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Therapeutic Processes in a Cognitive-Behavioral Treatment for Depressed Adolescents with Inflammatory Bowel Disease

Meredith Brent
Utah State University

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THERAPEUTIC PROCESSES IN A COGNITIVE-BEHAVIORAL TREATMENT FOR DEPRESSED ADOLESCENTS WITH INFLAMMATORY BOWEL DISEASE

by

Meredith Brent

A dissertation submitted in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

Psychology

Approved:

UTAH STATE UNIVERSITY
Logan, Utah

2006
Youth with inflammatory bowel disease (IBD) have higher rates of depression than healthy youth. A cognitive-behavioral treatment, primary and secondary control enhancement training-physical illness (PASCET-PI), for depressed adolescents with IBD was associated with reductions in depressive symptoms. The purpose of this study was to examine the salience of nonspecific processes (factors inherent in any human relationship) and specific processes (factors related to therapy content) during PASCET-PI sessions and their association with improvements in psychological functioning.

Participants included 10 adolescent patients with IBD with mean illness duration of 31.9 months. At intake, eight participants qualified for a diagnosis of major depressive disorder and two for a diagnosis of minor depression. Participants completed measures of depressive symptomatology and clinicians completed the
Children's Global Assessment Scale (CGAS). Measures were completed at posttreatment, 6 months posttreatment, and 1 year posttreatment. Independent judges used the Psychotherapy Process Q-sort (PQS) to rate the salience of therapeutic processes for PASCET-PI sessions #2 and #8 for each subject.

PQS ratings of PASCET-PI sessions were correlated with ideal prototypes of cognitive-behavioral treatment (CBT), interpersonal therapy (IPT), and psychodynamic (PD) orientations that were previously developed based on PQS ratings of an ideal session, according to expert therapists. Findings indicate that PASCET-PI sessions most closely resembled the CBT prototype ($r = .51, p < .05$). Change scores on outcome measures were correlated with PQS-prototype correlates to determine which processes were associated with improved psychological functioning. Findings suggest that reductions in depressive symptomatology were associated with processes characteristic of various orientations. Thus, CBT processes were not exclusive in promoting change. There were strong positive relationships between change scores of the PCS and prototypes of all orientations (CBT, IPT, and PD) at posttreatment and between the CDI and ASQ and all orientations at 6-months follow-up ($r = .62 - .72, p < .05$). Comparisons of specific process-outcome correlates and nonspecific process-outcome correlates did not reveal significant differences.
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Meredith Brent
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CHAPTER I
PROBLEM STATEMENT

Adolescents with chronic physical illnesses frequently have higher levels of depression than healthy peers (Lavigne & Faier-Routman, 1992; Nelms, 1989). One explanation for high rates of depression is that youth with chronic physical illnesses have difficulties achieving developmental processes associated with this life stage. Developmental processes that typically occur during late childhood and adolescence include defining and establishing one’s identity, separation from parents toward autonomy, and establishing positive intimate peer relationships. These tasks occur during a time of biological flux with pubertal development affecting both brain and body maturation (Chassin, Presson, Sherman, & McConnell, 1995). Because adolescents with chronic physical illnesses may experience social embarrassment or self-consciousness due to body deformities, motor impairments, or other physical problems (Engstrom, 1992), it has been hypothesized that they may withdraw from their peers and fail to develop age-appropriate social skills and a sense of autonomy. Depending on developmental level, adolescents may have difficulty acquiring disease knowledge, reasoning about personal control and efficacy, and coping with stress (Band & Weisz, 1990). These challenges contribute to an increased likelihood of depression (Kewman, Warchausky, & Engel, 1995).

Inflammatory bowel disease (IBD) is one such chronic physical illness with significant associated physiological functional impairment among children and adolescents (Friedrich & Jaworski, 1995). Symptoms of IBD include diarrhea,
abdominal pain, rectal bleeding and weight loss. Many patients with IBD require medication or surgical treatment. The course of this disease is often unpredictable with sudden exacerbations. The estimated prevalence rate of IBD among children is 10-24.5% and the annual incidence rate is 6 patients per 100,000 (Faull & Nicol, 1986; McClung, 1994).

In addition to the severe pain symptoms they experience, children and adolescents with IBD are likely to have poorer psychological health and particularly high rates of depression compared with physically healthy children and children with other chronic illnesses (Engstrom, 1992; Engstrom & Lindquist, 1991). In a sample of children and adolescents aged 9-18 with IBD, 60% had a psychiatric disorder in comparison to 15% in a group of physically healthy same-aged peers (Engstrom & Lindquist). Although children and adolescents with IBD experience more overall psychological problems than children and adolescents in the general population, mood and anxiety disorders are the specific psychological diagnoses that are most common among this population with rates of major depression ranging from 14% to approximately 42% (Bennett, 1994; Burke et al., 1989; Engstrom). High rates of depression among children and adolescents with IBD signify a need to develop effective psychotherapeutic treatments for this population. Although antidepressant medications have been shown to be efficacious in treating depression during childhood and adolescence in physically healthy youth (Emslie, Rush, & Weinberg, 1997), given that these physically ill youth are frequently already on complicated medication regimes and may have mal-absorption of oral agents, nonpharmacological treatment such as
psychotherapy are better options as first-line treatment, at least for mild to moderate depression.

At present, few psychotherapeutic treatments to reduce pain or psychological problems have been developed for children or adolescents with pediatric gastrointestinal disorders. However, results of several studies suggest that cognitive-behavioral family therapy (CBFT) may be an efficacious method to reduce pain symptoms in children with recurrent abdominal pain, a separate disorder from IBD. Sanders, Shepherd, Clegorn, and Woolford (1994) found an average pain reduction of 80% among children with recurrent abdominal pain who received a cognitive-behavioral family treatment, in contrast to a 40% reduction among children who received standard pediatric care. The results were unchanged at 6- and 12-month follow-ups. In spite of this, no previous studies addressing treatments to reduce depressive symptoms for adolescents with inflammatory bowel disease have been conducted.

The situation is different for youth who do not have physical illnesses. It is generally accepted that cognitive behavioral therapy (CBT) can be effective in treating depression in physically healthy children and adolescents as well as pain symptoms in children and adolescents who are not depressed (Lewinsohn, Clarke, & Rhoe, 1994). The prevalent hypothesis is that participation in CBT decreases depressive symptoms after the therapist and client identify irrational beliefs and maladaptive behaviors in sessions; identify the client’s negative cognitions about the self, world, and future; and substitute positive beliefs for the ones identified as maladaptive and irrational (Beck & Rush, 1978). However, it is unclear which of the
intervention techniques that are usually associated with CBT (e.g., examining irrational beliefs and maladaptive behaviors, learning problem-solving skills, scheduling positive behaviors) contribute to positive outcomes. Furthermore, few investigations of CBT treatments have been conducted with children with IBD who are depressed.

Some researchers who have used comparative clinical trials to determine the most effective methods of treating depression have found that nonspecific factors, or factors common to various treatment approaches, such as the client-therapist relationship, influence outcome more than the treatment-specific strategies (Ablon & Jones, 1998; Blatt, Quinlan, Zuroff, & Pilkonis, 1996; Castonguay, Goldfried, Wiser, Raue, & Hayes, 1996; Krupnik, Sotsky, Elkin, Watkins, & Pilkonis, 1996). Therefore, it is possible that the therapeutic relationship has a greater impact on therapy outcome than specific processes such as challenging cognitions or changing behaviors.

Additionally, previous research results suggest that therapists who identify themselves as having a CBT orientation often do not adhere to one particular treatment approach and "borrow" strategies from other treatment orientations, such as interpersonal or psychodynamic, during therapy sessions (Ablon & Jones, 1999; Goldfried, Raue, & Castonguay, 1998).

The development of optimally effective psychotherapy treatments for depressed adolescents with IBD requires the identification of both specific therapeutic techniques and general factors that facilitate reductions in depression and pain symptoms. An opportunity to investigate the relationship between therapy outcome and approach-specific and general factors became available after a CBT treatment called the Primary
and Secondary Control Enhancement Training-Physical Illness (PASCET-PI) for depressed adolescents with IBD was conducted at Children’s Hospital - Boston. Outcome measures indicated clinically and statistically significant reductions in depressive symptoms and improvements in global functioning, self-esteem, global health, and positive attributions following treatment (Szigethy et al., 2004b). However, it is unclear which aspects, or psychotherapeutic processes, of the treatment facilitated the reduction of depressive symptoms and improvement in general adjustment. It is possible that general factors such as the therapeutic relationship contributed to improvements in physical and psychological functioning within this sample. In addition, it is also possible the therapist utilized treatment strategies from therapeutic orientations other than CBT and that these non-CBT strategies contributed to the positive outcomes.

The purpose of this study was to conduct an in-depth examination of the videotaped individual therapy sessions of the PASCET-PI treatment in an effort to identify the psychotherapeutic processes, including those specific to CBT, those specific to other treatment approaches, and those common across treatment approaches, that were associated with improvements in adjustment and reduction of depressive symptoms among depressed adolescents with IBD.
Chronic illness is defined as an illness of long duration or marked by frequent recurrence. Youth with chronic illnesses demonstrate a wide range of psychosocial adaptation and investigations of their experience indicate numerous difficulties. Results of a meta-analysis on youth's adjustment to chronic physical disorders indicate that this population is at increased risk for overall adjustment problems including both internalizing and externalizing symptoms, in comparison with healthy youth (Lavigne & Faier-Routman, 1992). Approximately 20-30% of children and adolescents with chronic illness or physical disabilities will experience emotional or behavioral problems, a rate two times the rate among healthy youth (Carlson, Ricci, & Shade-Zeldow, 1990).

Consideration of some of the common situational factors among youth with chronic physical illnesses is critical in order to understand their psychological functioning. Evidence suggests that youth with chronic illnesses experience more psychosocial problems than healthy peers (Carlson et al., 1990). This population endures an omnipresent stressor, their illness, which may lead to disruption in normal development and relational functioning. The increase in stressful life events for youth with chronic illnesses may impede their adjustment or impair their sense of well-being. Families of youth with chronic illnesses may experience frequent disruption due to the.
child’s physical symptoms (Carlson et al.). Parents often experience frustration with the inability to manage their child’s physical symptoms, which inevitably has an effect on the child’s functioning. Consequently, family and peer interactions are often impaired or strained for this population (Sherbourne, Meredith, Rogers, & Ware, 1992). Findings that high levels of maternal depression are associated with increased depression in youth with chronic illnesses indicate the interactional effects of family functioning and child psychological functioning (Grey, Whittemore, & Tamborlane, 2002; Mullins et al., 1995). Research findings indicate that social support acts as a mediating factor and can decrease the psychological impact of a chronic illness, regardless of the child’s age (Carlson et al.; Sherbourne et al.). Additional situational aspects of chronic illness that often contribute to negative emotional functioning include embarrassing symptoms, visibility of the disease, extensive interventions for symptom management, unpredictable course, severity of symptoms, and poor prognosis (Lavigne & Faier-Routman, 1992; Nelms, 1989).

Although youth with physical disorders are at risk for both internalizing and externalizing behavior problems symptoms, depression is particularly common among youth with chronic illnesses (Carlson et al., 1990; Lavigne & Faier-Routman, 1992; Nelms, 1989). Comparisons of different groups of chronically ill youth, including those with asthma and diabetes, with healthy peers indicate that chronic illness is a general predisposing factor for developing depressive symptomatology and a lower self-esteem (Grey et al., 2002; Nelms).
To understand individual variations in psychological functioning among children and adolescents with chronic illnesses, styles of coping have been investigated (Rudolph, Dennig, & Weisz, 1995). Two general coping strategies have been identified. First, primary coping refers to active efforts to change objective conditions that are modifiable (e.g., participation in a school activity). In contrast, cognitive strategies utilized to cope with symptoms that cannot be changed have been referred to as secondary coping (Weisz, Thurber, Sweeney, Proffitt, & LeGagnous, 1997).

Because children and adolescents with chronic illnesses are typically unable to change objective conditions regarding their illness or family functioning, secondary coping strategies are of particular importance in mediating their illness experience. Indeed, studies suggest that certain attitudes and beliefs among children and adolescents with chronic illnesses are predictive of positive coping skills in response to disease complications. Children and adolescents with an internal locus of control regarding health demonstrated a more complex understanding of their disease, which is associated with positive adjustment, than those with a more external locus of control (Shagena, Sandler, & Perrin, 2002). Results of several investigations of youth with diabetes found that those who made more internal, stable, and specific attributions for general negative events (i.e., a learned helplessness attributional style) on the Children’s Attributional Style Questionnaire (CASQ; Seligman, 1984) had better metabolic control than youth who denied responsibility for negative events (Brown, Kaslow, Sansbury, Meacham, & Culler, 1991). This corresponds to findings that persons with diabetes who engage in...
negative self-statements and make internal attributions for negative life events as measured by the CDI and CASQ tend to have better metabolic control in the short-term (Kuttner, Delamater, & Santiago, 1990; Tennen, 1984). This population may place more emphasis on their ability to control their diabetes, which may result in better overall metabolic control yet more symptoms of depression or anxiety at times when metabolic control is not possible.

While a learned helplessness attributional style for negative events may be beneficial in terms of metabolic control, it is associated with depression and metabolic control problems in the long-term among youth with diabetes (Kuttner et al., 1990). Therefore, authors suggest that a balance between accepting responsibility for controllable events and not accepting blame for uncontrollable events is most adaptive for youth with diabetes (Brown et al., 1991). Additionally, Meijer, Sinnema, Bijestra, Mellenbergh, and Wolters (2002) investigated coping styles among adolescents with a chronic illness, including asthma, cystic fibrosis, constitutional eczema, or juvenile chronic arthritis. Results indicated that adolescents with a depressive coping style characterized by low self-esteem and social anxiety are more likely to experience poor adjustment to their illness, while adolescents with a confrontive coping style, indicated by active and purposeful problem-solving, experience less general and illness-related stress.

*Psychological Adjustment to Chronic Illness in Adolescence*

Adolescence is a complex period with many biological, psychological, and
social changes, even in the absence of the biological and social stressor of having a chronic physical illness. Specific tasks involved with stages of growth and development are thought to have an impact on adjustment to chronic illness (Band & Weisz, 1990; Carlson et al., 1990; Grey et al., 2002). Adolescents face numerous developmental tasks that may predispose them to experiencing depression. Piaget (1929) proposed that adolescence is characterized by the “formal operational stage,” characterized by the development of propositional logic. These higher level cognitive abilities allow the adolescent to consider what his or her life used to be like, could be like, or will be like in comparison to others. This cognitive ability frequently corresponds with the emergence of feelings of depression, anxiety, or withdrawal in adolescents with chronic illnesses because the adolescent begins to consider the impact that the disease has on his or her life (Carlson et al.).

In addition, physical growth and sexual maturation are often delayed or abnormal in adolescents with chronic illnesses (Rosen, 1991). The cognitive ability to consider others’ thoughts (“imaginary audience”) and an increased emphasis on appearance, behavior, and physical changes that emerge during adolescence may lead to feelings of self-consciousness and low self-esteem (Carlson et al., 1990). Furthermore, adolescents are more likely to engage in health-endangering activities, such as promiscuous sexual activity, cigarette smoking, reckless driving, and alcohol use (Chassin et al., 1995). The cognitive and behavioral characteristics of typical adolescent development often negatively affect health behaviors of adolescents with chronic illnesses including adherence with medical regimens, risk assessment, and
adjustment to the short and long-term demands of a chronic illness (Friedrich & Jaworski, 1995).

Conflicts between independence and dependence typical among adolescents are often magnified among those with a chronic illness. Research suggests that parent-adolescent relationships go through a period of renegotiation toward more mutual and shared power, but parent influences remain important in adolescent decisions. Dependence may be heightened among youth with chronic illnesses considering findings by Hauser, Jacobsen, and Milley (1992) that stressors of chronic illness are associated with regression of developmental maturity. Simultaneously, one of the hallmarks of adolescence is an increasing level of independence and autonomy. Because adolescents with chronic illnesses often need to adhere to treatment regimens to avoid medical complications, achieving independence and autonomy may be more difficult for this population (Chassin et al., 1995). Additional developmental tasks associated with adolescence include identity formation, development of body image, and preparing for intimacy in relationships. Illness-related factors, such as delayed sexual maturation, separation from peers due to hospitalizations, or limitations in mobility, may prevent the adolescent from successfully accomplishing these skills (Carlson et al., 1990).

Findings have confirmed that adolescents with chronic illnesses are significantly more prone to depression than younger youth with chronic illnesses (Grey et al., 2002). Research indicates that adolescents, who are typically in the formal operations stage characterized by development of abstract thought and hypothetico-deductive reasoning,
cope with illness differently than toddlers and young children, who are typically in the pre formal stage characterized by development of memory and imagination. A comparison of coping between two groups of youth with diabetes, those in the formal operational stage and those in the pre formal operational stage, was conducted by Band and Weisz (1990). Within the formal group, findings indicated that higher scores of positive adjustment as measured by the Medical Adjustment Scale, Socio-Behavioral Adjustment Scale, and Conners Parent Questionnaire were correlated with perceived coping efficacy and knowledge of their illness. Among the preformal children, the only variable related to positive adjustment was perceived control of the illness. It is evident that developmental functioning has a differential impact on emotional adjustment to the illness.

Course and Symptoms of Inflammatory Bowel Disease

One specific chronic disease that has a significant impact on psychosocial functioning among youth is inflammatory bowel disease (IBD). IBD is a term used to describe a group of chronic gastrointestinal disorders characterized by inflammation and lesions of the gastrointestinal tract. Two of the most common disorders within the IBD classification are Crohn’s disease (CD) and ulcerative colitis. CD causes inflammation of the digestive or gastrointestinal (GI) tract. Inflammation may occur anywhere in the GI tract from the mouth to the anus, however the end of the small intestine (ileum) or beginning of the large intestine are the most common sites of inflammation. Ulcerative colitis is a disease that specifically affects the colon, or large intestine, and is marked by
inflammation and ulceration of the colon mucosa, or top layer of the lining of the large intestine. Both disorders share a number of common symptoms, complications, and secondary effects of psychological and behavioral functioning. As the course of ulcerative colitis and CD progress, bloody loose stools become more common. Electrolyte imbalance, anemia, and dehydration are associated symptoms of ulcerative colitis and CD and depend on the severity of diarrhea and bleeding (Friedrich & Jaworski, 1995; McClung, 1994). Diarrhea, constipation, fevers, abdominal pain, and weight loss are also common symptoms associated with CD and ulcerative colitis. Thus, differential diagnosis between anorexia nervosa, abdominal lymphoma, and CD, or ulcerative colitis is difficult (Friedrich & Jaworski). The clinical course of CD and ulcerative colitis range in symptoms, intensity, and relapse flares for each individual. In adolescents with a chronic illness, growth or sexual maturation may be delayed. The disease course, nutritional deficiency, or concomitants of treatment all may contribute to disordered growth. Not only is the teenager often distressed when normal progression of growth and sexual maturation is disrupted by the illness, the disturbance of normal development may interfere with psychosocial development (Rosen, 1991).

