The Efficacy of Cognitive–Behavioral and Interpersonal Treatments for Depression in Puerto Rican Adolescents

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This study evaluated the efficacy of cognitive–behavioral therapy (CBT) and interpersonal psychotherapy (IPT) with depressed adolescents in Puerto Rico. Seventy-one adolescents meeting Diagnostic and Statistical Manual of Mental Disorders (3rd ed., rev.; American Psychiatric Association, 1987) criteria for a diagnosis of depression were randomly assigned to 1 of 3 conditions: CBT, IPT, or wait list (WL). Pretreatment, posttreatment, and 3-month follow-up measures of depression symptoms, self-esteem, social adjustment, family emotional involvement and criticism, and behavioral problems were completed. Results suggest that IPT and CBT significantly reduced depressive symptoms when compared with the WL condition. IPT was superior to the WL condition in increasing self-esteem and social adaptation.

Clinical significance tests suggested that 82% of adolescents in IPT and 59% of those in CBT were functional after treatment. The results suggest that both IPT and CBT are efficacious treatments for depressed Puerto Rican adolescents. IPT’s impact in other levels of outcome is discussed in terms of its consonance with Puerto Rican cultural values.

The field of psychotherapy research is now at a stage where the efficacy (Bergin & Garfield, 1986; Beutler & Crago, 1991) and effectiveness (Seligman, 1996) of treatments have been demonstrated for a sizable number of adult, some adolescent (Kaslow & Thompson, 1998), and a few childhood disorders (Hibbs & Jensen, 1996). However, the question of efficacy remains unanswered for ethnic minorities, a significant sector of our contemporary pluralistic society. Most treatment–outcome research does not include ethnic and language minorities as part of their sample (Bernal, Bonilla, Padilla, & Pérez-Prado, 1998; Miranda, 1996). In fact, the external validity for current treatment–outcome research is simply unknown with respect to the application of so-called empirically supported or effective interventions with minorities and other nonmainstream groups.

Although Latinos in the United States are one of the largest minority groups, our review of the treatment–outcome research literature showed that few studies include minority participants (Mays & Albee, 1992) in their design and even fewer studies include Latinos (Bernal, 1993; Miranda, Azocar, Organista, Muñoz, & Lieberman, 1996; Navarro, 1993). Recently, a special section of the Journal of Consulting and Clinical Psychology was dedicated to the issues of recruitment and retention of minorities in psychotherapy research (Miranda, 1996), offering strategies specific to Native American (Norton & Manson, 1996), African American (Thompson, Neighbors, Munday, & Jackson, 1996), and Latino populations (Miranda et al., 1996). Indeed, the conclusion offered by these authors is that ethnic minorities can be recruited and maintained in treatment–outcome research. However, to the extent that minorities are systematically excluded from treatment research, we run the risk of constructing an ethnocentric psychological science: Most treatment–outcome research can only be generalized to White, middle-class, English-speaking women who are seeking therapy.

There have been important clinical advances in the consideration of diversity, cultural, and ethnic minority issues for a wide range of psychotherapies. The role of culture and ethnicity is an important consideration of clinicians from different theoretical positions (Betancourt & López, 1993; Mays & Albee, 1992; McGoldrick, Pearce, & Giordano, 1982; Tharp, 1991). A variety of cultural models for individual psychotherapy (Comas-Díaz & Griffith, 1988; Jones & Korchin, 1982) have been proposed, and there is a growing literature on ethnic and cultural considerations for ethnic minority groups (Canino & Spurlock, 1994; Casas & Pyluk, 1995; Helms, 1995; LaFromboise, 1988; Marin & Marín, 1991; Ponterotto, Casas, Suzuki, & Alexander, 1995; Rogler, Malgady, Costantino, & Bumenthal, 1987). Other writers have developed culturally sensitive frameworks about cultural and minority issues in conducting psychotherapy (López et al., 1989) and psychotherapy research (Bernal, Bonilla, & Bellido, 1995). Treatment–outcome research has not kept up with these developments because most of these studies with adults and children are not generalizable to ethnic minority populations. In fact, treatment–outcome research with minority populations is nearly absent.
Clearly, there is a need to adapt, develop, and test treatment approaches that show empirical soundness with minority populations and that hold promise as preventive interventions. Thus, in an effort to respond to the question of the efficacy of treatments with ethnic minorities, we have focused our attention on the efficacy of two therapeutic approaches for the treatment of Puerto Rican adolescent depression.

The literature on the treatment of depression in children and adolescents is limited (Kaslowski & Thompson, 1998; Roselló & Bernal, 1996). Two comprehensive literature reviews concluded that there are few well-controlled investigations on the therapeutic efficacy of various treatment modalities for childhood depression, particularly for psychological and traditional psychotherapy approaches (Speier, Sherak, Hirsch, & Cantwell, 1985; Stark, Rouse & Kurowski, 1994). The few studies and reviews available show that cognitive–behavioral models seem to be effective in the treatment of depressed youth (Carey, 1993; Fine, Forth, Giblet, & Haley, 1991; Lewinsohn, Clarke, Hops, & Andrews, 1990; Reylords & Coats, 1986; Schrot, 1992; Stark, Sweerer, Kurowski, Sommer & Bowen, 1996; Werry & Wollersheim, 1989). Interpersonal treatments, much less studied, appear to be promising interventions (Moreau, Mufson, Weissman, & Klerman, 1991; Mufson, Moreau, Weissman, & Klerman, 1993; Mufson, Moreau, Weissman, Wickramaratne, Martin, & Samotlov, 1994; Robbins, Alessi, & Colber, 1989).

