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Treatment Acceptability of a Well-Established Cognitive Behavioral Therapy for Panic Disorder in a Passamaqdyoddy Community

Elizabeth Ranslow

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TREATMENT ACCEPTABILITY OF A WELL-ESTABLISHED COGNITIVE BEHAVIORAL THERAPY FOR PANIC DISORDER IN A PASSAMAQUODDY COMMUNITY

By

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TREATMENT ACCEPTABILITY OF A WELL-ESTABLISHED COGNITIVE BEHAVIORAL THERAPY FOR PANIC DISORDER IN A PASSAMAQUODDY COMMUNITY

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Thesis Advisor: Dr. Jeffrey E. Hecker


As a step towards evaluating the cross-cultural effectiveness of cognitive behavioral therapy for panic disorder, treatment acceptability was used in the current study to gain an understanding of the treatment utility and social validity of that treatment with a group of Passamaquoddy individuals. American Indian communities face substantial psychosocial challenges (e.g., poverty, discrimination, and high rates of violent deaths), which are associated with increased risk for psychopathology, and there is little empirical evidence of the effectiveness of cognitive behavioral therapy within these communities.

The current study addressed these issues in two phases. In phase 1, qualitative methodology was used to develop the culturally-modified treatment description. In phase 2, a quasi-experimental design was used to examine the effect of Passamaquoddy or European American cultural group on treatment acceptability of the original (CBT) and culturally-modified (CST) versions of the cognitive behavioral treatment rationale. The
effect of culturally-relevant variables (e.g., mental health values and cultural identification) on treatment acceptability was also examined.

How a treatment is described affects its acceptability in complex ways, considering cultural variables, gender, and previous treatment. It was not found that cultural group had the expected effect, however European American individuals without previous treatment favored the CST, whereas individuals living in a Passamaquoddy cultural group with a history of treatment preferred the CST. Within the Passamaquoddy group, bicultural or European American identifying individuals, compared to the Native American or marginalized individuals, found both the CBT and CST more acceptable. The Passamaquoddy group found the CST more acceptable for their community compared to the CBT, whereas their European American counterparts did not find one type of treatment more acceptable for their community. Unexpectedly, mental health values did not affect the relationship between cultural group and treatment acceptability, and women preferred the CST, while men did not have a preference.

The current study is the first to assess an aspect of social validity and culturally-relevant factors of a cognitive behavioral intervention for panic disorder in an American Indian community. In addition, it fills a gap in the literature reporting social validity of cognitive behavioral interventions more generally.
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INTRODUCTION

The current project is a treatment acceptability study designed to be of service to the Passamaquoddy community in Indian Township, Maine. The process of culturally modifying a standard cognitive behavioral treatment description will be useful to mental health practitioners and clients in Indian Township. The second part of the project, measuring the treatment acceptability of the standard and modified treatment descriptions to community members, is designed to help gain a better understanding of community members’ attitudes towards psychological treatment. A deeper understanding of factors that affect attitude toward psychological treatment is be gained by looking at some culturally-relevant variables related to treatment acceptability. Finally, this project represents an effort to fill a gap in the psychological literature regarding multicultural effectiveness of efficacious psychological interventions.

The literature review begins with an overview of demographic information regarding the American Indian and Alaska Native (AIAN) population of the United States. The discussion then turns to a description of risk and protective factors in Native American communities, which is included to provide a backdrop to a discussion of psychopathology. Although the focus is necessarily on factors that contribute to significant levels of psychological problems, although beyond the scope of this project, a

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1 When discussing Native peoples in the United States as a whole, the term AIAN will be used for the sake of efficiency. This term is chosen because it has been established in the literature reviewed, with the understanding that there is a controversy regarding appropriate terms to use when describing Native peoples in the United States as a population, and it is not meant to be used disrespectfully. In recognition of the diversity between AIAN peoples, every effort is made to refer to specific tribes and communities of AIAN peoples when that information is available.
more detailed discussion of this topic would focus more heavily on protective factors, which are often neglected in the literature on this population (LaFromboise, 1998). The discussion of psychopathology following the section on risk and protective factors is not meant to be comprehensive. Brief overviews of some psychopathological issues that are commonly found in the literature are provided, with the most detail spent on anxiety-related problems, given that the current project integrates an anxiety disorder intervention.

The review then turns to the treatment literature. First, an overview is provided of psychotherapy with AIAN peoples covering AIAN history, clinician characteristics, client characteristics and therapeutic models. The psychotherapy section ends with a discussion of the outcome literature regarding cognitive behavioral interventions and AIAN clients. The role of the Empirically Supported Treatment (EST) movement, which relies heavily on cognitive behavioral interventions, is discussed. The main goals of discussing the EST literature are to provide a rationale for the current study’s use of a description of a cognitive behavioral intervention for Panic Disorder, which arguably has the strongest evidence of efficacy of all the EST’s, and to describe a troubling cultural sensitivity gap in the EST literature. The final section of the literature review includes a comprehensive description of treatment acceptability, the main dependent variable of the current project. Treatment acceptability is used to provide a subjective measure of preference for two types of treatments, a standard cognitive behavioral therapy for Panic Disorder and a culturally modified version of that same treatment.
The American Indian and Alaska Native Population