Medical management for patients with IBD depends on the location and severity of the disease. The goals of treatment are to control inflammation, correct nutritional deficiencies, and relieve symptoms like abdominal pain, diarrhea, and rectal bleeding. Treatment may include drugs, nutritional supplements, surgeries, or a combination of these treatments (Ferry, 1999). Often, youth are treated with drugs containing mesalamine, a substance that helps control inflammation. Side effects of this drug
include nausea, vomiting, heartburn, diarrhea, and headache. Some patients (25% of youth) take corticosteroids to control inflammation; however, these drugs have serious side-effects including greater susceptibility to infection, obesity, acne, growth retardation, muscle atrophy, and depression and memory deficits (Brown, Koob, & Rivier, 1990; Rosen, 1991). Due to the enhanced focus on self-image during adolescence corticosteroids may contribute to the experience of depression (Rosen). Treatment for IBD that is resistant to medical or dietary interventions may include surgery that involves removal of the inflamed bowel or local surgery to treat specific complications including perianal complications, abscesses, or skin tags (Friedrich & Jaworski, 1995).

The etiology of inflammatory bowel disease was seen as a “medical mystery” for many years (Gillman, 1994). The exact cause of IBD remains unclear, but susceptibility genes and environmental factors both seem to play a role in the expression of this disease (Bradbury, 2002). The most popular theory is that the body’s immune system reacts to a virus or bacterium by rejecting it as if it were a foreign virus. Ongoing inflammation in the intestine is the result. Numerous factors appear to affect the course of the disease including environmental stressors, patient coping skills and responses to medications, activity level, and adherence to medical regimen (Gillman).

A question regarding etiology that has emerged is whether a premorbid coping style is an etiological factor or a maintaining variable in relation to IBD symptoms (Gitlin et al., 1991). Previous research on IBD has suggested that a “colitic” or “ulcerative” personality exists, which is characterized by overdependency, guardedness,
compulsive tendencies, immaturity, and perfectionism (McClung, 1994). Although preexisting coping styles are likely to have an impact on the expression of disease symptoms, evidence is more suggestive that the symptoms of IBD contribute to the development of problematic reaction patterns (Friedrich & Jaworski, 1995; Gillman, 1994; Gitlin et al.). At this time, neither CD nor ulcerative colitis are thought to be caused by emotional distress (National Digestive Diseases Information Clearinghouse, 2003).

*Psychological Functioning in Children and Adolescents with Inflammatory Bowel Disease*

Adolescents with IBD often have high rates of overall adjustment problems in comparison to adolescents with other chronic illnesses (Lavigne & Faier-Routman, 1992). A meta-analysis on the adjustment of youth to 21 different types of physical disorders including diabetes, asthma, cerebral palsy, and cystic fibrosis was conducted by Lavigne and Faier-Routman. When ranked on the basis of effect sizes, youth with IBD exhibited the most ($ES=1.23$) overall adjustment problems as rated by teachers and parents in comparison to youth with other physical disorders. Engstrom (1992) found that 60% of a sample of 20 youth with IBD met criteria for a psychiatric disorder as compared to 30% among youth with tension headache, 20% among youth with diabetes, and 15% among healthy youth.

Several studies have shown that internalizing disorders (including anxiety and depression) are the most common psychological disorders among youth with IBD (Burke et al., 1989; Engstrom, 1992). Painful and uncomfortable symptoms and
sequelae of IBD are thought to be related to the increased rates of depression and anxiety among adolescents (Ferry, 1999). Higher rates of depression and lower self-esteem have been confirmed in numerous comparisons of psychological functioning among youth with IBD when compared to physically healthy youth (Bennett, 1994; Burke, Neigut, Kocoshis, Chandra, & Sauer, 1994; Ferry; Gitlin et al., 1991). In addition, a comparison of lifetime and current prevalence of depression and anxiety disorders in 41 youth (mean age 13.19 yrs) with CD, 12 youth (mean age 11.07 yrs) with ulcerative colitis (UC), and 52 youth (mean age 12.19 yrs) with cystic fibrosis (CF) using the Kiddie Schedule for Affective Disorders and Schizophrenia structured diagnostic interview indicated lifetime prevalence of depression was 29% for those with CD, 21% for those with UC, and 11.5% for those with CF. The difference between rates of depression among youth with CD and CF was significant (Burke et al.).

An investigation of rates of depression among 102 youths (aged 11-17 years) with IBD screened using the Children’s Depression Inventory (CDI) found that 24.5% had a CDI score of ≥ 12, indicating that they had clinically significant depressive symptoms. Mean CDI scores positively correlated with age, such that older age at diagnosis of IBD was associated with significantly increased severity of depressive symptoms, but not with IBD type, duration, or course. Youths with moderate/severe current IBD-related symptoms had significantly higher mean CDI scores than those with inactive disease activity. Youth on steroids were more likely to have CDI scores ≥ 12 than those who were not taking steroids. Results support the recommendation to screen adolescents with IBD for depression (Szegethy et al., 2004b).
Researchers have identified social isolation as a primary contributing factor to psychosocial problems among children and adolescents with IBD (Friedrich & Jaworski, 1995). Due to painful symptoms, disruptions in school attendance and social relationships among this population are common (Gillman, 1994). Increased social isolation is often linked to delayed social development due to limited opportunities to practice social skills. Not surprisingly, investigations of youth with IBD indicate that they are less socially competent than physically healthy youth (Burke et al., 1994; Engstrom, 1992). Growth failure, delayed puberty, and other steroid medication side effects such as obesity and acne can also contribute to major disturbances in social competence (McClung, 1994).

In addition, families of children and adolescents with IBD have lower amounts of cohesion and higher levels of conflict than families with healthy children, according to parent reports on the Family Relationship Index Scale (Burke et al., 1994). A comparison of psychiatric disorders among 72 mothers of youth with IBD to 44 mothers of youth with CF found that more mothers of children with IBD have psychiatric disorders than mothers of children with CF. Specifically, 51% of mothers of youth with IBD had a history of depression compared with 41% of mothers of youth with CF. Although mothers of youth with CF were more likely to have panic attacks, mothers of youth with IBD were more likely to have obsessive-compulsive disorder and made suicide gestures or attempts (Burke et al.).

Embeddedness, or the child’s difficulty separating or individuating from the physical world, is another developmental consideration. The child’s ability to separate
is largely dependent on the ability of the parents to grant autonomy and individuation of their youth. Overall, research suggests that various aspects of family functioning, including low marital satisfaction, triangulation, enmeshment, ineffective communication, and lack of independence for the youth with IBD can impair their psychological and physical functioning and increases the risk for anxiety and depression (Friedrich & Jaworski, 1995).

Another contributing factor to the development of depression and anxiety is the use of ineffective coping strategies by this population. Youth with IBD have coping styles that are less effective, more rigid, and less flexible than psychologically and physically healthy youth, according to results of a comparison of 36 youth with IBD and 38 youth who did not have chronic physical or emotional problems (Gillman, 1994; Gitlin et al., 1991). van der Zaag-Loonen, Grootenhais, and Last (2004) found that adolescents with IBD use more avoidant coping styles than their peers. In fact, an investigation of coping styles among 73 youth with IBD as measured by the Perceived Stressful Life Events test and The Coping Inventory, suggest that youth with IBD frequently have difficulty identifying and discussing stressful life events and often utilize denial and repression defenses. These findings support previous research that youth with IBD devote a great deal of energy to avoiding conflict through passive, compliant, and submissive behaviors while denying their own needs (Engstrom, 1992; Gitlin et al., van der Zaag-Loonen et al.). Evidence also suggests that patients with IBD tend to exhibit compulsive characteristics, including neatness, orderliness, and punctuality. Investigators suggest that these coping styles increase the prevalence of
internalizing problems among this population (Engstrom; Gillman; Gitlin et al.).

Although it is recognized that adolescents with IBD are likely to have difficulties adapting to their illness, few psychological treatments have been developed for this population (Gillman, 1994). Researchers and practitioners consistently indicate a need for effective psychological treatments to address symptoms of depression for youth with IBD and other chronic illnesses (Bennett, 1994; Burke et al., 1989; Gitlin et al., 1991; Lewinsohn et al., 1994). Since there are currently no curative medical interventions for IBD, symptom management and reduction is the goal of treatment (McClung, 1994). It has been hypothesized that antidepressant medications may complicate medical regimens and exacerbate gastrointestinal symptoms (Szigethy et al., 2004b). Therefore, effective psychological treatments for this population are needed.

Cognitive-Behavioral Treatment for Adolescents with Depression

Investigations of empirically validated treatments for physically healthy adolescents with depression suggest that cognitive-behavioral therapy is generally effective in reducing depressive symptoms (Weisz et al., 1997). The traditional cognitive-behavioral model combines cognitive theories developed by Beck (1967), Ellis (1962), and Seligman (1975), which emphasize becoming aware of negative thoughts and learning to substitute them with more positive cognitions, with components of behavioral theories of depression. Behavioral theory posits that the depressed individual may have insufficient opportunities to receive positive reinforcement from the social environment, lack skills to generate positive
reinforcement from others, or display social behavior that is aversive to others. As a result of this negative relationship with the environment, the depressive episode is maintained or worsened (Lewinsohn et al., 1994). Therefore, cognitive-behavioral therapy includes instruction to change behavior in a way that improves the likelihood that successful interactions with the environment will occur. For example, individuals may be encouraged to identify and schedule pleasurable activities (Lewinsohn et al.).

Several modifications have been made to cognitive-behavioral therapy to enhance its effectiveness with adolescents (Lewinsohn et al., 1994). Developmental issues and challenges faced by the adolescent must be considered in treatment, such as the desire for increased independence. Because many adolescents do not seek treatment voluntarily, an emphasis on developing a positive therapeutic bond or alliance is emphasized. Because the family system affects the adolescent’s sense of well-being, participation of family members in the treatment for the adolescent is also important. The recommendation to complete homework assignments after each session and reinforcement for homework completion is also often incorporated in treatment for adolescents (Wilkes, Belsher, Rush, & Frank, 1994).

One specific CBT program that has been developed and proven to be effective in reducing depression in youth is the Primary and Secondary Control Enhancement Training (PASCET) program (Weisz et al., 1997). The PASCET program is an eight-session intervention with a detailed therapy manual. This treatment is based on the two-process model of control, as proposed by Rothbaum, Weisz, and Snyder (1982), which was briefly mentioned previously. Both processes included in the model address an
individual's attempt to gain control of his or her life. Primary control refers to attempts to influence objective conditions or events. Similar to behavioral theory, it is assumed that primary control leads to adaptation to the environment, which results in increased feelings of satisfaction and improvement in mood. Primary control skills emphasized in the PASCET treatment include identifying and engaging in activities that the youth finds enjoyable, goal setting, and practicing activities that are valued by the youth. For example, a youth who needs to maintain constant blood sugar levels would consistently inject insulin to achieve primary control. Secondary control refers to the psychological adaptation to unalterable circumstances in the environment. Secondary control corresponds to cognitive theories of depression such that individuals who feel capable of understanding and solving their problems are less likely to experience depression. Secondary control skills incorporated in the PASCET program include identifying and altering negative thoughts to more positive and adaptive beliefs and relaxation and positive imagery (Weisz et al.). For example, a youth who accepts that diabetes is a lifelong condition but focuses on aspects of his or her life that can be satisfying is exerting secondary control. Thus, the goal of the PASCET program is to help the client increase his or her sense of primary and secondary control.

Results of an investigation of the PASCET program delivered in eight sessions with elementary school children with mild to moderate depressive symptoms found positive results (Weisz et al., 1997). At immediate posttreatment as well as at 9-month follow-up, the treatment group's mean score on the CDI (Kovacs, 1992) was significantly lower than the mean score for the no-treatment control group.
Comparisons of posttreatment CDI scores showed the mean posttreatment CDI was significantly lower ($p < .05$) in the treatment group than in the control group. CDI scores dropped about twice as much in the treatment group than in the control group from pretreatment to posttreatment (mean change, 11.56 treatment group vs. 5.97 control group). More youth in the treatment group moved from the clinically significant range to the normal range on the CDI than youth in the control group at posttreatment (50% vs. 16%, respectively). Results also demonstrated larger reductions in depressive symptomatology on the Revised Children’s Depression Rating Scale (CDRS-R; Poznanski & Mokros, 1996) for children in the treatment group compared to the untreated youth at posttreatment ($p < .05$). On the CDRS-R, the treatment group change score of 12.06 from pre- to posttreatment was larger than the control group change score of 3.94. However, a comparison of posttreatment scores using pretreatment means as a covariate revealed no significant differences between the treatment and control groups. On the CDRS-R, 38% of the treatment participants and 23% of control participants moved from the clinical range to within the normal range. Analyses of 9-month follow-up data indicated a decline in depressive symptoms over time for both the treatment and control groups. However, the treatment group continued to show greater improvements. CDI means dropped about three times as much over time in the treatment group as in the control group. Follow-up means were adjusted for pretreatment scores. At follow-up, adjusted mean change on the CDI for treatment and control groups was 13.38 versus 4.38, respectively. The effect sizes for raw and adjusted scores on the CDI were 0.39 and 0.81, respectively, and the percentages of
participants moving from above to within the normal range between treatment and control groups was 62% versus 31%, respectively. Component effects tests for the CDRS-R interaction indicated that the mean treatment group point decline of 16.92 was significantly larger than the control group point decline of 4.88 ($p < .01$), and the percentages of individuals in the treatment group and control group moving from the clinical range to within the normal range on the CDRS-R at 9-month follow-up were 69% versus 24%, respectively. However, comparisons of the treatment and control group follow-up CDRS-R means, with pretreatment means covaried, showed the mean difference between change scores (adjusted mean change = 26.05 versus 30.61, respectively) was not statistically significant. The effect sizes for raw and adjusted scores on the CDRS-R were 0.06 and 0.52, respectively. As such, results of this investigation suggest that the PASCET program was associated with significant reductions of depressive symptoms as indicated by the CDI at posttreatment and 9-month follow-up. Although the treatment group change score was not significantly different than the control group change score on the CDRS-R at posttreatment or follow up, larger reductions in depressive symptomatology were seen among the treatment group on the CDRS-R at both time points.

The Weisz and colleagues (1997) study is the only study to date to evaluate the efficacy of the PASCET. However, the PASCET is currently accepted as an evidence-based psychotherapy to treat children and adolescents (aged 8-15 yrs) with depression (Weisz, Southam-Gerow, Gordis, & Connor-Smith, 2003). Because high rates of depression and adjustment difficulties among adolescents with chronic illness have been
identified, the next logical step was to develop a treatment for this population. The PASCET-Physical Illness (PASCET-PI) program, a modification of the PASCET program, was developed for this purpose (Szigethy et al., 2004b). Guided by previous research, the PASCET-PI consists of twelve 50-minute individual sessions covering primary control (sessions 1-7), secondary control and coping skills (sessions 8-12), with as many as four additional sessions depending on the adolescent’s coping skill mastery and improvement, as judged by the therapist (Table 1). Additionally, three family sessions are included in the PASCET-PI treatment, corresponding with sessions 1, 6, and 10 of the individual CBT protocol, to teach family problem-solving, psychoeducation about expressed emotion, and discussion between the adolescent and parents regarding progress and problems related to depression and physical illness. The first 40 minutes of each family session is held with the parents alone, and the remaining 20 minutes with the parents, adolescent, and, if appropriate, the siblings. The original PASCET treatment was modified in three main areas including the increased focus on the physical illness and the interaction between this and the adolescent’s coping style, family sessions, and social skills training for the adolescent. The social skills training included in the PASCET-PI involves a specific problem-solving approach to social problems common in adolescents with IBD disease limitations, and role-plays focused on reducing cognitive distortions when interacting with peers. Additional guidelines of the PASCET-PI program include building rapport, developing a therapeutic alliance with the adolescent, and incorporating creative projects into treatment. Accommodation can be made for participants who are unable to come to sessions due to a disease flare.
Table 1

Outline of Primary and Secondary Control Enhancement Training—Physical Illness

<table>
<thead>
<tr>
<th>Session</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Individual sessions</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Psychoeducation about comorbid depression and physical illness, cognitive-behavioral therapy, and problem-solving approaches</td>
</tr>
<tr>
<td>2</td>
<td>Constructing physical illness narrative; applying the problem-solving approach to illness coping</td>
</tr>
<tr>
<td>3</td>
<td>Choosing enjoyable solo activities</td>
</tr>
<tr>
<td>4</td>
<td>Planning social activities; developing social problem-solving skills</td>
</tr>
<tr>
<td>5</td>
<td>Relaxation techniques; guided imagery to cope with pain</td>
</tr>
<tr>
<td>6</td>
<td>Showing positive self</td>
</tr>
<tr>
<td>7</td>
<td>Developing talents</td>
</tr>
<tr>
<td>8</td>
<td>Identifying negative cognitive distortions</td>
</tr>
<tr>
<td>9</td>
<td>Modifying negative cognitive distortions and attributions regarding physical illness</td>
</tr>
<tr>
<td>10</td>
<td>Practicing positive reframing using thoughts, distracting activities, and social support</td>
</tr>
<tr>
<td>11</td>
<td>Review of skills learned and personalizing skills</td>
</tr>
<tr>
<td>12</td>
<td>Further consolidation of skills learned and personalizing skills</td>
</tr>
<tr>
<td>13</td>
<td>As many as four additional sessions based on improvement and skill mastery</td>
</tr>
</tbody>
</table>

| Family sessions (60-minute session at beginning, middle, and end) | |
| 1 | Probe family’s illness experience; psychoeducation about depression and physical illness within family’s illness narrative; teach family problem-solving |
| 2 | Psychoeducation about expressed emotion; discussion between adolescent and parents about progress and problems; psychoeducation about early signs of depression |
| 3 | Discussion between adolescent and parents about progress and problems; psychoeducation about early signs of depression; validation of grieving process and making meaning of physical illness-related adversity; empowering parent-adolescent dyads or triads to reinforce PASCET skills to their daily lives |

or other barriers. Such accommodations may include conducting telephone sessions or visiting the patient in the hospital if he or she is hospitalized.