Interpersonal approaches have not received as much attention in research as the cognitive therapies. Interpersonal psychotherapy has been adapted for adolescents and has been tested in open clinical trials, revealing positive effects (Moreau et al., 1991). Mufson et al. (1994) tested the acceptability and efficacy of interpersonal psychotherapy for 14 depressed adolescents. They reported a significant decrease in adolescents' depressive symptomatology, lower symptoms of psychological and physical distress, and improvement in functioning. Robbins et al. (1989) provided an interpersonal psychotherapy to 36 hospitalized depressed adolescents. Of these, 47% evidenced a reduction in depressive symptoms. The rest, who did not show improvement, were provided with further therapy in addition to antidepressive medication. From this group, 92% improved.

Given that cognitive–behavioral and interpersonal treatments are supported by the available literature with depressed youth, and that these modalities have been extensively studied with adult populations (Beckman, 1990; Elkin et al., 1989), we focused our efforts on adapting and testing the efficacy of these two types of treatments for adolescent depression. We adapted a cognitive–behavioral and an interpersonal treatment for depressed Puerto Rican adolescents, considering cultural, developmental, and socioeconomic factors and using a framework for ecological validity and culturally sensitive criteria (Bernal et al., 1995). The framework considers eight culturally sensitive elements of an intervention (i.e., language, persons, metaphors, content, concepts, goals, methods, and context). The process of adaptation has been described elsewhere (Roselló & Bernal, 1996), and there are published preliminary case studies (Roselló, 1993). The purpose of the present study was to evaluate the efficacy of these two treatments—cognitive–behavioral treatment (CBT) and interpersonal psychotherapy treatment (IPT)—compared with each other and with a wait-list control. We hypothesized that both treatments would be effective in reducing depressive symptoms and improving self-esteem, social adaptation, and behavior and family functioning in comparison with the wait-list control.

Method

Design

For recruitment, members of the research team visited schools in the area and presented the project to principals and social workers. Orientation about depression and its symptoms, as well as about referral procedures, was offered.

A pretreatment, posttreatment, and follow-up design with three groups was used. Participants were randomly assigned to one of three conditions: CBT, IPT, or a wait-list control group. Adolescents and their parents were evaluated in interviews and tested at intake, posttreatment, and at a 3-month follow-up.

Participants

This study was conducted at the Centro Universitario de Servicios y Estudios Psicológicos (University Center for Psychological Services and Research) at the University of Puerto Rico. All adolescents in the study were referred to the clinic by local schools.

We performed pretreatment assessments to evaluate the inclusion (Diagnostic and Statistical Manual of Mental Disorders [3rd ed., rev.]; American Psychiatric Association, 1987] diagnosis for major depressive disorder, dysthymia, or both; 13 to 18 years of age) and exclusion criteria (serious imminent suicidal risk; psychotic features, bipolar disorders, alcoholism, conduct disorder, or drug use disorder; organic brain syndrome; marked hyperaggression; need for immediate treatment or hospitalization; currently receiving psychotropic medication or psychotherapy; and legal involvement). One hundred sixty-one adolescents were referred and evaluated. Of these, 71 met the criteria for the study and 90 referrals did not meet criteria. The reasons for exclusion were as follows: 30% met exclusion criteria, 21% were not interested in participating, 18% did not meet inclusion criteria, 14% did not show up for the initial appointment, and 3% moved out of Puerto Rico. Participants were 71 adolescents ranging in age from 13 to 17 years (M = 14.70, SD = 1.40). The sample was 54% female and 46% male. All participants were in school from 5th to 12th grades.

Doctoral candidates in clinical psychology evaluated participants. A PhD clinical psychologist supervised all evaluations. To assess clinical depression at pretreatment, the clinical psychologists interviewed participants using the depression section of Diagnostic Interview Schedule for Children (Bravo, Woodbury-Farina, Canino, & Rubio-Stipec, 1993; Ribera et al., 1996). Most of the participants met the criteria for double depression: 21 in IPT, 16 in CBT, and 17 in the wait-list control group. Fewer met the criteria for major depression only: 2 in IPT, 9 in CBT, and 6 in the wait-list control group. None met the criteria for dysthymia only. Other comorbid disorders were not assessed.

Procedure

After the administration of pretreatment evaluations, parental and adolescent consent, and subsequent random assignment of participants to experimental groups, parents of all participants were again contacted. Parents and adolescents were provided with a general description of the focus of treatment; length, number, and scheduling of treatment sessions; and posttreatment and 3-month follow-up evaluation procedures. Parents and adolescents of the wait-list control group were told that they were being placed on a wait list and would receive treatment in 12 weeks. Payments were made at posttreatment ($10 for adolescents, $10 for parents) and at 3-month follow-up ($15 for adolescents, $10 for parents).
Treatment Conditions

The two treatment conditions consisted of 12 one-hour individual therapy sessions held once a week over a period of 12 weeks.

CBT. The CBT was based on the cognitive-behavioral model developed by Muñoz and Miranda (1986). This model is a group intervention for depressed adults and has been used with an adult Hispanic population in the San Francisco area (Muñoz et al., 1995). The model was adapted for adolescents and modified to an individual treatment format. The CBT is based on concepts of cognitive-behavioral therapy (Lewinoohn, Antonucci, Steinmetz, & Teri, 1984; Lewinoohn & Libet, 1972), cognitive therapy (Beck, Rush, Shaw, & Emery, 1979), and rational-emotive therapy (Ellis, 1962; Ellis & Bernard, 1983). CBT is based on the premise that thoughts, actions, and feelings are closely related. To work with depressive feelings, this model attempts to identify thoughts and actions that influence these feelings. The primary goals of this therapy are to diminish depressive feelings, shorten the time that the person feels depressed, teach alternative ways of preventing depression, and increase the person’s sense of control over his or her life. CBT is a short-term intervention, which consists of 12 weekly sessions. The sessions are divided into three major themes: how thoughts influence mood (Sessions 1–4), how daily activities influence mood (Sessions 5–8), and how interactions with other people affect mood (Sessions 9–12).