The AIAN population represents a diverse cultural group in the United States. There are over 500 different federally-recognized tribes (plus many state recognized tribes), which contributes to their cultural heterogeneity (LaFromboise, 1998). There are approximately 4.1 million AIAN\(^2\) individuals, making up about 1.5% of the total population of the U.S. (US Bureau of Census, 2002). About 20% of AIAN live on reservations and trust land (Norton & Manson, 1996), and approximately 40% of the total AIAN population lives in a rural area (Manson, Bechtold, Novins, & Beals, 1997). In addition, about one-fifth (21%) of AIAN speak one of 155 Native languages at some level of fluency (Dillard & Manson, 2000). The AIAN population is also younger than the general US population, with a median age of 26 years (Dillard & Manson, 2000).

The diverse nature of tribal group and geographical location (among other considerations) makes it difficult to determine similarities between groups (McNeil, Zvolensky, Porter, Rabalais, McPherson, & Kee, 1997). Although there are 500 plus tribes in the US, AIAN individuals share common historical circumstances (e.g., decimation of their people, loss of ancestral homelands, and destruction of language, culture and religion; Duran & Duran, 1995). Historical experiences common to most AIAN groups include epidemics of European disease, banned religious practices, forced attendance at boarding school, and placement on reservations (Neligh, 1990). Continued attempts at assimilation (e.g., urban relocation movements and claims settlements) evidence the perpetuation of negative experiences during the past century (Dillard &

\(^2\) This number is based on those individuals identifying as “American Indian or Alaska Native race alone or in combination with one or more races.”
Manson, 2000). Thus, it is possible to identify some common themes between tribal
groups that include psychopathological issues that are likely to be troubling in Native
American communities. However, it is also important to respect the tremendous diversity
represented among AIAN peoples (Dillard & Manson, 2000). Although it is possible to
describe AIAN as a cultural group, it is equally important to compare the generalized
findings within a particular Native American community.

Risk and Protective Factors

There are multiple risk and protective factors identified in Native American
communities that affect the nature and prevalence of psychopathology in those
communities (LaFromboise, 1998). For instance, there has been recent economic growth,
return of tribal members to reservations, and rebirth of traditional practices despite
centuries of practices and governmental policies designed to eradicate Native Americans
and their cultures (Cross, 1995; Duran & Brave Heart, 1999; Fisher, Strock, & Bacon,
1999). It is also possible that resiliency, sense of community, and sense of culture
represent strategies that have been successfully employed to cope with multiple stressors
in American Indian communities (Duran & Brave Heart, 1999; Evaneshko, 1999).
Unfortunately, there is a very limited amount of empirical research in this area
(LaFromboise, 1988). In a 1992 mental health needs assessment of Tucson’s urban
American Indians Evaneshko (1999) found that family was identified as the strongest
resource. Moreover, traditional values and knowledge were identified as resources, in
spite of assimilation pressures. Cultural strength as a resource is consistent with previous
investigations. For example, Miller & DeJong (as cited in Evaneshko, 1999) reported
that many Tucson Indians see the city as an extension of their traditional homeland. The authors further reported an "intriguing" result that many urban American Indians in Tucson maintain contact with their home tribal areas adjacent to Tucson (more than 40% had returned at least 3 times in the last year). According to the authors, the high level of maintenance of some component of their traditional ways (83%) might be explained by a "tendency for native peoples under bombardment to turn to their roots and seek sanctuary in their traditional value systems" (Evaneshko, 1999, p. 56). Further empirical examinations of hypotheses derived from this survey seem warranted. Specifically, the connection between types of perceived support, use of support, outcome and ethnicity justifies further attention.

Turning to Northeast tribal information, in a health status and needs assessment report completed recently through the Maine Bureau of Health (Kuehnert, 2000), several assets were identified by tribal health directors as key in confronting problems currently faced by tribes in Maine. The following assets were identified at three or more of the tribal health centers in Maine: talented community health leadership and staff members, traditional Native American cultural values and community norms, community attitudes supportive of the well-being of individuals, families and communities, political experience and knowledge by tribes and tribal leaders, and health funding resources currently in place. Given the lack of balance between information from Western compared to Eastern Native American communities, further investigation of factors that may be protective in the development of psychopathology in Northeast tribes would help to gain a better understanding.
American Indian communities in the United States also face substantial psychosocial challenges that are related to psychopathology. Infant mortality is higher among American Indians compared to the general population (as cited in Manson, 2000, Office of Planning and Legislation, US Department of Health, Public Health Service, Indian Health Service, 1996). Moreover, unemployment rates are substantially higher for Native Americans (US Department of Health and Human Services, 2001). Although the median household income in the US is $30,056, for American Indian families it is only $19,865. About one-third of American Indian families live below the poverty line, compared to the national average of 13.1% (US Department of Health and Human Services, 1994). In addition, adoption rates and foster care placements are significantly higher in Native American communities than in other segments of the population, and 37% of American Indian children live in single parent families, which are among the highest rate in the country (Manson, 2000). These factors contribute substantial psychosocial challenges in many Native communities.