In an initial evaluation of the efficacy of the PASCET-PI, this treatment was implemented by one doctoral level therapist at Children’s Hospital—Boston to 10 adolescents with comorbid depression and IBD. There was no comparison group for
this open trial. As expected, outcome measures indicated significant reductions in DSM-IV (American Psychological Association [APA], 2000) depression diagnoses, a significant reduction in depressive symptomatology, improvements in global psychological functioning and improvements in social functioning. Adolescents reported significant changes \( (p < .001) \) on self-reported CDI scores from pretreatment (mean = 16.18, \( SD = 4.21 \)) to posttreatment (mean = 4.82, \( SD = 4.75 \)). Parents also reported significant changes \( (p < .01) \) in their children’s depressive symptoms from pretreatment (mean = 19.00, \( SD = 7.33 \)) to posttreatment (mean = 8.09, \( SD = 4.11 \)) on the CDI-Parent Report. Significant improvements \( (p < .001) \) in mean global psychological functioning scores, as measured by the Children’s Global Assessment Scale, were also seen. Scores increased from 53.27 at pretreatment (\( SD = 6.92 \)) to 69.55 (\( SD = 7.93 \)) at posttreatment. Although IBD severity measures were unchanged, adolescents’ perceptions of their general health and physical functioning improved. Measures also indicated high participant satisfaction and helpfulness ratings for CBT (Szigethy et al., 2004b). Participants were followed and CBT maintenance sessions and pharmacological intervention were offered as needed for one year after posttreatment. A wide range in number of CBT booster sessions with a mean of 4.36 (\( SD = 4.37 \)) was provided to participants. Three participants met criteria for mood disorder during the 1-year follow-up period.

**Effects of Therapeutic Processes**

Although this preliminary study indicates that the PASCET-PI is effective in treating depression in adolescents with IBD, the question remains as to which
therapeutic processes contribute to positive outcomes in the PASCET-PI treatment. It would be remiss to simply conclude without further study that the positive outcomes were due to the specific factors, or well-defined therapist actions and techniques, as outlined in the treatment manual. Numerous treatment studies have failed to determine differential effectiveness rates when comparing various types of psychotherapy. For example, results of a meta-analysis of over 500 psychotherapy treatment studies found that specific psychotherapy modalities did not produce significant differences in type or degree of benefit (Smith, Glass, & Miller, 1980). Similarly, investigation of outcome data from the National Institute of Mental Health's Treatment of Depression Collaborative Research Project (TDCRP) found that there were not significant differences in effectiveness rates between various types of psychotherapy, including interpersonal, cognitive-behavioral, and drug treatment (Elkin et al., 1989).

However, specific therapeutic factors have been found to contribute to positive outcome. Sessions of the National Institute of Mental Health's TDCRP with adult patients with depression with a psychotherapy process measure (Psychotherapy Process Q-sort; PQS) found that 27 specific therapy processes significantly predicted outcome, however almost all of these processes also interacted with pretreatment disturbance level (Jones, Cumming, & Horowitz, 1988). Results of a hierarchical multiple regression analysis conducted to determine whether specific process factors would predict treatment outcomes indicated that the patient pretreatment Global Severity Index (GSI) derived from the Brief Symptom Inventory accounted for approximately 26% of the outcome variance. Interaction effects that predicted improvements among patients
with high pretreatment disturbance levels responded favorably to a particular therapeutic stance that was directly reassuring and avoided or suppressed the patient’s disturbing feelings. These patients seemed concerned with the therapist’s opinion of them and behaved in a manner to receive a favorable response. These sessions appeared to be more focused and concrete than sessions with less depressed patients. On the other hand, Q items predictive of successful outcome with patients with low pretreatment disturbance level focused on the emotional content in the patient’s narrative, personal meanings associated with the narrative, and transference interpretations. This approach utilized a more contemplative, thoughtful dialogue with numerous silences. Unlike the more disturbed patients, these patients appeared more conflicted about their dependency needs. Analysis of interaction effects of Q items on treatment outcome provided a coherent picture of clinical process with more and less severely depressed patients. Additionally, a single case study utilizing an informal time-series analysis of changes in mean ratings for the Q items across the hours for various sessions allowed the identification of Q items that demonstrated meaningful change. Because results of this study suggest that patient change is a complex interaction of therapist, patient, and relationship variables, the authors concluded that the distinction between specific and nonspecific factors is problematic because specific, intentional interventions help to shape and define therapeutic relationships. Rather than attempt to isolate single dimensions of process with outcome, the authors suggested that future research should investigate the complex, multidimensional models of change and consider interactions with certain patient qualities that reflect.
Others believe that nonspecific processes, or the qualities inherent in any positive human relationship that affect an individual’s morale or outlook such as empathy and support, are more predictive of outcome than specific factors (Blatt et al., 1996; Castonguay et al., 1996; Krupnik et al., 1996). Following a CBT for 30 depressed adults, a comparison of specific CBT processes to nonspecific processes (therapeutic alliance and the client’s emotional involvement) indicated that the nonspecific processes were more predictive of outcome than the specific processes. Results also indicated that the therapist’s focus on the impact of distorted cognitions on depressive symptoms correlated negatively with outcome. Descriptive analyses suggest that therapists sometimes increased their focus on cognitive rationales and techniques when therapeutic alliance was strained. However, the increased focus seemed to worsen the alliance and interfered with outcome (Castonguay et al.). After analysis of patient responses on the Barrett-Lennard Relationship Inventory (B-L RI) and Need for Approval and Perfectionism factors on the Dysfunctional Attitudes Scale (DAS), a 40-item inventory of depressogenic attitudes, administered as part of the National Institute of Mental Health’s TDCRP research protocol ($N = 225$), Blatt and colleagues (1996) found that ratings of the quality of the therapeutic relationship after the second session significantly or almost significantly correlated with four of the five outcome measures. Results of a regression analysis revealed that the patient’s perception of the quality of the therapeutic relationship was only marginally predictive of therapeutic gain at high and low levels of patient perfectionism, but significantly predictive at moderate levels of perfectionism. The authors concluded that treatment outcome is dependent on
patient and therapist qualities and their interactions, which affect the therapeutic relationship. Krupnik and colleagues evaluated the effect of the therapeutic alliance on outcome by examining the Vanderbilt Therapeutic Alliance Scale (VTAS) and Hamilton Rating Scale for Depression (HSRD) administered as part of the protocol for the NIMH TDCRP study. Results indicated that both early (after session 3) and mean Patient or Total Alliance (sum of Patient and Therapist Alliance) scores on the VTAS were significantly associated with outcome as measured by the HRS
d. Interestingly, examination of the individual regression coefficients was relatively strong for interpersonal (IPT), Imipramine-Clinical Management, and Placebo-Clinical Management conditions, yet weak for the CBT condition. Patient contribution to the therapeutic alliance accounted for 21% of the outcome variance on both the HRS
d and Battelle Developmental Inventory (BDI; \( p < .001 \)) according to mean factor weights. Mean total alliance accounted for 19% on the HRS
d and 18% on the BDI (\( p < .001 \)).

On the other hand, some previous research has failed to identify consistent correlations between therapeutic alliance and outcome. Soo-Hoo, Jones, and Pulos (1988) examined the transcripts of therapy hours of a brief psychodynamic psychotherapy delivered to 40 patients diagnosed with posttraumatic stress disorder (PTSD). Investigation of the relationship between ratings with the PQS and ratings made with the VTAS indicated that therapeutic alliance did not predict outcome. These are consistent with findings of other studies (Hartley & Strupp, 1983) that do not indicate a relationship between therapeutic alliance and outcome following brief psychotherapy, which has led some to conclude that the associations between alliance
and outcome is too simplistic and the interaction of multiple influences must be considered (Jones, Hall, & Parke, 1991).

Attempts to determine the specific factors or processes utilized during actual therapy sessions that contributed to positive treatment outcome have become important extensions of treatment outcome studies. To aid in such investigations, the PQS was developed to provide a standard language for describing psychotherapeutic processes utilized during therapies of various orientations. Expert therapists from the IPT, CBT, and PD ranked how characteristic each of 100 PQS items is according to their orientation in order to develop three ideal prototypes (Jones, 1985; Jones et al., 1988). Examples of PQS items are, “Therapist adopts supportive stance,” and “Patient experiences discomforting or troublesome (painful) affect.” To determine psychotherapeutic processes utilized during therapy sessions, an independent set of clinical raters rank the PQS items according to how characteristic they are of the actual therapy session. Correlations between PQS item ratings completed by independent raters and ideal prototypes help to determine how closely the actual treatment session is to its specified orientation.

Results of investigations of psychotherapeutic process utilizing the PQS suggest that the application of “specific factors” may not occur in isolation as previously assumed. For example, PQS ratings of IPT and CBT sessions to treat adults with depression as part of the National Institute of Mental Health TDSCR indicate that specific factors were not implemented during therapy sessions as predetermined. Results indicate that during both IPT and CBT therapy sessions, the processes that were
utilized adhered most strongly to the ideal prototype of CBT as determined by expert therapists rather than the IPT sessions being consistent with the ideal IPT prototype (Ablon & Jones, 2002). In other words, results indicate that the therapeutic processes previously identified by expert CBT therapists as most characteristic of CBT were often utilized during IPT sessions as well as CBT sessions.

Furthermore, therapeutic processes identified by expert IPT therapists as most characteristic of IPT were frequently utilized during CBT sessions. Although the psychotherapeutic processes were different for each approach, some of the most defining characteristics of each approach were shared across both types of therapy. For example, in both IPT and CBT prototypes, interpersonal relationships and the patient’s current life situation were rated as highly characteristic themes (Ablon & Jones, 1999).

Another investigation of specific factors implemented during treatment utilizing PD and CBT orientations found surprising results. Comparisons between PQS ratings of CBT treatment sessions and the ideal CBT prototype resulted in a strong correlation. However, results show that the psychodynamic prototype constructed by experts was consistently significantly correlated with positive outcome in both psychodynamic and cognitive-behavioral therapy (Ablon & Jones, 1998). Evidently, specific factors, or processes identified as characteristic of individual orientations, are not used exclusively by therapists of specific orientations during actual treatment sessions and may affect outcome in unexpected ways.

Some investigations of psychotherapeutic processes have correlated PQS ratings with outcome measures to determine the individual processes that were associated with
positive outcome. Results of these investigations have produced unexpected results. For example, the processes associated with the ideal PD prototype that were present in a CBT treatment were more strongly correlated with positive outcome than the processes present during the CBT treatment sessions that were associated with the ideal CBT prototype (Jones & Pulos, 1993). As previous studies have shown, it is critical to examine the multidimensional interactions that take place during therapy sessions to be confident of which processes actually contributed to positive outcomes (Jones et al., 1988). Knowledge of the aspects of treatment that impacted change most significantly will guide the development and implementation of future treatments.

Summary

Children and adolescents with chronic diseases have a higher rate of psychological problems than their physically healthy counterparts. Among children and adolescents with chronic diseases, children and adolescents with IBD have particularly high rates of psychological problems (Lavigne & Faier-Routman, 1992). One of the most common psychological problems among children and adolescents with IBD is depression. Studies of prevalence of depression among children and adolescents with IBD indicate that rates of depression are 29% among children with CD and 21% among children with ulcerative colitis (Burke et al., 1989).

Investigations of treatments for physically healthy youth with depression indicate that cognitive-behavioral therapy is empirically validated to reduce depressive symptoms among youth (Weisz et al., 1997). One CBT program that was developed to
treat adolescents with chronic illnesses is the PASCET-PI program (Weisz et al.). The PASCET-PI includes family sessions, psychoeducation on IBD, and creation of an illness narrative in addition to strategies to improve the adolescent’s sense of primary and secondary control over his or her life. In a recent outcome study of the PASCET-PI with 10 adolescents with comorbid depression and IBD, outcome measures indicated significant reductions in DSM-IV diagnoses of depression, improvements in global psychological symptoms, and improvements in social functioning (Szigethy et al., 2004b).

Although outcomes for the PASCET-PI are promising, it is difficult to determine which processes were important in facilitating change. Previous investigations of psychotherapeutic processes indicate that outcome studies are simplistic and have been unsuccessful at identifying strong and consistent correlations between dimensions of process and outcome. Various processes other than those predetermined are utilized during actual therapy sessions. Psychotherapy is typically influenced by multiple variables (e.g., specific variables, nonspecific variables, patient motivation, pretreatment level of disturbance) that interact with each other and contribute to change through different modes of causality (Ablon & Jones, 1998, 2002; Jones et al., 1988). Therefore, a critical question remains as to which aspects of the PASCET-PI contributed to positive outcome. Further investigation of therapeutic processes that contribute to positive outcome within treatments such as the PASCET-PI is needed to help understand the treatment effects and to suggest directions for development of future treatments for this population. In order to determine the process factors that
contributed to positive outcome within the PASCET-PI treatment, the processes involved in the therapy sessions were examined using the PQS (Jones, 1985) to address the following questions:

1. What is the relationship between actual psychotherapeutic processes utilized during PASCET-PI treatment sessions and ideal prototypes of cognitive-behavioral, psychodynamic, and interpersonal therapy, as determined by experts using the PQS measure?

2. Which prototypes are significantly associated with the PASCET-PI treatment effects as indicated by outcome measures?

3. What is the contribution of specific process factors, represented by PQS ratings, as well as nonspecific factors assessed by a measure of therapeutic alliance, to treatment outcome?
CHAPTER III

METHODS

Procedures for Recruitment of Participants

This treatment study was conducted through the Gastroenterology Clinic at Children's Hospital-Boston and approved by the hospital's institutional review board. Preliminary inclusion criteria included adolescents between 12 and 17 years of age with a diagnosis of IBD for 3 months or more, the ability to speak and understand English, and the ability to complete a short self-report measure, namely the CDI (Kovacs, 1992). Potential research participants with a biopsy-confirmed diagnosis of IBD were invited to participate in the study by their gastroenterologist. If the parent and adolescent were interested, a research assistant contacted the family. The CDI was administered to the adolescent if parental consent and adolescent assent were provided. If the adolescent obtained a score of 12 or higher on the CDI, he or she was called by phone and screened for inclusion and exclusion criteria. This cutoff score was selected because it yields a favorable sensitivity/specificity ratio for identifying major or minor depression (Kovacs). Inclusion criteria were met if the adolescent met DSM-IV (APA, 2000) criteria for major or minor depression, had a Child Global Assessment Scale (C-GAS; Shaffer et al., 1993) score below 60, and biopsy-confirmed IBD. Minor depression is defined in the DSM-IV as a potential new diagnostic category requiring the presence of at least two but less than five symptoms of major depression lasting at least 2 weeks in addition to either depressed mood or anhedonia with clinically significant functional
Exclusion criteria included history of bipolar disorder or psychosis, mental retardation by history, absence of both biological parents, antidepressant medication use within one month of assessment, depression requiring hospitalization, current pregnancy, substance abuse, previous treatment with manual-based CBT treatment, and active suicidal ideation. Of the 16 adolescents with IBD who met criteria for major or minor depression at the time of study recruitment, which lasted for approximately six months, 11 completed the PASCET-PI treatment. Reasons for exclusion included: suicidal ideation ($n = 1$), CGAS $> 60$ ($n = 2$), and travel distance ($n = 2$).

If potential participants met all inclusion criteria and had none of the exclusion criteria, a parental consent form was mailed for the assessment and treatment phase of the study. Next, the primary investigator (Eva Szigethy, M.D., Ph.D.) or a research assistant called the participants to invite them to participate in the treatment phase of the study. The primary investigator then conducted an individual face-to-face interview with each potential participant at the Children’s Hospital Psychiatry Department. At that time, the original consent form was discussed, parent’s written consent was obtained, and a separate written assent form was completed and discussed with the adolescent prior to the commencement of treatment sessions. After the interview, a battery of measures was administered to assess psychological functioning and patient background information. A total of $120$ was provided to the adolescent and family for completing assessments at pretreatment, posttreatment, 6-months follow-up, and 1-year follow-up.
Participants

Participants were four males (ages 12-16) and six females (ages 13-17) with a mean age of 14.8 (SD = 1.77) years. Eight of the participants identified themselves as European American and two as African American. Six adolescents lived in two-parent homes and four in single-parent homes. Annual family income ranged from $15,000 to $90,000 (mean = approx. $45,000). Six of the adolescents had CD and four had UC. Time since diagnosis of medical disease ranged from 10 months to 65 months prior to participation in the study, with mean illness duration of 31.9 months. At baseline, IBD severity based on the Pediatric CD Activity Index (PCDAI) or CD and the Clinical Score of Kozarek (CSK) was rated as inactive (n = 6), mild (n = 2), or moderate/severe (n = 3). At pretreatment, eight of the adolescents qualified for a diagnosis of Major Depressive Disorder and two for a diagnosis of Minor Depression. At pretreatment, three subjects had current comorbid DSM-IV-TR anxiety disorders including Generalized Anxiety Disorder (n = 2), and Specific Phobia (n = 2). Past diagnoses included PTSD (n = 2), attention deficit/hyperactivity disorder (ADHD; n = 1), and separation anxiety (n = 1). Eight participants had a family history of depression. Mean score of general adjustment and current level of impairment, as measured by the Children’s Global Assessment of Functioning, at pretreatment was 53.27 (SD = 6.92).

Participants in this study completed the full PASCET-PI treatment, which, as described earlier, includes twelve 50-minute sessions covering primary control (Sessions 1-7), secondary control (Sessions 8-12) and coping skills, with up to four additional sessions included based on the therapist’s judgment of the child’s progress.
and coping skill mastery. The mean number of individual sessions for the participants in this study was 12.4 (range 12-14) with a mean duration of 3.3 months (range 2.8-4.3). In addition, all participants completed three 60-minute family sessions. There was no control or comparison group for this pilot study of the PASCET-PI. The 10 participants who completed the PASCET-PI treatment were the participants in this examination of psychotherapeutic processes within the PASCET-PI treatment.

Participants were followed by the therapist for 1-year posttreatment. All participants received CBT booster sessions. The average number of CBT booster sessions completed was 4.36 ($SD = 4.37$), with a wide range of number of sessions (1-16) and time intervals between sessions. At the 6-month follow-up, only one of the participants met DSM-IV (APA, 2000) criteria for a current mood disorder. This adolescent was taking a high dose (40 mg) of prednisone for an UC exacerbation that resulted in surgery. Two additional participants met criteria for major depression in partial remission at the 6-month follow-up that evolved to full remission at the 1-year follow-up.

Seven participants were on prednisone (2.5-30.0 mg/day) while participating in the PASCET-PI treatment. Other medications to treat physical symptoms taken by participants at the time of intake included Remicade, Pentasa, Prilosec, 6-MP, Asacol, and Sulphasalazine. Additionally, although no participants were on psychotropic medications when participating in the PASCET-PI, four participants were taking psychotropic medications at various times during the 12-month follow-up period, with 1 participant on medications at both the 6-month and 1-year follow-up time points.
Psychotropic medications included bupropion SR \((n = 2; \text{dose range } 100-200\text{mg})\),
citalopram \((n = 2; \text{dose range } 20-40\text{mg})\), topiramate \((n = 1; \text{dose range } 75-125\text{mg})\), and
trazadone \((n = 1; \text{dosage } 50\text{mg})\). Only three subjects took medications for depressive
symptoms (i.e., insomnia, \(n = 1\); irritability, \(n = 1\); possible steroid-induced depressive
symptoms, \(n = 1\)); the rest were for anxiety diagnoses \((n = 2)\) or binge eating \((n = 1)\)
(Szigethy et al., 2004a, 2004b).

