population remains controversial, recent research has suggested that SSRI's can be used safely and effectively in combination with CBT (TADS, 2004). ECT for the treatment of adolescent depression has not been well researched.

Client Variables

The finding that multiple treatments are potentially effective in the treatment of depression suggests that variables such as nonspecific therapy factors and client characteristics may be as important or even more important than the specific content of the interventions. In fact, results from the Treatment of Depression Collaborative Research Program (TDCRP), a multi-site study comparing CBT, IPT, and pharmacotherapy in the treatment of adults with depression, suggested that outcome is better predicted by client characteristics than by the effects of particular interventions (Ablon & Jones, 1999; Blatt, Quinlan, Pilkonis, & Shea, 1995; Zuroff et al., 2000). According to Lambert (1992), as much as 40% of client improvement in psychotherapy can be attributed to client variables and extratherapeutic influences. Research has examined pretreatment client variables such as symptom severity, functional impairment, sociodemographic characteristics, expectancies, motivation for change, and psychological mindedness as they relate to outcomes of psychotherapy (see Clarkin & Levy, 2004 for a review).

Treatment Acceptability

Given the variety of models for depression (Beckham & Leber, 1995) as well as the availability of different public information about the treatment for this disorder, it is perhaps surprising that the perceived acceptability of alternative treatments for depression has received relatively little research attention as a client variable that could potentially influence outcome (Hamilton & Dobson, 2002). Treatment acceptability refers to judgments about treatment procedures made by nonprofessionals, laypersons, clients, and other potential consumers of treatment. They are based on an evaluation of whether the treatment is appropriate for the problem, fair, reasonable, intrusive, and whether it concurs with popular notions about what treatment should be (Kazdin, 1980). Two or more treatments can be effective and yet differ in the extent to which those who receive them consider them to be acceptable (Kazdin, 1980, 2000). For example, both stimulant medication and behavioral parent training are well established as empirically supported treatments for ADHD in youth; however, behavioral parent training has been found to be more acceptable to parents (Gage & Wilson, 2000). Kazdin (1980) suggested that acceptable treatments are more likely to be sought out and adhered to once treatment has begun, resulting in fewer dropouts, greater client compliance and motivation, more positive behavioral changes, and greater satisfaction with treatment.

Models of treatment acceptability. Several models of treatment acceptability have been proposed in the school psychology literature. Witt and Elliot (1985) hypothesized that teachers' initial judgments about acceptability guide their selection of treatments and affect the extent to which they implement the procedures as intended (treatment integrity), ultimately playing a role in determining the effectiveness of a treatment. It was further hypothesized that if teachers deem the treatment to be effective once it has been implemented, their initial judgments about acceptability will be enhanced. Thus, Witt and Elliot's (1985) model can be illustrated as consisting of reciprocal relationships between four treatment variables: acceptability, use, integrity, and effectiveness (see Figure 1). Reimers, Wacker, and Koeppel (1987) expanded this model, adding knowledge/ understanding of a treatment as a prerequisite for making judgments about its

acceptability. From these models, one can hypothesize that consumer judgments of treatment acceptability ultimately influence treatment outcomes.

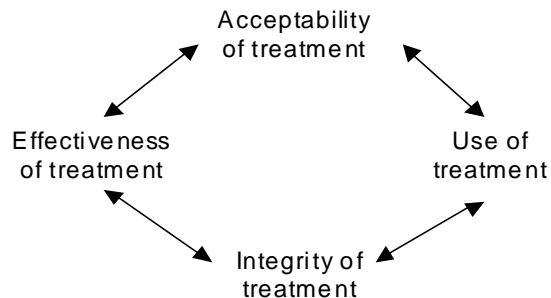


Figure 1. Witt and Elliot's (1985) model of treatment acceptability.

Acceptability and outcome. Researchers appear to agree that treatment acceptability is likely related to treatment outcomes (see Cross Calvert & Johnston, 1990 for a review); however, this relationship has rarely been tested empirically. Tarnowski, Simonian, Bekeny, and Park (1992) offer ethical and practical considerations to explain this lack of empirical scrutiny. They assert that one cannot reasonably ask clients to provide acceptability ratings prior to the start of treatment and then provide a treatment that is judged to be relatively unacceptable. Asking clients for acceptability ratings after treatment is completed would also be problematic since acceptability ratings may be confounded with the outcome of the treatment.

Despite the ethical concerns raised by Tarnowski et al. (1992), Reimers, Wacker, Cooper, & DeRaad (1992a) conducted a study that provided direct empirical support for the relationship between treatment acceptability and treatment outcome. Parents of children seen in a pediatric behavior management outpatient clinic were recommended positive reinforcement procedures. Ratings of acceptability were obtained at the initial clinic visit and one, three, and six months later. Parents also rated their child's behavior during the last three assessments. Acceptability ratings were highly consistent over time and were strongly and positively associated with change in child behavior problems. One criticism of this study, however, is that treatment acceptability and child behavior were

both assessed using parent-report, introducing a method variance confound (Foster & Mash, 1999; Sterling-Turner & Watson, 2002).

Using a data set expanded from that reported on in Reimers et al. (1992a), Reimers et al. (1992b) showed that treatment acceptability is also related to adherence/compliance, which has been found in numerous studies to be related to outcome (e.g., Addis & Jacobson, 2000; Burns & Spangler, 2000; Bryant, Simons, & Thase, 1999; Taft, Murphy, King, Musser, & DeDeyn, 2003; Leung & Heimberg, 1996; Charach, Ickowicz, & Schachar, 2004; Rittmannsberger, Pachinger, Keppelmuller, & Wancata, 2004). They reported that parents who rated the treatments as highly acceptable were more likely to be compliant at each of the follow-up points.

More support for the theorized acceptability-outcome relation comes from studies that show that giving clients a choice of treatments improves outcomes. Lin et al. (2005) found that among depressed adults seen in a primary care setting, clients who were matched with their preferred treatment (counseling, medication, or both) demonstrated more rapid symptom reduction than unmatched clients. Asarnow et al. (2005) found that depressed adolescents who were given a choice of treatment modalities as part of a quality improvement intervention evaluated in primary care clinics reported significantly fewer depressive symptoms and greater quality of life at follow-up than adolescents who received usual care.

Acceptability as outcome. It can be argued that treatment acceptability is worthy of study irrespective of its relationship to adherence and outcome. Researchers should be concerned not only with clinical outcomes thought to be important by professionals but also with aspects of treatment identified as important by consumers. In other words, the acceptability of a treatment to consumers should be an outcome variable in treatment effectiveness research in and of itself (Kazdin, 1978). Indeed, client perceptions of care (e.g., satisfaction) have received greater attention in recent years by provider accreditation agencies such as the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO, 2005) and the National Committee on Quality Assurance (NCQA, 2001), reflecting global trends toward increasing consumer involvement in healthcare. The Criteria for Evaluating Treatment Guidelines, published by the American

Psychological Association (APA, 2002), includes acceptability to the patient as one of the 21 criteria for evaluating the effectiveness of a treatment approach. According to Whitstock (2003), attending to the acceptability of a proposed treatment to an individual client could improve the “uptake” of research evidence, narrowing the gap between best available evidence and current practice. In addition, there is some evidence that the acceptability of an intervention is predictive of attributions of blame and the propensity to litigate (Meller, Martens, & Hurwitz, 1990).

Acceptability and utilization. The possibility that treatment acceptability is associated with treatment usage (Kazdin, 1980) has received some support in the youth treatment literature (e.g., Bannon & McKay, 2005; Chavira, Stein, Bailey, & Stein, 2003; Kazdin, 2000) and is yet another reason why treatment acceptability deserves more research attention. Understanding what makes a treatment acceptable to potential consumers may lead to improvements in rates of service utilization, which are notably poor among youth (Satcher, 2000; Leaf et al., 1996). Approximately 70% of children and adolescents in need of treatment in the United States do not receive mental health services (Report on the Surgeon General’s Conference on Children’s Mental Health, 2000). Among children and adolescents who enter therapy, 40-60% terminate prematurely (Kazdin, 1996; Wierzbicki & Pekarki, 1993).

Service underutilization by Hispanic youths and families in the United States is of particular concern given that they have lower rates of specialty mental health service utilization than non-Hispanic Whites (Hough et al., 2002; Roberts, 2000; Leaf et al., 1996). Hough et al. (2002) sampled adolescents receiving services in at least one of five public sectors of care and reported that non-Hispanic White youths with one or more mental health diagnoses and moderate impairment were 2.2 times as likely as their Latino counterparts to receive specialty outpatient mental health services. In addition, Latino youths reported entering specialty mental health services at a later age and making fewer visits than non-Hispanic White youths. According to Zwillich (2000), 80% of Hispanic adolescents with mental health issues do not receive care, and Hispanic youth have even higher rates of premature termination of therapy than non-Hispanic White youth (Takeuchi, Bui, & Kim, 1993; Sue, Fujino, Hu, & Takeuchi, 1991).

Unmet need may be greater for depressed adolescents than for adolescents with other disorders. Ping et al. (1999) examined the relationship between mental health diagnoses and patterns of service utilization in a community sample of 1, 285 children and adolescents controlling for potential confounding variables such as perceived need. They reported that while disruptive behavior disorders were significantly associated with the use of mental health services, depression was not. This finding is consistent with the results of earlier studies (Koot & Verhulst, 1992; Cohen, Kasen, Brook, & Struening, 1991). Keller et al. (1991) suggested that up to 80% of adolescents with depression do not receive any treatment. Results from the National Household Survey on Drug Abuse (NHSDA; Substance Abuse and Mental Health Services Administration, 2003) indicated that only 32 percent of Hispanic females aged 12 to 17 found to be at risk for suicide over the course of one-year received mental health treatment during the same period. One possible explanation for unmet need among depressed youth is that service providers are not sufficiently attentive to the acceptability of available depression treatments to potential consumers.

Prior research on the acceptability of depression treatments. Studies of acceptability have generally focused on treatments for attention-deficit/hyperactivity disorder (ADHD) and disruptive behavior (e.g., Kazdin, 2000), especially among developmentally delayed or mentally retarded children (e.g., Bihm, Sigelman, & Westbrook, 1997). Treatment acceptability in relation to school-based consultation practices has received considerable attention in the research literature (e.g., Elliott & Busse, 1993; Gresham & Lopez, 1996). Many studies have used undergraduate participants, although parents, teachers, mental health professionals, and occasionally children have been sampled. Only a handful of studies have examined the acceptability of various treatments for depression and of these, only one has sampled parents of youth.

Banken and Wilson (1992) presented 174 college undergraduates with case illustrations for major depression and dysthymia and asked them to rate the acceptability of four different therapies (behavioral, cognitive, interpersonal, and pharmacotherapy) using the Treatment Evaluation Inventory (TEI; Kazdin, 1980) and the Semantic Differential (SD; Osgood, Suci, & Tannenbaum, 1957). Participants also completed the

Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). Consistent with the authors' primary hypothesis, the treatments were rated differentially, with psychotherapies rated as significantly more acceptable than pharmacotherapy. Behavioral therapy and cognitive therapy were rated as equally acceptable and interpersonal therapy was rated as the most acceptable treatment. There was some evidence that participants who scored above 10 on the BDI evaluated treatment options differently from participants who scored a 10 or below, suggesting that symptom severity may affect treatment acceptability. Finally, the authors noted an inverse relationship between ratings of acceptability and treatment-specific attrition in a study by the National Institute of Mental Health (NIMH) published a few years prior (Elkin et al., 1989).

More recently, Hall and Robertson (1998) investigated the acceptability of single and combined treatment approaches for adult depression. Seventy-six college undergraduates read the case history of a student with major depression and used the TEI and the Credibility Rating Scale (CRS, Fox & Wollersheim, 1984) to evaluate the acceptability of the following interventions: CBT, IPT, pharmacotherapy with CBT, pharmacotherapy with IPT, and pharmacotherapy with support group therapy. No significant effects were found on the CRS. Data from the TEI, however, showed that treatments consisting of psychotherapy alone consistently fell toward the higher end of the acceptability continuum while the combination of pharmacotherapy and support group therapy consistently fell toward the lower end. Because combinations of individual psychotherapy and medication tended to fall between these two extremes, the authors concluded that the acceptability of pharmacotherapy is raised when combined with psychotherapy (or the acceptability of psychotherapy is lowered when combined with pharmacotherapy).

Tarnowski et al. (1992a) examined the acceptability of five interventions for childhood depression: attribution retraining, cognitive therapy, social skills training, contingency management, and pharmacotherapy. Sixty mothers whose children were seen for routine pediatric outpatient visits at a hospital were randomly assigned to read one of two case illustrations of an 11-year-old child with depressive symptomatology. The two cases represented different levels of symptom severity. Results were consistent

across all levels of symptom severity described and indicated that pharmacotherapy was judged to be least acceptable. Of note, however, was that the acceptability of psychosocial treatments varied as a function of the participant's race, with contingency management treatment rated as significantly less acceptable by African American mothers.

More recently, Cooper et al. (2003) investigated the acceptability of treatments for depression among African American, Hispanic, and non-Hispanic White patients in primary care settings across the United States. Their sample consisted of 829 adults who acknowledged having one week or more during the prior month when they felt sad, empty, depressed, or lost interesting things they normally enjoyed, and who met criteria for a major depressive episode in the year prior, as determined using the Composite International Diagnostic Interview (CIDI; Robins et al, 1988). Participants were administered a telephone survey, part of which asked them to use a four-point Likert scale to rate the acceptability of two options for helping themselves to feel better: taking antidepressant medications and going for individual counseling from a mental health professional. The survey also assessed attitudes towards medication and counseling. Hispanics and African Americans were more likely than non-Hispanic Whites to find antidepressant medication unacceptable and to believe that antidepressant medications are addictive. Hispanics, but not African Americans, were more likely than Non-Hispanic Whites to find counseling acceptable.

Given that studies have revealed considerable differences in the acceptability of various treatments for depression, it is important to identify the factors that influence judgments of treatment acceptability. Potential factors include characteristics of the individual judging the acceptability of the treatment (e.g., race/ethnicity, SES, prior mental health service use), characteristics of the individual receiving the treatment (e.g., symptom severity, age), and/or characteristics of the treatment itself (e.g., effectiveness, side effects).

Factors That May Influence Judgments of Treatment Acceptability

A theoretical model of factors associated with treatment acceptability is presented in Figure 2. The model suggests that ethnicity is related to judgments of treatment acceptability and that this relationship is mediated by several factors, including the perceived cause of the disorder for which treatment is sought. Further, this relationship is thought to be moderated by one's acculturation status. A number of factors in addition to ethnicity are suggested to influence judgments of treatment acceptability. Included among these are symptom severity and prior experience with mental health services/satisfaction. These factors are discussed below.

Perceived cause of the disorder. According to Kazdin (1980), judgments of treatment acceptability are based, in part, on an evaluation of whether the treatment is appropriate; that is, whether it is the best possible match to the client's needs (Salzer, Nixon, Schut, Karver, & Bickman, 1997). It is possible that the perceived cause of the disorder targeted by an intervention affects judgments of whether or not the intervention is appropriate to the problem. A treatment that maps onto the perceived cause would be more likely to be deemed appropriate and thus, acceptable. Support for this hypothesis comes from a study by Iselin and Addis (2003) in which mental health clients and undergraduates rated seven depression treatments first presented alone and then with six different etiological vignettes. All participants considered the treatments more helpful when the cause and treatment focus were congruent.