Furthermore, there are risk factors for violence in some American Indian communities. Suicide and homicide are the second and third leading causes of death among American Indians aged 15-24 years old, and the rates of suicide and homicide are 2 to 3 times the national average (Office of Planning and Legislation, US Department of Health, PHS, HIS, 1996). Further, most of the leading causes of death in American Indian communities are alcohol-related (Manson, 2000). In addition, the average age of death is significantly lower among Native Americans compared to the general population. In Maine, the average age of death between 1978 and 1997 was 74 years of age, whereas for Native Americans in Maine during that time it was 60 years of age (Kuehnert, 2000).
Many of the leading causes of death are related to psychosocial variables (e.g., accidents, suicide and alcoholism; Dinges & Duong-Tran, 1993; Kuehnert, 2000). Experiences of trauma can also lead to the development of multiple forms of psychiatric symptomatology. For example, rates of developmental disorders, drug use disorders, depressive disorders, and anxiety disorders have been found to be higher in abused AIAN youth compared to those without trauma histories (Piasecki, Manson, Biernoff, & Hiat, 1989).

Examination of the relations between risk and protective factors, outcome, and ethnicity in rural American Indians suggests a complex relationship between those variables (Fisher, Strock, & Bacon, 1999). In a study designed to look at the relationship between risk and protective factors in Native Americans, Fisher et al. (1999) found that for American Indian males negative life events and positive self/family concept predicted problem behavior, whereas negative life events was the only significant predictor of problematic behavior for American Indian females. For European American participants, both males and females reported similar significant risk and protective factors. Traditional values was not a significant protective factor for American Indians or European Americans, however it approached significance with Native American males. Further, the authors found that teacher ratings of the participants’ behaviors were influenced by ethnicity. Specifically, teachers’ reports of problem behaviors in Caucasian participants were predicted by lack of protective factors. In American Indian participants, teachers’ reports of problem behaviors was predicted by American Indian participants’ reports of risk factors. This study underscores the need to look more closely at the complex relationship between risk and protective factors, outcome and ethnicity.
**Psychopathology in Native American Communities**

Depression and suicide, substance abuse and dependence, and anxiety problems (e.g., posttraumatic stress disorder and phobias) represent the psychopathological issues with the highest prevalence rates in Native American communities (Beals, Piasecki, & Nelson, 1997; Dillard & Manson, 2000; Manson & Brennan, 1995; Manson, Bechtold, Novins & Beals, 1997). It has been proposed that Native Americans may have less severe diagnoses compared to their European American counterparts (Earle, Bradigan, & Morgenbesser, 2001). However, epidemiological data with this population are incomplete, due to a number of factors including methodologically flawed studies and culturally insensitive research (Dillard & Manson, 2000; Manson & Shore, 1981; McNeil, 1997). Moreover, although it is not the focus of the current project, it is important to note that the literature on psychopathology in AIAN populations should be reviewed with caution regarding the cross-cultural validity of psychopathological concepts (e.g., Manson, 2000; O’Nell, 1996; Putsch, 1999; S. Sue, 2001).

Epidemiological studies comparing rates of psychopathology between Native Americans and other cultural groups report a substantial amount of variation. In a study conducted in a Northwest Coast American Indian community, investigators reported an overall prevalence of psychiatric impairment of 69%, which is higher than rates reported in other countries (Shore, Kinzie, Hampson, & Pattison, 1973). However, in an Eskimo community, researchers found that rates of psychopathology were consistent with those of the Canadian population in general (Murphy & Leighton, 1989). In a more recent study comparing Indian and non-Indian Mexican migrant farm workers in California (Alderete et al., 2000), researchers found a significant difference in the lifetime

...
prevalence rates for psychiatric disorders between the two groups. The lifetime prevalence rate for Indian participants was 26%, compared to 20% for non-Indian participants. Further, the authors found that the most prevalent disorders among non-Indians were specific phobia (6%) and alcohol dependence (6%), whereas the most prevalent disorder among Indians was alcohol dependence (9.9%). These data provide some evidence of the variability in findings between Native American populations.

The evidence regarding prevalence rates of psychopathology among American Indians paints a complex picture. For example, in an investigation of the prevalence of psychiatric disorders among American Indians adolescent detainees (Duclos, Beals, & Novins, 1998), approximately 49% of the participants met criteria for at least one alcohol, drug, or psychological disorder. Further, 12.7% of the sample met criteria for two disorders, and 8.7% had three or more disorders. The diagnoses with the highest prevalence rates were substance abuse/dependence (38%), conduct disorder (16.7%), and major depression (10%). Males in the study were significantly more likely to meet criteria for one disorder, whereas females were more likely to have met criteria for major depression and/or an anxiety disorder, and were also more likely to have met criteria for three or more disorders. Overall, the evidence suggests that Native Americans experience a high level of psychopathology with a great deal of within and between group variability.