After explaining the rationale of CBT and the basic rules of therapy (scheduling, confidentiality, etc.), the goals of CBT are discussed with the adolescent. The adolescent is asked about what is troubling him or her, and the therapist explains that depression can be treated by alternative ways to control feelings. The specific goals of treatment are focused on reducing feelings of depression, shortening the periods of depression, and developing more control over one’s life. The definition of depression is reviewed, and the therapist relates it to the adolescent’s feelings and experiences.

Sessions 1–4 target cognition and introduce exercises to identify dysfunctional attitudes and how to change them. During Session 1, considerable time is dedicated to the rationale of CBT and basic expectations of therapy (scheduling, confidentiality, etc.) and the goals of CBT are discussed. After defining the goals of treatment, the definition of depression is reviewed and related to the adolescent’s feelings and experience. By the end of Session 1, the Daily Mood Scale is introduced and the adolescent is asked to fill it out for the next 7 days. The focus treatment for the next three sessions is on cognition. Depressed thinking is defined as inflexible and judgmental, and the adolescent is taught to identify different types of thinking (constructive vs. destructive, necessary vs. unnecessary, positive vs. negative) using his or her own examples, experiences, and definitions; examples of errors in thinking (e.g., categorical, generalization, and mental filters jumping to conclusions) are discussed. By the third session, the A-B-C-D cognitive technique is introduced and practiced: “A” is the activating event, “B” is the belief or thought about the event, “C” is the consequence, and “D” is the way to dispute or talk back to the thought.

In Sessions 5–8, the adolescent is introduced to the concept that the least pleasant activities people do, the more depressed they feel and that the vicious cycle of depression and unpleasant activities can be broken with activities that the adolescent finds pleasant, rewarding, or inspiring. The daily mood graph and the pleasant activities list are introduced as resources. The diversity of possibilities related to pleasant activities is discussed in detail—for example, that pleasant activities vary for different people, that these need not be expensive or entail spending money, that they help in developing a sense of well-being, that pleasant activities help in maintaining a good balance between obligations and pleasures, and that these activities can be planned. The adolescent is taught that an important aspect of pleasant activities is creating a plan to overcome depression that entices setting reasonable goals, focusing on positive actions, and planning rewards. Examples are discussed, and the adolescent is helped in developing such a plan.

Sessions 9–12 are centered on how contacts with people affect mood. The question of whether depression causes people to be less sociable or vice versa is discussed, and the social support of the adolescent—including family, friends, teachers, peers, and acquaintances—is introduced and reviewed. If the support system is weak, steps are taken to strengthen or enlarge it. If the system is found to be adequate, the focus is on maintaining its strength. The notion here is that the stronger the system of support, the easier it will be to face difficult situations and overcome depression. The exercise of “places and activities where one can meet others” is introduced, and strategies to keep the support system healthy (phone or personal contacts, sharing activities with others, etc.) is discussed. Also, ways to strengthen family relationships are discussed, and if family members are a source of conflict, the therapist evaluates the possibility of inviting one or more family members to help improve or strengthen family relations. Subsequently, the differences between assertive, passive, and aggressive behaviors are defined and the therapist teaches the adolescent to engage in more assertive behaviors. Imagery is used, beginning with a photograph of a scene, then imagining the action as in a movie, and later saying something in an assertive way with an imagined consequence or response. Throughout all the sessions, the daily mood graph, weekly activities schedule, and the practice of thinking and behaving differently with others is recorded. In the last or closing session, the therapist and adolescent review key concepts throughout the last 11 sessions, focusing on specific ways that thinking, pleasant activities, and contacts with people affect mood.

IPT. IPT is based on the original model developed by Klerman, Weissman, Rounsaville, and Chevron (1984). This treatment was first developed for depressed adults. Mufson (1991) adapted IPT to an adolescent population in the states. Our adaptation of IPT is based on the original IPT manual for adults (Klerman et al., 1984). IPT is based on the notion that depression may be explained by problems in interpersonal relationships. These interpersonal conflicts are thought to be associated with symptoms of depression and are the focus of this intervention. As the quality of the person’s current interpersonal relationships improve, IPT is presumed to facilitate recovery by ameliorating depressive symptoms and by helping in the development of more satisfying and healthy relationships. IPT is focused on current problems, important interpersonal relationships, an evaluation of the present situation, and solving the problematic situation. IPT is a short-term psychotherapy adapted to 12 weekly sessions divided into approximately three groups of 4 sessions each. Initial sessions (1 to 4) aim to obtain information about depression and its development, explain what IPT is, evaluate interpersonal relationships, identify main problems, establish a treatment plan, and explain what is expected of the patient in therapy. The intermediate sessions (5 to 8) are aimed at helping the patient work on the selected interpersonal problem, monitor depressive feelings, facilitate a positive therapeutic relationship, and prevent the interference of parents in the treatment of their children. The last 4 sessions (9 to 12) aim to discuss termination, acknowledge feelings related to separation, review the course of treatment and symptoms, and recognize the patient’s interpersonal competence.

One of the central aspects of IPT is the identification of a primary interpersonal problem area. These problem areas are not mutually exclusive and may overlap. The therapist may use certain precipitating events to define with the patient the primary problem area. Primary problem areas targeted by IPT are (a) grief, (b) interpersonal disputes, (c) role transitions, and (d) interpersonal deficits. The general goals and strategies are described within each of these primary problem areas.