In another study, Addis and Carpenter (1999) found significant relationships between reasons adults use to explain depression and their reactions to activation-oriented or insight-oriented treatment rationales. Individuals who attributed depression to past experiences in childhood or to stable aspects of the self responded more favorably to insight-oriented treatment rationales and less favorably to activation-oriented treatment rationales than individuals who did not endorse these reasons for depression. Consistent with the possibility that causal beliefs are associated with judgments of treatment acceptability is evidence that clients show better adherence to treatments that

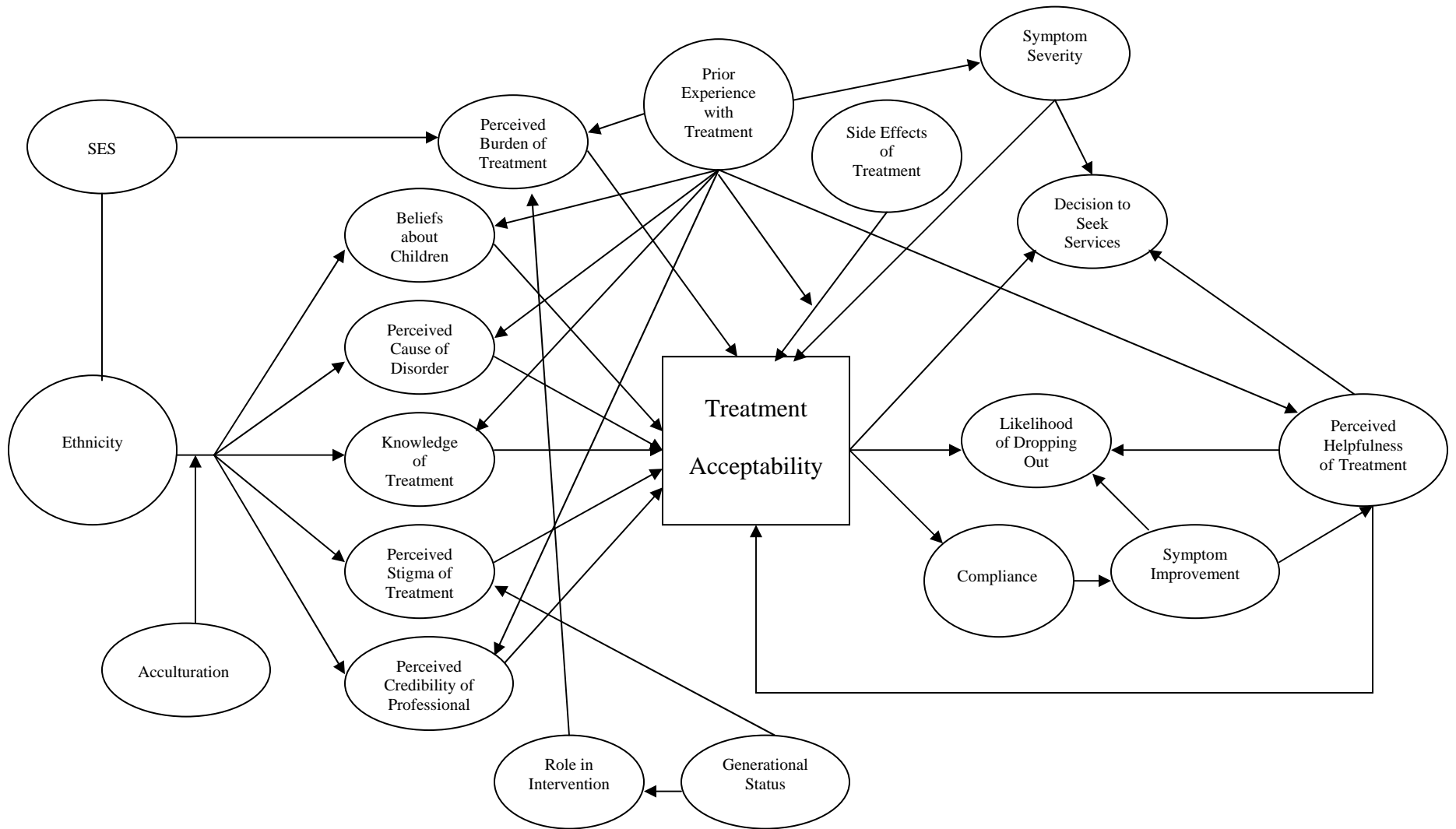


Figure 2. Theoretical Model of Factors Associated with Treatment Acceptability.

are congruent with their own causal beliefs (Elkin et al., 1999) and those of their caregivers (Sher, McGinn, Sirey, & Meyers, 2005). Also, data from at least one study has suggested that clients have better outcomes with therapeutic approaches that match their causal explanations for depression. Addis and Jacobson (1996) found support for their prediction that clients who attributed depression to existential causes (e.g., being stuck in the same place in life) would respond better to cognitive therapy and worse to behavioral activation than would clients who did not attribute depression to existential causes. They also found that endorsing relationship-oriented reasons for depression was negatively related to cognitive therapy outcomes.

While several studies have examined parents' causal beliefs about child behavioral and/or emotional problems in general (e.g., Yeh, Forness, Ho, McCabe, & Hough, 2004; Yeh et al., 2004; Yeh, McCabe, Hough, Lau, Fakhry, & Garland, 2005), there have not been any studies that have looked at beliefs specific to depression in children or adolescents. A number of studies, however, have reported on adults' beliefs about the causes of depression in adults (Thwaites et al., 2004; Srinivasan, Cohen, & Parikh, 2003; Lauber, Falcato, Nordt, & Rossler, 2003; Kirk et al., 1999; Jorm et al., 1997; Kuyken et al., 1992; Addis & Jacobson, 1996; Furnham & Kuyken, 1991). It is difficult to draw conclusions from the results of these studies because they sampled populations from different countries (e.g., Australia, Canada) in different settings (e.g., outpatient clinic, community) using different measures of causal beliefs (e.g., Reasons for Depression Questionnaire; semi-structured interview). Causes that were most highly endorsed include achievement-related concerns (Thwaites et al., 2004) or unfulfilled desires, hopes, and ambitions (Kuyken et al., 1992), stress and negative life experiences (Srinivasan, Cohen, & Parikh, 2003), cognitive causes (Furnham & Kuyken, 1991) biological causes (Kirk et al., 1999), difficulties within the family or partnership (Lauber et al., 2003), day-to-day problems (Jorm et al., 1997), response to life events/traumatic experiences (Kuyken et al., 1992), and existential concerns that reflect a stable disillusionment with life (Addis & Jacobson, 1996). Studies varied with respect to the causes that were included among response options. For example, only a few studies assessed participants' agreement with a cognitive cause (Srinivasan, Cohen, & Parikh,

2003; Kirk et al., 1999; Furnham & Kuyken, 1991) and only one study included a cause that was specifically familial (Lauber et al., 2003).

Several studies have reported ethnic/cultural differences in the perceived cause(s) of depression (Furnham & Malik, 1994; Lawrence et al., 2006; Karasz, 2005) and/or other mental disorders (Yeh, Hough, McCabe, Lau, & Garland, 2004; Sheikh & Furnham, 2000; Milsten, Guarnaccia, & Midlarsky, 1995; Schnittker, Freese, & Powell, 2000; Furnham & Chan, 2004; Furnham & Muraio, 2000; Edman & Koon, 2000; Narikiyo & Kameoka, 1992). If perceptions of the causes of depression are indeed related to treatment acceptability, then one could deduce from these findings that there might be ethnic differences in acceptability judgments.

*Race/ethnicity*¹. There are several other reasons why race/ethnicity in general and Hispanic ethnicity in particular might influence the acceptability of treatments for adolescent depression. First, the symptoms identified by the DSM-IV as constituting a major depressive episode may not represent a coherent syndrome in other cultures. The DSM-IV is based on research that was conducted largely with majority culture populations and has been criticized for being culturally invalid (Lewis-Fernandez & Kleinman, 1994; Fabrega, 1995). If Hispanics have a different experience or understanding of the symptoms associated with depression as it is experienced by members of the majority culture, they will likely make different judgments of the appropriateness of various treatments for those symptoms. More specifically, Hispanics would be expected make less favorable judgments of available treatments for depression (as it is defined by the DSM-IV) than would non-Hispanic Whites. Second, Hispanics might generally view treatments for depressed adolescents as less acceptable than non-Hispanic Whites view them because Hispanics tend to believe that conventionally defined symptoms of psychopathology reflect temperament when exhibited by youth rather than mental illness, which is thought to be an adult experience (Arcia, Castillo, & Fernandez, 2004).

Finally, values that have been identified as fundamental to Hispanic culture may translate into preferences for some treatments over others. These values include

¹ Many researchers distinguish between “race” and “ethnicity.” The focus of this section is on the Hispanic ethnic group; however, relevant studies of cultural groups defined by their race are also cited.

familismo and *personalismo*. *Familismo* has been defined as “a strong identification with and attachment to their nuclear and extended families, and strong feelings of loyalty, reciprocity, and solidarity among members of the same family” (Marin & Marin, 1991; p.13). Based on this value, Hispanic Americans, more than Non-Hispanic Whites, might prefer family therapy to individual psychotherapies. *Personalismo* involves an emphasis on close interpersonal relationships (Flores, 2000; Flores, 1994; Levine & Padilla, 1980) and might thus influence Hispanics to see more value in IPT than treatments that do not have a relational emphasis (e.g., CBT).

In addition to the core values of *familismo* and *personalismo*, Hispanic Americans have been found to be more collectivist than European Americans (Oyserman, Coon, and Kemmelmeier, 2002). In collectivist cultures, the group takes priority over the individual and the concept of the self is enmeshed in the social context (Fiske, 2004). Thus, the finding that Hispanic Americans are more likely to endorse a collectivist value orientation supports the hypothesis that they would be more likely than members of the majority culture to favor family therapy and IPT relative to alternative treatments. It could also be argued that these values might lead Hispanics to consider available treatments for depression less acceptable across the board than Non-Hispanic Whites consider them. Furnham and Malik (1994) suggest that in cultures in which the interest of the family takes precedence over individual interests, there is less tolerance for cognitions regarding the self and depression is often perceived as self-indulgent. If depression is not perceived as a bona fide illness, then any treatment developed within the context of a medical model of depression is not likely to be perceived as highly acceptable.

Another worldview/value orientation associated with Hispanic culture that might serve to make treatments for depression generally unappealing is *fatalismo*, or the idea that individuals have minimal control over their environment (Kouyoumdjian, Zamboanga, & Hansen, 2003). Hispanics who accept *fatalismo* might see events as the result of luck or divine will (Kouyoumdjian, Zamboanga, & Hansen, 2003) and might not expect there to exist any treatment that would ameliorate symptoms of mental disorders.

Few studies have examined the relationship between race/ethnicity and treatment acceptability or treatment preferences. As mentioned earlier, Cooper et al. (2003) found that Hispanic adults were more likely than non-Hispanic White adults to find counseling acceptable and to find antidepressant medication unacceptable. Tarnowski et al. (1992a) found a relationship between race (Caucasian or African American) and mothers' ratings of the acceptability of various psychosocial treatments for childhood depression. In a separate study, Tarnowski et al. (1992b) found that mothers' ratings of the acceptability of treatments for child externalizing behavior did not vary as a function of race (Non-Hispanic White or African American). This finding was consistent with that of Heffer and Kelley (1987), who sampled the same population.

Findings from studies on treatment credibility and preferences are consistent with the possibility that treatment acceptability is associated with race/ethnicity.² Using a sample of Asian American college students, Wong, Kim, Zane, Kim, & Huang (2003) found that cultural identity moderated ratings of the credibility of cognitive therapy and time-limited dynamic psychotherapy. Dwight-Johnson, Sherbourne, Liao, and Wells (2000) reported that African American adults seen in primary care clinics were more likely than non-Hispanic Whites to prefer counseling over medication in the treatment of depression. It should be noted, however, that factors other than treatment acceptability might influence preferences; for example, whether or not insurance will cover the treatment. Data from focus groups conducted by Cooper-Patrick et al. (1997) suggest that non-Hispanic Whites are more likely than African Americans to be concerned with attributes of specific treatments for depression, raising the possibility that treatment acceptability plays a greater role in non-Hispanic Whites' preferences than it does in African Americans' preferences.

The impact of race/ethnicity on perceptions of treatment acceptability is worth exploring given that service utilization patterns differ by ethnic group. Data from the U.S. National Ambulatory Medical Care Survey (NAMCS) for the years 1992 through 1996 indicated that the rate of encounters documenting the use of antidepressants, a

² Treatment credibility has been defined as the extent to which clients feel that a treatment is appropriate, logical, and helpful and is one that could be recommended to a friend (Borkovec & Nau, 1972). The literature on treatment credibility is relatively small and items that have been used to measure this construct appear to sample the content of items used to measure treatment acceptability.

diagnosis of depressive illness, or both were comparable for African Americans and Hispanics yet less than half the rates observed in Non-Hispanic Whites (Skaer, Sclar, Robison, & Galin, 2000). While data specific to the treatment of depression in youth are unavailable, there have been several studies of service utilization specific to ADHD (e.g., Zito, Safer, dosReis, Magder, & Riddle, 1997). Stevens, Harman, and Kelleher (2004) reported that an ADHD diagnosis and/or the prescription of stimulants was less likely to be given to Hispanic youths relative to non-Hispanic White youths during primary care visits from between 1995 and 2000. Bauermeister et al. (2003) reported that only 7% of Hispanic children with ADHD received stimulant medication during the year prior to when they were interviewed and only 3.6% were still taking the medication at the time of the interview. Consistent with these findings are qualitative data collected by Arcia, Fernandez, and Jauquez (2004) which suggest that Hispanic mothers of young children with behavior problems overwhelmingly prefer treatments other than stimulant medication because they believe medication to be addictive, dulling of cognitive processes, and inappropriate for behavior problems. Interestingly, 5% of the 62 mothers sampled spontaneously mentioned that they delayed help seeking because they thought that the physician might prescribe medication and an additional 14.5% of the mothers identified possibility of being prescribed medication as a barrier to help seeking when presented with a list of 15 possible barriers. Data on utilization rates of specific types of psychotherapy are generally not reported on in the peer-reviewed literature.

Acculturation. It may not be ethnicity per se that is related to treatment acceptability but rather, the degree to which one shares the lifestyle, beliefs, and values associated with the majority culture. Evidence of a relationship between acculturation and treatment acceptability would support this hypothesis. Although numerous definitions of acculturation have been proposed in the literature, the classic, most frequently cited definition of acculturation was put forth by Redfield, Linton, and Herskovits (1936): “Acculturation comprehends those phenomena which result when groups of individuals having different cultures come into first-hand contact, with subsequent changes in the original cultural patterns of either or both groups” (p.149).

Berry and his colleagues proposed a widely accepted framework of individual-level acculturation based on the negotiation of two issues: the retention of or immersion in an ethnic society other than the dominant society, and the adoption of or immersion in the dominant society (Berry, 1980; Berry & Kim, 1988; Berry & Sam, 1996). This negotiation results in four positions or modes of acculturation: assimilation, which involves moving away from one's ethnic society and immersing fully in the dominant society; integration, which is immersing in both ethnic and dominant societies; separation, which involves withdrawal from the dominant society and complete immersion in the ethnic society; and marginalization, which is a complete lack of meaningful immersion in either the ethnic or dominant society. Acculturation has been found to be associated with a number of factors thought to be related to treatment acceptability, including familism (Sabogal, Marin, Otero-Sabogal, & Marin, 1987), collectivism (Gomez, 2003), illness concepts (Glovsky & Haslam, 2003), perceived causation of symptoms/etiology beliefs (Mallinckrodt, Shigeoka, & Suzuki, 2005), mental health status (e.g., Miranda & Umhoefer, 1998; see Rogler, Cortes, & Malgady, 1991), mental health service utilization (Wells, Golding, Hough, Burnam, & Karno, 1989), attitudes toward seeking professional psychological help (Zhang & Dixon, 2003; Tata & Leong, 1994), and locus of control, which has been linked conceptually to fatalismo (Guinn, 1998).

Socioeconomic status. In order to draw conclusions about the impact of race/ethnicity on judgments of treatment acceptability, it is necessary to examine socioeconomic status (SES) as a potential confound. Compared to non-Hispanic Whites in the United States, Hispanic Americans have lower levels of income, education, and occupational status (Kouyoumdjian, Zamboanga, & Hansen, 2003; U.S. Census Bureau, 2001; Sue, Zane, & Young, 1994). Approximately one in three Hispanics live in poverty (Rosenthal, 2000) and one in four Hispanics do not have health insurance (Brown, Ojeda, Wyn, & Levan, 2000). In the year 2000, 27.8% of Hispanics dropped out of high school compared to 6.9% of non-Hispanic Whites (National Center for Education Statistics, 2002). Given these statistics, any study of Hispanic ethnicity in relation to treatment acceptability should consider SES as a covariate.

Symptom severity. Symptom severity refers here to the degree to which symptoms impair functioning and/or cause distress. The severity of depression experienced by an adolescent may affect his/her judgments of treatment acceptability. For example, an adolescent who is unable to get out of bed in the morning to go to school may be more willing to tolerate the side effects of an antidepressant than an adolescent who makes it to school but feels somewhat sluggish throughout the day.

Treatment acceptability studies have generally manipulated symptom severity using case illustrations (e.g., Elliot & Fuqua, 2002; Sturmey, 1992; Kazdin, 1980). Some studies have measured the severity of symptoms experienced by respondents (e.g., Banken & Wilson, 1992) or their children (e.g., Chavira et al., 2003; Reimers et al., 1992). Two studies of the acceptability of treatments for depression have looked at symptom severity. As noted above, Banken and Wilson (1992) reported some evidence that respondents who scored high on self-report measure of depressive symptoms rated the acceptability of treatments differently than respondents who scored low. Tarnowski et al. (1992a) found that participants who were randomly assigned to read a vignette representing a severe case of depression rated treatments as more acceptable than participants who read a vignette describing a mild case; however, this effect was not significant.