Depression

Depression represents a relatively common form of psychopathology in the general population (Arean, McQuaid, & Munoz, 1997). Prevalence estimates of Major
Depressive Disorder vary widely across studies of the general adult population (APA, 2000). Estimates of the overall lifetime prevalence rate of Major Depressive Disorder range from 6% to 17% in the general population (Blazer, Kessler, & McGonagle, 1994). Further, investigations using community samples of adults have demonstrated lifetime prevalence rates from 10% to 25% for women and from 5% to 10% for men (APA, 2000).

Depression signifies a considerable problem in many American Indian communities, with a great deal of variability in prevalence estimates. For example, in a recent survey of 13,000 adolescents in a Northwest Coast American Indian community, investigators found that 14% of females and 8% of males reported feelings of sadness and hopelessness (Blum, Harmon, Harris, Bergesien, & Resnick, 1992). In another study of elderly American Indians visiting an Indian Health Service outpatient facility, 32% reported depressive symptoms, a rate higher than that in elderly European Americans (Manson, 1992). In a study of adult American Indians in primary care, 19% of the patients reported depressive symptomatology (Goldwasser & Badger, 1989). In a more recent sample of Indian Mexican migrant farm workers, researchers found that the lifetime prevalence for any mood disorder was 8.3%, with Major Depressive Episode occurring most prevalently (Alderete, Vega, Koldy, & Aguilar-Gaxiola, 2000). In a related line of research, Napholz (1995) assessed the sex role behavior of professional American Indian and Alaska Native women in an urban setting with interesting results regarding prevalence of depression. The author found that women who characterized themselves as androgynous evidenced rates of depression similar to the high end of estimates from the general population (21.7%), but women who reported that they had to
fit into traditional female roles evidenced a significantly higher rate of depression (48%). In a study of AIAN college students, investigators found that 45% of participants scored above the criteria for clinical depression on a self report measure (as cited in Manson, Bechtold, & Novins, 1997). Interestingly, in another study using a similar age group, but in juvenile detention (Novins, Duclos & Martin, 1999), only 10% of participants evidenced substantial depressive symptomatology. Taken together, the data suggest considerable variation in the prevalence of depression both between and within Native American groups. However, overall prevalence rates seem to be at or above those of the general population.

**Alcohol-related Disorders**

Alcohol dependence and abuse are two of the most prevalently diagnosed disorders in the general population (APA, 2000). Based on community sample studies, the lifetime prevalence rate for alcohol dependence in adults is about 8%, and for alcohol abuse about 5% (APA, 2000). Looking at drinking along a continuum, the rate of problem drinking is about 15% to 35% of the adult US population, and the rate of severely dependent drinking is about 3% to 7% (Sobell, Breslin, & Sobell, 1997).

Rates of drinking vary by ethnicity (Sobell, Breslin, & Sobell, 1997), with Native Americans generally evidencing higher rates compared to the epidemiological data in the general population. For example, an investigation using a sample of 582 tribally-enrolled Native Americans in the Southwestern United States found that 71% of participants qualified for a diagnosis of an alcohol disorder at some point in their lives, and 37% currently qualified for that diagnosis (Rassmussen, Albaugh, & Goldman, 1998). In cross-cultural comparisons, Native Americans have higher prevalence rates of diagnosed
alcohol related disorders, although the data are somewhat mixed. In a study of Vietnam
veterans, Northern Plains and Southwestern Indians had higher lifetime (80%) and
current (70%) prevalence rates of alcohol abuse or dependence, than White, Black, and
Japanese-American veterans, which ranged from 33-50% lifetime and 11-32% current (as
cited in Manson, 2000).

Some evidence suggests that alcohol-related disorders may also be a problem in
Northeastern Native American communities. For example, in 1997 the second most
frequent diagnostic category for health problems at the five Indian Health Service
outpatient clinics in Maine was mental illness and chemical addictions (Kuehnert, 2000).
In a community sample survey, investigators found that European American and Native
American youth have the highest prevalence rates (both lifetime and yearly) of heavy use
of alcohol among U.S. ethnic categories (Rebach, 1992). This high prevalence rate has
lead to a substantial body of literature regarding alcohol and other substance use in
Native American communities. However, the prevalence rates of alcohol related
disorders vary between and within American Indian groups, and that research has been
conducted with only a limited number of tribes (Gray & Nye, 2001). For example, Heath
(1989) found evidence that American Indian groups have higher numbers of abstainers
and heavy drinkers, but fewer individuals who drink in moderation.

Comorbidity of substance disorders with other disorders is common in the general
population (APA, 2000). Prevalence rates seem to vary substantially by sample source,
leading to a conservative estimate of between 7% and 75% psychiatric comorbidity in
alcohol use disorders (Mezzich, Arria, Tarter, & Moss, 1991). In clinical samples of
patients coming to treatment for substance disorders, the rate of comorbidity is reported
at 35% to 65% (Anthony, Warner, & Kessler, 1994; Regier, Farmer, Rae, Locke, Keith, Judd, & Goodwin, 1990; Westermeyer, Specker, Neider & Lingenfelter, 1994). Recent evidence suggests that the relationship between substance and other disorders is strong among Native Americans, as well. For example, in a study of male and female Southwestern American Indians, individuals meeting criteria for alcohol dependence or binge drinking were more likely to have 3 or more disorders (as cited in Manson, 2000). Overall, substance disorders frequently co-occur with other diagnoses, and that is true in Native American populations, as well.