If depression is associated with grief reactions as a result of loss or separation from a loved one, this area will be the focus of treatment. IPT uses several strategies for grief reactions that include the eliciting of feelings, nonjudgmental exploration, reassurance, reconstruction of the adolescent’s relationship with last person, development of awareness, and behavior change.

Interpersonal disputes are nonreciprocal expectations about the relationship between the adolescent and another person. If these interpersonal disputes are recurrent, ongoing, seem to increase in frequency, and are
related to the adolescent’s depression, such disputes will be the focus of treatment. The goals are to identify the interpersonal dispute, develop a plan of action, encourage better patterns of communication, and evaluate expectations. The IPT therapist has a variety of strategies, including analysis and exploration of role disputes; discussion of how such disputes are related to depression; and the exploration of expectations, values, options, and resources.

Role transitions or life changes, such as the divorce of parents, birth of siblings, change in school, unemployment, immigration, and physical changes, may be experienced as losses and linked to depression. Recent life events and changes may be viewed as related to depression. The goal of IPT is to enable the adolescent to perceive the new role as positive and as an opportunity to grow and to restore self-esteem by supporting competence to deal with the new situation and demands. IPT therapists use several strategies that include an examination of positive and negative aspects of old and new role, a realistic evaluation of what was lost, expression of affect related to change, support for the development of new support systems, and encouragement for acquiring new social skills for the new role.

Interpersonal deficits are evident when there is a history of poor interpersonal relationships. These deficits may involve the absence of lasting, close, and satisfying relationships. IPT identifies three types of deficits (socially isolated, socially unfulfilled, and chronically depressed). The goal of treatment is to reduce social isolation, and the most common strategies entail the exploration of past relationships and support in developing new relationships.

The structure of IPT is relatively flexible and does not necessarily follow a session-by-session protocol. During the first four sessions, a history of the depression is obtained and the nature and objectives of IPT are explained. Perhaps two of the most important tasks for the therapist during these sessions are fostering the therapy alliance with the patient and providing a clinical conceptualization of the primary interpersonal problem area. Subsequently, the therapist establishes the treatment goals. The next four sessions are focused on problem solving for each particular case (e.g., grief, role dispute, role transition, or interpersonal deficit). The last four sessions of treatment (or the termination phase) are centered on supporting a sense of competence to solve problems on one’s own and the meaning of giving up a relationship, such as the one in therapy. The assumption here is that addressing these issues will likely prevent the reappearance of depressive symptoms after termination. Also, the course of treatment is reviewed and the adolescent’s competencies in solving interpersonal difficulties are acknowledged.

Parent Involvement

Parents were interviewed in the initial assessment. They also participated in the preassessment, postassessment, and follow-up assessment using the parent version of the Child Behavior Checklist (CBCL–P). Familism is one of the strongest cultural values of Puerto Ricans and Hispanics (Sabogal, Marin, & Otero-Sabogal, 1987). It refers to a strong identification and attachment to the family group with strong feelings of solidarity, loyalty, and reciprocity. The family is the most important unit for meeting psychological needs and enhancing the identity and emotional security of its members. Even in the midst of poverty, discrimination, racism, and isolation, minority families survive and handle problems (Smith, Burlew, Mosley, & Whitney, 1978). Familism has been related to healthy psychological adjustment and mental health by protecting against stressors and providing a natural support system (Mannino & Shore, 1976).

Therefore, issues of family obligation and support related to self-esteem must be evaluated. The therapist has to be sensitive to this value and must try to strengthen its positive aspects. Because Puerto Rican adolescents depend on their parents for solutions, alternatives, and even attendance of therapy sessions, parents were interviewed before and after the therapy in a climate of utmost respect. If needed, therapists were allowed to discuss issues related to treatment with the parents individually or together with the adolescent. Confidentiality with the adolescent was guaranteed and explained to both parents and adolescents.

Because Puerto Rican parents often adopt cultural values of absolute parental authority and respect, the period of dependence on parents is somewhat longer in the Puerto Rican culture. Therapists need to be aware of these values and address such issues in ancillary meetings with parents, if necessary.

Treatment Protocol

Detailed manuals were prepared for both therapy conditions to ensure protocol compliance and aid in replication. The objectives, content, and techniques of both CBT and IPT are described elsewhere (Rosselló & Bernal, 1996). The treatment manuals for both conditions are available from Jeannette Rosselló.

Therapists and Treatment Integrity

Therapists were all advanced graduate clinical psychology students with an average of 3 years of clinical experience. They were trained and supervised weekly by two PhD clinical psychologists experienced in each of the therapy approaches.

To ensure treatment integrity, (a) detailed treatment manuals were used for both CBT and IPT; (b) for both treatments, each session or group of sessions’ content was detailed in a checklist of therapist actions; (c) therapists received training in one of the treatment model to which they were assigned; and (d) weekly supervision meetings were held separately for each CBT and IPT team in which sessions were reviewed and planned using the manual’s indications. As a manipulation check, all sessions were videotaped and evaluated by an independent coder (who was trained in each of the treatment models) using an integrity checklist. These checklists were constructed from the treatment manuals. For CBT, a checklist was prepared for each of the 12 sessions, which considered the objectives, tasks, and methods that were supposed to be accomplished in each particular session. For IPT, one checklist was designed for the initial phase (Sessions 1–4) and for the middle and final phases (Sessions 5–12). A PhD clinical psychologist answered any questions in the coding of items done by supervised coders. All therapy sessions were videotaped and rated for therapy fidelity, which revealed a compliance rate of 85% for IPT therapists and a compliance rate of 91% for CBT therapists.