Measures

Participants completed measures related to demographic variables and
psychological functioning. Measures were also completed 6 months and one year after
completing treatment. Although additional measures were administered at pretreatment
and posttreatment as part of the PASCET-PI treatment outcome study, the measures
described in this section were those utilized for participant selection and for the
investigation of psychotherapeutic processes. The following measures were
administered for participant selection.

*Demographic Information Form:* This is a self-report form that includes age, sex, race, religion, school placement, family composition, marital status of parents, occupation of parents, educational level of parents, and socioeconomic status.

*Medical History Form:* This form was used to obtain information related to the adolescent’s medical history including onset and course of medical illness, medication use, and duration of treatment. Disease-specific scales of disease severity, puberty status, and growth charting was also obtained from the participant’s medical chart.
The Schedule for Affective Disorders and Schizophrenia for Children, Present and Lifetime Version (KSADS-PL; Parent and Child Version): The KSADS-PL (Kaufman, Birmaher, Brent, & Rao, 1997) is a semistructured diagnostic interview designed to obtain present episode and lifetime history of psychiatric illness according to DSM-IV criteria. Information collected from parents and adolescents was integrated by the interviewer and therapist (E. Szigethy) after the interview to determine a score combining the parent and child reports. The same interviewer, who was different from the therapist, conducted pre- and posttreatment assessments. In addition to the determination of diagnoses, the combined total number of depressive symptom items by both the parent and adolescent during the K-SADS-PL administration was tabulated. Raters blind to treatment status rated a randomly selected 42% of pretreatment and 36% of posttreatment-taped sessions, with 100% agreement on diagnoses (Szigethy et al., 2004a, 2004b). This measure was utilized to determine psychological diagnoses of potential participants.

Test-retest reliability coefficients of the KSADS-PL have been found to be in the excellent range for present and lifetime diagnoses of major depression, bipolar disorder, generalized anxiety, conduct, and oppositional defiant disorder. Kappa statistics for overall test-retest reliabilities for the K-SADS-P/L are .63-.90 for current, .55-1.00 for lifetime (Ambrosini, 2000). Results of previous investigations indicate that the KSADS-PL generates reliable and valid child and adolescent psychiatric diagnoses (Kaufman et al., 1997).

Pediatric CD Activity Index (PCDAI): The PCDAI (Hyams et al., 1991) is a
validated measure of severity of CD. This scale was administered to assess IBD severity and determine inclusion criteria. The PCDAI includes subjective patient historical information (based on recall for the previous week), physical examination findings, laboratory assessment, and data concerning weight and height changes. Independent evaluations of global assessment of disease activity for each patient was performed by two pediatric gastroenterologists.

Previous research indicated that the correlation between the PCDAI and Harvey-Bradshaw index, a validated simple index of CD activity, was high \((r = 0.86; \text{Hyams et al., 1991})\). The correlation between PCDAI and physician’s “global assessment” of disease activity as none, mild, or severe was \(r = 0.80\). Increasing PCDAI scores were noted with increasing disease severity. Significantly different PCDAI scores were noted for each of the categories of global assessment of disease severity (None = 10, Mild = 21, Moderate = 34, Severe = 48; Hyams et al.).

**Clinical Score of Kozarek for Ulcerative Colitis (CSK):** The CSK (Kozarek et al., 1989) was administered to determine inclusionary criteria and measures severity of ulcerative colitis. The CSK is calculated based on patient subjective report and objective extraintestinal manifestations. Results were converted into one of three ranked scores including inactive, mild, or moderate/severe.

The following measures were administered at pretreatment, posttreatment, and follow-ups to assess outcome.

**Children’s Depression Inventory (CDI)-Parent and Child Forms:** The CDI-Parent and Child Forms (Kovacs, 1992) were administered during the initial screening
and at posttreatment and follow ups. The Total CDI score indicates the frequency and severity of depression experienced by the child or adolescent. The CDI has well-validated psychometric properties and has been used to reliably diagnose depression in medically ill populations (Engstrom, 1992; Siegel, Golden, Gough, Lashley, & Sacker, 1990). The CDI has adequate internal consistency (.70-.89). Test-retest reliability has been demonstrated in 16 studies, with a mean of .70. This number increases to .80 if the mean is obtained from studies with a 1-week retest interval (del Barrio, 1993). Research on its discriminative validity has been mixed, thus it is recommended that the CDI be used as a screening instrument with additional clinical data to determine the appropriate diagnosis (del Barrio).

*Children's Attributional Style Questionnaire-Revised (CASQ-R):* CASQ-R (Kaslow & Nolen-Hoeksema, 1991) is a shortened measure derived from the original 48-item CASQ with 24 forced-choice items used to assess children's attributions of positive and negative events. There are 16 questions that pertain to each of the three attributional dimensions: internality, stability, and globality. Scoring assigns 1 to internal, stable, or global responses and 0 to external, unstable, or specific responses. Scores are summed to determine overall degree of learned helplessness. Higher scores reflect a greater degree of learned helplessness. Cronbach alphas for the overall composite is .61. CASQ-R positive, negative, and overall scores correlate significantly with the Vanderbilt Depression Inventory (VDI). More external-unstable-specific attributions for good events was associated with more elevated VDI scores ($r = -.40$; Thompson, Kaslow, Weiss, & Nolen-Hoeksama, 1998).
Perceived Control Scale: The 24-item self-report Perceived Control Scale is designed to assess perceived control, defined as the belief that “I can obtain a desired outcome (or avoid an undesired outcome) if I try” (Weisz, McCabe, & Dennig, 1994). Subscales reflecting control over academic, social, and behavioral contexts are embedded within the questionnaire (8 items each) and have been used to predict changes in depressive symptoms. The full questionnaire yields three subscale scores and a total perceived control score (Weisz, Sweeney, Proffitt, & Carr, 1993). Information on the development and validation of the PCS is contained in an unpublished manuscript (Weisz, Proffitt, & Sweeney, 1991). This measure has been used in previous research studies. For example, a version of the PCS in a diagnostic interview format was administered to 33 children with acute lymphocytic leukemia. Based on their PCS scores, children were divided into three groups: primary control, secondary control, and relinquished control. ANOVAS indicate significant differences between groups on Internalizing, Externalizing, and Total problem scores of the CBCL, F(3, 26) = 3.72, 3.23, and 4.42, respectively. None of the children in the secondary control group scored in the clinical range on the CBCL Total Problems, Externalizing, or Internalizing scales; however, 50% of children in the primary control group scored in the clinical range on the Total Problems and Internalizing scales, and 35% scored in the clinical range on Externalizing scale (Weisz et al., 1994).

Children's Global Assessment Scale (CGAS): The CGAS (Shaffer et al., 1993) is an instrument completed by the clinician to assess general adjustment and current level of mental or physical impairment. Ratings range from 0 to 100 with a cutoff score
of 60 indicating clinically significant impairment. In this study, the pretreatment score was determined by the therapist and the posttreatment score was determined by clinical consensus with an independent clinician. The therapist did not determine the posttreatment score to eliminate bias. The scale has demonstrated high interrater reliability ($r = .83$) and test-retest reliability for the total behavior problem score and social adaptation scale was .76. To examine the discriminant validity of the CGAS, two groups of subjects were formed based on the cutoff score suggested by the authors; one group with scores above 70, which indicates adequate functioning, and one with scores below 70, which indicates significant difficulties with functioning. Results of a discriminant analysis including variables related to functional impairment, level of adaptive functioning, number of diagnoses, and total problem behavior scale of the Child Behavior Checklist (CBCL) indicate that the group with scores above 70 had significantly more problems than those with scores below 70 (Bird, Canino, Rubio-Stipec, & Ribera, 1987; Shaffer et al., 1983; Steinhausen, 1987). Due to the global nature of this outcome measure, it was analyzed separately from specific measures of depressive symptoms including the CDI, CASQ, and Physical Component Summary (PCS).

The following measures were administered only at posttreatment and follow-up.

*Therapist Alliance Scales for Adolescents-Therapist and Patient Report (TASA):*

The TASA (Shirk & Saiz, 1992) measures the quality of therapeutic alliance from the adolescent and therapist perspective. The therapist and patient independently rate the therapeutic bond and the collaborative nature of the therapeutic relationship. Overall
internal consistency of the Therapeutic Alliance Scales for Children, from which the TASA is an upward extension, is .72 for the therapeutic bond scale as rated by the child, .67 for collaborative nature of the therapeutic relationship as rated by the child, .88 for therapist’s rating of therapeutic bond, and .87 for therapist’s rating of collaborative nature (Shirk & Saiz). Preliminary data on TASA-Therapist Report with 30 cases reveals good internal consistency for the overall scale (0.85; S. Shirk, personal communication, March 25, 2002).

The PASCET-Physical Illness Protocol Adherence Checklist: This detailed checklist is designed to determine the therapist’s actual adherence to the PASCET-PI treatment objectives during therapy sessions. A list of topics determined most important to cover during each session was developed prior to implementation of the treatment by developers of the treatment (J. Weisz, E. Szigethy, & W. Beardslee). This checklist was used by trained independent raters when reviewing all of the videotaped treatment sessions in their entirety. Percentages of topics on the list completely covered and topics partially covered, as determined by trained raters after reviewing treatment sessions, were computed. Completely covered was defined as topic covered and child gives indication that he or she understands. Partially covered was defined as topic covered without child giving indication that he or she understands.

Psychotherapy Process Q-Sort (PQS): the PQS is a descriptive measure of the psychotherapy process suitable for quantitative analysis, the Psychotherapy Process Q-sort (Jones, 1995), was utilized to code two PASCET-PI individual treatment sessions from each participant. This measure consists of 100 items that characterize a wide range of therapeutic interactions, focusing on the therapist, client, and the therapist-
client interaction to provide a meaningful index of the description and classification of the therapy process. Unlike most psychotherapy process measures, the PQS utilizes an entire hour as the unit of observation. Raters are to take a neutral stance when rating without the bias of a specific orientation. The PQS items are not committed to a specific theoretical viewpoint so can be used for comparing the theory process of different therapies. The Q-sort contains three types of items: (a) items describing patient attitude and behavior or experience, (b) items reflecting the therapist actions and attitudes, and (c) the patient-therapist interaction. Examples of items are, “Patient verbalizes negative feelings (e.g., criticism, hostility) toward therapist (versus makes approving or admiring remarks)” and “Patient rejects (versus accepts) Therapist’s comments and observations.” The reliability and validity of each item has been tested statistically. Items were chosen after conducting a search of psychotherapy process measures and selecting items from consultations with research-oriented clinicians. Item revisions were made based on ability to discriminate and low interrater reliability. An item covariance matrix was computed to determine the final item pool to ensure items assessed different constructs and did not overlap. This process occurred numerous times before the final Q set was derived. Reliability at the individual Q-item level has been consistently satisfactory, ranging from .50 to .95. The Psychotherapy Process Q-set has demonstrated strong interrater reliability across a variety of studies and treatment samples (Ablon & Jones, 2002; Jones et al., 1988; Jones & Pulos, 1993). Intercrater reliability of the PQS ranges from .68 to .90, with a mean reliability of 0.86 (Jones et al.). According to one of the developers of the measure, an interrater
reliability of .60 is considered acceptable (J.S. Ablon, personal communication, May 14, 2003) due to different interpretations of events and interactions during sessions when rating the psychotherapeutic process. This is an identified problem among measures involving expert judgment. Disagreement has been found in many areas of expert judgment due to inherent uncertainty as to how objective information should be utilized to guide judgments (Cooksey, 1996; Wigton, 1996). Factorial validity for the PQS is irrelevant because the measure was constructed in a way to ensure independence among items. The desirable result of an absence of a factor structure was confirmed by factor analysis (Jones et al.).

A videotape of the entire individual therapy session rather than randomly selected segments of the session is viewed when Q-sorting in order to increase opportunity to view events of importance and enhance external validity. After studying the process data, the rater sorts through the 100 cards and place them in a row of nine categories. The cards believed to be most characteristic of the session are placed at one end of the row while cards believed to be most uncharacteristic of the process data are placed at the other end of the row. If the item is irrelevant to the processes observed during the hour, the card is placed in the neutral range. The number of cards to be placed in each category are as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>No. of cards</th>
<th>Label of Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>5</td>
<td>extremely characteristic or salient</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>quite characteristic or salient</td>
</tr>
<tr>
<td>7</td>
<td>12</td>
<td>fairly characteristic or salient</td>
</tr>
</tbody>
</table>
Assignment of a specified number of cards to each category has been shown to be more useful than if the rater is allowed to assign any number of cards to a category because the rater is forced to consider each item individually and carefully when number of items per category is limited.

Three independent prototypes, representing cognitive-behavioral, interpersonal, and psychodynamic therapies, were developed using the Psychotherapy Process Q-set. Rankings of Q-items have been developed by expert therapists from each orientation. Specifically, panels of 10 or 11 experts from each of the three orientations rated each Q-item on a scale from 1 to 9, according to how characteristic each PQS item was of an ideally conducted therapy session according to their orientation. A prototype for each orientation was then developed using a statistical method called the “Q technique.” Ratings of “ideal” therapy sessions from approximately thirty experts from each orientation were correlated over 100 PQS items and factor analyzed with a varimax rotation. Resulting factor weights indicate the degree that individual items contribute to
each factor for each of the 100 Q-items. The item with the highest factor weight is most representative of the session and the item with the lowest factor weight is least representative of the session. Factor weights are expert rankings after factor analysis.

For this study, three independent raters were trained by completing approximately thirty hours of individual and group training conducted by one of the developers of the PQS measure prior to utilizing the PQS to rate PASCET-PI sessions. Two of the raters were experienced psychiatrists specializing in pediatric psychiatry in a medical setting, and the third rater was a graduate student in child clinical psychology. All raters successfully completed training in the application of the PQS.

Procedures

All study participants completed the Primary and Secondary Control Enhancement Training: Integrated Treatment for Depressed Adolescents with Physical Illness (PASCET-PI) treatment program. A Human Subject Protocol Application was approved to conduct the treatment by the Committee on Clinical Investigation at Children’s Hospital-Boston in compliance with the Department of Health and Human Services (DHHS) regulations.

For this study, archived individual treatment sessions of the PASCET-PI treatment program were coded by trained clinical raters using the PQS. Each clinical judge was trained by one of the developers of the measure, Dr. Stuart Ablon at Massachusetts General Hospital. Training consisted of approximately 20 hours of coding, feedback, and interrater reliability checks.
Two individual sessions from each of the 10 participants were used to investigate psychotherapeutic processes utilized throughout the treatment. After consultation with the PASCET-PI therapist and PQS developer, individual sessions 2 and 8 were chosen to be coded for several reasons. First, these sessions were typical of other individual sessions within the PASCET-PI. Additionally, a session at the beginning and another session at the end were rated to obtain a sample of primary control skills taught at the beginning of the treatment, and a sample of secondary control skills taught toward the end of the treatment. The same sessions were rated for each participant to increase consistency among ratings. Alternative arrangements were made for two individual sessions rated with the PQS. Individual session #2 was conducted via phone due to one participant’s disease flare and audiotaped; however, the audiotape was inaudible. Therefore, session #3 (also a session focused on primary control) was utilized instead of session #2. Similarly, the audiotaped session #8 for another participant was inaudible so session #10 (a summary session involving practicing both primary and secondary control skills) was substituted. After viewing the videotaped therapy sessions, the two independent raters rated the individual sessions on each of the 100 items on the PQS. The Q-ratings for both rated sessions for each patient were averaged across sessions to obtain one score for each of the 100 items for each patient.
CHAPTER IV

RESULTS

Preliminary Analyses

Prior to evaluating the research questions, adherence of actual treatment sessions to the PASCET-PI protocol was evaluated. Quality assurance checks of PASCET-PI sessions, as measured by the PASCET-PI Protocol Adherence checklist, indicated that predetermined topics for the treatment that were partially or completely covered across all sessions ranged from 68-90%, depending on the patient. On average, 81% of topics were covered completely or partially across all sessions.

Preliminary analyses also included calculation of PQS interrater reliability for each session of the PASCET-PI treatment that was rated by the two independent raters. Correlations of .60 and higher demonstrate that raters’ perceptions of characteristic and uncharacteristic items in the session were agreed upon. As previously mentioned, although .60 is considered low for some measures, it is considered acceptable for this measure (S. Ablon, personal communication, May 2003). Interrater reliability coefficients for each session are presented in Table 2.

PQS ratings of PASCET sessions are in the appendix, which this author and someone else ranked. For exploratory purposes, the process items on the PQS with the 20 highest ratings according to average ratings across sessions are presented in Table 3. In other words, the 20 items listed in Table 3 are considered the most characteristic psychotherapeutic processes of the PASCET-PI sessions according to averages across

...
Table 2

*Interrater Reliability Correlations for PQS Ratings of PASCET-PI Sessions*

<table>
<thead>
<tr>
<th>Participant #</th>
<th>Session 2 correlation</th>
<th>Session 8 correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>004</td>
<td>.66</td>
<td>.65</td>
</tr>
<tr>
<td>009</td>
<td>.68</td>
<td>.84</td>
</tr>
<tr>
<td>010</td>
<td>.63</td>
<td>.80</td>
</tr>
<tr>
<td>016</td>
<td>.60</td>
<td>.72</td>
</tr>
<tr>
<td>018</td>
<td>.74</td>
<td>.68</td>
</tr>
<tr>
<td>019</td>
<td>.63</td>
<td>.83</td>
</tr>
<tr>
<td>052</td>
<td>.74</td>
<td>.79</td>
</tr>
<tr>
<td>064</td>
<td>.69</td>
<td>.76</td>
</tr>
<tr>
<td>089</td>
<td>.64</td>
<td>.65</td>
</tr>
<tr>
<td>091</td>
<td>.63</td>
<td>.83</td>
</tr>
<tr>
<td>Averages</td>
<td>.66</td>
<td>.76</td>
</tr>
</tbody>
</table>

However, it is important to consider that all 100 items of the PQS were ranked to reflect not only the aspects that were most prominent in the sessions but also the least characteristic aspects of the therapy processes.