Furthermore, comorbidity of anxiety disorders and alcohol use disorders is common among American Indians, and at least as common as in the general population (Rasmussen, Albaugh & Goldman, 1998; Westermeyer, 2001). In a study of substance abuse patients, American Indians evidenced a higher rate of anxiety disorder than non-Indians (Westermeyer, 1993). Phobias and panic disorder seem to be the most prevalent of the comorbid anxiety disorders with alcohol use disorders (Neligh, Baron, Braun, & Czarnecki, 1990; Westermeyer, 2001). In addition, PTSD occurs frequently with alcohol use disorder, with especially high rates among Native American veterans (Robin, Chester, Rasmussen, Jaranson, & Goldman, 1997). Overall, the evidence suggests that comorbid anxiety and substance disorders represents a substantial challenge in many Native American communities.

**Anxiety Disorders**

Empirical literature on anxiety-related problems among Native Americans has been lacking until recently (Iwasama & Smith, 1996; McNeil, 1997; Trimble, 1990). The paucity of literature has contributed to a lack of understanding of anxiety-related
problems in Native Americans (McNeil, 1997). However, some evidence is available regarding the nature of some anxiety-related problems in Native American individuals, including anxiety disorders, anxiety sensitivity, and culturally-specific anxiety (e.g. McNeil, Zvolensky, Porter, Rabalais, McPherson, & Kee, 1997; Mesquita & Frijda, 1992). Furthermore, studies of Native American college students demonstrate significantly higher levels of anxiety (both state and trait) among Native Americans (Miq’mak, Lakota, and mixed Western tribe samples) compared to non-Natives (Gold, Garner, Murphy, & Weldon, 1980; McDonald, Jackson, and McDonald, 1991; Pine, 1985), and the presence of high levels of anxiety has been demonstrated to lead to a heightened risk for the development of anxiety disorders (Barlow, Bach, & Tracey, 1998). In a review of the existing literature, McNeil (1997) suggests that anxiety problems need to be better understood in order to improve the quality of treatment for AIAN individuals.

Anxiety disorders represent one of the most common mental health dysfunctions and relate to substantial health care costs (Greenberg, Sisitsky, & Kessler, 1999; Zayfert, Dums, & Ferguson, 2002). Unfortunately, the presence of an anxiety disorder can be a risk factor for other disorders (Barlow, 2002), and even increase the risk of suicide (Khan, Leventhal, Khan, & Brown, 2002). Investigations of the prevalence rates of anxiety disorders in the general population demonstrate variability both between and within the anxiety disorders. For example, epidemiological studies indicate a lifetime prevalence rate of Specific Phobia from 10% to 11.3%, 1.5% to 3.5% for Panic Disorder, 3% to 13% for Social Phobia, 1% to 14% for Posttraumatic Stress Disorder, and 5% in community samples to 12% in individuals presenting at anxiety disorder clinics for
Generalized Anxiety Disorder (APA, 2000). Overall, anxiety disorders represent a substantial problem for a large number of individuals in the general US population.

Investigation of prevalence rates of anxiety disorders in Native American communities suggest a frequency approximately equal to depression, and in some communities the occurrence of anxiety problems may be even higher (Foulks & Katz, 1973). Further, epidemiological data also indicate that anxiety disorders appear to be among the most common mental health problems for AIAN (Manson, Tatum, & Dinges, 1982). Anxiety disorders are frequently cited as the most common in AIAN individuals who seek mental health professional help (Rhoades, Marshal, Attneave, Echohawk, Bjork, & Beiser, 1980).

Posttraumatic Stress Disorder (PTSD) has a disturbingly high prevalence rate in many Native American communities (Manson, Beals, O’Nell, Piasbecki, Bechtold, Keane, & Jones, 1996). The prevalence rate of PTSD in non-clinical population ranges from 1% to 14%, however prevalence rates from 3% to 58% have been observed for individuals who experienced severe and extreme events, such as victims of combat or victims of volcanic eruptions (APA, 2000; Norris, 1992). In a recent study, a genealogically based sampling strategy was used with a Southwestern tribe to examine the prevalence and characteristics of PTSD and related traumatic events among American Indians (Robin, Chester, Rasmussen, Jaranson, & Goldman, 1997). Investigators found an overall lifetime prevalence rate of 17.9% for men and 25.4% for women (although the gender difference was not significantly different). For both men and women, the most frequently reported traumatic events were automobile accidents and receiving news of the violent or unexpected death, mutilation, or serious injury of a loved one. In addition,
42.3% of women reported experiencing physical assault. Furthermore, almost every man who experienced combat developed PTSD (90.9%). In this study, the American Indians had a prevalence rate of PTSD comparable to groups that have experienced severe and extreme events, such as survivors from mass shootings and combat (De Girolamo & McFarlane, 1993). These findings suggest that risk for PTSD varies by number and severity of traumatic events, rather than by ethnicity, and that many Native communities may be at high risk for experiencing traumatic events.