Outcome Measures

Some of the methodological issues in prior research concern the measurement of multiple levels of outcome (Stark, 1990). The battery of instruments was constructed to obtain measures of dysfunction in different domains: symptoms of depression, self-esteem, social adjustment, family functioning, and behavioral problems.

Treatment efficacy was evaluated by administering the following measures.

Children’s Depression Inventory (CDI). The CDI (Kovacs, 1983, 1992) is a 27-item self-rated symptom-oriented scale suitable for school-age children and adolescents. The CDI quantifies a wide range of depressive symptoms, including disturbances in mood and capacity to enjoy activities, vegetative functions, self-evaluations, and interpersonal behavior. The 27 items of the CDI offer three choices. Item choices are keyed from 0 to 2 in the direction of increasing symptom severity, with scores ranging from 0 to 54. The participant is instructed to select the sentence for each item that best describes him- or herself for the past 2 weeks. Kovacs (1983, 1992) found a reliability coefficient of .86 for the scale and has found it to be a valid measure when compared with other instruments. This instrument was selected because it provides a self-report measure that is able to differentiate mild and severe depression (cutoff values of 12 and 19,
respectively). Also, the CDI has been widely used by many researchers in the area. We have used the CDI with different samples of Puerto Rican children and adolescents. Jeannette Rosselló translated into Spanish and culturally adapted the CDI, considering semantic, content, technical, and conceptual equivalence to the original instrument (Flaherty, 1987). Our data with the CDI with different Puerto Rican samples suggest that it is valid (Bernal, Rosselló, & Martínez, 1997) and internally consistent (Rosselló, Guisasola, Rałat, Martínez, & Nieves, 1992), with alphas above .83. For the present study, the CDI was used to screen participants as well as to evaluate outcome.

**Piers-Harris Children’s Self-Concept Scale (PHSCS).** The PHSCS (Piers, 1972; Piers & Harris, 1984) consists of 79 items, which are answered with a “yes” or “no” response. Items follow the pattern developed by Jersild (1952), in which the student is asked to answer according to what he or she likes or dislikes about him- or herself. Each item can be classified in six groups of basic factors that reflect the student’s self-concept, behavior, intellectual and school status, physical appearance and attributes, anxiety, popularity, happiness, and satisfaction. The general score offers an index of self-concept. The reliability coefficient has been reported to be .94. This instrument was translated and adapted for the present study, taking into consideration semantic, content, and technical equivalence to the original version. The internal consistency in a Puerto Rican sample was found to be high (α = .94; Ramos, 1984). Because self-concept is such an important feature in depression, this instrument was used as another index of treatment outcome.

**Social Adjustment Scale for Children and Adolescents (SASCA).** The SASCA (Beiser, 1990) is a self-administered instrument developed for a study with North and South American children. The scale was adapted and translated into Spanish by the Institute of Behavioral Research of the Medical Sciences Campus, University of Puerto Rico. Its objective is to measure the level of social adjustment by taking into account interpersonal and school functioning. It consists of 22 items that describe personal qualities and daily life activities. Each item is evaluated according to its frequency on a 3-point scale (ranging from 0 to 2). Bravo et al. (1993) reported acceptable reliability coefficients when used with Puerto Rican children and adolescents. A high internal consistency (.99) was obtained for the SASCA in the present study.

**Family Emotional Involvement and Criticism Scale (FEICS).** The FEICS (Shields, Franks, Harp, McDaniel, & Campbell, 1992) is a self-administered instrument consisting of 14 items, which are answered on a scale ranging from 1 to 5. The FEICS measures how one family member perceives the emotional expression of the entire family. Items are divided into two subscales: Intensity of Emotional Involvement and Perceived Criticism. Shields et al. have reported adequate construct validity (with the Family Adaptability and Cohesion Scales, another family instrument) and criteria validity. They have also established a reliability index of .82 for the Perceived Criticism subscale and .74 for the Intensity of Emotional Involvement subscale. With a Puerto Rican adolescent sample, Martínez (1994) reported a reliability index of .71 for the Perceived Criticism subscale and .54 for the Intensity of Emotional Involvement subscale. The FEICS demonstrated an acceptable degree of internal consistency with this sample of Puerto Rican adolescents: .71 for the Perceived Criticism subscale and .54 for the Intensity of Emotional Involvement subscale (Martínez, 1994). The adolescent version of the CBCL (CBCL-A) and the CBCL-P (Achenbach & Edelbrock, 1983) are instruments that measure social abilities and behavior problems in children and adolescents. In each version of the CBCL, there are 20 items that measure social abilities and 118 items that measure behavior problems. The CBCL has been widely studied and used for research purposes, with valid and reliable indexes in several research samples (Jensen, Salzberg, Richters, & Watanabe, 1993; Rey & Morris-Yates, 1991; Rubio-Stipec, Bird, Canino, & Gould, 1990).

### Results

Prior to the major analysis of treatment conditions, we conducted a series of t tests and one-way analyses of variance (ANOVAs) across treatment conditions on all pretreatment measures to examine group comparability. Results revealed no significant differences in pretreatment scores, suggesting that random assignment to conditions was effective. The three groups were similar in depression (CDI and CBCL-A), self-esteem (PHSCS), social adaptation (SASCA), behavior (CBCL-A, CBCL-P), and family expressed emotion (FEICS).

We analyzed the data from the instruments administered to participants and parents through separate ANOVAs, with repeated measures at pretreatment and posttreatment (time). These analyses permitted the evaluation of the effects of treatment, time, and the interaction of Treatment × Time on the outcome measures. Table 1 shows the pre- and posttreatment means, standard deviations, and F values for each outcome measure.