As can be seen in Table 3, some of the most characteristic items across both sessions describe the structured nature of the therapist and content of sessions. Many of the most characteristic items describe the therapist’s active and structured style such as, “Therapist gives explicit advice and guidance,” and “Therapist communicates with patient in clear, coherent style.” Content items such as, “Therapist presents an experience or event in a different perspective,” and “Discussion centers on cognitive themes,” indicate the cognitive-behavioral focus of the therapy. Several items describe nonspecific processes of the treatment, such as, “Therapist adopts supportive stance,”
Table 3

Rank Order of the 20 Most Characteristic Psychotherapy Process Items in the PASCET-PI Cognitive Behavioral Therapy Sessions

<table>
<thead>
<tr>
<th>Rank</th>
<th>Item description</th>
<th>Average rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Therapist behaves in a teacher-like didactic manner.\textsuperscript{a}</td>
<td>8.7</td>
</tr>
<tr>
<td>2</td>
<td>Therapist actively exerts control over the interaction (e.g., structuring and/or introducing new topics).\textsuperscript{a}</td>
<td>8.5</td>
</tr>
<tr>
<td>3</td>
<td>There is a discussion of specific activities or tasks for the patient to attempt outside of session.\textsuperscript{a}</td>
<td>8.2</td>
</tr>
<tr>
<td>4</td>
<td>Discussion centers on cognitive themes (i.e., about ideas or belief systems).\textsuperscript{a}</td>
<td>8.2</td>
</tr>
<tr>
<td>5</td>
<td>Patient’s current or recent life situation is emphasized in discussion.\textsuperscript{d}</td>
<td>7.9</td>
</tr>
<tr>
<td>6</td>
<td>Therapist gives explicit advice and guidance (versus defers even when pressed to do so).\textsuperscript{a}</td>
<td>7.9</td>
</tr>
<tr>
<td>7</td>
<td>Therapist explains rationale behind his or her technique or approach to treatment.\textsuperscript{d}</td>
<td>7.8</td>
</tr>
<tr>
<td>8</td>
<td>There is discussion of body functions, physical symptoms, or health.\textsuperscript{b}</td>
<td>7.7</td>
</tr>
<tr>
<td>9</td>
<td>Therapist communicates with patient in clear, coherent style.\textsuperscript{c}</td>
<td>7.6</td>
</tr>
<tr>
<td>10</td>
<td>Therapist is directly reassuring (place in uncharacteristic direction if therapist tends to refrain from providing direct reassurance).</td>
<td>7.4</td>
</tr>
<tr>
<td>11</td>
<td>Therapist adopts supportive stance.\textsuperscript{d}</td>
<td>7.4</td>
</tr>
<tr>
<td>12</td>
<td>Dialogue has specific focus.\textsuperscript{d}</td>
<td>7.3</td>
</tr>
<tr>
<td>13</td>
<td>Therapist presents an experience or event in a different perspective.\textsuperscript{a}</td>
<td>7.1</td>
</tr>
<tr>
<td>14</td>
<td>Therapist is confident or self-assured (versus uncertain or defensive).\textsuperscript{a}</td>
<td>7.0</td>
</tr>
<tr>
<td>15</td>
<td>Therapist asks for more information or elaboration.\textsuperscript{a}</td>
<td>7.0</td>
</tr>
<tr>
<td>16</td>
<td>Therapist acts to strengthen defenses.</td>
<td>6.9</td>
</tr>
<tr>
<td>17</td>
<td>Therapist clarifies, restates, or rephrases patient’s communication.</td>
<td>6.7</td>
</tr>
<tr>
<td>18</td>
<td>Therapist suggests that patient accept responsibility for his or her own problems.\textsuperscript{b}</td>
<td>6.6</td>
</tr>
<tr>
<td>19</td>
<td>Patient’s interpersonal relationships are a major theme.\textsuperscript{b}</td>
<td>6.5</td>
</tr>
<tr>
<td>20</td>
<td>Therapist’s remarks are aimed at facilitating speech.\textsuperscript{e}</td>
<td>6.5</td>
</tr>
</tbody>
</table>

Note. Each statement is rated on a 9-point scale (1 = least characteristic item or negatively salient, 9 = item most characteristic or salient).

\textsuperscript{a} = Included in CBT prototype  
\textsuperscript{b} = Included in IPT prototype  
\textsuperscript{c} = Included in PD prototype  
\textsuperscript{d} = Included in CBT and IPT prototypes  
\textsuperscript{e} = Included in IPT and PD prototypes
and "Therapist clarifies, restates, or rephrases patient's communication," and suggest an emphasis on the therapeutic relationship.

As detailed in Table 3, 12 of the most characteristic items in the PASCET-PI overlap with items rated among the 20 most characteristic items of ideal CBT therapy according to the prototype developed by expert therapists (Ablon & Jones, 2002). Additionally, eight of the most characteristic process items of the PASCET-PI overlap with the 20 most characteristic items of ideal IPT prototype (three of these overlap between CBT and IPT), and two items overlap with the 20 most characteristic items according to the Psychodynamic prototype (one of these overlaps between IPT and PD).

Relationships Between PQS Ratings, Prototypes, and Outcome Measures

The first research question asked about the relationships between the PASCET-PI treatment and ideal cognitive-behavioral, interpersonal, and psychodynamic PQS prototypes. To answer this research question a series of calculations were performed. First, the PQS ratings of the 100 Q-sort items for each session were averaged across rater. These averaged 100 PQS ratings for each session were then correlated with the 100 factor weights of the ideal CBT prototype (one factor weight for each PQS item). The correlation between the 100 PQS item ratings and the 100 CBT prototype factor weights result in a single correlation, which represents the relationship between that participant's PQS session ratings and the CBT prototype factor weights. This correlation can be conceptualized by a scatterplot with PQS ratings on one axis and
ideal prototype factor weights on the other axis. Each point on the scatterplot would indicate the strength of the relationship between the PQS rating and prototype factor weights for each individual item. The regression line would indicate the single correlation between the PQS rating and ideal prototype. The same calculations were then conducted with the IPT and PD prototypes and the PASCET-PI treatment. These analyses produced six correlations (CBT, IPT, and PD for sessions 2 and 8) for each of the 10 participants. For each participant, the two correlations from session 2 and 8 for each orientation were averaged. For example, correlations with the CBT prototype for session #2 and #8 for participant #1 were .62 and .48. Thus, the average correlation with the CBT prototype for participant #1 was .55. As a result, relationships between the PASCET-PI and the three different orientations could be examined. These correlations are displayed in Table 4. Although the Pearson product moment correlation is one of the most popular statistics used when investigating relationships between variables, z scores provide information about the relative position of a score compared with other scores in a distribution. In order to make comparisons between scores reflecting the relationship of processes utilized within the PASCET-PI and ideal prototypes within and across each orientation, scores needed to be standardized.

Because the sampling distribution of Pearson’s r is not normally distributed, Pearson correlations were transformed to z scores using the Fisher r-to-z transformation formula. The z score indicates the amount in standard deviation units within a range of -3 to +3 that the PQS ratings is associated with an ideal session from a psychodynamic, cognitive-behavioral, or interpersonal orientation.
Table 4

Relationships Between Expert Prototype Factor Weights and PASCET-PI PQS Ratings

| Part | Cognitive-behavioral |  | Interpersonal |  | Psychodynamic |  |
|------|----------------------|  |---------------|  |---------------|  |
|      | Correlation | Z score | Correlation | Z score | Correlation | Z score |
| 004  | .551       | .6186   | .183        | .1850   | -.245       | -.2501  |
| 009  | .426       | .4537   | .137        | .1377   | -.332       | -.3430  |
| 010  | .682       | .8295   | .259        | .2660   | -.083       | -.0833  |
| 016  | .385       | .4009   | .110        | .1104   | -.402       | -.4237  |
| 018  | .264       | .2701   | .072        | .0724   | -.378       | -.3980  |
| 019  | .703       | .8675   | .277        | .2774   | -.086       | -.0880  |
| 052  | .570       | .6475   | .227        | .2340   | -.231       | -.2342  |
| 064  | .724       | .9080   | .252        | .2574   | -.157       | -.1608  |
| 089  | .525       | .5863   | .223        | .2267   | -.186       | -.1890  |
| 091  | .314       | .3285   | .091        | .0913   | -.350       | -.3654  |
| Average | .514        | .5911   | .183        | .1850   | -.245       | -.2536  |
| $R^2$ | .349       | .034    | .064        |         |             |         |

Results indicate that correlations were stronger between PQS ratings and the ideal prototype of CBT than with the ideal prototypes of IPT or PD. Correlations between PQS ratings and the ideal CBT prototype resulted in an overall moderate positive correlation. The variance in PQS ratings accounted for by processes associated with the ideal CBT prototype was moderate ($R^2 = .349$). The average correlation between PQS ratings and ideal prototypes of the IPT orientation was small and positive. The variance ($R^2$) accounted for in PQS ratings by IPT processes was very small ($R^2 = .034$). The relationship between the PD prototype and PQS ratings was small and negative yet larger in magnitude than the average correlation with the IPT prototype. The variance in PQS ratings accounted for by PD processes was small ($R^2 = .064$).
These findings indicate that, while there were some aspects of interpersonal therapy present within the PASCET-PI therapy, the processes evident within PASCET-PI sessions matched most closely to the ideal prototype of cognitive-behavioral therapy. PASCET-PI PQS ratings correlated more strongly with psychodynamic prototype factor weights than with IPT prototype factor weights, although PD was negatively correlated with PQS ratings. Negative correlations between the PASCET-PI therapy and the ideal psychodynamic prototype indicate that topics and processes ideally utilized in psychodynamic therapy were rarely implemented and possibly avoided by the therapist when delivering the PASCET-PI therapy. Examination of the percent of variance ($R^2$) accounted for by adherence to the ideal prototypes was moderate for CBT and small for IPT and PD. The relationship between PQS ratings and the CBT prototype was larger than the relationship with prototypes of other orientations. Averages of $z$ scores reflecting the association between PQS ratings and ideal prototypes are presented in Figure 1. The figure indicates a moderate positive relationship between PQS ratings and CBT prototype, a small positive relationship between PQS ratings and IPT prototype, and a small negative relationship between PQS ratings and PD prototype.

Processes Associated with Positive Outcome

To answer the second research question to determine which of the three orientations (as determined by ideal prototype factor weights) are significantly associated with treatment effectiveness as indicated by outcome measures, $z$ scores from Table 3 that reflect adherence between PQS ratings and ideal prototype factor weights
for each participant were correlated with change scores from outcome measures (CDI, CASQ, PQS, and CGAS) for each of the participants. Posttreatment change scores were computed by subtracting pretreatment scores from posttreatment scores. Follow-up change scores were computed by subtracting pretreatment scores from outcome measure scores at the specified follow-up time (i.e., 6-months posttreatment, 1-year posttreatment). The mean change scores of outcome measures, which reflect the average change score across all participants, are listed in Table 5. For all measures, positive change scores indicate an improvement in functioning. Table 6 displays correlations between adherence of PASCET-PI sessions to CBT, IPT, and psychodynamic processes and change scores on outcome measures of depressive symptomatology at posttreatment. Table 7 displays correlations between adherence to
### Table 5

**Mean Change Scores and Standard Deviations at All Time Points**

<table>
<thead>
<tr>
<th>Outcome measure</th>
<th>Posttreatment</th>
<th>6 months</th>
<th>1 year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean change score</td>
<td>SD</td>
<td>Mean change score</td>
</tr>
<tr>
<td>Children's Attributional Style Questionnaire</td>
<td>.7</td>
<td>2.5</td>
<td>1.8</td>
</tr>
<tr>
<td>Children's Depression Inventory</td>
<td>12.2</td>
<td>4.6</td>
<td>12.8</td>
</tr>
<tr>
<td>Perceived Control Scale</td>
<td>7.0</td>
<td>6.0</td>
<td>4.3</td>
</tr>
<tr>
<td>Children's Global Assessment Scale</td>
<td>17.1</td>
<td>8.1</td>
<td>14.5</td>
</tr>
</tbody>
</table>

### Table 6

**Correlations Between Change Scores of Outcome Measures and Relationship Between PASCET-PI PQS Ratings (Z scores) and Ideal Prototype Factor Weights at Posttreatment**

<table>
<thead>
<tr>
<th>Outcome measure</th>
<th>CBT</th>
<th>IPT</th>
<th>PD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children's Attributional Style Questionnaire</td>
<td>.067</td>
<td>-.035</td>
<td>-.125</td>
</tr>
<tr>
<td>Children's Depression Inventory</td>
<td>.189</td>
<td>.090</td>
<td>.087</td>
</tr>
<tr>
<td>Perceived Control Scale</td>
<td>.220</td>
<td>.173</td>
<td>.088</td>
</tr>
<tr>
<td>Average across measures</td>
<td>.159</td>
<td>.076</td>
<td>.017</td>
</tr>
<tr>
<td>Average $R^2$</td>
<td>.025</td>
<td>.006</td>
<td>.000</td>
</tr>
</tbody>
</table>
Table 7

*Correlations Between Change Scores of Outcome Measures and Relationship Between PASCET-PI PQS Ratings (Z scores) and Ideal Prototype Factor Weights at 6-Months Follow-Up*

<table>
<thead>
<tr>
<th>Outcome measure</th>
<th>CBT</th>
<th>IPT</th>
<th>PD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children's Attributional Style Questionnaire</td>
<td>.622</td>
<td>.654*</td>
<td>.637*</td>
</tr>
<tr>
<td>Children's Depression Inventory</td>
<td>.674*</td>
<td>.635*</td>
<td>.717*</td>
</tr>
<tr>
<td>Perceived Control Scale</td>
<td>.381</td>
<td>.206</td>
<td>.273</td>
</tr>
<tr>
<td>Average across measures</td>
<td>.559</td>
<td>.498</td>
<td>.542</td>
</tr>
<tr>
<td>Average $R^2$</td>
<td>.312</td>
<td>.248</td>
<td>.294</td>
</tr>
</tbody>
</table>

*p < .05

ideal prototypes and these outcome measures at 6-months follow-up. Table 8 displays correlations between adherence to ideal prototypes and these outcome measures at 1-year follow-up. Because the CGAS is a clinician-rated global measure of physical and emotional functioning rather than a client-completed measure of depressive symptoms as are the CDI, CGAS, and PCS, results of correlations with this measure are presented separately. Table 9 displays correlations between adherence to ideal prototypes and the CGAS at all time points. In the tables below, positive correlations indicate an association with improvement in functioning while negative correlations indicate an association with a decline in functioning.

Examination of individual correlations with measures of symptoms related to depression at posttreatment shows that the strongest positive correlation was between CBT and the PCS ($r = .220$). In fact, the measure with the strongest positive correlations across all orientations at posttreatment was the PCS, which suggests that
Table 8

*Correlations Between Change Scores of Outcome Measures and Relationship Between PASCET-PI PQS Ratings (Z scores) and Ideal Prototype Factor Weights at 1-year Follow-Up*

<table>
<thead>
<tr>
<th>Outcome measure</th>
<th>CBT</th>
<th>IPT</th>
<th>PD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children’s Attributional Style Questionnaire</td>
<td>.202</td>
<td>.392</td>
<td>.358</td>
</tr>
<tr>
<td>Children’s Depression Inventory</td>
<td>.681*</td>
<td>.579</td>
<td>.617</td>
</tr>
<tr>
<td>Perceived Control Scale</td>
<td>.406</td>
<td>.416</td>
<td>.363</td>
</tr>
<tr>
<td>Average across measures</td>
<td>.430</td>
<td>.462</td>
<td>.446</td>
</tr>
<tr>
<td>Average $R^2$</td>
<td>.185</td>
<td>.213</td>
<td>.199</td>
</tr>
</tbody>
</table>

* $p < .05$

Table 9

*Correlations Between Change Scores of CGAS and Relationship Between PASCET-PI PQS Ratings (Z scores) and Ideal Prototype Factor Weights at All Time Points*

<table>
<thead>
<tr>
<th>CGAS at different time points</th>
<th>CBT</th>
<th>IPT</th>
<th>PD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posttreatment</td>
<td>-.328</td>
<td>-.511</td>
<td>-.519</td>
</tr>
<tr>
<td>6-months follow-up</td>
<td>.034</td>
<td>-.096</td>
<td>-.066</td>
</tr>
<tr>
<td>1-year follow-up</td>
<td>-.385</td>
<td>-.437</td>
<td>-.374</td>
</tr>
</tbody>
</table>

Improvements in perceived control may have been positively related to processes characteristic of CBT, IPT, and PD at this time point. However, these correlations were all small in magnitude. Given that most of the individual correlations with outcome measures are weak in a positive direction, results suggest that techniques associated with each of the three orientations did not significantly facilitate reductions in depressive symptoms.
At 6-months follow-up, correlations were statistically significant and positive between adherence to all three prototypes and the CDI. Positive, statistically significant correlations were also found between the CASQ and the IPT and PD orientations. In addition, although the correlation between the CASQ and CBT was not statistically significant, it is almost as strong as the correlations between the CASQ and IPT and PD orientations. These findings suggest that improvements in depressive symptoms and attributional style at 6-months follow-up were strongly related to processes considered characteristic of all three orientations. Correlations between the PCS and all three therapy orientations were low at the 6-months follow-up indicating none of the three therapy methods were strongly related to changes in perceived control or general adjustment.

The only statistically significant correlation at 1-year follow-up was between the CDI and CBT ($r = .681$). However, correlations between the IPT and PD orientations with the CDI were also moderate to high, which suggests that improvements in depressive symptoms were related to processes considered characteristic of all three orientations. Moderate correlations are evident across orientations with the PCS, which suggests that processes from all orientations were equally related to improvements in perceived control. Small to moderate positive correlations were noted between all orientations and change scores on the CASQ at this time period, suggesting processes consistent with the CBT, IPT, and PD were somewhat related to positive changes in attributional style.

Average correlations between adherence to prototypes and change scores of
outcome measures related to depression across orientations indicate that the variance accounted for ($R^2$) in change scores in relationship with ideal prototypes was small at all time points, particularly at posttreatment and 1-year follow-up. At 6-months and 1-year follow-ups, correlations and mean $R^2$ values are slightly stronger than at posttreatment. However, all mean $R^2$ values are small and there is very little difference between $R^2$ values across orientations. Results indicate that, despite some strong individual correlations, variations in correlations across measures and orientations decreased the strength of average correlations.

Examination of the correlations between the CGAS and therapy orientations indicates that, as with the depression-related measures, there were few differences in the pattern of correlations across orientations. At posttreatment, the correlations between the CGAS and all orientations were negative and moderate in strength. The correlations across orientations at the 6-month follow-up are primarily negative but are small. At the 1-year follow-up correlations are negative and of moderate strength. Thus, trends in correlations with the CGAS are related to time points such that correlations are moderate in a negative direction at both posttreatment and 1-year follow-up, regardless of orientation (see Table 9).