Prior experience with mental health services. A history of mental health service use might influence judgments of treatment acceptability positively or negatively depending on the outcome of the intervention(s) delivered. If there is symptom improvement, the treatment is more likely to be perceived as helpful and thus, acceptable. This possibility is accounted for in Witt and Elliot's (1985) model by the bi-directional relationship between treatment acceptability and treatment effectiveness. Mental health service use might also influence judgments of treatment acceptability by changing the consumer's understanding of the disorder treated (through education about its etiology, for example), his/her appreciation of the time and effort involved in treatment (perceived burden), and/or his/her judgment of side effects. Three studies of the acceptability of treatments for depression have measured participants' service use histories (Banken & Wilson, 1992; Hall & Robertson, 1998; Cooper et al., 2003). Two of these studies did

not analyze for the effects of this variable, presumably because the large majority of participants reported no treatment history (Banken & Wilson, 1992; Hall & Robertson, 1998). The third study, conducted by Cooper et al. (2003), sampled adults who reported one week or more of depressed mood or loss of interest within the past month and who met criteria for Major Depressive Episode in the past year. Results indicated that both participants who found antidepressant medications acceptable and those who found counseling acceptable were more likely than participants who did not find these treatments acceptable to have had previous treatment for depression at specialty mental health settings and to have discussed an emotional problem during a primary care visit. Participants who found antidepressant medication acceptable were also more likely to have been treated for depression in a general medical setting. The authors did not offer an explanation for these findings. Although it's possible that previous treatments were effective (at least in the short-term) and therefore enhanced subsequent acceptability judgments, it's also possible that a third variable such as symptom severity was responsible for the relationship between prior service use and acceptability.

Other factors. Other factors that have been researched in relation to treatment acceptability are knowledge regarding the treatment (e.g., Corkum, Rimer, & Schachar, 1999), information about the treatment's effectiveness (e.g., Clark & Elliot, 1988), side effects of the treatment (Kazdin, 1981), the rationale provided for the treatment (e.g., Cavell, Frenz, & Kelley, 1986), the treatment setting (e.g., primary care, specialty clinic; Van Voorhees et al., 2003), and the location of the intervention (in public, in private, at home, or self-administered; Turco & Elliott, 1986). Factors that have not been researched include characteristics of the professional describing or recommending the treatment, stigma attached to the treatment, media portrayal of the treatment, perceptions of how commonly others have undergone the treatment, cultural beliefs about children, and geographic region.

Objectives and Specific Aims

This study examined treatment acceptability with respect to seven therapies for depression: CBT, IPT, family therapy, pharmacotherapy, CBT with pharmacotherapy, IPT with pharmacotherapy, and family therapy with pharmacotherapy.

There were two primary objectives. The first objective was to ascertain up-to-date information from adolescents on the acceptability of various treatments for adolescent depression. No treatment acceptability study to date has focused specifically on the use of treatments for depression with adolescents. In addition, the study by Tarnowski et al. (1992a) described earlier is the only one that has focused on treatments for depressed youth. Major shifts in public opinion regarding the treatment of depression and mental health treatment in general are likely to have occurred since that study was conducted. Consistent with this possibility are data indicating that there were enormous increases throughout the 1990s in the use of psychotropic medications among youth (Najjar et al., 2004) and that the medications that are currently most commonly prescribed by outpatient child psychiatrists are stimulants and antidepressants (Staller, Wade, & Baker, 2005). Changes in the layperson's attitudes toward psychotropic medications could be both a cause and a consequence of these recent trends in their use. Now especially, in light of the recent controversy surrounding SSRIs, it is important to understand the consumer perspective on the risks and benefits of various treatments for depression, at the very least because their effectiveness is limited by treatment adherence/compliance.

By eliciting adolescents' judgments of the acceptability of treatments, this study will help to fill a gap in the literature. Adolescents are a unique population in that they may have the cognitive capacity to understand the rationale behind a treatment and to evaluate its risks/benefits and yet, unlike adults, their rights regarding treatment are not protected by legal consent procedures. Also, adolescents are often referred by adults who may have a different agenda for treatment (DiGuseppe, Linscott, & Jilton, 1996). They are notoriously difficult to engage in therapy (A. Freud, 1946; Meeks, 1971), perhaps because the developmental press toward increasing autonomy discourages them from relying on adults, including therapists, for guidance (Shirk & Karver, in press).

The specific aim that corresponds to this first objective is:

1. *To assess the perceived acceptability of seven single and combined treatments for adolescent depression using a multi-ethnic community sample of adolescent females. These treatments are: CBT, IPT, family therapy, pharmacotherapy, CBT with pharmacotherapy, IPT with pharmacotherapy, and family therapy with pharmacotherapy.*

Based on past research, it was hypothesized that in general, psychotherapy approaches (CBT, IPT, family therapy) would be judged as more acceptable than pharmacotherapy, with combined treatments (CBT with pharmacotherapy, IPT with pharmacotherapy, and family therapy with pharmacotherapy) falling somewhere in between.

The second objective of this study was to add to the literature on the predictors of treatment acceptability. Information about the client characteristics associated with reduced treatment acceptability can alert practitioners to the need to more thoroughly address concerns that are common to particular populations and help them match clients to the treatments to which they are most likely to adhere. Also, data on predictors of treatment acceptability can help inform the development of treatments that are tailored to specific populations and can be easily transported into real-world settings. Treatments tailored to minority groups, in particular, are sorely needed (Rossello & Bernal, 1999).

Specific aims that correspond to the second objective are:

2.
 - a. *To test for differences between non-Hispanic Whites' and Hispanics' perceptions of the acceptability of seven single and combined treatments for adolescent depression.*

It was hypothesized that Hispanics would judge acceptability of treatments for adolescent depression less favorably overall than would non-Hispanic Whites. It was also hypothesized that there would be ethnic differences in the acceptability

of treatments relative to each other. Specifically, Hispanics would be more likely than non-Hispanic Whites to judge IPT and family therapy as relatively more acceptable than other treatments for adolescent depression.

- b. *To examine the relationship between treatment acceptability and acculturation among Hispanics.*

It was hypothesized that Hispanics who are immersed predominantly in U.S. culture would judge the acceptability of treatments more favorably than would Hispanics who are immersed predominantly in their culture of origin (but not Hispanics who are highly immersed in both cultures, or bicultural).

- 3. *To evaluate the influence of different perceptions of causes of depression on ratings of the acceptability of various treatments.*
 - a. For each causal factor-treatment pair listed below, it was hypothesized that participants who endorse the causal factor as an explanation for depression would judge the acceptability of the corresponding treatment more favorably than participants who do not endorse the causal factor. The pairs are:
 - i. physical causes – pharmacotherapy
 - ii. relational causes – IPT
 - iii. family issues – family therapy
 - iv. cognitive causes - CBT
 - b. It was further hypothesized that participants who identify the causal factor as being most significant in determining depression would judge the acceptability of the corresponding treatment more favorably than they would judge the acceptability of alternative single treatments for depression.
- 4. *To evaluate the relationship between symptom severity and treatment acceptability.*

It was hypothesized that all treatments, especially medication, would be viewed as more acceptable in the case of a severely depressed adolescent than in the case of

a mildly depressed adolescent. Further, it was hypothesized that medication would be considered more acceptable relative to other treatments when depression symptoms are severe than when they are mild.

5. *To examine the relationship between adolescent self-reported depressive symptomatology and treatment acceptability.*

It was hypothesized that there would be a positive association between self-reported depressive symptomatology and the acceptability of treatments for depression, especially medication.

Figure 3 illustrates the constructs and relationships of interest in this study.

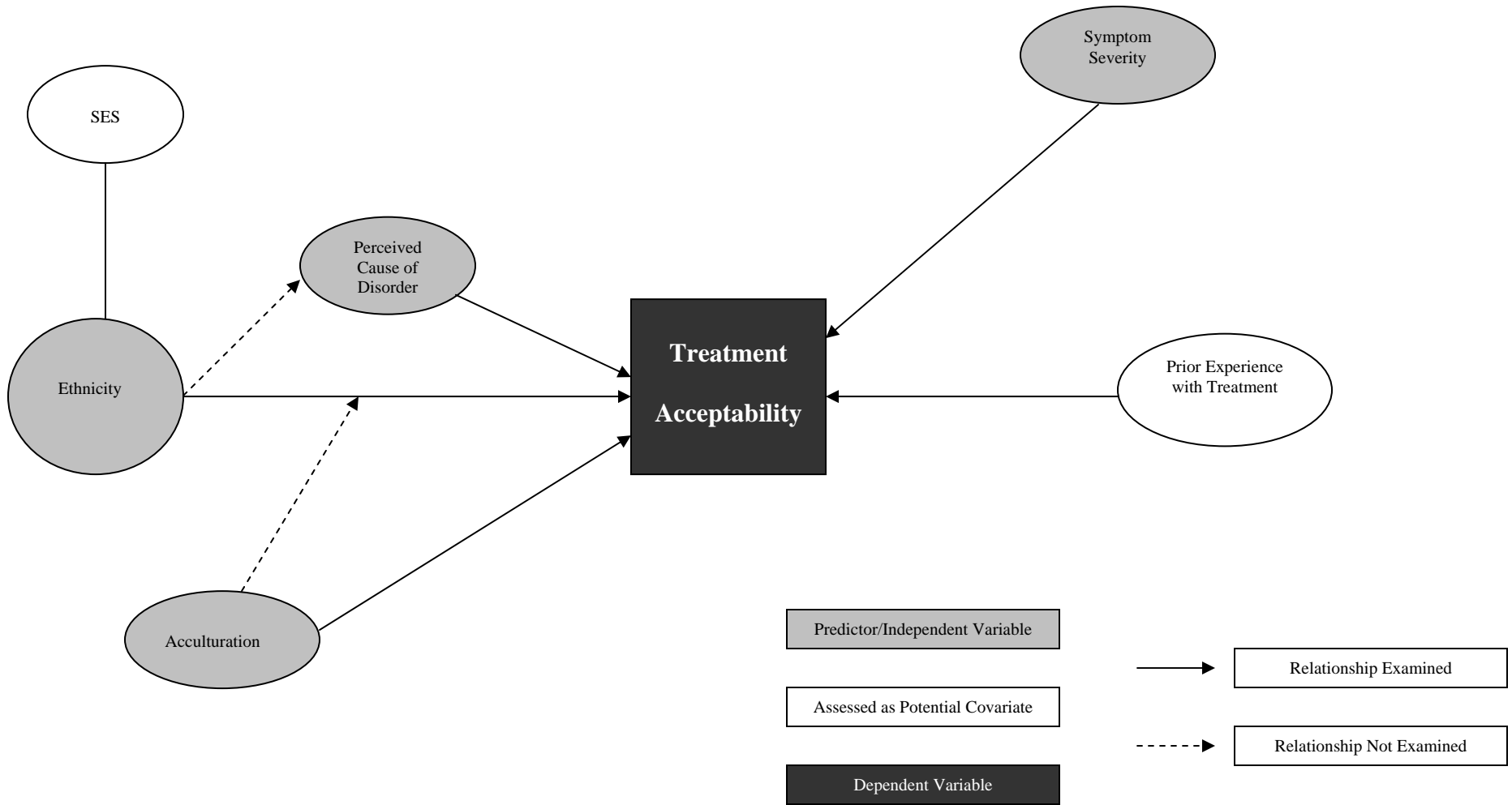


Figure 3. Model of Variables Assessed in Relation to Treatment Acceptability.

Method

Participants

Sixty-seven female high school students (grades 9 through 12) were included in this study. Approximately 36% of the sample ($n = 24$) was recruited from one of six public high schools, two in New Jersey (Emerson, Union Hill) and four in Florida (Alonso, Hillsborough, Leto, South County).³ The remainder of the participants responded to flyers posted around the community in Tampa and in two counties in northern New Jersey (Bergen and Hudson). There were no significant differences by state on any of the dependent variables in the analyses reported below (p values ranged from .33 to .99).

It is estimated that 650 females at Union Hill and 400 females at Emerson were contacted about participation in the study.⁴ Based on the demographic profile of these two schools, it is assumed that almost all of the female students contacted about the study were either Hispanic or non-Hispanic White and thus, would have met criteria for inclusion in the study. The participation rate for each of these two high schools was approximately 2%. Approximately 20 females at Alonso, 100 females at Hillsborough, and 30 females at South County were informed about the study. Estimated participation rates for these schools were 10%, 1%, and 7%, respectively. It could not be determined how many females contacted at Alonso and Hillsborough were eligible for participation in the study; however, all of the females from South County who were informed about

³ 15 additional high schools in Hillsborough County, Florida were identified as potential sites for recruitment based on their demographic profiles. However, the principals of these schools did not agree to assist with the study by allowing access to their student population. Superintendents and/or principals of 14 additional high schools in northern New Jersey also declined participation.

⁴ Given the demographic profile of these two schools, it is assumed that the majority of female students contacted about the study were eligible to participate. However, because multiple methods of recruitment were used at these two sites, it could not be determined how many repeat contacts were made. The number of adolescents from each school who were contacted about the study is a rough estimate.

the study were Hispanic and thus, eligible to participate. The number of students from Leto who were informed about the study is not known⁵; however, only one student from this high school participated. Approximately 75 adolescents responded to flyers made available in the community; 56% of these adolescents participated in the study.

Thirty-six participants self-identified as Hispanic and 31 participants self-identified as non-Hispanic White. Slightly more than one third of the Hispanic participants ($n = 13$) were born in a Latin American nation. Of the 23 Hispanic participants born in the United States, 18 indicated that one or both biological parents were born in a predominantly Spanish-speaking nation. The remaining 5 participants reported that at least one of their grandparents was born in a Spanish-speaking nation. Participants had parents and/or grandparents from the following Spanish-speaking nations: Argentina ($n = 1$), Chile ($n = 1$), Colombia ($n = 2$), Cuba ($n = 9$), Dominican Republic ($n = 9$), Ecuador ($n = 2$), El Salvador ($n = 3$), Guatemala ($n = 1$), Honduras ($n = 1$), Mexico ($n = 2$), Paraguay ($n = 1$), Peru ($n = 1$), and Puerto Rico ($n = 12$), and Spain ($n = 3$).

Participants ranged in age from 14 years to 18 years ($M = 16.5$, $SD = 1.23$). Approximately 9 percent of participants were in grade 9 at the time of data collection, 30% were in grade 10, 18% were in grade 11, and 40% were in grade 12. The overrepresentation of 12th graders is likely due to the ability of 18 year olds to provide sufficient consent to participation without parental consent.

Approximately 31% of participants ($n = 21$) endorsed symptoms of depression at a level associated with clinical severity in the restandardization sample (Reynolds, 2002). About 43% of the sample ($n = 29$) had utilized mental health services, which included services provided by a school counselor ($n = 12$). The same rate of lifetime service utilization was reported for youth ages 9 to 17 years in the Methods for the Epidemiology of Child and Adolescent Mental Disorders (MECA) Study (Dulcan, 1996; Lahey, Flagg, Bird, & Schwab-Stone, 1996; Wu et al., 1999).

⁵ The procedure for recruiting participants relied on teachers to announce the opportunity to learn more about participation in the study. Administrators did not provide information about the number of students to whom this announcement was made.

Measures

Socioeconomic Status. SES was measured using the Hollingshead Four Factor Index of Social Status (Hollingshead, 1975), which was administered in the form of a pencil-and-paper questionnaire. This index uses education, occupation, sex, and marital status to determine a family's composite social status. Each family's composite score was computed by multiplying the Occupation scale value by a weight of 5 and the Education scale value by 3 and summing the products. Hollingshead Education scores range from 1 (less than seventh grade) to 7 (graduate professional training) and Hollingshead Occupation codes range from 1 (farm laborers/mental service workers) to 9 (higher executives, proprietors of large businesses, and major professionals). Hollingshead Four Factor Index raw scores range from 8 to 66, with higher scores reflecting higher SES. In homes with two employed parent figures, the scores were averaged to obtain one score per family. In addition to using the Hollingshead classification scheme, data on income was collected using a single item.

Cirino et al. (2002) reported on the interrater reliability of the Hollingshead system for use with families of varying constitutions. Kappa coefficients ranged from .31 (for one-female-wage-earner families) to .82 (for two-wage-earner families), with a kappa of .68 for the total sample of 140 families. Convergent validity with two other measures of SES was also assessed. Correlation coefficients ranged from .42 to .92, with the majority above .80.