The results showed a significant effect for time for depression, \(F(1, 45) = 67.49, p < .0001\), and for self-esteem, \(F(1, 53) = 23.71, p < .0001\). The interaction effect between group and time was significant for depression, \(F(2, 55) = 6.69, p < .003\); self-esteem, \(F(2, 54) = 4.29, p < .009\); and social adaptation, \(F(2, 52) = 4.22, p < .02\). No significant differences were found for perceived criticism, intensity of emotional involvement, or adolescent or parent social abilities and behavior measures.

Next, we conducted planned orthogonal comparisons between the two treatment conditions and the wait-list control condition (see Table 2). Participants in IPT, \(F(1, 33) = 11.62, p < .002\), and CBT, \(F(1, 37) = 2.58, p < .015\), showed significantly lower depression scores when compared with participants in the wait-list control condition. No significant differences were found between IPT and CBT on the CDI. Self-esteem, \(F(1, 33) = 12.73, p < .001\), and social adaptation scores, \(F(1, 33) = 10.62, p < .003\), significantly increased for the IPT group when compared with the wait-list control group. No differences were found between IPT and CBT groups or between CBT and wait-list control groups for self-esteem or social adaptation.

Because some of the participants did not complete all therapy sessions, we performed secondary analyses to investigate whether significant differences existed between completers (eight sessions or more) and noncompleters (seven sessions or fewer). Sixty-eight percent of IPT participants and 52% of CBT participants completed treatment. No significant differences were found between completers and noncompleters on any of the pretreatment measures. ANOVAs with repeated measures (pretreatment and posttreatment) with completers revealed similar results as those reported with the whole sample. It is important to note that only 1 participant dropped out of treatment after the first session of IPT; none dropped out after the first session of CBT.

There were no differences in attrition for the three groups, \(\chi^2(2, N = 71) = 2.427\). Thirty-nine percent of the noncompleters were in the wait-list control condition. For the wait-list control group, 5 of 23 participants (22%) dropped out; for IPT, 4 of 23 participants (17%) dropped out; and for CBT, 4 of 25 participants (16%) dropped out. The difference between IPT and CBT groups in attrition was not significant, \(\chi^2(1, N = 48) = 1.3\). The two treatment groups did not differ significantly from the wait-list control group in attrition.
Table 1
Pre- and Posttreatment Means and Standard Deviations for Adolescent and Parent Outcome Measures Across the Three Groups

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Note. IPT = interpersonal psychotherapy treatment; CBT = cognitive-behavioral treatment; WL = wait-list control; CDI = Children's Depression Inventory; PHCSCS = Piers-Harris Children's Self-Concept Scale; SASCA = Social Adjustment Scale for Children and Adolescents; FEICS = Family Emotional Involvement and Criticism Scale; CBCL–A = Child Behavior Checklist for Adolescents; CBCL–P = Child Behavior Checklist for Parents.

* p < .05. ** p < .01.

Out of the 23 participants in IPT, 11 were referred for additional treatment (6 to family therapy, 5 to individual therapy). Out of the 25 participants in CBT, 10 were referred to therapy (5 to family therapy, 5 to individual therapy).

At follow-up, attrition was high (52% for IPT, 44% for CBT) because some of the adolescents still needed additional treatment and were referred, some had moved, and others did not attend their follow-up appointments. In light of ethical consideration, the wait-list control group was not available at follow-up because they were eligible to receive therapy after the postevaluation. No significant differences were found at follow-up between IPT and CBT groups (see Table 3).

Figure 1 shows the mean CDI scores for the evaluations conducted across time for the two treatment conditions and the wait-list control condition. As can be observed, although not statistically significant, the CBT group appeared to continue to make gains in reduced symptoms of depression at follow-up.

Increasing interest has been paid to the analysis of clinical significance in treatment research. Jacobson and Truax (1991) argued for the need to establish the clinical significance on the effect of therapy. Defining a clinical significant change as a return to normal functioning, they suggested a way to operationalize this process by considering the level of functioning that falls within the range of the functional population (after treatment). This range...
could be defined as 2 SDs of the mean of the sample studied. From a previous study with an adolescent community sample (Rosselló et al., 1992), a calculation of 2 SDs on the CDI yielded a score of 17 as the cutoff point, differentiating functional versus nonfunctional adolescents (Jacobson & Truax, 1991). At posttreatment, using a cutoff score of 17 or less, Rosselló et al. found that 82% of those in IPT and 59% of those in CBT showed a clinically significant change.

In addition, we calculated effect sizes for the treatment groups using the CDI scores as the measure of depressive symptoms. IPT showed an effect size of .73, whereas CBT showed an effect size of .43. This suggests that 77% of the treated adolescents in IPT and 67% of the treated adolescents in CBT were better off than the adolescents in the wait-list control group. These effect sizes can be interpreted as moderate effects for both treatments.

Another analysis of clinical significance is an examination of the proportion of participants who moved from the dysfunctional or clinical range to the normative range (Kendall & Grove, 1988). Figure 2 presents the percentage of participants who were severely depressed (using CDI cutoff points) at pre- and posttreatment according to treatment condition. Marked decreases in depressive

Table 2
Table 2
\begin{tabular}{|l|c|}
\hline
F Values for Pre- and Posttreatment Comparisons on Dependent Measures \hline
\hline
 Pre-post comparison & F \\
\hline
CDI & \\
IPT vs. CBT & 2.61 \\
IPT vs. control & 11.62** \\
CBT vs. control & 2.58* \\
PHCSCS & \\
IPT vs. CBT & 3.15 \\
IPT vs. control & 12.73*** \\
CBT vs. control & 2.05 \\
SASCA & \\
IPT vs. CBT & 2.02 \\
IPT vs. control & 10.62** \\
CBT vs. control & 2.12 \\
\hline
\end{tabular}

Note. IPT = interpersonal psychotherapy treatment; CBT = cognitive-behavioral treatment; CDI = Children's Depression Inventory; PHCSCS = Piers-Harris Children's Self-Concept Scale; SASCA = Social Adjustment Scale for Children and Adolescents. *p < .05. **p < .01. ***p < .001.