This finding suggests that improvements in mental or physical functioning as measured by the CGAS were inversely related to aspects of the specific processes associated with all three prototypes that were present in the PASCET-PI and that processes may have negatively affected global functioning.
Nonspecific Versus Specific Processes

The third research question was to determine whether specific or nonspecific process factors contribute more to positive outcome. The contribution of specific process factors are reflected through the correlations between CBT, IPT, and PD prototypes and outcome measure change scores as presented in Tables 6-9. To determine the contribution of nonspecific factors to treatment outcome, the 10 participant scores on each subscale of the Therapist Alliance Scale for Adolescents (TASA-T, TASA-P, TASA-CP, and TASA-CT) were correlated with participant change scores on the four outcome measures (CDI, CGAS, CASQ, and PCS) at posttreatment, 6-months, and 1-year follow-up. Tables 10-12 display correlations between the four subscales of the TASA and change scores of measures of depressive symptoms. Correlations between the TASA and the CGAS are again in a separate table. The TASA, which measures the therapeutic bond as rated individually by the patient and therapist (TASA-P, TASA-T) and collaborative nature of the therapeutic relationship rated individually by patient and therapist (TASA-CP, TASA-CT), was completed by therapist and patient at posttreatment only. Therefore, the same TASA scores were correlated with outcome measure change scores at posttreatment, 6-months, and 1-year follow-up analyses. At posttreatment, the weakest and strongest correlations were with different subscales of the TASA with the CDI. Specifically, the strongest correlation was with the TASA-P and CDI ($r = -.563$), indicating an inverse relationship between the patient’s perceptions of the therapeutic alliance and improvements in depression. The weakest correlation was between TASA-T and CDI ($r = .004$), indicating the therapist’s perception of therapeutic alliance had little influence on improvement of depression.
### Table 10

*Correlations Between TASA and Change Scores of Measures of Depression at Posttreatment*

<table>
<thead>
<tr>
<th>Outcome measure</th>
<th>TASA-P</th>
<th>TASA-T</th>
<th>TASA-CP</th>
<th>TASA-CT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children’s Attributional Style Questionnaire</td>
<td>-0.151</td>
<td>0.017</td>
<td>-0.176</td>
<td>0.113</td>
</tr>
<tr>
<td>Children’s Depression Inventory</td>
<td>-0.563</td>
<td>0.004</td>
<td>0.062</td>
<td>0.010</td>
</tr>
<tr>
<td>Perceived control scale</td>
<td>-0.110</td>
<td>-0.349</td>
<td>-0.342</td>
<td>-0.513</td>
</tr>
<tr>
<td>Averages</td>
<td>-0.275</td>
<td>-0.109</td>
<td>-0.220</td>
<td>-0.130</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.076</td>
<td>0.012</td>
<td>0.048</td>
<td>0.017</td>
</tr>
</tbody>
</table>

*Note.* TASA-P = Patient rating of Therapeutic Bond  
TASA-T = Therapist rating of Therapeutic Bond  
TASA-CP = Patient rating of collaborative nature of therapeutic relationship  
TASA-CT = Therapist rating of collaborative nature of therapeutic relationship

### Table 11

*Correlations Between TASA and Change Scores of Measures of Depression at 6-Months Follow-Up*

<table>
<thead>
<tr>
<th>Outcome measure</th>
<th>TASA-P</th>
<th>TASA-T</th>
<th>TASA-CP</th>
<th>TASA-CT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children’s Attributional Style Questionnaire</td>
<td>0.112</td>
<td>0.532</td>
<td>-0.146</td>
<td>0.338</td>
</tr>
<tr>
<td>Children’s Depression Inventory</td>
<td>-0.145</td>
<td>0.588</td>
<td>0.123</td>
<td>0.417</td>
</tr>
<tr>
<td>Perceived control scale</td>
<td>-0.196</td>
<td>0.375</td>
<td>-0.345</td>
<td>0.250</td>
</tr>
<tr>
<td>Averages</td>
<td>0.076</td>
<td>0.498</td>
<td>0.123</td>
<td>0.335</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.006</td>
<td>0.248</td>
<td>0.015</td>
<td>0.112</td>
</tr>
</tbody>
</table>

*Note.* TASA-P = Patient rating of Therapeutic Bond  
TASA-T = Therapist rating of Therapeutic Bond  
TASA-CP = Patient rating of collaborative nature of therapeutic relationship  
TASA-CT = Therapist rating of collaborative nature of therapeutic relationship
Table 12

*Correlations Between TASA and Change Scores of Measures of Depression at 1-year Follow-Up*

<table>
<thead>
<tr>
<th>Outcome measure</th>
<th>TASA-P</th>
<th>TASA-T</th>
<th>TASA-CP</th>
<th>TASA-CT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children’s Attributional Style Questionnaire</td>
<td>.126</td>
<td>-.144</td>
<td>-.328</td>
<td>-.263</td>
</tr>
<tr>
<td>Children’s Depression Inventory</td>
<td>-.266</td>
<td>.486</td>
<td>.091</td>
<td>.158</td>
</tr>
<tr>
<td>Perceived control scale</td>
<td>.279</td>
<td>-.017</td>
<td>-.150</td>
<td>-.096</td>
</tr>
<tr>
<td>Averages</td>
<td>.046</td>
<td>.108</td>
<td>.129</td>
<td>-.067</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.007</td>
<td>.012</td>
<td>.017</td>
<td>.005</td>
</tr>
</tbody>
</table>

*Note.* TASA-P = Patient rating of Therapeutic Bond  
TASA-T = Therapist rating of Therapeutic Bond  
TASA-CP = Patient rating of collaborative nature of therapeutic relationship  
TASA-CT = Therapist rating of collaborative nature of therapeutic relationship

At 6-months follow-up, correlations between subscales of the TASA (TASA-P, TASA-T, TASA-CP, and TASA-CT) and outcome measures were generally more positive and stronger than at posttreatment (see Table 11). The strongest correlation at this time 6-months follow-up with measures of depressive symptoms is between the TASA-T and CDI ($r = .588$). The weakest correlation is between the TASA-P and CASQ ($r = .112$).

Relationships between therapist ratings of the therapeutic bond (TASA-T) and the CDI and CASQ were moderate ($r = .588, .532$, respectively) at 6-months follow-up, indicating that the therapist’s perception of a positive therapeutic bond was associated with reductions in depressive symptomatology and improvements in attributional style. The largest effect across measures at 6-month follow-up was with the TASA-T ($R^2 = .248$), which suggests that outcome was affected by therapist perceptions of a positive therapeutic bond (TASA-T) more than other perceptions of therapeutic alliance. Average $R^2$ values were particularly
small for patient ratings of the therapeutic bond (TASA-P) and patient ratings of the collaborative nature of the therapeutic bond at 6-month follow-up (TASA-CP; $R^2 = .006, .015$, respectively) although there were fairly large differences across measures.

At 1-year follow-up, negative correlations were seen with the CASQ across TASA subscales, with the strongest negative correlation between the TASA-CP and CASQ ($r = -.328$), in contrast to mostly positive correlations between the CASQ and TASA subscales at 6-months follow-up. These inverse relationships suggest that positive perceptions of the therapeutic bond actually interfered with improvements in attributional style at this time point. The strongest correlation at this time point was between the TASA-T and the CDI ($r = .486$), indicating that the therapist's perception of the therapeutic alliance was moderately related to improvement in depressive symptoms. Most of the correlations between the TASA and CDI (range: -.266 to .486) as well as with the PCS (range: -.150 to .279) were smaller at 1-year follow-up than at 6-months follow-up. This trend suggests that improvements in depressive symptomatology and perceived control were not as strongly related with therapeutic alliance at 1-year follow-up.

Similar to among measures of depressive symptoms, there is substantial variability between correlations of TASA subscales and outcome measures. For example, the correlation between the TASA-CP and CGAS at posttreatment is high, but correlations between TASA-CP and other measures are low. In general, higher ratings of therapeutic alliance were associated with improvements in global functioning. Low to moderate, and often negative, correlations between therapeutic alliance variables and other outcome measures, including the CDI, CASQ, and PCS are evident at posttreatment. Trends indicate
that a positive relationship between therapeutic alliance was not significantly related to improvements in depression, attributional style, or perceived control at posttreatment (see Table 10).

Correlations between the CGAS and most variables of the TASA were generally stronger than with other measures of depressive symptoms (see Table 13). At posttreatment, the correlation between the CGAS and TASA-CP was statistically significant \((r = .643)\) and was strong with the TASA-CT \((r = .501)\), suggesting that the collaborative nature of the therapeutic alliance from both the patient and therapist’s perspectives were important in improving general functioning. Correlations with the CGAS were moderate to high at 6-months follow-up (range \(r = .480 - .760\)), with statistically significant correlations between the CGAS and TASA-T \((r = .635)\) and TASA-CT \((r = .760)\). These strong correlations with the CGAS suggest that improvements in global functioning were strongly related to patient and therapist ratings of a positive therapeutic

Table 13

<table>
<thead>
<tr>
<th>Outcome measure</th>
<th>TASA-P</th>
<th>TASA-T</th>
<th>TASA-CP</th>
<th>TASA-CT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posttreatment</td>
<td>.183</td>
<td>.313</td>
<td>.643*</td>
<td>.501</td>
</tr>
<tr>
<td>6-months follow-up</td>
<td>.578</td>
<td>.635*</td>
<td>.480</td>
<td>.760*</td>
</tr>
<tr>
<td>1-year follow-up</td>
<td>-.127</td>
<td>-.032</td>
<td>-.067</td>
<td>-.188</td>
</tr>
<tr>
<td>Averages</td>
<td>-.275</td>
<td>-.109</td>
<td>-.220</td>
<td>-.130</td>
</tr>
<tr>
<td>(R^2)</td>
<td>.076</td>
<td>.012</td>
<td>.048</td>
<td>.017</td>
</tr>
</tbody>
</table>

*Note: TASA-P = Patient rating of Therapeutic Bond  
TASA-T = Therapist rating of Therapeutic Bond  
TASA-CP = Patient rating of collaborative nature of therapeutic relationship  
TASA-CT = Therapist rating of collaborative nature of therapeutic relationship  
* \(p < .05\)
alliance at 6-months follow-up. Smaller correlations were evident between the CGAS and all TASA subscales at 1-year follow-up than at other time points. This suggests that global functioning was less affected by the therapeutic relationship 1 year after termination of the PASCET-PI than at posttreatment or 6 months after the termination of treatment.

Finally, to compare the contribution of nonspecific versus specific processes to treatment outcome, average correlations between outcome and adherence of PASCET-PI sessions to ideal prototypes (CBT, IPT, and PD) as well as outcome and the TASA were computed across outcome measures at posttreatment, 6 months, and 1-year follow-ups. When examining correlations between specific and nonspecific processes and outcome, the strongest positive correlation is between therapist ratings of therapeutic relationship (TASA-T) and outcome at 6 months follow-up ($r = .498$). Most of the correlations between outcome and specific and nonspecific processes were weak in magnitude. The average correlations between specific and nonspecific processes and outcome measures at each time point are displayed in Table 14. Overall, correlations were stronger at the 6-months follow-up than at posttreatment or 1-year follow-up for measures of depressive symptoms. At this time period, outcome was positively related to processes associated with all three therapeutic orientations as well as TASA subscales measuring therapist perceptions of the therapeutic alliance and the collaborative nature of the therapeutic alliance. A trend that was evident with the CGAS was that correlations were stronger in a positive direction with subscales of the TASA than with the three therapeutic orientations at all time points.
Table 14

Average Correlations of Specific and Nonspecific Measures with Outcome Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>CBT</th>
<th>IPT</th>
<th>PD</th>
<th>TASA-P</th>
<th>TQASA-T</th>
<th>TASA-CP</th>
<th>TASA-CT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measures of symptoms of depression</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posttreatment</td>
<td>.037</td>
<td>-.071</td>
<td>-.117</td>
<td>-.275</td>
<td>-.109</td>
<td>-.220</td>
<td>-.130</td>
</tr>
<tr>
<td>6-months follow-up</td>
<td>.430</td>
<td>.350</td>
<td>.390</td>
<td>.076</td>
<td>.498</td>
<td>.123</td>
<td>.335</td>
</tr>
<tr>
<td>1-year follow-up</td>
<td>.226</td>
<td>.238</td>
<td>.241</td>
<td>.046</td>
<td>.108</td>
<td>.129</td>
<td>-.067</td>
</tr>
<tr>
<td>CGAS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posttreatment</td>
<td>-.328</td>
<td>-.511</td>
<td>-.519</td>
<td>.183</td>
<td>.313</td>
<td>.643*</td>
<td>.501</td>
</tr>
<tr>
<td>6-months follow-up</td>
<td>.034</td>
<td>-.096</td>
<td>-.066</td>
<td>.578</td>
<td>.635*</td>
<td>.480</td>
<td>.760*</td>
</tr>
<tr>
<td>1-year follow-up</td>
<td>-.385</td>
<td>-.437</td>
<td>-.374</td>
<td>-.127</td>
<td>-.032</td>
<td>-.067</td>
<td>-.188</td>
</tr>
</tbody>
</table>

*p < .05
CHAPTER V
DISCUSSION

The purpose of this study was to investigate the psychotherapeutic processes utilized during PASCET-PI treatment sessions delivered to adolescents with comorbid depression and IBD. Among the few psychological treatments that have been developed for this population, it is unclear which therapeutic processes are associated with improvements in depressive symptomatology and general functioning. It was hoped that results of this investigation would help determine important therapy components and areas of emphasis in order to develop and implement efficacious treatments for this population in the future. After viewing two videotaped individual PASCET-PI sessions for 10 adolescent participants, independent raters utilized the PQS to rate the salience of individual psychotherapeutic processes items during PASCET-PI sessions. To determine which therapeutic orientation was most associated with positive outcome, PQS ratings of the PASCET-PI were correlated with prototypes of ideal therapy sessions as determined by expert therapists from the CBT, IPT, and PD orientations. The strength of associations between specific processes and outcome was compared with the strength of associations between nonspecific processes and outcome to determine which type of process was most influential in the change process.

Results of the first research question to determine the relationship between Q-item ratings of individual PASCET-PI sessions and Q item ratings of ideal prototypes of CBT, PD, and IPT indicate that PASCET-PI sessions were more closely associated with the ideal prototype of a CBT than IPT or PD therapy. In other words, correlations were
higher between PQS ratings of PASCET-PI therapy sessions and factor weights of the ideal CBT prototype than with factor weights of the ideal IPT or PD prototypes. Analyses indicated a small positive correlation between PASCET-PI PQS ratings and the IPT prototype and a small negative correlation between PASCET-PI PQS ratings and the PD prototype. Thus, specific therapy processes deemed important by expert cognitive-behavioral therapists were more prevalent during PASCET-PI sessions than processes considered important by therapists from other orientations.

Although PASCET-PI sessions most closely resembled the ideal CBT prototype, a small positive correlation between PQS ratings and the IPT prototype indicates that the PASCET-PI sessions slightly resembled the ideal IPT prototype. A close investigation of the 20 most characteristic PQS items utilized during PASCET-PI sessions (see Table 3) indicates that 12 of the most characteristic items of PASCET-PI sessions overlap with the 20 most characteristic items of the CBT prototype and 8 of the most characteristic items of the PASCET-PI overlap with the 20 most characteristic items of the ideal IPT prototype. The slight correspondence of this CBT treatment to the IPT prototype corresponds with previous psychotherapy process research that has found that IPT and CBT processes often overlap (Ablon & Jones, 2002).

Some previous investigations of the psychotherapeutic processes utilized during CBT in comparison to IPT sessions have found that the two types of treatments can be distinguished in a reliable manner (Hill, O'Grady, & Elkin, 1992; Jones & Pulos, 1993). However, most previous comparisons of IPT and CBT have utilized rating scales that exclusively evaluate therapist interventions without direct observation of the nature of
therapist-patient interaction. When the methodology utilized by researchers includes
direct observation of the interactions between therapist and patient, such as when
utilizing the PQS, the nature of the interactions between patient and therapist are quite
similar across the IPT and CBT orientations (Ablon & Jones, 2002). Such findings led
to the theory that IPT represents a “common factor,” or Rogerian treatment, which
emphasizes support, nonjudgmental acceptance from the therapist, and empathy. In
addition to common factors, evaluation of the IPT prototype reveals that the most
characteristic processes of this orientation are diverse and varied. For example, the 20
most characteristic IPT process items include, “Love or romantic relationships are a
focus of discussion,” “Discussion of body functions, physical symptoms or health,” and
“Therapist draws attention to patient’s nonverbal behavior.” Thus, IPT processes,
which are diverse and include common factors, may be more widely used and likely to
overlap with other orientations (Ablon & Jones, 1999).

In fact, close evaluation of the most characteristic processes of the IPT and CBT
orientations indicate that numerous processes overlap across both orientations. Items such
as, “Therapist adopts supportive stance,” “Patient’s current or recent life situation is
emphasized in the discussion,” and “Therapist explains rationale behind technique or
approach to treatment” are among the 20 most characteristic items of both the IPT and CBT
prototypes. Additionally, comparisons of IPT and CBT treatments for depression during
the NIMH TDCRP found that both IPT and CBT prototypes emphasize themes of current
relationships and self-image (Ablon & Jones, 1999). In accordance with previous research,
elements of IPT were utilized during PASCET-PI sessions, which resulted in a small positive correlation with the ideal IPT prototype.

In contrast, the 20 most characteristic CBT process items are a more unified and cohesive group of processes targeted at changing cognitions and behaviors. Items such as, “Discussion centers on cognitive themes (i.e., about ideas or belief systems),” and “Therapist encourages patient to try new ways of behaving with others,” that are within the 20 most characteristic CBT process items are a cohesive set and focused on changing cognitions and behaviors. Similarly, the PASCET-PI manual is designed to facilitate the implementation of a specific and concrete series of cognitive-behavioral strategies, including disputing irrational beliefs and scheduling positive behaviors. The implementation of cognitive-behavioral strategies, such as discussion of cognitive themes and specific tasks or activities for the patient to attempt outside of the session, was frequently observed while rating PASCET-PI sessions. Thus, results indicated a moderate positive relationship between PQS ratings and the CBT prototype, which was larger in magnitude than the correlation between PQS ratings and the IPT prototype.

While there were positive relationships between PASCET-PI ratings and the CBT and IPT prototypes, there was a small negative correlation between PASCET-PI ratings and the PD prototype. This finding is understandable considering the dissimilar strategies utilized by therapists of the CBT and PD orientations. Previous research also supports this finding. For example, when 186 treatment sessions within 30 brief psychodynamic and 32 cognitive-behavioral therapies were rated using the PQS, results demonstrated that there were significant differences between processes utilized during the different types of
therapy. CBT promoted control of negative affect through the use of intellect and problem-solving while providing reassurance, encouragement, and support. PD promoted evocation of affect, bringing troubling thoughts to awareness, and integrating current and past life experiences while using the therapeutic relationship as a change agent (Jones & Pulos, 1993). Thus, the negative correlation with PD prototype that resulted from process ratings of the PASCET-PI makes sense considering that CBT and PD noticeably differ and often utilize opposing strategies.

In this study, only one PQS process item within the 20 most characteristic processes of PD prototype overlapped with the 20 most characteristic processes of the PASCET-PI. This item was, “Therapist’s remarks are aimed at facilitating patient’s speech.” This item, which is also included in the 20 most characteristic processes of IPT, could be considered a “common factor,” which helps improve the therapeutic alliance. In fact, processes rated among the 20 most characteristic items within the IPT and PD prototypes that were rated most characteristic during PASCET-PI sessions included, “Therapist’s remarks are aimed at facilitating patient’s speech,” “Patient’s interpersonal relationships are a major theme,” “Therapist clarifies, restates, or rephrases patient’s communication,” and “Therapist is directly reassuring.” It is noteworthy that these processes are not specific to one orientation.