Mental health service use. Mental health service use was measured using a modified version of the Short Services Assessment for Children and Adolescents (Short SACA, Horwitz et al., 2001). The SACA is an interview that examines where children/adolescents and/or their parents have received assistance for emotional behavioral problems, the types of care received, and satisfaction with care. The SACA was developed based on four survey instruments used in multi-site federally funded studies (e.g., National Institute of Mental Health-sponsored Methods for the Epidemiology of Child and Adolescent Disorders, MECA). The short form was modified for use in this study by eliminating items that refer to early childhood services that are not likely related to attitudes about depression treatments (e.g., play therapy). The modified

Short SACA was administered to adolescents to assess lifetime service use and the adolescent's perception of the helpfulness of any services that the adolescent received. Responses to items on the SACA were collapsed into four categories in order to simplify analyses: services received and considered helpful; services received and considered somewhat helpful; services received but not considered helpful; services never received. For adolescents who endorsed the use of more than one mental health service, helpfulness ratings were averaged.

The original English-language SACA has been shown to have excellent test-retest reliability for lifetime service use when administered to parent and good to excellent reliability when administered to children aged 11 and older (Horwitz et al., 2001). The Spanish-Language SACA exhibited good test-retest reliability when administered to adolescents and when administered to their parents (Bean, Rotheram-Borus, Leibowitz, Horwitz, & Weidmer, 2003). The concordance between parent reports using the English-language SACA and medical and administrative service records were assessed in one study. Kappas ranged from .48 to 1.00 for inpatient services, outpatient services, and school services, with a kappa of .76 for a global "any use" service variable (Hoagwood et al., 2000). In another study, The English-language SACA adult-youth correspondence for lifetime use of any services, inpatient services, outpatient services, and school services ranged from fair to excellent ($k = .43$ to $.85$ with most at $.61$ or greater; Stiffman et al., 2000). Kappas for the Spanish-language SACA have been reported to range from $.30$ to $.89$ (Bean et al., 2003).

Ethnicity. Participants were asked to self-identify as "Hispanic or Latino", "non-Hispanic White", or "Other." "Hispanic or Latino" was defined for participants using the official criteria developed by the United States Office of Management and Budget (OMB): "A person of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race" (*Federal Register*, 1978, p.19269; *Federal Register*, 1997, p.58783). Participants were also asked to indicate their birthplace and that of their parents and grandparents.

Acculturation. Hispanics' level of acculturation was measured using the Bidimensional Acculturation Scale for Hispanics (BAS; Marin & Gamba, 1996). The

BAS was chosen over commonly used unidimensional scales such as the Short Acculturation Scale for Hispanics (SASH; Marin, Sabogal, VanOss Marin, Otero-Sabogal, & Perez-Stable, 1987) because it is rooted in the theoretical perspective that acculturation involves two independent dimensions: maintenance of the culture of origin and adherence to the dominant or host culture (Berry, 1997, 1998; Berry & Sam, 1996, Cuellar, Arnold, & Maldonado, 1995; Marin & Gamba, 1996). Thus, the BAS provides two scores: for the Hispanic domain and one for the non-Hispanic domain. Each domain consists of 12 items rated on a 4-point Likert-type scale. Ratings are averaged to produce cultural domain scores that range from 1 to 4. Respondents who score 2.5 or higher in a particular domain are considered to be immersed in the culture it represents.

Respondents who score a 2.5 or higher in both domains are considered to be bicultural.

Items on the BAS were chosen to reflect the experiences of all Hispanics rather than just one subgroup and the measure has been found to be equally reliable and valid with Mexican Americans and Central Americans (Marin & Gamba, 1996). The BAS has been used with adolescents with very good internal consistency reported for each domain (Guinn, 1998) and has been recommended above other acculturation measures for use with this population (Zayas, Lester, Cabassa, & Fortuna, 2005). In the current sample, Cronbach's alpha coefficients for the Hispanic domain and the non-Hispanic domain were 0.92 and 0.90, respectively. Sample items include "How often do you watch television programs in English?" and "How often do you speak in Spanish with your friends?" The BAS is available in both English and Spanish.

Perceived cause(s) of depression. Beliefs about the cause of depression were measured using a modified version of the Beliefs About the Causes of Child Problems questionnaire (Yeh & Hough, 1997). This questionnaire was developed based on a literature review, expert consultation, and prior qualitative and quantitative research. It is administered as a semi-structured interview and measures etiological beliefs in eleven separate categories: Physical Causes, Personality, Relational Issues, Familial Issues, Trauma, Friends, American Culture, Prejudice, Economic Problems, Spiritual Causes, and Nature Disharmony. One additional category, Cognitive Causes, was added for this study. This category was chosen based on a review of studies of causal beliefs about

depression and other mental health problems (Srinivasan, Cohen, & Parikh, 2003; Thwaites, Dagnan, Huey, & Addis, 2004; Kirk, Brody, Solomon, & Haaga, 1999; Kuyken, Brewin, Power, & Furnham, 1992; Landrine & Klonoff, 1994; Sonuga-Barke & Balding, 1993; Schnittker, Freese, & Powell, 2000; Sheikh & Furnham, 2000; Addis & Jacobson, 1996; Jorm et al., 1997; Sher, McGinn, Sirey, & Meyers, 2005; Matschinger & Angermeyer, 1996; Whittle, 1996; Furnham & Malik, 1994; Armstrong & Swartzman, 1999; Atkinson, Worthington, Dana, & Good, 1991; Jorm, 2000). For each of the twelve categories, participants were asked to respond yes/no to whether or not they believe that any emotional/behavioral problem the youth described in the vignette has “is likely due, at least in part,” to issues described by a global item pertaining to that category. Endorsement of the global item prompted more specific questions within that category, with the exception of the Prejudice category (which consists only of a global item). Dichotomous variables were created for each category, reflecting the endorsement of one or more specific items within that category. For the purposes of this study, participants were also asked to choose a single causal category that they believe is most significant in determining depression.

There are both parent and adolescent versions of the Beliefs about the Causes of Child Problems questionnaire, each of which are available in English and Spanish. Psychometric information has been reported for the parent version only. Test-retest data was collected from 23 parents with an average time of 8.23 days between administrations. According to guidelines by Rosner (1995), reliability estimates for 7 of the 11 scales suggest “excellent reproducibility” (or greater than 85% agreement between administrations). Kappas for two of the four remaining scales suggest “good reproducibility” while kappas for the other two scales (Personality and Friends) suggest “marginal reproducibility.” Construct validity of the questionnaire is supported by previously hypothesized racial/ethnic differences in responses to items about biopsychosocial causes (Yeh et al., 2004). Finally, results from a confirmatory factor analysis (CFA) of the 11 etiologic categories showed an adequate fit for an a priori 3-factor model (biopsychosocial vs. sociological vs. spiritual/nature disharmony) that

reflects the broader domains hypothesized to be differentially related to mental health service use.

Depression. Depression was measured using the Reynolds Adolescent Depression Scale—2nd Edition (RADS-2; Reynolds, 2000). The RADS-2 is a 30 item self-report measure of the severity of depressive symptoms in adolescents in grades 7 through 12. Items are rated on a 4-point scale. Estimates of the internal consistency of the RADS range from .91 to .96 with ethnically diverse samples of normal and depressed adolescents ranging in size from 62 to 2,120 (Reynolds & Mazza, 1998). Cronbach's alpha coefficient for the current sample was .85. Test-retest reliability estimates range from .79 for a 12-week interval (Reynolds, 1987) and .93 for a 1-4 week interval (Reynolds & Mazza, 1998). Concurrent validity has been shown using the Beck Depression Inventory (BDI), the Center for Epidemiological Studies—Depression Scale (CES-D), the Children's Depression Inventory (CDI) among other measures (see Reynolds & Mazza for a review). Criterion-related validity has been demonstrated using diagnostic and semistructured clinical interviews of depression (King et al., 1997; Reinecke & Shultz, 1995). The RADS-2 was chosen over other measures of depression symptomatology because it has been developed and validated with large and diverse samples of adolescents in the community/schools.

Treatment Acceptability. Treatment acceptability was measured using the Abbreviated Acceptability Rating Profile (AARP; Tarnowski & Simonian, 1992). The AARP consists of 8 items that load on a unitary factor accounting for 84.9% of the variance in responses. The AARP yields a total score that ranges from 8-48 and has been shown to statistically distinguish between pharmacological and nonpharmacological treatments as well as among different types of nonpharmacological treatments (Tarnowski et al., 1992a). Reliability was assessed using a culturally diverse sample with limited educational background. Published split-half and Cronbach alpha coefficients for the measure are .95 and .97, respectively. In the current sample, Cronbach's alpha coefficients ranged from .93 for IPT to .95 both for Family Therapy and for CBT + Pharmacotherapy. The AARP takes approximately 10 minutes to complete and has a readability index of 5.0 according to the Harris-Jacobson Wide Range Readability

Formula. The AARP was chosen over measures such as the Treatment Evaluation Inventory (TEI; Kazdin, 1980) and the Intervention Rating Profile-20 (IRP-20) because it is shorter and easier to understand. Sample items include “I like the treatment” and “Overall, the treatment would help the child.”

Procedure

Recruitment of participants. Adolescents were recruited from public high schools in New Jersey and Florida, and from the community. At five of the six high schools, a brief presentation about the study was made to students in grades 9-12 in their English classes (or some equivalent). A letter explaining the study was distributed along with forms to indicate parental consent and student assent to participation. A sociodemographic questionnaire to be completed by parents who consented to participation was included with these materials. Students were informed verbally that if they had difficulty reading the letter and/or consent forms, they could approach their teacher privately. When this occurred, the teacher informed the research staff so that individual telephone calls to review the letter and consent form could be arranged. The research staff included Spanish-speaking individuals who were available to communicate with parents/guardians who do not use English as their first language.

The consent/assent forms distributed to students provided information about the purpose of the study, the type of information collected, and the risks and benefits of participating. They also explained confidentiality and its limits (reports of danger to self, danger to others, abuse) and included a toll-free telephone number that potential participants could use to contact project staff if they have any questions. The letter distributed along with the consent/assent forms indicated that students may or may not be contacted for data collection depending on whether or not they meet criteria for inclusion in the study. Students were asked to review the forms at home with their parents and discuss whether or not they would like to participate in the study. Parents were asked to indicate their decision by checking off “I freely give my permission for my child to take part in this study” or “I do not give my permission for my child to take part in this study”

and to provide their signatures. They were also asked to indicate their decision to participate or not to participate themselves in a similar manner. Students were asked to indicate their decision by checking off “I have thought about this and agree to take part in this study” or “I do not” want to take part in this study” and to provide their signatures. The letter asked that students and parents who consent to participation complete and return a separate form that asked them to identify their ethnicity and to indicate their home address, their home telephone number, times at which they are likely to be available for an interview, and the language in which they prefer to be interviewed. Students were asked to return the forms to their homeroom teachers (or some equivalent). Parents were given the option of returning the sociodemographic questionnaires simultaneously with the consent/assent forms, or separately by mail. Teachers were instructed to maintain consent forms in a locked file cabinet until a research assistant collected them in person.

At Emerson High School, the principal investigator addressed students during an assembly in addition to visiting classrooms to recruit participants. At Union Hill High School (New Jersey), parents were addressed directly at “Parents’ Night.” They were informed of the study (according to the procedures outlined above) and given consent/assent forms to review with their daughters. Also, administrators at Union Hill High School agreed to disclose directory information (in accordance with the Family Educational Rights and Privacy Act) and research assistants contacted parents directly via phone to describe the study and ascertain whether or not they would consider participating along with their children. Research assistants mailed the forms described above to parents who expressed interest in the study and gave them the option of returning the forms by mail or having their children return the forms at school.

At Leto High School, teachers were notified of the study by a memo distributed to their mailboxes. The memo requested that they read a paragraph about the study to their classes and have students who are interested in learning more about the opportunity to participate provide their names and phone numbers. This procedure was also used for classes at Emerson High School in which the majority of students did not speak English

comfortably. Bilingual research assistants then contacted participants by phone to provide more information about the study.

Adolescents who self-identified as either Non-Hispanic White or Hispanic American were contacted for further data collection. Individuals who met criteria for inclusion and actually participated in the study were compensated with a \$10.00 money order.

Data collection. Once informed consent had been obtained from parents and assent from adolescents, all research materials (including treatment descriptions, case descriptions, and questionnaires) were mailed to their places of residence. Materials were provided in the language that they indicated to be their preference either on the phone or on the form that participants returned along with the consent/assent forms. Participants who lost these materials were mailed a second set. Approximately one week after research materials were mailed out, bilingual research assistants attempted to contact participants by phone to conduct interviews. (All participants were interviewed individually.) Participants for whom it is not a convenient time to complete the interview were offered the opportunity to re-schedule. Adolescents younger than 18 years of age were only interviewed at times during which at least one parent/legal guardian was present in the home (in case she endorsed a critical item on the RADS). Eight of the 67 interviews were conducted in Spanish.

Research assistants⁶ followed a protocol for each interview and recorded participants' responses using paper copies of the measures. They began by reminding participants that they are free to withdraw from the study at any time. Participants were also reminded of the exceptions to confidentiality and asked to confirm that at least one parent/guardian would be at home for the duration of the interview. Participants were then asked to make sure that they have access to the packet of study materials that was sent in the mail, as some of the interview questions would require them to read and refer to information provided in that packet.

Participants were asked again to identify their ethnicity and indicate their country of origin. Hispanic participants were administered the BAS verbally and were able to

⁶ 59 interviews were conducted by the Principal Investigator and 8 interviews were conducted by one of two bilingual research assistants.

read along in their packet if they so desired. All adolescent participants were interviewed about their history of mental health service utilization using the SACA.

Participants were then presented with a case description of a 15-year-old who meets DSM-IV criteria for MDD. The case description represented one of two levels of symptom severity (mild and severe), which was determined by random assignment. Research assistants read the case descriptions out loud as participants followed along. Participants were then administered the Beliefs About the Causes of Child Problems interview. The items that make up this interview were modified such that participants were asked to think about the problems experienced by the protagonist in the case description (rather than their own problems). In addition, participants were asked at the end of the interview to choose among the “global” causes that which they believe is most significant in determining depression. Following the interview, participants were instructed to follow along as the research assistants read descriptions of four single treatments (CBT, IPT, family therapy, pharmacotherapy) presented in random order. Participants were then asked to review the treatment descriptions and use the AARP to rate the acceptability of each of those treatments for use with the adolescent featured in the case description. They were also prompted to rate the acceptability of three treatment combinations (CBT + pharmacotherapy, IPT + pharmacotherapy, family therapy + pharmacotherapy) in random order. They were told that there are no right or wrong answers to items on the AARP and asked to indicate their true opinions. Participants were encouraged to refer back to both the case description and treatment descriptions as necessary. They were given the option to hear the questions read out loud and indicate their responses, or record their own responses and read them off to the interviewer.

Participants were then administered the RADS. In the event that an adolescent endorsed the critical item that reads, “I feel like hurting myself” by responding hardly ever, sometimes, or most of the time, the research assistant followed a suicide risk assessment protocol (Appendix A), which involved asking follow-up questions to determine if a more thorough risk assessment by a Ph.D. level psychologist is needed. Four clinical psychologists (Dr. Marc Karver, Dr. Vicky Phares, Maria dePerczel Goodwin, Dr. Christine Totura) agreed to serve as suicide consultants and designated

times at which they could be reached by telephone/cellular phone. Interviews were only conducted at times during which one or more suicide consultants were available. Consultants were also provided with a protocol for assessing and responding to risk, and to assist in determining whether or not parents of adolescents who endorsed the critical item should be notified and given contact information for local service providers.

Each interview took approximately 35-50 minutes. Research assistants thanked participants for their time and reminded them that they would receive a \$10 money order by mail. The study was carried out in accordance with professional and legal standards of ethical conduct for research involving human subjects. The University of South Florida Institutional Review Board approved all recruitment and data collection procedures.

Development of study materials. Two case descriptions of approximately 130 words each were developed in English based on DSM-IV criteria for MDD, and then translated into Spanish (Appendix B). While both feature the same nine symptoms of MDD, the frequency or severity of each of these symptoms is varied across the two descriptions in order to reflect the different severity levels of the cases (see Appendix B). The number of symptoms included in the case descriptions was chosen based on the recommendations of social judgment researchers, who maintain that most judges are able to mentally track and utilize eight to ten cue values (Cooksey, 1996). The symptoms featured in the case descriptions were selected based on published reports of the prevalence rates of various depressive symptoms among Hispanic and non-Hispanic White adolescents (Roberts, Chen, & Solovitz, 1995) and adolescent females in particular (Bennett et al., 2005; Kovacs, Obrosky, & Sherrill, 2003). The order in which physical and psychological symptoms are presented in the descriptions was randomized. Pilot testing with clinical psychology doctoral candidates demonstrated that reliable MDD diagnoses and judgments of symptom severity could be made based on the case descriptions.