Epidemiological surveys have found differences in prevalence rates of PTSD among Native Americans. For example, in a recent investigation of Native American combat veterans (Manson, Beals, O'Neill, Piasecki, Bechtold, Keane & Jones, 1996), the authors found a 31% current, and 57% lifetime, prevalence rate of PTSD for Northern Plains Indians, and 26.8% current, and 45.3% lifetime, prevalence rate for Southwestern Indians. These findings suggest that investigations into the prevalence and characteristics of PTSD among Native Americans should include studies of within group differences and that tribe specific prevalence rates might evidence the most accurate description of PTSD for Native peoples. In addition, future research should consider the occurrence of acute traumatic events in the context of cumulative and intergenerational trauma (Duran & Brave Heart, 1999; Robin, Chester & Golman, 1996; Robin, Chester, Rasmussen, Jaranson, & Goldman, 1997). Indeed, a University of Maine professor is developing a study to examine the effects of multigenerational trauma in Indian Township, Maine (G. Werrbach, personal communication, May, 2002).

Native Americans have experienced a long history of persecution including forced acculturation, as well as overt and covert acts of prejudice and discrimination
LaFromboise, 1988; Trimble, 1990). Negative sociocultural experiences of Native American populations likely contribute to the onset of anxiety disorders, including panic disorder and intergenerational posttraumatic stress disorder (Choney, Berryhill-Paake & Robbins, 1995; McDonald, Jackson, & McDonald, 1991; Norton & Manson, 1995; Norton, Rockman, Malan, & Cox, 1995; Robin, Chester, Rasmussen, Jaranson & Goldman, 1997). The presence of posttraumatic stress disorder is a further risk factor for other forms of psychopathology (Koren, Arnon, & Klein, 2001). For example, a large proportion of individuals who present for treatment of PTSD experience comorbid panic attacks (Falsetti, Resnick, Davis, & Gallagher, 2001). Given these findings, history of trauma and related anxiety symptoms should be considered in treatment and research with Native American individuals.

Although research in this area is lacking (LaFromboise, 1998), panic disorder is also a concern in Native American communities (Amern & Katschnig, 1990; Norton, Rockman, Malan, & Cox, 1995). There is at least one study in the literature specifically addressing panic disorder in American Indian individuals (Neligh, Baron, Braun, & Czarnecki, 1990). Neligh et al. (1990) used a sample of 50 participants from two Native American communities in the Pacific Northwest to investigate the prevalence of panic disorder (PD). The authors found that 14% of participants currently met criteria for a diagnosis of PD. This rate is significantly higher than the rate in the general population, which ranges from 1.5% to 2% for one-year prevalence (APA, 2000). Furthermore, those individuals with PD had twice the prevalence of lifetime depression compared to the remainder of the participants in the study. In addition, the individuals with PD reported three times the frequency of depressive symptoms. Although caution should be taken in
making generalizations about Native peoples in general based on the findings of one study, this preliminary evidence suggests that PD may be a considerable problem for some Native Americans. Future research should be directed towards PD in Native American communities, which is currently both understudied and a considerable problem. Finally, focusing research on less severe forms of psychopathology, such as PD, is consistent with the observation that previous research efforts that have focused on more severe problems with this population may contribute to an unwanted effect of over-pathologizing AIAN populations (LaFromboise, 1998).

**Psychotherapy in Native American communities**

Despite the significance of their mental health needs, many American Indian communities are underserved by mental health services (Cauce et al., 2002; Renfrey, 1992; Trimble, 1990). AIAN clients may be the most neglected ethnic group in the mental health field (Manson, 1982). Lack of Native American psychologists may be an indicator of that neglect (LaFromboise, 1988). In addition, AIAN individuals report a lower use of mental health services compared to other segments of the US population (Manson, 2000). Many variables have been hypothesized to explain this finding. For example, attitudinal differences (e.g. values and beliefs) that vary by culture may be important in determining the use of mental health services (LaFromboise, 1998; S. Sue, 1998). Acculturation may also affect mental health service utilization (Wells, Golding, Hough, & Burnam, 1988). In addition, it is possible that Native American individuals may not seek mental health treatment because they may not view problems as “mental health problems” (Link, Cullen, Frank, & Wozniak, 1990). Alternatively, they may not
seek mental health treatment because they are unaware that effective treatments may be available (Manson, 2000; S. Sue, 2001). The stigmatization of “mental patients” may lead community members to fear seeking help from mental health professionals (Link, 1987). Furthermore, the expression of symptoms may vary across culture (e.g. somatic, cognitive), leading individuals to seek help from a variety of practitioners (Link, Cullen, Frank, & Wozniak, 1990). Discrimination experienced in health care settings could also deter ethnic minority individuals from seeking mental health treatment (Vega & Rumbaut, 1991). Financial and logistical concerns may also be barriers (Evaneshko, 1999). Finally, socioeconomic status may mediate the effect of ethnicity on mental health care utilization (Manson, 2000; Evaneshko, 1999). Overall, while AIAN individuals are in need of mental health services, numerous factors have been proposed to contribute to the gap in their receipt of those services. Given the number of factors proposed in the literature, empirical examination could help draw attention to specific factors in need of further consideration.