Results of the second research question to determine which prototypes were significantly associated with positive outcome after implementation of the PASCET-PI treatment were particularly interesting. Despite a higher correlation between PASCET-PI processes and the ideal CBT prototype, there was not a consistent trend showing that
adherence to the CBT orientation was more closely related to positive outcome than adherence to the IPT or PD prototypes across time points (i.e., posttreatment, 6-months follow-up, 1-year follow-up). At 6-month follow-up, the strongest positive correlations across orientations were seen with the CDI and CASQ. At 1-year follow-up, the strongest correlations were seen with the CDI across orientations. Mean $R^2$ values across measures of symptoms of depression were small at all time points, suggesting that little variance in improvements in depression can be accounted for by prototypes of any of the three orientations. Examination of average correlations and associated $R^2$ values between PASCET-PI PQS ratings/prototypes and measures of symptoms of depression were very similar across orientations at all time points.

Variations in follow-up treatment and medications among participants during the 1-year follow-up may have contributed to the fact that few trends were noted across time points in the relationships between outcome measures and orientations. As noted earlier, the nature and severity of each individual participant’s presenting problems varied during the 1-year follow-up period. Thus, subjects received a broad range of number and frequency of booster CBT sessions as well as psychopharmacological intervention, which likely contributed to sustained improvement (Szigethy et al., 2004a). Because previous research indicates that maintenance therapy for depressed youth without physical illness is mixed with studies supporting (Brent & Kolko, 1998) and opposing the effectiveness of booster sessions (Lewinsohn et al., 1994), it is difficult to predict how the absence of treatment would have affected outcome. However, it seems likely that participants would have exhibited a steady increase or decrease in psychological functioning depending on
how much they incorporated skills learned during treatment into their lives over the long term. For participants who did not effectively utilize CBT strategies or with families who resisted changes suggested during the PASCET-PI treatment, it seems that their depressive symptoms and general functioning would steadily worsen over time. On the other hand, participants who were able and motivated to incorporate strategies learned during treatment and were supported by their family, their symptoms and functioning would steadily improve. It is possible that correlations between PQS ratings and outcome measures would indicate a steady trend over time points if no follow-up treatment had been provided.

Analyses of correlations between outcome measures and prototypes indicate noteworthy differences. Specifically, correlations between the CGAS (a global measure of physical and psychological functioning) and prototypes were primarily negative while correlations between depression outcome measures (CDI, PCS, and CASQ) and prototypes were primarily positive. However, despite the fact that correlations between adherence to prototypes and the CGAS were negative, CGAS change scores indicate that adolescents perceived an improvement in their general functioning at all time points. Few differences in strength of correlations across orientations with the CGAS were seen, suggesting that participants' perceptions of improved functioning were equally influenced by processes associated with all orientations. Differences in correlation direction between the CGAS and measures of symptoms of depression with prototypes seem to indicate that processes measured within the PASCET-PI treatment were effective in improving perceptions of depressive symptomatology but not of global functioning. It appears that something other than specific processes of the CBT, IPT, or PD orientations facilitated perceptions of
improved functioning. An alternative explanation of the differences in results is that the CGAS measure that includes physical functioning and broad psychological functioning, in contrast to measures of depressive symptoms, may assess different or divergent aspects of functioning and processes than addressed and incorporated into the PASCET-PI measured by the PQS.

In contrast, the measure that correlated most strongly with therapeutic alliance was the CGAS at posttreatment and 6-months follow up. These findings suggest that a positive therapeutic relationship had a positive relationship with perceived improvements in functioning, more so than specific processes (CBT, IPT, or PD) implemented during PASCET-PI sessions at that time point. In other words, global improvement in functioning as measured by the CGAS was affected more by the participant's feelings of being supported and perceived ability to collaborate with the therapist than specific processes. It makes intuitive sense that improved global functioning would be affected by the nonspecific, general experience of therapy in contrast to depressive symptomatology, sense of control, or attributional style, which may require more specific strategies to result in change.

Some researchers (Agras, Kazdin, & Wilson, 1979; Rachman & Wilson, 1980) argue that measures that are global and imprecise are bound to obscure differences in outcome. Shapiro and Shapiro's (1982) meta-analysis found that outcome measures specific to the goals of treatment yielded somewhat larger effects than global measures. Such findings have led to the recommendation to utilize specific measures of change to detect the corresponding specific effects of a technique targeted in a specific area of
functioning. Thus, the lack of concordance among general and specific outcome measures is understandable if the treatment is targeted toward specific areas rather than general improvement (Stiles, Shapiro, & Elliott, 1986), such as the PASCET-PI.

When looking at the correlations between prototypes and measures of symptoms of depression, there were notable differences across measures. For example, the strongest positive relationships were between outcomes on the Perceived Control Scale and adherence to the three prototypes (CBT, IPT, and PD) at posttreatment, with the strongest relationship with CBT ($r = .220$). However, these correlations were fairly low, indicating a small relationship between adherence to specific techniques and outcome at posttreatment. At 6-months follow-up, there were strong correlations between outcomes on the CDI and adherence to all three prototypes, with statistically significant correlations with CBT, IPT, and PD, and the strongest correlation with PD. At 6-months follow-up, the CASQ also strongly correlated with all three prototypes. Additionally, there were strong correlations between the CDI and all prototypes and 1-year follow-up, particularly between the CDI and CBT. In general, findings suggest that processes within the PASCET-PI that are typical of CBT, IPT, and PD were effective in decreasing symptoms associated with depression. Thus, a combination of processes that were present in the PASCET-PI and are considered characteristic across various therapeutic orientations contributed to an increased sense of self-esteem and control. Examination of prototypes reveals that some items are considered important to all prototypes. It seems possible that processes considered valuable to each orientation contributed to positive outcomes following the PASCET-PI.
To address the third research question, to compare the contribution between specific and nonspecific processes to treatment outcome, correlations between subscales of the nonspecific measure (TASA) were correlated with measures of depressive symptoms and the CGAS. In general, average correlations across TASA subscales and associated $R^2$ values of measures of depressive symptoms were small. Findings indicate several moderate average correlations across the TASA subscales at 6-months follow-up between the therapist ratings of therapeutic bond (TASA-T) and measures of depressive symptoms and the collaborative nature of the therapeutic relationship (TASA-CT) and measures of depressive symptoms. However, the majority of the correlations between TASA variables and outcome measures were small at all time points. Correlations between the CGAS and TASA subscales were generally stronger than correlations between the TASA and measures of depressive symptoms, particularly at posttreatment and 6-months follow-up. Correlations with TASA subscales were stronger across subscales at 6-months follow-up than posttreatment or 1-year follow-up for both measures of depressive symptoms and the CGAS.

It is interesting to note that therapist ratings of therapeutic bond in relation to measures of depressive symptoms and the CGAS were slightly higher than patient ratings of therapeutic bond in relation to outcome at most time points. This suggests that the therapist's feelings regarding the therapeutic relationship may be equally, if not more important, than patient ratings of the therapeutic bond. If the therapist feels positive about the therapeutic relationship, it seems that he or she would be more
motivated and effective when delivering the treatment, which would likely positively influence outcome.

Overall, results that neither therapist nor patient ratings of the therapeutic relationship were consistently associated with improvements in functioning across measures correspond with previous research. Findings of an investigation of therapeutic alliance during the NIMH TDCRP also indicated that therapist contribution was not significantly associated with outcome (Krupnick et al., 1996). Small correlations between nonspecific measures and outcome do not support the nonspecific hypothesis of therapeutic effectiveness, which poses that general qualities inherent in any positive human relationship that affect an individual’s expectations or morale affect treatment outcome more than well-defined, intentional actions on the part of the therapist (Frank, 1961).

However, the focus of the PASCET-PI, a short-term cognitive-behavioral therapy, was not on developing a strong therapeutic bond. While the therapist was supportive and empathic, she behaved in a teacher-like, didactic manner to help the patients to learn cognitive and behavioral strategies and less time was spent on developing rapport or enhancing the therapeutic bond. Previous research suggests that there is typically a smaller relationship between therapeutic alliance and outcome in CBT than among other orientations. For example, Krupnik and colleagues (1996) compared the relationship between therapeutic alliance and outcome across four types of treatment including IPT, pharmacotherapy and clinical management, placebo and clinical management, and CBT and found that the relationship was relatively strong for
all conditions except CBT. Thus, the importance and influence of nonspecific factors may differ depending on treatment type and goals.

Some theories pose that the therapeutic alliance is a prerequisite for therapist interventions to be effective. For example, Rogers' (1957) model of client-centered therapy presents the therapeutic alliance as a necessary and sufficient component for therapeutic changes to occur. However, most psychoanalytic authors conceptualize the therapeutic alliance as a necessary but not sufficient component of successful therapy. The alliance allows the patient to work effectively with the strategies and statements made during therapy. From this point of view, the alliance does not uniquely contribute to positive outcome but provides the context within which interventions can promote change (Gaston, 1990). This theory may help to explain small correlations between therapeutic alliance and outcome following the PASCET-PI. Despite positive ratings of therapeutic alliance, this component of therapy was evidently not sufficient to produce positive outcomes.

A comparison between the contribution of specific process factors and the contribution of nonspecific process factors to treatment outcome for measures of depressive symptoms as well as general functioning suggest that there was little difference in the association between specific and nonspecific processes and outcome other than slightly stronger correlations with the CGAS and TASA at posttreatment and 6-months follow-up. This is consistent with previous research, which suggests that positive outcome is more closely associated with patient variables and the patient’s experience during therapy than either therapeutic alliance or specific techniques.
Results of one investigation indicated that positive outcome was associated with patients who experience a positive sense of self and an idealized view of their therapist in treatment sessions (Ablon & Jones, 1999). The patient’s pretreatment level of disturbance has also been associated with outcome (Jones et al., 1988) while other studies have found significant correlations between patient motivation, resistance, and responsiveness to interventions and outcome (Jones & Pulos, 1993; Smith & Klaus, 2003). Results of a factor analysis of PQS ratings at three time points from transcripts of CBT and PD therapy delivered to 30 subjects yielded four factors after varimax rotation, which included cognitive-behavioral technique, psychodynamic technique, patient resistance (difficulty of patient to develop a collaborative, working alliance with the therapist) and negative patient affect (evidence of anxiety, depression, or other troublesome affect during sessions). Patient resistance and patient negative affect were significantly negatively correlated with outcome. Thus, it is possible that outcome in this study was more significantly associated with variables that were not measured, such as patient variables and patient experiences rather than the specific or nonspecific variables that were assessed.

In addition to strong correlations with “third variables,” results of null or negative correlations between specific and nonspecific variables with outcome have led to the conclusion that specific and nonspecific variables should not be evaluated separately because the specific processes and strategies utilized during therapy inevitably influence the therapeutic relationship and impact outcome (Jones et al., 1988, 1991; Stiles, Shapiro, & Elliott, 1994). For example, Jones and colleagues (1988) found
that therapists used different techniques and modified the treatment model depending on the nature and severity of psychological problems experienced by their patients. The specific strategies utilized during the intervention consequently influenced the nature of the therapeutic relationship. For example, a therapist who emphasized the patient's feelings and was directly reassuring developed a different type of relationship than a therapist who actively exerted control over the interaction and behaved in a teacher-like, didactic manner. To investigate the negative correlation between the focus on distorted cognitions on depressive symptoms (a CBT process) and outcome, Castonguay and colleagues (1996) conducted descriptive analyses. Results suggest that therapists occasionally increased their focus on cognitive rationales and techniques when therapeutic alliance was strained. However, the increased focus seemed to worsen the alliance and interfered with outcome (Castonguay et al.). Thus, in this study, the interaction between nonspecific and specific factors was critical to consider in a qualitative manner when evaluating the relationship between psychotherapeutic processes and outcome. Solely relying on the comparison of specific to nonspecific factors would not allow understanding of the complex interplay between these two types of variables.

Particularly with a treatment such as the PASCET-PI, which was designed so that topics and the nature and length of treatment and follow-up sessions were individually tailored to the patient's presenting problems, the therapeutic relationship and intervention strategies varied with each patient. Because the interaction between specific and nonspecific seems to be intertwined, ratings of individual processes may
not be able to capture the holistic nature of the interaction. The attempt to isolate nonspecific from specific processes may result in correlations between process and outcome that are small in magnitude because even the most characteristic psychotherapy interactions may be difficult to capture without the integration of both types of processes. Numerous researchers argue that specific and nonspecific factors cannot be separated or accurately identified and that the attempt to define and categorize process variables fails to do justice to the complexity of the process of change (Butler & Strupp, 1986; Castonguay & Holtforth, 2005; Strupp, 1986). Thus, future investigations of nonspecific processes should continue to consider how the interaction of specific, nonspecific, and patient variables affect outcome in a quantitative and qualitative manner (Ablon & Jones, 2002; Jones et al., 1988). The findings that neither specific nor nonspecific variables were particularly associated with positive outcome following the PASCET-PI may be due to difficulties with isolating and rating processes, particularly among raters with different training and experience.

Limitations

Because this was an open trial study, limitations include the delivery of the PASCET-PI treatment by one therapist to a small sample \((n = 10)\) of adolescents with one chronic illness. This small sample size limits the statistical power to derive significant results as well as increases the potential for skewed results due to outlying data. This sample and methodology limits the ability to generalize results to other therapists and adolescents with different chronic illnesses. Additionally, this group of
adolescents had various psychiatric comorbidities and differing IBD courses. There was no control for changes in medications during the course of the intervention. Follow-up treatment during the 1-year follow-up period, which consisted of a varying number of booster sessions and/or administration of psychotropic medication, was inconsistent across participants, depending on presence and severity of psychological symptoms.

Although the PQS is one of the most comprehensive and well-validated measures of psychotherapy process, it continues to be a challenge to rate a therapy session in an objective manner. After years of specialized training, therapists have been exposed to various theoretical orientations and typically develop their own style and focus on one orientation. When using the PQS, raters are supposed to use an atheoretical and objective lens; however, inherent biases in human judgment make it difficult to completely achieve this goal. For example, raters in this study were trained in different orientations and programs, including clinical psychology and medicine with a specialization in psychiatry, which may negatively affect inter-rater reliability. The variation in education and training in psychotherapy across raters may have contributed to varying viewpoints and opinions of processes occurring during sessions. The acceptable interrater reliability coefficient of .60 for the PQS is lower than the acceptable interrater reliability coefficient for most objective measures because this measure relies on human judgment. Because consistency in ratings was lower than is optimal, this limits confidence one has in these ratings.
Additionally, two sessions were substituted (session 3 for participant #091 and session 10 for participant #018) due to phone sessions and poor audiotape quality for the regular scheduled session. Although it is impossible to determine how these substitutions affected results, the procedures were not as standardized as desired. Also, rating the same two sessions for each participant could be considered a limitation because it is difficult to generalize the salience of processes that were utilized within the entire treatment.

Another issue was the large age range included in this sample as there are many developmental differences between an 11-year-old and a 17-year-old in ability to integrate and process strategies, feelings, and information provided as part of the PASCET-PI treatment. Results indicating small differences in correlations between outcome and various orientations may have been related to the wide age range within the sample because there were likely different responses of processes utilized within the treatment. Other factors that were not directly considered as treatment outcome variables, such as parental reinforcement of between-session practice of skills, gender or cultural differences, may have been important determinants of treatment outcome. Such treatment outcome variables would likely strengthen the relationship between ideal prototype factor weights and PQS ratings in a positive or negative direction. For example, the participant may respond more positively to processes utilized during treatment that were also reinforced by parents or practiced between sessions.
Future Directions

The PQS measure utilized in this study was originally developed by expert therapists when considering therapy with adults. It would be helpful to utilize ideal prototypes for each orientation developed by expert pediatric psychologists. Ideal prototypes developed by expert pediatric psychologists would likely reflect ideal processes based on developmental level. For example, adolescents may be less likely to strive to develop a strong therapeutic bond with the therapist due to their developmental stage, which is characteristic of striving for independence and autonomy. It would be helpful to compare the findings of this study of processes within the PASCET-PI with ratings of specific and nonspecific processes when utilizing a recent adaptation of the PQS for use with children (Schneider, 2004). The CPQ is similar to the PQS in that it consists of 100 pantheoretical items describing a significant feature of child therapy process. Items include descriptions of the child's attitudes, behavior, or experience; the therapist's actions and attitudes; and items reflecting the interaction of the therapist and patient, the climate, or atmosphere of the interaction (Schneider). Comparing the PQS and CPQ would help to determine the degree of specificity of therapeutic process measure needed for investigations of therapeutic process and whether the process measure should be individually tailored to the patient population. This would allow the determination of the most appropriate methodology for future empirical investigations of the effect of therapeutic process on therapy outcome.

The ability to rate more sessions during a treatment using the PQS or the CPQ would result in a more comprehensive and accurate picture of the processes utilized
throughout the entire treatment. Although time-consuming and labor-intensive, a more comprehensive evaluation of therapeutic processes would allow increased accuracy when determining the processes that were most and least characteristic of the treatment than rating two sessions of each participant. The PQS measure is more comprehensive than most psychotherapy process measures because the entire therapy session is viewed before rating. However, the ability to code additional sessions within the treatment using the PQS would increase the comprehensiveness of therapeutic process ratings and result in increased confidence in the ratings of processes utilized during the treatment.