Treatment descriptions (Appendix C) were developed based on empirically supported treatment manuals specific to adolescent depression (Mufson, Dorta, Moreau, & Weissman, 2004; Clarke, Lewinsohn, & Hops, 1990; Diamond, Siqueland, &

Diamond, 2003; Brent et al., 1997) as well as treatment descriptions used in prior studies of the credibility and perceived helpfulness of depression treatments (Iselin & Addis, 2003; Rokke, Carter, Rehm, & Veltum, 1990). Each description was approximately 95-100 words long (in English) and included the goals and methods of the treatment, the time commitment involved, and any potential side effects. Treatment descriptions were generally equivalent with respect to Flesch-Kincaid grade level.

All research materials excluding those standardized measures that are available in Spanish were translated and back-translated by two bilingual research assistants. That is, one research assistant translated the original version of a measure into Spanish and a second research assistant independently translated it back into English. The original version and the back-translated English version were compared. The two research assistants were consulted to identify the reasons for any inconsistencies that were found and were asked to come to a consensus regarding the best alternative.

Results

Missing Data

Thirty-one parent-adolescent dyads did not complete and return questionnaires used to assess SES. These 31 cases were excluded from all preliminary analyses involving either annual household income or the Hollingshead Four Factor Index. 4 of the remaining 36 cases were also excluded from preliminary analyses involving income either because the item was not completed or because it appeared that the income reported was not annual. For the measures administered by telephone, there were few missing data. One observation (out of 864) was missing for the BAS, which was scored by averaging responses across the items that make up each domain. Helpfulness ratings were missing for 3 of the 29 adolescents who had utilized mental health services. These three cases were excluded from analyses involving helpfulness ratings but were included in all other analyses. Finally, 1 (out of 2010) observations was missing for the RADS-2. The total depression score in this case was calculated according to the procedure outlined in the RADS-2 Professional Manual (Reynolds, 2002) for prorating incomplete protocols.

Descriptive Statistics

Hollingshead Four Factor Index. Thirty-six participants in this study returned the questionnaires⁷ with items required to calculate the Hollingshead Four Factor Index. The range of scores was 24 to 66. The median score was 48, which falls into the second highest social stratum outlined by Hollingshead (1975): medium business, minor professional, technical workers. The breakdown is provided in Table 1. It is suspected that the true SES breakdown of the sample is much lower than these data reflect, as the majority of participants from whom questionnaires were not collected were recruited

⁷ 15 adolescents and 21 parents reported SES.

from Union City, which is among the districts in New Jersey with the lowest reported SES. Also, the method of data collection assumed that parents of participants are literate.

Table 1.

Participants' Social Strata as Assessed by Hollingshead Four Factor Index

Stratum	Range of Scores	Households (<i>n</i> = 36)
Major business and professional	65-55	27.78%
Medium business, minor professional, technical	54-40	44.44
Skilled craftsmen, clerical, sales workers	39-30	11.11
Machine operators, semiskilled workers	29-20	16.67
Unskilled laborers, menial service Workers	19-8	0

Income. Household income was reported for about half of the sample. The range was \$5,000 to \$170,000 annually. The median income was \$80,000. 1 participant reported household income less than \$8,000; 5 participants reported between \$8,000 and \$32,000; 6 participants reported between \$32,000 and \$78,000; 19 participants reported between \$78,000 and \$164,000; and 2 participants reported between \$164,000 and \$357,000. Although the median household income for this sample was substantially higher than the national median (\$48, 201; Census Bureau, 2006), it was comparable to the median household income in Bergen County (\$71,394; U.S. Census Bureau, 2005), where the majority of participants who reported income reside.

Short Services Assessment for Children and Adolescents (modified). The modified Short SACA used in this study consisted of 13 items assessing participants' mental health service utilization history. The items were scored dichotomously. Frequencies with which participants endorsed each item are presented in Table 2.

Participants were asked to rate the helpfulness of each service utilized (1 = helpful; 2 = somewhat helpful; 3 = not helpful). In cases where more than one service had been utilized, helpfulness ratings were averaged. The mean helpfulness rating across participants was 1.75 ($SD = 0.78$).

Table 2.

Frequencies with which Mental Health Services had been Utilized by Participants

Service	Adolescents ($N = 67$)
Community mental health center, child guidance clinic, or outpatient mental health clinic	4.4%
Professional in private office (e.g., psychologist, psychiatrist, social worker, counselor)	23.5
In-home provider, therapist, family preservation worker or counselor	5.9
Pediatrician or family doctor	4.4
Nurse practitioner	1.5
Healer, shaman, spiritualist (for emotional/behavioral problems)	4.4
Acupuncturist, chiropractor, nutritionist (for emotional/behavioral problems)	4.4
Psychiatric or medical unit in general hospital (overnight)	2.9
Residential treatment center	2.9
Group Home	1.5
Foster Home	1.5
Other (all reported school counselor)	32.4

Bidimensional Acculturation Scale for Hispanics. Hispanic participants were assigned to one of four categories based on their Hispanic domain and non-Hispanic

domain scores on the BAS: immersed in Hispanic culture, immersed in non-Hispanic culture, immersed in both cultures (bicultural), and immersed in neither culture. The cutoff score recommended by the developers of the BAS (2.5 for each Hispanic domain and non-Hispanic domain) was used to determine the latter two categories. 38.9% of the Hispanic sub-sample (n=13) were identified as immersed in non-Hispanic culture and 61.1% were identified as bicultural (n=22). None of the participants were identified as immersed predominantly in Hispanic culture. This characteristic of the sample is not unusual among school-based studies conducted in the United States/English-speaking classrooms (e.g., Christenson et al., 2006) because the measure relies on the frequency with which Spanish is spoken as an indicator of immersion in Hispanic culture. Scores on the BAS were normally distributed, for both the Hispanic domain (skewness = -0.12, standard error = 0.39; kurtosis = -1.0, standard error = 0.77) and the non-Hispanic domain (skewness = -0.78, standard error = 0.39; kurtosis = -0.76, standard error = 0.77). The mean for the Hispanic domain was 2.7 ($SD = 0.69$) and the mean for the non-Hispanic domain was 3.54 ($SD = 0.49$).

Beliefs About Causes of Child Problems Questionnaire (modified). Dichotomous variables were created to represent the global items that assessed causal beliefs about depression. The frequencies with which each causal factor was endorsed are reported in Table 3. There appeared to be less variability in global item responses than Yeh and colleagues found in their research using the measure (Yeh, et al., 2004a; Yeh et al., 2004b; Yeh et al., 2005). For example, 4 of the 12 causal factors were endorsed by more than 80% of the sample. Participants were also asked to indicate which causal factor was most significant/played the biggest part in determining the problems of the adolescent in the case description. This item is not part of the semi-structured interview that was used in previous studies. The frequencies with which participants selected the various causal factors are presented in Table 4.

Reynolds Adolescent Depression Scale. The range of possible total scores on the RADS-2 is 30 to 120; the range of total RADS-2 scores in this sample was 44 to 94. This range is somewhat smaller than that reported in a validation study with young adolescents (Reynolds & Mazza, 1998): 33 to 100. Scores on the RADS-2 were normally distributed

in the current study (skewness = 0.23, standard error = 0.29; kurtosis = -0.22, standard error 0.58). The mean score was 69.93 ($SD = 10.30$), which is significantly higher than the mean score reported for females in the restandardization sample ($t = 6.45, p < .01$): 61.81 (Reynolds, 2002). According to the RADS-2 Professional Manual (Reynolds, 2002), the mean found in the vast majority of samples is 60 ± 2 points.

Table 3.

Frequencies with which Causal Beliefs were Endorsed

Cause	Adolescents ($N = 67$)
Physical Causes	43.3%
Personality	94.0
Relational Issues	85.1
Familial Issues	80.6
Trauma	76.1
Friends	68.7
American Culture	25.4
Prejudice	29.9
Economic Problems	41.8
Spiritual Causes	14.9
Nature Disharmony	10.4
Cognitions	94.0

Table 4.

Frequencies of Causal Factors Identified as Most Significant in Determining Depression

Cause	Adolescents (<i>N</i> = 67)
Physical Causes	1.5%
Personality	22.1
Relational Issues	13.2
Familial Issues	5.9
Trauma	14.7
Friends	4.4
American Culture	0.0
Prejudice	0.0
Economic Problems	0.0
Spiritual Causes	0.0
Nature Disharmony	0.0
Cognitions	32.4

Approximately 31% of participants ($n = 21$) in the current study endorsed symptoms of depression at a level associated with clinical severity in the restandardization sample. The standard deviation for this sample was 10.30, which was smaller than that published for females in the restandardization sample: 15.23.

Abbreviated Acceptability Rating Profile. One variable was created for AARP scores (regardless of treatment type) in order to examine the distribution. Although kurtosis was acceptable (kurtosis = -0.40, standard error = 0.23), the distribution was negatively skewed (skewness = -0.54, standard error = 0.11). Values were reflected and a square root transformation was applied. Skewness and kurtosis both fell within

acceptable ranges (skewness = -0.16, standard error = 0.11; kurtosis = -0.60, standard error = 0.23). The range of raw scores was 8 to 48. The mean was 32.45 ($SD = 10.20$) and was comparable to the mean of AARP scores across various treatments in studies that sampled college students (Elliott & Fuqua, 2002), parents (Tarnowski et al., 1992a; Krain, Kendall, & Power 2005), and direct care professionals (Miltenberger & Lumley, 1997).

Preliminary Analyses

Prior to hypothesis testing, potential confounding variables, namely SES and the perceived helpfulness of mental health services utilized, were assessed in relation to treatment acceptability using bivariate tests. Correlations between income and the dependent measures (AARP scores for each individual treatment/treatment combination and the sum of AARP scores across treatments) ranged from -.32 to .11 and were not significant at an alpha level of .05. Neither were correlations between Hollingshead Four Factor Index scores and the dependent measures, which ranged from -.02 to .19. There were no significant differences in dependent measures based on whether or not mental health services had been utilized by participants; p-values ranged from .31 to .92. Among participants who had utilized mental health services, ratings of the helpfulness of these services were not significantly related to acceptability scores; Pearson's r ranged from -.36 to .19.

Hypothesis Testing

Hypothesis testing was carried out using raw scores on the AARP and then again using transformed scores; findings did not differ. In the interest of clarity, results of analyses performed using raw data are reported.

Objective 1. The perceived acceptability of single and combined treatments for adolescent depression was assessed (Aim 1). It was hypothesized that in general, psychotherapy approaches (CBT, IPT, family therapy) would be judged as more acceptable than pharmacotherapy, with combined treatments (CBT with

pharmacotherapy, IPT with pharmacotherapy, and family therapy with pharmacotherapy) falling somewhere in between. Table 5 presents mean AARP scores (and standard deviations) for each treatment/treatment combination. The rank order of the treatments from most acceptable to least acceptable is as follows: CBT, IPT, Family Therapy, CBT + Pharmacotherapy, Family Therapy + Pharmacotherapy, IPT + Pharmacotherapy, Pharmacotherapy. Acceptability scores for CBT were significantly higher than acceptability scores for each of the other treatments, with the exception of IPT. Acceptability scores for pharmacotherapy were significantly lower than acceptability scores for each of the other treatments.

Analyses were repeated excluding the fifth item of the AARP, which asks participants to indicate how much they agree/disagree with the statement that the treatment in question would not have bad side effects. The mean score for pharmacotherapy, the description of which explicitly mentioned side effects, was still significantly lower than the mean score for each of the other treatments. P-values were all less than .01.

Table 5.

Acceptability Ratings by Treatment Type (N = 67)

Treatment Type	<i>M</i>	<i>SD</i>
CBT	39.15 _a	8.08
IPT	38.07 _a	7.70
Family Therapy	33.85 _b	10.02
CBT + Pharmacotherapy	33.27 _b	9.50
Family Therapy + Pharmacotherapy	29.18 _c	9.29
IPT + Pharmacotherapy	29.07 _c	7.68
Pharmacotherapy	24.54 _d	10.52

Note. The range of possible scores is 8 to 48. Means with different subscripts differ significantly at $p < .05$.

Objective II. It was hypothesized that Hispanics would judge the acceptability of treatments for adolescent depression less favorably overall than would non-Hispanic Whites. To test for ethnic differences in acceptability judgments (Aim 2a), a 2 (ethnicity) x 7 (treatment type) mixed-model repeated measures ANOVA was executed with ethnicity as a between-subjects variable, treatment type as a within-subjects variable, and total scores on the AARP as the dependent variable. Consistent with hypotheses, there was a significant main effect of treatment type, $F(1, 65) = 22.86, p < .01$ but not ethnicity, $F(1, 65) = 2.83, p = .10$. There was a small to medium effect of ethnicity on total acceptability ratings, which were calculated by summing scores on the AARP across treatments ($d = 0.42$); however, it was not in the predicted direction. That is, Hispanics judged the acceptability of treatments more favorably overall than did non-Hispanic Whites. Due to the small sample size, this effect may not be reliable. Means and standard deviations of AARP scores by ethnicity are reported in Table 6.

It was also hypothesized that there would be ethnic differences in the acceptability of treatments relative to each other. Specifically, Hispanics would be more likely than non-Hispanic Whites to judge IPT and family therapy as relatively more acceptable than other treatments for adolescent depression. To examine this hypothesis, the ranks of the seven treatments were calculated for each participant and Mann-Whitney U tests were carried out with ethnicity as the grouping variable. There were no significant findings. Thus, the hypothesis was not supported. Median treatment ranks are presented in Table 7. U values for each treatment type are presented in Table 8.

Table 6.

Acceptability Ratings by Ethnicity

Treatment Type	<u>Hispanic (n = 36)</u>		<u>NHW (n = 31)</u>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
CBT	39.03	8.46	39.29	7.75
IPT	39.36	7.26	36.58	8.04
Family Therapy	35.61	9.63	31.81	10.25
Pharmacotherapy	24.53	10.96	24.55	10.18
CBT + Pharmacotherapy	34.17	11.00	32.23	7.44
IPT + Pharmacotherapy	30.28	8.34	27.68	6.70
Fam + Pharmacotherapy	31.53	8.99	26.45	9.29

Note. The range of possible scores is 8 to 48. NHW = non-Hispanic White; Fam = Family Therapy.

Table 7.

Median Treatment Ranks by Ethnicity

Treatment Type	Total sample ($N = 67$)	Hispanic ($n = 36$)	NHW ($n = 31$)
CBT	2.00	2.00	1.50
IPT	2.50	2.00	3.00
Family	3.00	3.00	4.00
Pharm	6.50	6.75	6.50
CBT + Pharm	3.00	3.25	3.00
IPT + Pharm	5.00	5.00	5.00
Family + Pharm	5.00	5.00	5.00

Note. Higher ranks correspond to more favorable judgments. Family = Family Therapy; Pharm = Pharmacotherapy.

Table 8.

Differences in Treatment Ranks by Ethnicity

Treatment Type	Mann-Whitney U	p -value
CBT	409.00	.05
IPT	500.00	.46
Family Therapy	536.50	.79
Pharmacotherapy	512.00	.54
CBT + Pharmacotherapy	552.00	.94
IPT + Pharmacotherapy	527.50	.70
Family Therapy + Pharmacotherapy	515.00	.59

The relationship between treatment acceptability and acculturation among Hispanics was examined (Aim 2b). A series of independent samples t-tests was carried out with acculturation status (bicultural, predominantly non-Hispanic) as the independent variable and mean scores on the AARP for each treatment type as the dependent variable. There were significant differences in ratings made by predominantly non-Hispanic participants and bicultural participants on the CBT, $t(34) = -2.48, p = .02$ and Family Therapy + Pharmacotherapy, $t(34) = -3.434, p = .002$. Also, composite acceptability ratings differed significantly by acculturation status, $t(34) = -2.83, p = .008$.

To evaluate the hypothesis that participants who endorse particular causes of depression would make more favorable judgments of corresponding treatments than participants who do not endorse such causes (Aim 3a), a series of four one-way ANOVA's were performed with AARP scores for the treatment in question as the dependent variable. As hypothesized, participants who endorsed relational causes as a probable cause of depression rated IPT significantly higher than did participants who did not endorse relational causes, $F(1, 65) = 10.38, p < .01$. Also, participants who endorsed familial issues rated family therapy significantly higher than participants who did not endorse familial issues, $F(1, 65) = 4.79, p < .03$. The hypothesis that participants who endorsed physical causes of depression would rate pharmacotherapy significantly higher than participants who did not endorse physical causes was not supported, $F(1, 65) = 0.00, p = .93$. Neither was there support for the hypothesized relationship between endorsement of cognitive causes and ratings of cognitive therapy, $F(1, 65) = 0.37, p = .54$.