Recently, research has been conducted to better understand the lower use of mental health services by Native Americans (Manson, 2000). In a study of community mental health centers in Seattle, Washington, 55% of the Native American participants were unlikely to return after the intake session (S. Sue, 1977). This rate was higher than the nonreturn rate for Black, Hispanic, or White participants (S. Sue, 1977). In a recent study of Native American Vietnam veterans (as cited in Manson, 2000, Gurley, Novins, Shore, & Manson, under review), investigators found that veterans were more likely to use VA services than IHS services for mental health issues, even though IHS services were in closer proximity. The authors concluded that this difference was due to concerns
about the stigma of using local services in addition to a preference for fellow veterans as a peer group in treatment (Manson, 2000). Moreover, the investigators found that Southwestern Indians were more likely than Northern Plains Indians to use traditional healing options for mental health concerns. The authors suggested that this finding may be due to increased availability of traditional healing options in the Southwest.

Further evidence is available regarding the use of mental health service by Native American individuals. In a comprehensive examination of mental health needs in a sample of urban American Indians in Tucson, Arizona, information was obtained regarding what types of support systems are available and whether they are utilized (Evaneshko, 1999). Most respondents (76.4%) knew of places where community help is available, and most relied on Indian Health Service facilities for health care (50.6%). Other community resources used by respondents were food programs, Medicaid, Traditional Indian Alliance (a non-profit corporation addressing health and social needs in Tucson’s American Indian population), Native American medicine, Native American Church, and alcohol or drug programs. In addition, respondents were asked which community services they would most likely use if they had a psychosocial problem. The most frequently chosen options (in descending order) were private counselor (40.8%), counseling for self only (37.9%), education groups (37.9%), and religious leaders (36.2%). The least likely services to be used were psychiatrists (9%) and psychologists (10.9%). Furthermore, Evaneshko (1999) argued that although respondents appreciated receiving support from family and cultural traditions, Tucson’s American Indian population is largely dependent on the dominant culture for social and health services, and acceptability, affordability and accommodation may be the largest determinants of
usage of community resources (as cited in Evaneshko, 1999). However, results from the Evansko (1999) study suggested that lack of knowledge regarding availability of community resources is the largest barrier to utilization (36%). Moreover, community resources were not used because of excessive waiting, inconvenient hours, distance, lack of transportation, unaffordability, and negative experiences. However, the resources in Tucson were appreciated by many respondents. For example, 70% stated they would use community resources more frequently if the services would come to them. The authors concluded that the moderate approval rating might be explained in cultural terms, and recommended that future investigation look at the impact of cultural factors on use of mental health services. Overall, many AIAN individuals in this community were aware of mental health services and comparatively unlikely to prefer psychiatric or psychological services.

**AIAN History in Psychotherapy**

It has been suggested that the shared historical experiences (e.g. forced acculturation, racism) of AIAN individuals are likely to impact psychological treatment in a number of ways (Dillard & Manson, 2000; Duran & Brave Heart, 1999). For example, it is possible that some level of mistrust is likely to be normative (and maybe even adaptive) for AIAN clients working with European American clinicians (Dillard & Manson, 2000). Attempts to alleviate that mistrust, explained by the therapist as a desire to help Indian people, might be perceived as patronizing and destructive to the therapeutic alliance (Dillard & Manson, 2000). According to some researchers, the therapist may instead be encouraged to approach historical mistrust in a respectful and nonjudgmental manner.
There are other factors related to the historical experience of AIAN individuals that could negatively affect the therapeutic relationship with a European American therapist. For example, therapists are encouraged to avoid behaviors that could contribute to an experience of continued oppression in AIAN clients (Dillard & Manson, 2000; Duran & Duran, 1995). Historically, European culture has been forced on Native peoples as an act of “civilizing savages” and the perception of a power differential in the therapeutic context may be experienced in a way that perpetuates this oppression (Dillard & Manson, 2000). Internalized racism or conflicts regarding ethnic identity are other historically relevant phenomena that could impact therapy with a Native American client. Specifically, American Indian clients may devalue themselves or their culture. One method of survival and acceptance in European culture has been for AIAN individuals to adopt European ways, which could lead to a belief that those ways are superior (Dillard & Manson, 2000). Conversely, rejection of “traditional” practices, which historically lead to negative consequences for AIAN, could also have been a means of survival and acceptance in European American culture that leads to internalized racism. In addition, there are other forms of internalized racism within many Native American communities that could impact the therapeutic relationship, such as negative beliefs about “full-bloods” or individuals of mixed heritage (Dillard & Manson, 2000). Unfortunately, most of the information regarding issues between a therapist and a Native American client are anecdotal or theoretical. Further research in this area is warranted.