Table 3
Table 3
\begin{tabular}{|l|c|c|c|c|c|}
\hline
Measure and group & Posttreatment & & & Follow-up & & \\
& n & M & SD & n & M & SD & F \\
\hline
CDI & \\
IPT & 19 & 10.79 & 6.51 & 12 & 13.75 & 9.52 & 0.02 \\
CBT & 21 & 13.28 & 7.61 & 11 & 8.90 & 6.84 & \\
PHCSCS & \\
IPT & 19 & 57.15 & 9.51 & 12 & 53.83 & 10.76 & 0.01 \\
CBT & 22 & 51.59 & 13.26 & 8 & 58.87 & 13.23 & \\
SASCA & \\
IPT & 19 & 37.00 & 7.27 & 12 & 34.16 & 9.36 & 3.58 \\
CBT & 22 & 31.18 & 7.07 & 11 & 38.36 & 9.51 & \\
FEICS & \\
Perceived Criticism & \\
IPT & 19 & 15.36 & 4.36 & 11 & 18.00 & 6.13 & 0.01 \\
CBT & 20 & 16.85 & 6.32 & 10 & 15.00 & 5.16 & \\
Intensity of Emotional Involvement & \\
IPT & 19 & 19.15 & 6.03 & 11 & 17.54 & 4.86 & 0.01 \\
CBT & 20 & 15.85 & 5.19 & 10 & 17.60 & 4.16 & \\
CBCL-A & Social Abilities & \\
IPT & 18 & 40.27 & 11.85 & 12 & 36.58 & 11.02 & 0.09 \\
CBT & 16 & 33.25 & 10.31 & 11 & 32.45 & 5.62 & \\
Behavior & \\
IPT & 18 & 75.33 & 5.55 & 12 & 73.66 & 13.03 & 0.16 \\
CBT & 18 & 73.72 & 8.50 & 11 & 68.63 & 9.50 & \\
CBCL-P & Social Abilities & \\
IPT & 13 & 37.77 & 10.98 & 12 & 51.50 & 28.32 & 0.01 \\
CBT & 16 & 35.87 & 6.68 & 11 & 41.54 & 23.90 & \\
Behavior & \\
IPT & 13 & 64.92 & 10.64 & 12 & 72.25 & 14.67 & 0.22 \\
CBT & 16 & 62.75 & 8.85 & 11 & 71.18 & 13.18 & \\
\hline
\end{tabular}

Note. IPT = interpersonal psychotherapy treatment; CBT = cognitive-behavioral treatment; CDI = Children's Depression Inventory; PHCSCS = Piers-Harris Children's Self-Concept Scale; SASCA = Social Adjustment Scale for Children and Adolescents; FEICS = Family Emotional Involvement and Criticism Scale; CBCL-A = Child Behavior Checklist for Adolescents; CBCL-P = Child Behavior Checklist for Parents.
symptoms can be observed in the treatment groups when compared with the wait-list control group.

Discussion

There are several important issues related to the findings of this study. The first two concern efficacy and cultural aspects to treatment development. The third issue concerns the impact of treatment at different levels of outcome.

First, with regard to efficacy, the results of this study provide evidence that IPT and CBT are effective treatments for depressed Puerto Rican adolescents. Participants in both treatment groups significantly improved at posttreatment, with marked reductions in depressive symptoms and increases in self-esteem in comparison

![Figure 1](image1.png)

*Figure 1.* Pretreatment, posttreatment, and follow-up (3-month) depression score means across conditions.

Pre = pretreatment; Post = posttreatment; IPT = interpersonal psychotherapy treatment; CBT = cognitive-behavioral treatment; WL = wait-list control.

![Figure 2](image2.png)

*Figure 2.* Percentage of severely depressed adolescents at the pretreatment, posttreatment, and follow-up for each condition. IPT = interpersonal psychotherapy treatment; CBT = cognitive–behavioral treatment; WL = wait-list control; Pre = pretreatment; Post = posttreatment.
with the wait-list control group. The analysis of clinical significance showed that 82% of the participants in IPT and 59% of those in CBT were in the functional range at posttreatment.

Also, moderate effect sizes were obtained for the groups receiving either IPT or CBT, suggesting that the average treated participant was functioning better, considering depression symptoms, than 72% of those not treated. This effect size compares favorably with the reported average effect size (.38) in the child and adolescent psychotherapy literature. It is also favorable when compared with the effect size established by two meta-analytic studies (.79 [Weisz, Weiss, Alicke, & Klotz, 1987] and .71 [Casey & Berman, 1985]). Thus, the average treated participant in our sample compares favorably with the available data in the literature, suggesting a significant advantage of treatment over no treatment.

The results on the benefits of both CBT and IPT in reducing depressive symptoms in adolescents are consistent with the results from other efficacy studies (Kaslow & Thompson, 1998). In a recent review of seven efficacy studies, Kaslow and Thompson concluded that all variations of CBT and IPT delivered in individual, group, or family formats were effective in reducing depression. As in our study, none of the treatments were shown to be superior to one another, with most demonstrating that the active treatment was superior to the control.