It was hypothesized that there would be a relationship between the causal factor that participants identify as most significant in determining depression and judgments of the corresponding treatment relative to judgments of other treatments (Aim 3b). However, these relationships were not examined due to the small number of participants who identified each cause of interest: physical causes, ($n = 1, 1.5\%$), relational causes ($n = 9, 13.2\%$), familial causes ($n = 4, 5.9\%$), and cognitive causes ($n = 22, 32.4\%$).

It was hypothesized that all treatments, especially medication, would be viewed as more acceptable in the case of a severely depressed adolescent than in the case of a

mildly depressed adolescent. In order to evaluate the relationship between symptom severity (of the adolescent in the case description) and treatment acceptability (Aim 4), a 2 (symptom severity) x 7 (treatment type) mixed-model repeated measures ANOVA was performed with symptom severity as a between-subjects variable and treatment type as a within-subjects variable. The effect of symptom severity on ratings of acceptability was negligible, $F(1, 65) = 0.008, p = .93$, as was the interaction between symptom severity and treatment type, $F(1, 65) = 0.30, p = .94$.

It was also hypothesized that medication would be considered more acceptable relative to other treatments when depression symptoms were severe than when they were mild. To examine this hypothesis, Mann-Whitney U tests were carried out on ranks with symptom severity (of the adolescent in the case description) as the grouping variable. Participants who were presented with the mild case did not rank pharmacotherapy significantly different from participants who were presented with the severe case ($U = 555.5, p = .94$).

Finally, correlations were used to evaluate the hypothesis that there would be a positive association between self-reported depressive symptomatology and the acceptability of treatments for depression, especially medication (Aim 5). Using total scores on the RADS-2, there were no significant findings. All correlation coefficients showed little to no association. Pearson's r coefficients are displayed in Table 9

The possibility that more depressed participants did not discriminate among treatments was examined by calculating for each participant the standard deviation for AARP scores (across treatments) and conducting a correlational analysis to evaluate the relationship between standard deviations and total RADS-2 scores. The correlation coefficient indicated a weak, nonsignificant association ($r = .10, p = .44$).

Table 9.

Pearson's r for Acceptability and Self-Reported Depressive Symptomatology (N = 67)

<u>AARP Total Score</u>	<u>RADS-2 Total Score</u>
CBT	.03
IPT	-.02
Family Therapy	-.09
Pharmacotherapy	-.23
CBT + Pharmacotherapy	.01
IPT + Pharmacotherapy	-.08
Family Therapy + Pharmacotherapy	-.20
Total Acceptability	-.14

Discussion

The primary objective of this study was to ascertain information from adolescents on the acceptability of various single and combined treatments for depression. Despite the prevalence of depression among adolescents, the challenge of engaging this population in treatment, and recent media attention to the increased risks of psychotropic medications when administered to adolescents, there have not been any published quantitative studies of the acceptability of treatments for depression to adolescents themselves. Another objective of this study was to add to literature on variables associated with treatment acceptability in order to alert practitioners to concerns common to particular populations, to assist with matching clients to treatments that will maximize adherence, and inform the development of treatments that are tailored to specific populations and can be easily transported into real-world settings. It was hypothesized that adolescents would judge psychotherapy approaches as more acceptable than pharmacotherapy, with combined treatments falling in between; and that treatment acceptability would be related to perceived causes of depression, ethnicity, acculturation, and symptom severity.

As expected, psychotherapy approaches without a pharmacological component were generally more acceptable to adolescents than those with a pharmacological component, which were considerably more acceptable than pharmacotherapy alone. These findings are consistent with previous research that showed that adolescents prefer non-medical interventions in general (e.g., Offer, Howard, Schonert, & Ostrov, 1991). Psychotherapy approaches were rated acceptable, on average, although mean scores suggest that adolescents' views of these treatments could be improved. Pharmacotherapy in the absence of psychotherapy was rated unacceptable, on average.

Among the psychotherapy approaches, CBT was favored by the sample, on average, and was followed closely by IPT. Also, CBT and pharmacotherapy used together was rated significantly higher, on average, than each of the other psychotherapy approaches in combination with pharmacotherapy. The finding that adolescents in this sample tended to rate CBT as most acceptable is consistent with results of another vignette study that examined adolescent girls' beliefs about treatment for bulimia nervosa (Mond et al., 2007). Participants in that study expressed a preference for CBT over other types of psychotherapy/counseling, medication, and non-professional interventions.

There are several possible reasons why adolescents preferred CBT. First, adolescents may have been responding to the content of the intervention, which included "teaching the teen to replace negative thoughts about herself, others, and the world with more realistic thoughts that make her feel better." Consistent with this possibility is the finding that 94% of the sample endorsed cognitions as a likely cause of depression. Second, adolescents may have favored CBT because its description did not identify parent/family involvement as a key component of the treatment. The description of IPT, the mean of which was ranked second highest, indicated that parents may or may not play a part in treatment. Parent involvement, which is integral to family therapy, may be viewed unfavorably by adolescents, whose primary developmental task is to establish autonomy (Logan & King, 2001). Third, the description of CBT, unlike IPT and family therapy, included mention of homework assignments in order for adolescents to practice skills in between sessions. Homework is used in therapy to transfer learning to the client's everyday life (Spiegler & Guevremont, 1998). The implication that specific skills acquired in session could be applied outside of therapy may have led adolescents to form an impression of CBT as more concrete and/or more relevant than other approaches. Also, the mention of practice could be appealing to adolescents because it suggests that in CBT, they have some control over improving their condition. According to Corey (2001) homework helps clients to assume active roles in the change process. Although it has been suggested that using the term "homework" in CBT with youth could lead to noncompliance (Hudson & Kendall, 2000), the impact of using this term has not been investigated empirically. Given that all of the adolescents who participated in this study

had attended school and less than half of them had ever utilized mental health services, it's possible that the mention of homework in this context made adolescents feel more oriented to the format of CBT and thus, more comfortable with it. Finally, CBT was described as consisting of many different components (e.g., cognitive restructuring; relaxation; problem solving) that could each be considered to produce a distinct outcome (e.g., positive thinking; reduced anxiety; removal of stressors), increasing the likelihood that adolescents would find the treatment helpful in at least one respect. The description of IPT, on the other hand, emphasized one focus only (i.e., improving relationships) and discussed variations of this focus (e.g., resolving disagreements with parents or conflicts with peers). The description of family therapy also emphasized one focus (i.e. changing the way family members get along), to which each of the components mentioned (e.g., communication; problem solving) were clearly linked.

In contrast to CBT, pharmacotherapy was rated as low on acceptability by most adolescents, even when analyses were repeated excluding the item that addressed side effects. More than half of the sample judged pharmacotherapy as least acceptable of all of the treatments. Several possible explanations for these findings are considered. First, it might be difficult for adolescents who have not experienced the benefits of pharmacotherapy first hand to believe that it is effective for emotional and behavioral problems; without knowledge of neurotransmitters, it is not obvious how antidepressants bring about change in symptoms. A study in the adult literature showed that only 40% of clients who had already been prescribed antidepressants could explain how they work (Bultman & Svarstad, 2000). It might be easier for adolescents to appreciate the potential for psychotherapy to be effective given that they've probably experienced at some point a change in mood after talking about problems with a friend or family member, if not a professional. Rates of informal help seeking from friends and family are high among adolescents (e.g., Boldero & Fallon, 1995; Schonert-Reichl & Muller, 1996), especially females (Rickwood, Deane, Wilson, & Ciarrochi, 2005) and Hispanics (McMiller & Weisz, 1996; Rew, Resnick, & Blum, 1997), and studies have shown that help from these sources is frequently perceived as beneficial (e.g., Offer et al., 1991). Second, adolescents might view pharmacotherapy as a cover up rather than a solution to one's

problems. Loewenthal and Cinnirella (1999) reported that the prevalent view of antidepressant medication in their multicultural sample of women was that it is a superficial form of help. Third, in line with one of the primary criticisms of the medical model (e.g., Engel, 1977), adolescents might perceive pharmacotherapy as pathologizing the individual rather than locating the source of problems in the environment. As a result, pharmacotherapy might be more stigmatized than psychotherapy. Moreover, the impact of stigma is likely heightened during adolescence, when capacities for self-reflection and social perspective-taking develop, and individuals become sensitive to potentially negative evaluations made by others (Elkind & Bowen, 1979; Harter, 1990). Disturbances in self-concept are also more common during adolescence (Rosenberg, 1985). The thought of taking medication, which implies being “sick,” might be especially threatening to an adolescent’s sense of self. Further, the relatively passive role that adolescents have in pharmacotherapy compared to psychotherapy might make them feel weak, unempowered, or ineffective in their environment. Finally, adolescents might believe that addiction to antidepressants is likely and fear being reliant on them to function. A qualitative study by Wisdom, Clarke, and Green (2006) provides support for some of these ideas. Adolescents who were interviewed individually and as part of a focus group tended to view taking antidepressant medication as inconsistent with their views of themselves as autonomous, independent, healthy and normal; and struggled with the decision to take medication even when they recognized their depression as abnormal.

Future studies should explore whether adolescents’ unfavorable attitudes are based on factual information (e.g., about risks and side effects), misconceptions (e.g., about the potential for addiction), or other variables (e.g., stigma). To the extent that views of pharmacotherapy and related treatment approaches as relatively unacceptable can be attributed to the latter two possibilities, school-based programs to increase mental health awareness (Battaglia, Coverdale, & Bushong, 1990; Esters, Cooker, & Ittenbach, 1998; Pinfold et al., 2003) or “mental health literacy” (knowledge and beliefs about mental disorders which aid their recognition, management, and prevention; Jorm et al.,

1997a) may prove effective in increasing acceptability and in turn, utilization.⁸ Such programs could address stigma by providing factual information to counter stereotypes of people who take antidepressants. Given that adolescents resist seeking treatment because they expect their provider just to “medicate” them (e.g., Wisdom, Clarke, & Green, 2006) and that in primary care settings, at least, adolescents who present with depressive symptoms *are* likely to be prescribed antidepressants (DeBar, Clarke, O’Connor, & Nichols, 2001; Park & Goodyer, 2000), these programs might benefit from incorporating information on adolescents rights as consumers of mental health services and training in how to communicate with mental health providers about available treatment options. In addition to addressing the acceptability of treatments to adolescents prior to entry into treatment (e.g., at school), role induction and other pretreatment strategies that have been found to be successful with adults (see Walitzer, Dermen, & Connors, 1999 for a review) should be explored with adolescents in clinic settings.

Pretreatment interventions to increase acceptability might include psychoeducation about causes of depression, as results of this study partially supported the hypothesized relationship between the perceived causes of depression and treatment acceptability. Adolescents who endorsed relational issues as a likely cause of depression rated IPT as more acceptable than adolescents who did not endorse relational issues. Also, adolescents who endorsed familial causes rated family therapy as more acceptable than adolescents who did not endorse familial causes. The data did not support the hypothesis that the perception of cognitions as a cause of depression would be related to the acceptability of CBT. However, it is likely that a ceiling effect prevented a relationship from being detected given that 94% of participants endorsed cognitions as a likely cause of depression and CBT was rated acceptable by most participants. Finally, there was no relationship between perceptions of physical causes of depression and the acceptability of pharmacotherapy, suggesting a general aversion to this treatment that is

⁸ These recommendations should be proceeded upon cautiously, with consideration of whether or not the acceptability of antidepressants to adolescents should be increased. Although results of a recent meta-analysis support the safety and efficacy of SSRI’s in the treatment of youth depression (Bridge et al., 2007), concerns have been raised about selective publication of positive findings (Mamdani, 2008) and the lack of research on the long-term effects of antidepressants on the developing central nervous system (Leckman & King, 2007). Ongoing attention to emerging evidence from large scale research efforts (e.g., Child and Adolescent Psychiatry Trials Network; March et al., 2007) is critical.

independent of the causes of depression. Data on causal factors identified by adolescents as most significant in determining depression could not be analyzed in relation to acceptability ratings due to the limited sample size.

The finding that at least some causal beliefs were related to the acceptability of congruent treatments is consistent with the results of a study by Meyer and Garcia-Roberts (2007). They found that, in general, adult clients' reported reasons for their depression that were systematically associated with their motivation to engage in corresponding interventions. These findings do not necessarily imply that matching clients to treatments that target their perceived reasons for depression would improve outcomes. After reviewing the work of Hayes and colleagues, who developed Acceptance and Commitment Therapy (Hayes, Luoma, Bong, Masuda, & Lillis, 2006; Hayes, Strosahl, & Wilson, 1999), Meyer and Garcia-Roberts (2007) suggest that the reasons that people offer for behavior may not be related to the contingencies that actually control their behavior. However, at the least, findings from the current study underscore the need for clinicians to assess clients' beliefs about the causes of depression and discuss any concerns that clients may have about whether or not the proposed treatment would address the causes of their distress. It may be important to introduce the distinction between original causes and maintaining causes (Iselin and Addis, 2003). According to Addis and Carpenter (2000), a common concern among clients is that treatment involves a superficial focus on symptoms without correcting the "real underlying" problem. Future research should focus on identifying the most effective ways for clinicians to communicate with clients about the causes of depression and incorporate their beliefs into the rationale for treatment.

Results may have been influenced by modifications made to the measure of causal beliefs. Respondents in this study were instructed to indicate whether or not they believe that the problems experienced by the depressed adolescent in the vignette "were likely due, in part, to" the cause represented by each global item. The version of the measure that has been validated asks respondents to reflect on causes of emotional or behavioral problems, which may include but are not limited to depression. Also, the original version of the measure asks respondents to reflect on problems that they have experienced (in the

adolescent version) or their children have experienced (in the parent version). Thus, there was more personally contextualized information available to them to help in narrowing down the causes to which they attribute emotional and behavioral problems. Limiting the information available to participants in this study by asking them to consider a hypothetical scenario might have resulted in responding that was overly-inclusive. Numerous participants were reluctant to rule out a cause of depression because they felt it could be possible given the lack of information. A related limitation is that because participants in this study were instructed to think about another depressed individual, their responses may have been influenced by the fundamental attribution error, or the tendency for people to overemphasize dispositional explanations for behaviors observed in others (e.g., personality) while underemphasizing situational explanations (e.g., economic problems). To the extent that beliefs about the causes of depression are related to treatment acceptability, a de-emphasis on situational explanations may have contributed to the finding that family therapy was less acceptable than CBT and IPT. Thus, the findings from this study should be replicated using a sample of depressed adolescents. Alternative measures (e.g., Illness Perceptions Questionnaire-Revised; Moss-Morris et al., 2002) as well as qualitative indices might be useful for assessing beliefs about the causes of depression in future studies. The semi-structured interview used in this study did not distinguish between distal and proximal causes of depressive symptoms. At least some adolescents volunteered verbal descriptions of a sequence of events which they believed had led to the onset of depression, or ways in which several causal factors likely interacted to produce depression. The dichotomous items that make up the interview did not capture such complexity of thought. Finally, in addition to assessing beliefs about the causes of depression, future research could assess other attributions in relation to treatment acceptability; for example, identity, consequence, duration, and controllability/cure (Leventhal et al., 1980; Weinmann, Petrie, Moss-Morris, & Horne, 1996).

Based on previous findings that Hispanics are less likely than non-Hispanic Whites to utilize services and more likely to believe that conventionally defined symptoms of psychopathology reflect temperament (rather than mental illness), it was

hypothesized that Hispanic adolescents would judge the acceptability of treatments for adolescent depression less favorably overall than would non-Hispanic White adolescents. This hypothesis was not supported. In fact, there was a small to moderate effect in the opposite direction, indicating that Hispanic adolescents overall rated treatments more favorably than did non-Hispanic White adolescents. An examination of mean acceptability scores, however, showed that this pattern was not consistent across treatment types. Findings from this sample are somewhat consistent with results of studies in the adult literature. Cooper et al. (2003) found that counseling was more acceptable and antidepressant medication was less acceptable to Hispanic adults than to non-Hispanic White adults. A more recent study of older adults' acceptance of depression treatments reported that Hispanics attitudes across all treatments were as favorable as those of their non-Hispanic White peers (Choi & Morrow-Howell, 2007).