Patient variables, such as pretreatment disturbance and life circumstances, as well as patient characteristics including motivation, responsiveness, and negative affect have been found to mediate the effectiveness of specific processes, development of the therapeutic alliance, and ultimately treatment outcome (Brent & Kolko, 1998; Jones & Pulos, 1993; Krupnik et al., 1996). Stiles and colleagues (1994) noted the traditional approach to assessing process-outcome relationships utilizes a linear statistical model that ignores client variables although this does not reflect reality. In practice, therapist and client responsiveness is affected by numerous other factors, which should be assessed and evaluated in interaction with specific and nonspecific processes. Additionally, assessment of interactions with contextual, developmental, and biological factors should be included in studies of psychotherapy process when appropriate. Thus, future process studies should investigate the impact of mediating and moderating variables on outcome. Results of these interactions can provide valuable information to further modify and improve treatments for youth with chronic illnesses.
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### Rank Ordering of Q-Items by Factor Weights on Cognitive-Behavioral Prototype Factor

<table>
<thead>
<tr>
<th>PQS #</th>
<th>Item description</th>
<th>Factor score</th>
</tr>
</thead>
<tbody>
<tr>
<td>38</td>
<td>There is discussion of specific activities or tasks for the P to attempt outside of session</td>
<td>1.93</td>
</tr>
<tr>
<td>30</td>
<td>Discussion centers on cognitive themes (i.e., about ideas or belief systems)</td>
<td>1.68</td>
</tr>
<tr>
<td>4</td>
<td>P’s treatment goals are discussed.</td>
<td>1.51</td>
</tr>
<tr>
<td>85</td>
<td>T encourages P to try new ways of behaving with others</td>
<td>1.49</td>
</tr>
<tr>
<td>17</td>
<td>T actively exerts control over the interaction (e.g., structuring, introducing new topics)</td>
<td>1.45</td>
</tr>
<tr>
<td>45</td>
<td>T adopts supportive stance</td>
<td>1.43</td>
</tr>
<tr>
<td>23</td>
<td>Dialogue has a specific focus</td>
<td>1.38</td>
</tr>
<tr>
<td>31</td>
<td>T asks for more information or elaboration</td>
<td>1.37</td>
</tr>
<tr>
<td>69</td>
<td>P’s current or recent life situation is emphasized in discussion</td>
<td>1.35</td>
</tr>
<tr>
<td>27</td>
<td>T gives explicit advice and guidance</td>
<td>1.32</td>
</tr>
<tr>
<td>80</td>
<td>T presents an experience or event in a different perspective</td>
<td>1.28</td>
</tr>
<tr>
<td>86</td>
<td>T is confident or self-assured (vs. uncertain or defensive)</td>
<td>1.21</td>
</tr>
<tr>
<td>37</td>
<td>T behaves in a teacher-like (didactic) manner</td>
<td>1.17</td>
</tr>
<tr>
<td>73</td>
<td>P is committed to the work of therapy</td>
<td>1.14</td>
</tr>
<tr>
<td>57</td>
<td>T explains rationale behind technique or approach to therapy</td>
<td>1.13</td>
</tr>
<tr>
<td>88</td>
<td>P brings up significant issues and material</td>
<td>1.09</td>
</tr>
<tr>
<td>72</td>
<td>P understands the nature of therapy and what is expected</td>
<td>1.08</td>
</tr>
<tr>
<td>95</td>
<td>P feels helped</td>
<td>1.06</td>
</tr>
<tr>
<td>28</td>
<td>T accurately perceives the therapeutic process</td>
<td>1.05</td>
</tr>
<tr>
<td>48</td>
<td>T encourages independence of action or opinion</td>
<td>1.02</td>
</tr>
</tbody>
</table>

Note: Factor weights derived from expert cognitive-behavioral therapists’ (N = 10) ratings of the Psychotherapy Process Q-set.

VITA

MEREDITH LEE BRENT

PROFESSIONAL ADDRESS
Department of Psychiatry and Human Behavior
Rhode Island Hospital, Coro West Building
One Hoppin Street
Providence, RI 02903
Email: mbrent@lifespan.org

HOME ADDRESS
175 Medway St., #2
Providence, RI 02903
Email: mbrent@gmail.com

EDUCATION

2003-2006
Doctor of Philosophy
Combined Professional-Scientific Psychology,
(Clinical/Counseling/School), APA-approved program
Utah State University
Logan, Utah Dissertation: An Investigation of Therapeutic Processes in a
Cognitive-Behavioral Treatment for Depressed Adolescents with Inflammatory
Bowel Disease
Advisor: Gretchen Gimpel, Ph.D.

2000-2002
Master of Science
Counseling Psychology
Utah State University
Logan, Utah
Thesis: The Effects of a School-wide Student-Administered Praise Intervention
on Student Problem Behavior
Advisor: Richard West, Ph.D., Donna Gilbertson, Ph.D.

1991-1995
Bachelor of Arts (Magna Cum Laude)
Major: Psychology, Departmental Honors, Phi Beta Kappa
Colby College
Waterville, ME

Spring 1994
Semester Abroad: School for International Training
Independent Research: The Wellbeing of Aboriginal Australians:
Public Health Issues
Melbourne, Australia
Advisor: Eric Arndt, M.S.

RELEVANT WORK EXPERIENCE

Pediatric Psychology Postdoctoral Fellow (September 2005-present)
Brown University, Department of Family and Child Psychiatry, Rhode Island Hospital and
Hasbro Hospital, Providence, RI, APA-approved
Preparing an RO3 grant proposal to the National Institutes of Health. Implementing
cognitive-behavioral clinical interventions for children and adolescents with chronic
illnesses, with a focus on gastrointestinal disorders. Working as part of multi-
disciplinary team in Gastrointestinal Clinic at Hasbro Children’s Hospital. Recruiting
subject participants, collecting data, and performing analyses for ongoing research on
families of children with chronic illnesses. Preparing manuscripts using clinical
research data sets. Completed 2-month rotation in Consultation/Liaison. Completing
rotation in Anxiety Clinic conducting psychological assessments of children and
adolescents referred for a variety of symptoms of anxiety. Participating in professional
development seminars in grant writing and ethics.
Supervisors: Debra Lobato, Ph.D., Jack Nassau, Ph.D., Wendy Plante, Ph.D., Abbe
Garcia, Ph.D., Jen Freeman, Ph.D., Aleksandra Krunic, M.D., and Christine Trask,
Ph.D.

**Psychology Intern** (August 2004-August 2005, 40-50 hours a week)
*Children’s Mercy Hospitals and Clinics, Department of Developmental and Behavioral
Sciences, Kansas City, MO, APA-approved*

**Child Psychology Clinic** (12 month rotation, 16 hours a week)
Duties: Conduct comprehensive psychological and psychoeducational assessments of
children and adolescents referred for a variety of learning, behavioral, and emotional
concerns. Provide individual and family therapy for children and adolescents using
primarily empirically-validated treatments in a hospital-based outpatient setting.
Provide crisis hotline and emergency services for three months of year. Participate in
weekly individual and peer supervision.
Supervisors: David Bennett, Ph.D., Rochelle Harris, Ph.D., and Christine Moser, Psy.D.

**Consultation and Liaison** (4 month rotation, 20-25 hours a week, 8/04-11/04)
Duties: Conducted pediatric inpatient consultations as requested by medical staff.
Common problems include adjustment to hospitalization and injury or illness, acute and
chronic pain management, neuropsychological sequelae of head injury, medical
compliance, and bereavement. Provided assessment, diagnostic impressions, short-term
behavioral and cognitive-behavioral therapy, and recommendations to families and
medical staff. Participate in research project investigating relationship between family
relationships and medical adherence among children with diabetes.
Supervisors: Christina Adams, Ph.D., Lynne Hardy, Ph.D., Sarah Kirk, Ph.D., and
Susan Mortweet VanScoyoc, Ph.D.

**Special Needs/Autism** (4 month rotation, 16-20 hours a week, 12/04-3/05)
Duties: Conduct psychological assessments and provide individual and family therapy
for children and adolescents presenting with developmental delays, pervasive
developmental disorders, and coexisting behavioral and emotional concerns. Participate
in Down’s Syndrome and Autism interdisciplinary clinics each week including
professionals from developmental pediatrics, speech/language, audiology, nutrition,
occupational and physical therapy. Provide diagnostic feedback and facilitate targeted
behavioral interventions for children and their families.
Supervisors: Brian Belden, Ph.D. and Vicki Little, Ph.D.
Behavioral Pediatrics (4 month rotation, 16-20 hours a week, 4.05-7/05)
Supervisors: Vincent Barone, Ph.D. and Edward Christopherson, Ph.D.
Duties: Conduct psychological and psychoeducational assessments and provide therapy to infants, children, and adolescents referred for a variety of behavioral and emotional concerns and common childhood problems (e.g., noncompliance, enuresis, encopresis, adjustment reactions, sleep problems).

Case Coordinator (September 2003-July 2004, 20 hours a week)
Clinical Services, Center for Persons with Disabilities, Logan, Utah
Supervisor: Pat Truhn, Ph.D.
- Conducted psychoeducational evaluations on children and adolescents with a variety of psychological and academic difficulties, including anxiety, depression, attention-deficit/hyperactivity disorder, learning disabilities, autism, and abuse.
- Wrote comprehensive psychological reports and provide feedback to clients.
- Conducted school observations.
- Collaborated with multidisciplinary team to determine diagnosis and treatment in weekly meetings.
- Supervised and assisted graduate students with assessment and report-writing.

Early Head Start Mental Health Specialist (September 2001-May 2003, 20 hours a week)
Early Head Start, Logan, Utah
Supervisor: David Stein, Ph.D.
- Provided individual, group, and family therapy to families in the Early Head Start program, addressing concerns such as abuse, multicultural issues, depression, and anger management.
- Conducted parent training and psychoeducational sessions for parents on topics including prenatal nutrition, stress management, ADHD, depression, and anxiety.
- Provided services to approximately eight individual clients on a weekly basis.
- Conducted child observations for behavioral and social assessments in homes or daycare setting.
- Participated in weekly staff meetings and individual supervision sessions.

Program Assistant (December 2000-May 2003, 10 hours a week)
Center of the School for the Future, Utah State University, Logan, Utah
Supervisor: Richard West, Ph.D.
- Provided consultation to school administrators and teachers regarding individualized and school-wide behavioral intervention programs in public school settings.
- Conducted staff trainings with school personnel on student behavioral and psychological concerns.
- Conducted functional assessments on children displaying disruptive behaviors.
- Presented research at education conferences and in-service trainings.

RELEVANT WORK EXPERIENCE continued

Personnel Manager (September 1997-May 1999, 40 hours a week)
Monroe Personnel, 333 Market Street, San Francisco, California
• Screened resumes and conducted approximately six job interviews each day.
• Assessed job applicants for relevant job skills, using tests, references, and personal interview.
• Responsible for hiring qualified applicants for temporary and permanent employment.
• Wrote job orders after speaking with client companies regarding employee needs.
• Placed job advertisements online, in newspapers, and weekly newsletters.
• Hired temporary employees for over forty temporary jobs each day.
• Responsible for securing top companies as clients, including Sony Metreon, Inc. and Pottery Barn. As one of two employees, was largely responsible for inclusion in the “100 Fastest Growing Companies in San Francisco” ratings.
• Participated in business networking events in the San Francisco financial district, including interview, selection, and conflict resolution.
• Developed Lunchtime Meditation series for business women in downtown San Francisco with rotating guest speakers on relaxation and stress reduction strategies.

**Facility Supervisor** (May 1995- July 1996, 50 hours a week)
*Sunshine Intensive Care Facility, Hayward, California*

• Developed individualized plans to improve independent living skills for adults with severe developmental disabilities, predominantly severe mental retardation.
• Presented quarterly reviews and monthly progress reports to multidisciplinary team including psychologist, physician, rehabilitation counselor, occupational therapist, social worker, and nurse.
• Wrote behavior modification plans and data and behavior logs.
• Supervised over 20 direct care staff at four facilities.
• Checked all record keeping in each program including shift change logs, data logs, toileting charts, medication logs, staff time cards, staff duty lists, and daily menu chart.
• Supervised medication administration, client personal budgets, facility budget, and planning of recreational and social activities.
• Arranged doctor appointments and transportation for clients.
• Conducted weekly staff trainings to teach interventions and data recording techniques as well as review client progress.

**Health Camp Group Leader** (July 1998, two week overnight camp)
*Stanford University Center for Research in Disease Prevention, Palo Alto, California*

• Facilitated group leadership activities designed to increase activism among youth regarding public health issues.
• Assisted in development of educational program designed to help children and adolescents identify and solve community health problems.
• Stayed at overnight camp for youth.

**RESEARCH EXPERIENCE**

*Therapeutic Processes in a Cognitive-Behavioral Intervention for Depressed Adolescents with a Chronic Illness*
Supervisor: Eva Szigethy, MD, Ph.D.
Proposed and conducted my dissertation research project on psychotherapeutic processes of a cognitive-behavioral treatment to treat depression among adolescents with Inflammatory Bowel Disease. Completed six-week training on 100-item psychotherapy process Q-sort measure at Massachusetts General Hospital with Dr. Stuart Ablon, developer of measure. Viewed videotaped therapy sessions and rated sessions on therapeutic process with Q-sort measure at Children’s Hospital-Boston for three months.

**ADHD Study Student Therapist** (October 2001-January 2004)

Supervisor: Gretchen Gimpel, Ph.D.

Provided parent-child interaction therapy to parents of children with a diagnosis of ADHD. Administered behavioral and social measures, followed manualized research protocol as part of data collection for study on the effectiveness of parent training for symptoms of ADHD. Attended weekly research meetings to discuss ADHD client challenges, research activities, and publications written by the ADHD study team.

**The Effects of a School-wide Peer-administered Praise Intervention on Student Problem Behavior** (June 2001-December 2002)

Supervisor: Richard West, Ph.D.

Site: Center for the School of the Future, Utah State University, Logan, Utah

Proposed and conducted thesis investigating the effectiveness of a school-wide intervention to reduce disruptive behaviors in elementary schools. Trained school teachers and students to implement praise intervention involving praise notes, positive praise statements, and reinforcers for positive behavior. Used hidden video cameras to analyze student adherence to the intervention protocol.

**Cache County Memory Study** (September 2000-December 2000)

Supervisor: Joann Tschanz, Ph.D.

Site: Science, Engineering, and Research Laboratory, Utah State University, Logan, Utah

Coded video tapes of elderly subjects for observable symptoms of Alzheimer’s disease. Reviewed medical charts, entered data, performed data analysis. Completed forty hours of training on medical complications and symptoms common among elderly. Collaborated with additional research assistants to determine interrater reliability on measure ratings.

**Effects of Psychopharmaceutical Drugs on Human Behavior** (September 1999-May 2000)

Supervisors: Lisa Marsch, Ph.D. and Warren Bickel, Ph.D.

Site: Human Behavioral Psychopharmacology Lab, University of Vermont, Burlington, VT

Coordinated and organized data collection and analysis process for substance abuse study. Recruited and scheduled participants, conducted intake screenings, collected physical and behavioral performance data during study sessions at hospital research laboratory. Ensured quality data collection by screening and coding all data sheets.

**Effectiveness of a Health Behavior Intervention for Youth** (July 1996-May 1997)

Supervisors: Tom Robinson, Ph.D. and Sara Wert, M.S.

Site: Stanford University Center for Research in Disease Prevention, Palo Alto, CA

Supervised team of Research Assistants to ensure quality data collection techniques for NIH Health Intervention and Survey. Delivered health education intervention and monitored research survey administration to diverse student populations in Palo Alto public high schools. Edited and prepared surveys for data entry.
Negative Attributional Style among College Students with Seasonal Affective Disorder
(September 1994-May 1995)
Supervisor: William Henry, Ph.D.
Site: Colby College, Waterville, Maine
Proposed and conducted an original research project on Seasonal Affective Disorder. Conducted literature review on symptoms of seasonal affective disorder and associated cognitions. Collected data on college sample and wrote formal research paper.

CLINICAL PRACTICA

Practicum in Psychotherapy with College Students (September 2003-May 2004)
Utah State University Counseling Center, Logan, Utah
Supervisors: Gwena Couillard, Ph.D. and Dave Bush, Ph.D.
Provided individual and group therapy to a college population, focusing on issues including academic difficulties, religious concerns, and relationship difficulties. Implemented interventions of various orientations, including behavioral, cognitive, interpersonal, and psychodynamic. Conducted assessments including cognitive, achievement, and personality. Completed case presentations to team throughout academic year.

Practicum in Psychotherapy with Pediatric Population (September 2002-May 2003)
Biomedical Division, Center for Persons with Disabilities, Logan, Utah
Supervisor: Gretchen Gimpel, Ph.D.
Provided individual therapy to children and adolescents with a range of medical and psychological difficulties. Worked within a medical setting to provide psychological intervention and consultation with patients, physicians, and nurse-practitioner. Communicated with medical care providers about psychological functioning of patients.

Practicum in Assessment with Children (September 2001-May 2002)
Clinical Services, Center for Persons with Disabilities, Logan, Utah
Supervisor: Pat Truhn, Ph.D.
Conducted psychological and psychoeducational assessment including school and parent-child observations. Training included administering, scoring, and interpreting assessments, conducting intake interviews, writing reports, and providing feedback to clients.

Practicum in Psychotherapy with Adults (January 2001-August 2002)
Utah State University Psychology Community Clinic, Logan, Utah
Supervisor: Susan Crowley, Ph.D.
Provided psychological assessment and individual psychotherapy to a wide variety of clients, with an emphasis on community members with minimal economic resources. Therapeutic issues included major depressive disorder, relationship issues, anxiety, family conflict, low self-esteem, and Axis II diagnoses.
OTHER CLINICAL VOLUNTEER EXPERIENCE

Battered Women's Advocate (May 1998-Sept. 1999)
W.O.M.A.N. Inc., San Francisco, California
Provided case management and crisis intervention for battered women and children at domestic violence shelter. Collaborated with protective service agencies, legal services, mental health services, and housing services to assist domestic abuse victims in obtaining legal and social services. Completed sixty hour domestic violence crisis counseling training.

Battered Women's Advocate (January-May 1995)
Battered Women's Shelter, Augusta, Maine

Intern (February-June 1994)
Strehlow Research Centre, Alice Springs, Australia
Assisted Arrente Aboriginal adults to relocate their biological families after being removed from their families and placed into government-run homes as children. Collaborated with public health workers and social workers to help Aboriginal individuals improve their mental, physical and spiritual health. Conducted research project on the impact of historical events on the state of Aboriginal health in contemporary Australian society.

Teen/Parent Counselor (January 1994)
Parent/Child Center, Middlebury, Vermont
Provided emotional support to pregnant and parenting teens from low socioeconomic status in individual and group counseling sessions. Therapeutic issues included anger management, stress reduction, assertiveness training, and domestic violence.

OTHER CLINICAL VOLUNTEER EXPERIENCE continued

Job Club Facilitator (August 1998-Sept 1999)
The Women's Building, San Francisco, California
Coordinated support group for women from minority and low socioeconomic status seeking employment.

Health Outreach Volunteer (June 1996-March 1997)
Health Initiatives for Youth, San Francisco, California
Provided advocacy and support to HIV positive and at-risk youth. Assisted in development of website and online support group for HIV positive youth. Assisted in the planning and execution of the organization's first annual national conference for GLBT youth.

Sierra Club Trip Leader (October 1995-Sept 1999)
Sierra Club Inner City Outings, San Francisco, California
Led outdoor camping and hiking trips for at-risk youth, including multicultural, homeless, and
juvenile delinquent populations. Attended monthly meetings to discuss outreach and coordination of outdoor trips.

**Trip Leader** (September 1996-February 1999)
*Trips for Kids, Marin, California*
Led mountain bicycle trips for at-risk youth including low SES inner-city boys, juvenile delinquent adolescent females at a residential facility, and homeless youth. Worked in and helped to maintain low-cost bicycle shop.

**ACADEMIC AWARDS AND ELECTED POSITIONS**

- Dean’s List, every semester in graduate school and college
- Charles A. Dana Scholar: 1993-1995, awarded two consecutive years for excellent academic performance
- Runnals Scholar: 1994-1995, awarded to one outstanding female scholar who demonstrates leadership qualities
- Phi Beta Kappa: 1995
- Psi Chi Society, Secretary: 1992-1995

**CONFERENCE PRESENTATIONS**


**CURRENT PROFESSIONAL AFFILIATIONS**

American Psychological Association (APA)
Division 53: Society of Clinical Child and Adolescent Psychology
Society of Behavioral Medicine
Association of Behavior Analysis
Utah Association of School Psychologists