A second issue concerns the positive findings for IPT. In an open clinical trial for IPT, Mufson et al. (1994) found that IPT significantly reduced adolescent depression from pre- to posttreatment. However, the lack of a control or comparison group calls into question the validity of their findings. Our study provides additional evidence on the benefits of IPT within the context of a randomized clinical trial. To our knowledge, ours is perhaps the first study that compares IPT with an already established treatment (e.g., CBT) conducted by an "independent" team of investigators. Although there is now evidence to suggest that CBT meets the criteria for a "well-established" treatment for adolescent depression, additional randomized trials with a larger sample size are needed with IPT.

A related issue concerns the impact of IPT on other levels of outcome. Although IPT and CBT were superior to the wait-list control group, and were essentially equivalent in reducing depressive symptoms, participants in IPT benefited in their self-concept (PHSCS) and social adaptation (SASC) significantly more than participants in the wait-list control condition. No differences were found between CBT and wait-list control groups or between CBT and IPT groups for self-concept and social adaptation, suggesting that IPT impacts other levels of outcome of a more interpersonal nature. This finding also supports the theoretical basis of IPT, which is purported to operate on interpersonal processes to alleviate depressive symptoms (Klerman & Weissman, 1993).

We should note that in preparation for this study, considerable effort was dedicated to the development of the treatment manuals, their adaptation to both developmental and cultural sensitive criteria (Bernal et al., 1995; Rosselló & Bernal, 1996), and pilot testing (Rosselló, 1993; Rosselló & Bernal, 1996). Both IPT and CBT were adapted, taking into consideration cultural aspects of the treatments that consider the "interpersonal" aspects of the Latino culture. For example, in analyzing the interpersonal relationships (throughout the 12 sessions) of the adolescents, we incorporated cultural values such as familismo and respeto ("respect"). For CBT, in the last module dealing with people (4 sessions), we used the same cultural values. Despite our efforts in incorporating and equalizing cultural content for both treatments, IPT had positive outcomes on self-concept and social adaptation over the wait-list control. No such changes were evident for CBT. The impact on other levels of outcome of IPT may be related to its greater degree of compatibility with Puerto Rican cultural values of personalismo ("personalism"; i.e., the preference for personal contacts in social situations) and familismo ("familism"; i.e., the tendency to place the interest of the family over the interests of the individual) shared by most Latino groups (Bernal & Shapiro, 1996; Falicov, 1996; García-Prato, 1996). IPT appears to address directly these values of the Puerto Rican culture, perhaps making it more effective in other areas of outcome for this population.

Our findings may be considered preliminary, as the sample size was small. It is also possible that treatment studies with adolescents need to include outcome measures that evaluate other dimensions of functioning, such as the family system, as well as the specific mechanism of change. Furthermore, it is important to note that the wait-list control group could not be maintained until follow-up, which would have enabled a better test of efficacy. Ethical considerations of delaying treatment to the wait-list control group beyond the 3-month treatment period outweighed the scientific benefits of extending the efficacy trial of CBT and IPT at follow-up. However, the trend observed at the 3-month follow-up evaluation should be interpreted cautiously because of the high dropout rate. This trend could suggest a "sleeper effect" (Kendall, 1991) for the CBT group, whose depression scores decreased from posttreatment to follow-up evaluation. It may be that skills acquired through the CBT intervention can successfully be applied to emerging situations after the passage of time. This sleeper effect should be explored further to complete the analysis of the relative efficacy of the IPT and CBT interventions.

Another limitation of this study was that only self-report outcomes were used (i.e., absence of posttreatment diagnostic interviews). Also, a behavioral measure of improvement would have informed the results. Although we found no significant differences in severity of depression on the basis of the CDI, there was a larger proportion of adolescents meeting pretreatment criteria for major depression in CBT than in IPT. Because there is evidence to suggest that initial severity of depression is related to outcome (Kazdin, Bass, Ayers, & Rodgers, 1990), it is possible that the larger number of adolescents with major depression in CBT could have influenced the results. In addition, at pretreatment, comorbidity was not assessed. This limitation did not permit an analysis of how different comorbid diagnoses affect treatment outcome.

In conclusion, our findings support the results obtained in other outcome studies with adolescents (Carey, 1993; Fine et al., 1991; Kahn, Kehle, Jenson, & Clark, 1990; Levinsohn et al., 1990; Reynolds & Coats, 1986; Schrodt, 1992; Stark et al., 1996), in which psychosocial interventions proved effective in the treatment of symptoms of depression. The present clinical trial for the treatment of depression symptoms used an adolescent sample of Puerto Ricans. In this regard, our study contributes to the small yet growing literature of the treatment of ethnic minorities and nonmainstream groups. In fact, the positive findings of the present study suggest that adequate adaptation (Bernal et al., 1995) of therapeutic models with demonstrated empirical support is an

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avenue to explore in the treatment of ethnic minorities and other
diverse populations.

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Received December 18, 1997
Accepted March 9, 1999


The Publications and Communications Board of the American Psychological Association announces the appointment of seven new editors for 6-year terms beginning in 2001. As of January 1, 2000, manuscripts should be directed as follows:

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Manuscript submission patterns make the precise date of completion of the 2000 volumes uncertain. Current editors, Milton E. Strauss, PhD; Charles T. Snowdon, PhD; James H. Neely, PhD; Arie Kruglanski, PhD; Patrick H. DeLeon, PhD, JD; Robert A. Bjork, PhD; and Bruce D. Sales, JD, PhD, respectively, will receive and consider manuscripts through December 31, 1999. Should 2000 volumes be completed before that date, manuscripts will be redirected to the new editors for consideration in 2001 volumes.