One potential explanation for the finding that treatment acceptability did not differ by ethnicity in this study is that Hispanics' response style differed from the response style of non-Hispanic Whites such that Hispanics were more likely to choose extreme response options. This cross-cultural difference in response style has been documented in the literature (Marin, Gamba, & Marin, 1992; Clarke, 2000). Consistent with this explanation, the mean score for pharmacotherapy, which was clearly rated least acceptable by both ethnic groups, was lower for Hispanics than non-Hispanic whites. Further, an examination of the frequency with which each response option was selected across treatment types showed that 35.71% of responses made by Hispanics were extreme (either 1 or 6 on a 6-point scale) versus 22.75% of responses made by non-Hispanic Whites. Finally, the largest differences between ethnic groups were found for the means of combined treatments. It makes sense that treatments falling in the middle of the overall rank order of means would be most affected by differences in response style. Although some response styles are considered problematic (e.g., acquiescent) because they contaminate results, extreme responding does not necessarily indicate inaccurate reporting. Extreme responses may reflect extreme opinions. To confirm the finding that Hispanics tend to have strong opinions about treatments for depression, future studies should incorporate multiple response formats and include qualitative components.

The finding that treatments for depression are at least as acceptable to Hispanic adolescents as they are to non-Hispanic White adolescents suggests that negative treatment expectations, which have been written about as a barrier to treatment (e.g., Lahey et al., 1996), do not account for ethnic differences in unmet need for services. Addressing service underutilization in Hispanic adolescents might require more attention to other barriers to treatment identified in the literature (e.g., Lahey et al., 1996), such as system barriers (e.g., inability to get an appointment), financial barriers (e.g., lack of health insurance), and stigma (e.g., concern over what others are thinking). Research on stigma, in particular, is lacking, although qualitative studies have established its impact on adolescents' attitudes toward seeking professional help for mental disorders in general (e.g., Chandra & Minkovitz, 2007) and for depression specifically (e.g., Wisdom, Clarke, & Green, 2006). A study in the adult literature showed that Hispanic women were more likely than non-Hispanic White and African American women to anticipate stigma-related barriers to treatment (Alvidrez & Azocar, 1999). Future research should explore stigma as a factor contributing to ethnic disparities in service utilization among adolescents.

Although the acceptability of treatments to adolescents does not appear to account for ethnic differences in unmet need in this population, future studies should examine the acceptability of treatments to parents, who consent to adolescents' treatment and facilitate treatment progress; for example, by scheduling appointments and providing transportation. Parents' judgments of treatment acceptability may differ from those of their adolescent children because they have different perceptions of the need for treatment, for example, or because they would have different roles in the interventions. Ethnic group differences in acceptability may be more pronounced among parents, who are often likely to be less acculturated than their adolescent children due to differences in generational distance from the time of immigration or in the age of arrival in the United States (Marin et al., 1987). There has been only one published study of the acceptability of treatments for child problems to Hispanic parents (Borrego, Ibanez, Spendlove, & Pemberton, 2007). Although the study did not sample non-Hispanic White parents, precluding direct ethnic group comparisons, results contradicted findings of previous

studies that were conducted with predominantly non-Hispanic samples (e.g., Jones, Eyberg, Adams, & Boggs, 1998). Specifically, punishment-based behavior management interventions were preferred in the Hispanic sample whereas reinforcement-based interventions were preferred in predominantly non-Hispanic White samples. Thus, it appears that ethnicity might be related to the acceptability of treatments to parents. This question has yet to be examined with respect to depression in particular.

In addition to the hypothesis that Hispanic adolescents would judge the acceptability of treatments for adolescent depression less favorably overall than would non-Hispanic White adolescents, it was hypothesized that there would be ethnic differences in the acceptability of treatments relative to each other. That is, values and worldviews that have been described as characteristic of Hispanic culture (e.g., *familismo*, *personalismo*, *fatalismo*, collectivism) but not Anglo culture would translate into different treatment preferences across the two groups. Specifically, Hispanics would be more likely than non-Hispanic Whites to judge IPT and family therapy as relatively more acceptable than other treatments (e.g., CBT) for adolescent depression. Because these analyses relied on ranks for each participant, the influence of response style was decreased. While the median rank of each of these treatments was higher for Hispanics than non-Hispanic Whites, results were not significant. This finding should be replicated with a larger sample. If it's true that ethnicity is not related to the relative acceptability of treatments for adolescent depression, efforts to improve the cultural sensitivity of mental health services delivered to adolescents might focus less on the content of interventions and more on extratherapeutic factors or therapy process factors, such as the alliance. In a study with Puerto Rican adults, the alliance was found to explain 45% of the variance in the effectiveness of psychotherapy (Bernal, Bonilla, Padilla-Cotto, & Perez-Prado, 1998). Research on the alliance with Hispanic adolescents is needed.

In interpreting the finding that relative acceptability did not differ by ethnicity, the demographic characteristics of the non-Hispanic White sub-sample should be considered, as it might not have sufficiently represented the larger Anglo population. Specifically, the majority of non-Hispanic White participants were recruited from northern New Jersey, where there is a concentrated population of Italian Americans. Approximately

one-third of the non-Hispanic White sample reported that at least one parent or grandparent was born in Italy. Italian culture, like Hispanic culture, also places an emphasis on relationships with family (Giordano, McGoldrick, & Klages, 2005; Yaccarino, 1993). Thus, to the extent that non-Hispanic White participants are immersed in Italian culture, effects of ethnicity would be attenuated.

Finally, it is worth mentioning that the median rank of CBT was equal to the median rank of IPT in the Hispanic sub-sample and the ratings of these two treatments indicated that they were both acceptable to Hispanics, on average. This finding lends support to the argument that integrating CBT and IPT by focusing on interpersonal schemas might be particularly effective with this population (Perez, 1999). Alternatively, individual differences in the acceptability of these treatments to Hispanics could inform prescriptive matching (e.g., Beutler & Harwood, 1995); that is, the use of different therapies or techniques for different kinds of clients. It would be interesting to explore whether or not types of depression that are proposed to respond differentially to CBT versus IPT (e.g., dependent versus self-critical; Blatt & Maroudas, 1992) correspond to differences in the acceptability of each of these treatments to individuals suffering from depression.

The hypothesis that Hispanics who are immersed predominantly in their culture of origin would judge treatments as less acceptable than would Hispanics who are immersed predominantly in U.S. culture could not be evaluated because the range of acculturation in this sample was restricted such that none of the Hispanic participants could be considered highly immersed in their culture of origin but not bicultural. It's possible that this restricted range was a result of limitations in the measurement of acculturation (Unger et al., 2007; Cabassa, 2003). According to Unger et al. (2007), acculturation measures are only modestly correlated, and conclusions of a study may differ based on which scale is selected. Although the BAS has relatively strong psychometric properties, it only measures surface level acculturation; that is, items primarily assess language use. Many of the adolescents in this study were recruited from classrooms in which English is spoken; the potential for these adolescents to score highly on the Hispanic domain scale was limited. Measuring other aspects of acculturation, such as

awareness and appreciation of cultural material (e.g., history, art, music, foods, holidays) and preferences for relationships (e.g., friendships, romantic relationships) with individuals from one or both cultures (Cuellar et al., 1995; Orozco, Thompson, Kapes, & Montgomery, 1993; Padilla, 1980) might have produced a greater range of acculturation scores.

Unexpectedly, overall acceptability was significantly higher for bicultural adolescents than Hispanic adolescents immersed predominantly in non-Hispanic culture. It's possible that bicultural adolescents were more likely than predominantly non-Hispanic adolescents to find multiple treatments appealing because they were able to consider how a given treatment might be effective within the context of Hispanic culture *or* non-Hispanic culture. According to cultural frame switching theory (Hong, Morris, Chiu, & Benet-Martinez, 2000), bicultural individuals shift between two culturally based interpretive lenses in response to contextual cues that make different cultural identities salient. Cues may be subtle or implicit; for example, roles, expectations, and goals embedded in a particular context (Benet-Martinez, Lee, & Leu, 2006). In a study by Verkuyten and Pouliasi (2002), bicultural children showed differences in attributions (external versus internal), self-identification (social versus personal), and attitudes toward family integrity and obedience depending on cultural identity salience. It's possible that in the current study, characteristics of the various treatments activated different cultural frames, allowing bicultural individuals to appraise treatments hypothesized to be appealing in collectivist cultures (e.g. family therapy) as acceptable in addition to treatments that place more emphasis on the individual (e.g., CBT). Another possibility is that treatment descriptions did not activate different cultural identities but bicultural individuals, as a result of frequently switching cultural frames, are more cognitively flexible and thus able to evaluate multiple treatment approaches as acceptable.

In addition to rating treatments overall as more acceptable, bicultural participants assigned higher acceptability ratings to CBT and to family therapy and pharmacotherapy combined than did Hispanic participants immersed predominantly in non-Hispanic culture. According to Sue and Sue (1990), Hispanics expect treatments to be problem-solving oriented and directive, and to have immediate effects. These characteristics are

all consistent with the description of CBT. In the case of family therapy and pharmacotherapy combined, bicultural adolescents might have been more likely than their highly acculturated counterparts to value the family component because they are more vulnerable to conflict with parents due to generational gaps with regard to assimilating to U.S. culture (Organista, 2000). They might perceive pharmacotherapy as a solution that provides some immediate relief, especially if they experience somatic symptoms, but disapprove of it in the absence of psychotherapy either because they appreciate family conflict as a root cause of depression or because they have the expectation common among Hispanics that a treatment provides *desahogo* (Martinez Pincay & Guarnaccia, 2007), which is similar to “getting things off one’s chest.”

Future research should capitalize on advances in the operationalization and assessment of acculturation. One measure that could be considered for use in future studies is the Acculturation, Habits, and Interests Multicultural Scale for Adolescents (AHIMSA; Unger et al, 2002; 2007). This scale represents an improvement over measures of acculturation that have been used previously because it is intended specifically for adolescents, it can be used with a multi-ethnic sample, and it measures aspects of acculturation other than language use. In this study, the AHIMSA might have detected varying levels of acculturation within the non-Hispanic White sample, which was partly Italian American, allowing for a more accurate assessment of the relationship between ethnicity/acculturation and treatment acceptability. Also, the items on the AHIMSA appear to tap into respondent’s lifestyle, which is likely more relevant to treatment acceptability than language use. For the purpose of this study, however, it would have been most valuable to know the extent to which beliefs and values of Anglo culture have been adopted and the extent to which beliefs and values of Hispanic culture have been retained. A need for the development of acculturation measures that tap into beliefs and values has been acknowledged repeatedly in the literature (e.g., Cuellar et al., 1995; Cabassa, 2003).

Finally, it was hypothesized that treatment acceptability would be related to symptom severity. The design of the study allowed this hypothesis to be addressed in a couple of ways. First, the severity of symptoms experienced by the adolescent in the

vignette was manipulated and between subjects analyses were carried out. Results failed to support the hypothesized relationship. The finding that symptom severity was not significantly related to treatment acceptability is consistent with studies in the adult literature in which vignettes were used to manipulate severity (Banken & Wilson, 1992; Landreville et al., 2001). One interpretation of these findings is that judgments of acceptability are not influenced by the severity of symptoms or the level of distress experienced by the individual for whom the treatments are intended. Alternatively, it may be the case that in all of these studies, participants were not able to differentiate the levels of symptom severity represented in the vignettes. The two vignettes used in this study were identical in terms of how many and which symptoms were included. The primary difference was the frequency or severity of each individual symptom, which was communicated through modifying adverbs (e.g., “somewhat” versus “extremely”). Even if adolescents attended to the modifying adverbs, they might not have been strong enough to affect impressions of severity. An alternative approach would be to construct two vignettes with different symptom constellations utilizing data on the extent to which individual symptoms of depression signal distress to adolescents (Burns & Rapee, 2006). However, varying the symptoms across vignettes would have not allowed for causal beliefs to be analyzed in the sample as a whole. Thus, it would have been necessary to obtain a sample considerably larger than that which was feasible to obtain with this population in order to have adequate power to address all of the specific aims.

In addition to manipulating severity of symptoms experienced by the adolescent in the vignette, the level of depressive symptomatology experienced by adolescent respondents was measured. Correlations with acceptability scores did not yield support for the hypothesized relationship. Thus, it appears that adolescents’ judgments of treatment acceptability have little to do with the extent to which they experience symptoms of depression. This finding that severity of depressive symptoms was not related to treatment acceptability is consistent with results from the adult literature (Landreville et al., 2001). It’s possible, however, that the RADS-2 as it was administered in this study was not an accurate measure of severity of depression in respondents. First, as would be expected of any study conducted with minors, adolescents were informed at

the start of the study and again before the RADS-2 was administered that there existed the possibility that the research assistant would break confidentiality should adolescents provide information indicating the risk of self-harm. This procedure might have increased the likelihood that at least some adolescents would underreport ideation or other symptoms perceived to be associated with risk of self-harm. Consistent with this possibility, only 3% of participants ($n = 2$) in the current sample endorsed the critical item that assesses for thoughts of self-harm. The prevalence of ideation in other community samples of adolescents has been substantially greater, with some reports exceeding 20% (e.g., Reinherz et al., 2006). Further, a one-sample t-test using as the test value the mean score obtained for this item in the RADS-2 school-based standardization sample of females was significant, $t(66) = 21.97, p < .01$ in the direction expected. Second, the RADS-2 was administered orally, which may have made participants feel less anonymous, increasing the likelihood that some of them would “fake good.” However, both of these possibilities of underreporting are unlikely given that the mean total score for the sample was higher than the mean score for the RADS-2 restandardization sample and as many as five items can be omitted without invalidating the RADS-2 score. Finally, although it appeared that there was some range restriction in total depression scores, it was likely not substantial enough to have influenced results.

Limitations

In addition to previously mentioned caveats, such as limited variability in causal beliefs, the overrepresentation of Italian Americans in the non-Hispanic White sample, the use of a language-based measure of acculturation, and slight restriction in the range of depression scores, this study has several other limitations that should be considered. Due to a poor response rate, there was inadequate power to detect moderate effects. For example, results did not show a significant relationship between ethnicity and overall acceptability; however, measures of association suggest that this relationship may exist in the population and could emerge as significant with a larger sample. Moreover, because the sample was self-selected and there is no information available about adolescents who

did not participate, the possibility that participants differed systematically from non-participants cannot be ruled out. The poor response in this study is attributed to several factors. First, the target population was one that underutilizes mental health services. It's possible that some of the same characteristics that prevent individuals from seeking mental health services (e.g., stigma; time constraints) also prevent them from participating in research on mental health services. Second, policies imposed by the Institutional Review Board (IRB) at the University of South Florida presented obstacles for recruitment. For example, the IRB required consent from at least one biological parent. In Union City, where many families immigrated only recently, a substantial percentage of high school students are in the care of another adult, such as an extended family member. Exclusion of these families not only reduced the response rate but also introduced threats to the generalizability of the sample by reducing the likelihood that participants who would score low on measures of acculturation were included. Another IRB policy that likely affected the response rate was the requirement that parental consent and youth assent be documented on separate forms. School administrators volunteered the feedback that there were too many consent/assent forms (which were provided both in Spanish and in English) and that the consent forms were too long, alienating parents who are relatively uneducated and/or whose time is limited (because they work multiple jobs, for example). Several adolescents also provided feedback about the recruitment and consent process, indicating that the study was far less burdensome than the impression that had been created by the amount of information that the IRB required the investigators to provide beforehand. Third, adolescents who were interested in the study were relied on to complete multiple steps in order for participation to occur (e.g., bring consent forms home to parents, return consent forms at school, answer the phone during scheduled interview times). Follow-through was thus less likely than would have been the case if data were collected at school, for example, using passive consent procedures. Previous school-based research has shown that participation is poor when adolescents are given some responsibility for obtaining parental consent but that passive consent procedures result in very high response rates in this population (Tarquini et al., 2007). Exploring different formats for recruitment and data collection might

facilitate the attainment of a larger sample by improving the response rate. For example, data could be collected via the internet rather than by telephone, allowing adolescents to complete the study at their convenience. Also, given that there was minimal risk involved in this study, a waiver of informed consent documentation could be requested in the future, citing the poor response rates in this study as evidence that the study could not practicably be carried out without the waiver. Replicating the study with a larger sample would increase statistical power to detect differences across subgroups of adolescents and allow for findings to be confirmed using more conservative analyses.

Due to limitations of power, analyses were conducted on Hispanics as a group regardless of nation of origin. This is a limitation of the study insofar as there is much cultural heterogeneity among Hispanics (Marin & Marin, 1991, pp. 31-41; Sweeney, Robins, Ruberu, & Jones, 2005). As Malgady (1994) pointed out, though, it would be difficult to specify narrower subgroup differences that are cultural in nature and that are likely to be of consequence in the delivery of mental health services. Even if such differences were identified, the resources that would be needed to act in response to them are not likely to be forthcoming in the field of mental health. Thus, it would be wiser to search for and develop appropriate courses of action for dealing with the cultural commonalities among Hispanic nationalities, not their cultural diversities. A major strength of this study is that it is among the first to look at the relationship between ethnicity (Hispanic or non-Hispanic White) and the acceptability of treatments for youths. In addition, it is notable that this study sampled the population for whom the treatments of interest are intended: adolescents. This strength sets it apart from other studies in the treatment acceptability literature, which have typically used university undergraduates (Finn & Sladeczek, 2001). Direct evidence that the use of undergraduates can limit external validity comes from a study by Forehand and McMahon (1981), in which there were significant differences between mothers and university students on ratings of the acceptability and usefulness of a program for managing child noncompliance.

Another limitation of this study is its analog nature. Treatment descriptions were presented in written format, potentially limiting the extent to which results would apply in real-world settings, where clients have the opportunity to ask their providers questions

about treatments and providers have the opportunity to address their clients' concerns. There is some evidence to suggest, however, that analog and naturalistic ratings of acceptability are positively associated (Reimers et al., 1992b) and that beliefs and attitudes concerning treatments for depression are related to utilization (Jorm et al., 2000). Moreover, the analog approach to investigating treatment acceptability allowed for comparative judgments to be made, providing more information than ratings solicited in a real-world setting, where it is unlikely that clients would have the luxury of choosing from among seven different treatments.

In addition to the use of written treatment descriptions, another potential limitation was the use of written vignettes to represent depressed individuals. The advantage of using written vignettes, however, was that they allowed for greater control of the information conveyed and attended to by participants. Thus, participants were less likely to use information that is irrelevant to the research questions in forming judgments (McLaughlin, Bell, & Stringer, 2004). Furthermore, there is evidence that "paper people" studies produce results that are equivalent to those produced by behavioral observation studies or at worst, the effect sizes in paper people studies are greater (Cleveland, 1991; Murphy et al., 1986). For example, Bech, Haaber, and Joyce (1986) found that psychiatrists' judgments of the severity of illness in confederates enacting depressed clients were in agreement with judgments of severity made using paper profiles of the clients. At least two studies from the medical literature found agreement ($r > .90$) between doctors' judgments of real patients and corresponding paper patients (Kirwan, Bellamy, Condon, Buchanan, & Barnes, 1983; Kirwan, Chaput de Saintonge, Joyce, & Currey, 1983).

Summary

Despite the aforementioned limitations, this study showed adolescents clearly discriminate among treatments in formulating impressions of acceptability; that is, whether a treatment is appropriate to the problem, fair, reasonable, intrusive, and whether it concurs with popular notions about what treatment should be (Kazdin, 1980). The

results of this study support Kazdin's (1980, 2000) claim that two or more treatments can be effective and yet differ in the extent to which those who receive them consider them acceptable. Some treatments (e.g., pharmacotherapy) were rated low on acceptability, on average. Given the relationships between treatment acceptability and utilization (Bannon & McKay, 2005; Chavira et al., 2003; Kazdin, 2000), adherence/compliance (Reimers et al., 1992b), and even outcome (Reimers et al., 1992a), these findings underscore the need to address adolescents' perceptions of acceptability before entry into treatment and throughout treatment in order to achieve successful outcomes. These findings also support the notion that treatment utilization in this underserved population could be improved by providing adolescents with access to multiple interventions and considering their preferences (Asarnow et al., 2005).

Future studies should examine the acceptability of treatments to adolescents in clinic settings. According to Finney (1991), treatment acceptability is potentially interactive, with practitioners and consumers influencing the acceptability of treatment to each other. Studies in clinic settings would allow for a more in-depth investigation of the treatment acceptability that incorporates this conceptualization. Future studies should also investigate which aspects of the interventions (e.g., content; role of parents) adolescents consider most when forming an impression of a treatment as acceptable or unacceptable. Qualitative designs (e.g., Pemberton & Borrego, 2005) may be helpful in identifying treatment characteristics appropriate for quantitative study. Finally, continued research on participant/client variables that might influence acceptability is recommended. This study provided some evidence that ethnicity, acculturation status, and perceived causes of depression are related to treatment acceptability. Other participant variables that could be explored in relation to treatment acceptability include previously acquired knowledge about treatment, perceived stigma associated with depression and its treatment, and the perceived credibility of the professional providing information about treatment. Information that would be gained from such research could inform the development of pretreatment interventions, delivered in schools and clinics, to increase acceptability.

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Appendices

Appendix A: Protocol for the Assessment of Suicidality and Self-Harm

***** Protocol for the Assessment of Suicidality and Self-harm *****

Say to the participant:

I want to talk to you a bit more about what you said about trying to kill/harm yourself. Just to be sure, let me ask...

1a. **Have you ever tried to kill or harm yourself?**

YES Record response and complete questions 1b-1e.

NO Record response and skip to question 2a.

Youth Response:

1b. **What happened?** (i.e., method of suicide / self-injury)

Youth Response:

1c. **Where did this take place?**

Youth Response:

1d. **What lead up to this?** (i.e., why did the participant attempt suicide or self-harm)

Youth Response:

1e. **When did this occur?**

Youth Response:

Appendix A: (Continued)

2a. **I really appreciate your sharing this information with me. Have you thought about killing or harming yourself in the past two weeks?**

- YES Record response and complete question 2b.
- NO Record response.

END PROTOCOL. FOLLOW SCRIPT FOR NON-MANDATORY REPORTING.

Youth Response:

2b. **Are you currently considering killing or harming yourself?**

- YES Record response and continue to question 3a.
- NO Record response and skip to question 3b.

Youth Response:

3a. **Do you have a plan for killing or harming yourself?**

- YES Record response and skip to question 3c.
- NO Record response and skip to item 4.

Youth Response:

3b. **When you were considering killing or harming yourself within the past two weeks, did you have a plan of how to do it?**

- YES Record response and proceed to 3c.
- NO Record response and skip to item 4.

Youth Response:

Appendix A: (Continued)

- 3c. **What was/is your plan?** (i.e., how, when, and where the youth planned/plans to kill or harm themselves).

Youth Response:

4. **FOLLOW SCRIPT FOR MANDATORY REPORTING.**

Appendix A: (Continued)

Script for Mandatory Reporting

Say to youth:

Your thoughts about killing/harming yourself concern me. It sounds like something to take seriously. Remember -- when we first talked to you about the study, we told you that the law requires us to break confidentiality if we are concerned about your safety. I want to be sure -- do you understand confidentiality?

If necessary, clarify any misunderstanding on confidentiality.

I need to let your parents know that you have thought about hurting yourself, so that they can help keep you safe. I must tell them because I am legally responsible for watching out for your safety. After I tell them, I'll also need to follow up with one of the doctors that work with us so they can also make sure you are safe. One of the doctors may call you back to talk with you and your parents.

How do you think your parents will react?

If youth refuses to let you speak with the parent, say:

I will have to call one of the doctors that I work with and they will be required to try and contact your parents. If they are unable to contact your parents, they will be required to call 911 and have a law enforcement officer come to your house to ensure your safety. Will you please reconsider letting me talk to your parents now?

Then, talk to the parents on the phone, and say something like...

Some of the information your daughter provided in the interview suggested that she is thinking about harming herself. I am legally required to report this information to you and I feel that it is important for me to make sure you are aware of this. One of our clinicians may be calling to follow up with you. Considering that your daughter is currently thinking about harming herself, I recommend that you closely supervise her and that you take her as soon as possible to a mental health professional. Would you like for me to give you contact information for some mental health professionals in your area?

Provide parent with contact information from list of providers.

It is important that I stress to you that what I have done is not a full psychological evaluation. It is just one interview, but it is important for you to have a more complete follow-up to determine if your daughter needs some sort of intervention targeting suicidality immediately.

Appendix A: (Continued)

Script for Non-Mandatory Reporting

Say to youth:

From what you've told me, it seems like you have been feeling _____ (e.g., sad a lot lately). Many teens feel this way when they are going through tough times. Letting people, like your parents, know how you're feeling, rather than keeping it to yourself, is important. Other teens have these feelings and there are trained people who understand teens and can help them deal with these feelings. I would like to let your parents know how you've been feeling so they can help you decide if you'd like to see a trained person to help you feel better.

If youth says YES, say to parents:

It seems like your daughter has been feeling _____ (e.g., sad for some time). She gave me permission to let you know how she is feeling. I did not do a formal assessment, but I recommend that you speak to a trained mental health professional for follow-up. I have some information about places you can contact to get help for her.

Offer the parent contact information for service providers in his/her area.

If youth says NO, say to youth:

I hope that you will consider talking with your parents or perhaps a mental health professional about how you're feeling. Talking to a professional can be very helpful.

Appendix A: (Continued)

Step 2: Consultant Assessment

After gathering preliminary information from the RA, consider whether it is necessary to evaluate the situation further, for example:

- 1) If it is ambiguous how suicidal the adolescent is and the parents have not yet been informed
- 2) If the parents have been informed but the situation is ambiguous and the parents may benefit from having more information
- 3) If the parents were informed but do not appear to be taking the situation seriously and thus should have the added weight of talking to a consultant/doctor

When in doubt, contact another consultant:

	Dr. Totura	Dr. Goodwin	Dr. Karver	Dr. Phares
Home	(xxx) xxx-xxxx	(xxx) xxx-xxxx	(xxx) xxx-xxxx	(xxx) xxx-xxxx
Cell	(xxx) xxx-xxxx	(xxx) xxx-xxxx	(xxx) xxx-xxxx	(xxx) xxx-xxxx
Office	(xxx) xxx-xxxx	(xxx) xxx-xxxx	(xxx) xxx-xxxx	(xxx) xxx-xxxx

Consultant Assessment

Recommendations:

Did you contact another consultant? Yes No

If yes, who was contacted? Christine Totura
 Maria dePerczel Goodwin
 Marc Karver
 Vicky Phares

Document your discussion with the consultant:

Appendix A: (Continued)

Step 3: Follow up with Adolescent, Parents, and Authorities (if necessary) and Document

If appropriate after careful consideration of the information provided by the RA and in consultation with other suicide consultants, you will call the adolescent and follow the attached protocol. Document all consultations and conversations conducted.

Appendix A: (Continued)

Current stressors (family, peer, school)

Current mood state

Availability of means to follow through with act

Social supports

Assess overall mental status (oriented – who, when, where, not confused, coherent, adequate judgment)

Appendix A: (Continued)

Problem-solve alternatives to hurting self. Help participant to generate coping strategies to deal with suicide-provoking situations in the interim. For example:

- distracting activities
- doing something for others
- avoiding stressful situations
- distract with pleasant sensations (any of 5 senses)
- positive imagery
- prayer
- any relaxation strategies known

Indicate strategies discussed and adolescent's attitude toward each below.

Ask subject to **contract for safety** over next 24 hours if there is more than minimal risk. Place a check mark in the appropriate box and, if possible, record any details about each task in the spaces below.

If she **can agree** to contract for safety:

With adolescent:

- Help them develop a concrete plan in case of crisis (e.g., identify social supports to contact, keep emergency telephone numbers by phone).

- If she is in treatment: Contract with them to talk with the therapist directly as soon as possible (i.e. the next morning).

Appendix A: (Continued)

- If she is not in treatment: Tell them parents will be encouraged to set up an emergency appointment by the following day.

With the Parent:

- Review crisis plan (including emergency telephone numbers).

- Review limiting access to means (e.g., pills, firearms).

- Review treatment plan (i.e., contacting therapist or scheduling and going to an emergency appointment).

Appendix A: (Continued)

If she can't contract for safety: Attempt to speak with parents

- Review crisis plan (including emergency telephone numbers).

- Review limiting access to means (e.g., pills, firearms)

- Tell parent to supervise the adolescent and to make an appointment with the therapist (if in treatment already) or for an emergency assessment as soon as possible.

If at any point during the interview, the adolescent seems disoriented, hangs up or refuses to put the parents on the phone, immediately contact rescue at 911.

Applicable Not Applicable

Appendix A: (Continued)

If the parents refuse to talk or follow through with a crisis plan, they should be warned that this would trigger a duty to report call to New Jersey’s Division of Youth and Family Services (DYFS). If they continue to refuse, call DYFS and report this as a “medical neglect” situation.

1-877-NJ ABUSE (652-2873)

<http://www.state.nj.us/dcf/abuse/how/>

Applicable Not Applicable

Appendix B: Case Descriptions

Mild Depression

Maria is a high school student. Lately, she has been feeling somewhat sad or depressed. She feels more tired than usual, like she has little energy, and she is not as interested in activities that used to interest her very much. She just doesn't enjoy them as much as she once did. Maria has been somewhat irritable and short-tempered too, and has had some difficulty concentrating. She has been having a bit of trouble falling asleep and sometimes wakes up in the middle of the night. Every now and then, Maria doesn't really feel like eating. Sometimes she blames herself for things that most people would not feel guilty about. Maria has had brief thoughts about death or dying but has no plan to kill herself.

Severe Depression

Maria is a high school student. Lately, she has been feeling extremely sad or depressed. She feels a lot more tired than usual, like she hardly has any energy, and she has lost almost all interest in activities that interested her before. She just doesn't enjoy them anymore. Maria has been extremely irritable and short-tempered too, and has had a lot of difficulty concentrating. She has been having a lot of trouble falling asleep and often wakes up in the middle of the night. Also, Maria doesn't ever really feel like eating anymore. Oftentimes she blames herself for things that most people would not feel guilty about. Maria thinks about death and dying a lot and has even thought about how she could kill herself if she really wanted to.

Appendix B: (Continued)

DSM-IV Symptoms as Described in the Mild and Severe Case Descriptions.

Symptom	Mild Depression	Severe Depression
depressed mood	somewhat sad or depressed	extremely sad or depressed
fatigue	more tired than usual, like she has little energy	a lot more tired than usual, like she hardly has any energy
anhedonia	not as interested in activities that used to interest her very much; doesn't enjoy them as much as she once did	has lost almost all interest in activities that interested her before; doesn't enjoy them anymore
irritability	somewhat irritable and short-tempered	extremely irritable and short-tempered
difficulty concentrating	has had some difficulty concentrating	has had a lot of difficulty concentrating
insomnia	has been having a bit of trouble falling asleep and sometimes wakes up in the middle of the night	has been having a lot of trouble falling asleep and often wakes up in the middle of the night
loss of appetite	every now and then, Maria doesn't really feel like eating	Maria doesn't ever really feel like eating anymore
guilt	sometimes she blames herself for things that most people would not feel guilty about	oftentimes she blames herself for things that most people would not feel guilty about
suicidal ideation	has had brief thoughts about death or dying but has no plan to kill herself	thinks about death and dying a lot and has even thought about how she could kill herself if she really wanted to

Appendix C: Treatment Descriptions

Cognitive-Behavioral Therapy

With this therapy, the teen meets individually with a therapist on a regular basis. The therapy has several parts. The therapist helps the teen to plan pleasant activities. The therapist teaches the teen to replace negative thoughts about herself, others, and the world with more realistic thoughts that make her feel better. The therapist teaches the teen skills for making friends, communicating, and solving problems. The therapist teaches the teen to relax by being aware of tension in her body and releasing the tension. The teen is given homework so that she can practice what she learns in therapy.

Interpersonal Therapy

With this therapy, the teen meets with a therapist on a regular basis. Parents may play a part in treatment but don't have to. Therapy focuses on the teen's relationships with important people in her life. The teen and her therapist choose one or two relationship problems to work on. For example, disagreements with parents, conflicts with peers, the loss of a meaningful relationship, problems with communication, or coping with changes in the family. The therapist helps the teen to express her own feelings. The therapist also teaches her new ways of coping with her relationships.

Family Therapy

With this therapy, the whole family meets with a therapist on a regular basis. All family members are thought to play a role in the teen's problems. They all work towards changing the problem. The focus of family therapy is on the way that family members get along with each other. Relationships that lead to conflict are changed. The therapist teaches the family skills for communicating better and for working together to solve problems. Family members learn to talk about problems that keep the teen from trusting her parents and using them for emotional support.

Pharmacotherapy

With this therapy, the teen goes to see a doctor to get a prescription for medication. This therapy focuses on the chemicals in the brain that affect a person's feelings as well as her sleeping and eating. It involves using medication(s) to change those chemicals. The teen usually checks in with that doctor to let the doctor know how the medication is working. A doctor might start the person on a small amount of medication and then increase the dosage. The doctor might also choose different medications if needed. Medications have different side effects for different people.