**Characteristics of Clinicians**

Therapy characteristics of empathy, genuineness, availability, respect, warmth, congruence, and concreteness are likely to be effective in treatment of the AIAN (or any
other) client (Trimble, Fleming, Beauvais, & Jumper-Thurman, 1996). From the general outcome literature, so-called “common factors” have been shown to be related to successful outcome (Asay & Lambert, 1999; Weinberger, 1995). Strong evidence suggests that the five most important factors for therapeutic change are the therapy relationship (both positive regard and the ability to work together towards the same treatment goal), expectation of positive outcome, ability to confront problems, mastery of skills, and internal attribution of responsibility for positive change. Perception of lack of therapist experience can also lead to deterioration in psychotherapy (Lambert, Bergin, & Collins, 1977), which could come from minority clients believing non-minority individuals cannot understand them (S. Sue, 2001). According to some researchers, the common factors approach should be considered a starting point of therapy with AIAN populations (Trimble et al., 1996).

Interpersonal factors between a therapist and a client (e.g., trustworthiness) might be particularly important in a therapeutic relationship with a Native American client. LaFromboise and Dixon (1981) found that displaying trustworthiness during simulated interviews led to more positive ratings of counselors by AIAN students, regardless of the counselor’s ethnicity. This finding indicated that trustworthiness seemed to be enhanced by use of culturally appropriate communication styles and trust behaviors. In another study regarding AIAN client attitudes towards clinicians, LaFromboise, Dauphinais, and Rowe (1980) surveyed American Indian students in Oklahoma and concluded that important therapist characteristics included trustworthiness and flexibility, as well as knowledge of practical and useful information. The authors proposed that a clinician’s effectiveness may depend on his or her ability to embody these characteristics. This
proposal is consistent with recommendations for working with AIAN clients mentioning that it is likely that clinicians need to be adaptive and flexible in their application of conventional therapy techniques (e.g. Neligh, 1990; Trimble, 1996; Trimble & LaFromboise, 1987). More recently, LaFromboise (1992) has found evidence supporting the interpersonal impact of counselor affinity, clarification, and helpful verbal responses on attitudes of American Indian clients at the beginning stages of counseling. The author suggested that the findings implicate the utility of the interpersonal paradigm for cross-cultural counseling research.

Research has indicated that clinicians of American Indian ancestry may be more effective than non-Indian clinicians (e.g. Bransford, 1982; Lowrey, 1983). However, some researchers have found evidence suggesting that ethnicity may not be directly related to positive outcome (S. Sue & Zane, 1987). Culture and cognitive match may be more critical to psychotherapy outcome than ethnic match (D.W. Sue, 1999; S. Sue & Zane, 1987). Bransford (1982) suggested that a counselor’s perceived expertise, attractiveness, and respect for Indian culture was likely to improve effectiveness by contributing to client-therapist rapport. Relatedly, S. Sue (1990) and Trimble and Hayes (1984) suggested that clinician knowledge and awareness of American Indian culture, including historical and present day influences, could influence the client’s experiences. Bichsel and Mallinckrodt (2001) found that Native American women prefer clinicians who are culturally-sensitive. Renfrey (1992) has asserted that tribal-specific therapist acculturation is a necessity for appropriate treatment. Overall, while ethnic match between therapist and client may not be necessary with AIAN individuals, understanding the culture of the client is likely an important factor.
There are additional factors that may influence clinician preference in Native American clients. Native American clients may prefer same-sex clinicians (Bichsel & Mallinckrodt, 2001; Haviland, Horswill, & O’Connell, 1983). However, although more AIAN clients, compared to non-Indians, in this study preferred same sex counselors, participants stated that they would likely pursue counseling even if the counselor was not their first choice (Haviland, Horswill, and O’Connell, 1983). Also, one study investigated non-verbal cues by non-Indian counselors that may affect Native American clients’ perceptions of empathy, warmth, genuineness, and concreteness (Littrell & Littrell, 1983). The authors found that Indian participants rated casual clothing as less indicative of empathy, warmth, and genuineness than Caucasian participants. According to the author, the findings may be explained in terms of cultural values regarding the roles of authority positions. Specifically, the authors argued that an American Indian client may interpret non-verbal cues as expressed in casual clothing as indicative of an individual who does not deserve respect. This observation is consistent with findings from cross-cultural literature suggesting that credibility may be more critical than ethnicity (S. Sue & Zane, 1987). Future research in this area seems warranted in order to better understanding the relations between non-verbal cues and the perceptions of American Indian clients.

**Client Characteristics**

Cultural identification can be defined as the extent to which an individual self-assess their involvement with a particular cultural (Oetting, 1997). There is some evidence that level of acculturation to European American or AIAN culture and biculturalism are related to psychotherapy outcome (BigFoot-Sipes, Dauphinais,
LaFromboise, Bennett, & Rowe, 1992; McNeil, 1997; Renfrey, 1992). BigFoot-Sipes et al. (1992) found evidence suggesting that Indian youth prefer Native American counselors only when the youth expressed a strong commitment to Native American culture. Other researchers (e.g., Price and McNeil, 1992) have recommended assessing identification to both European and Native American cultures. Price and McNeil (1992) found that college students committed only to the culture of their tribe were more likely to have negative attitudes toward counseling, less likely to endorse personal need for counseling, have less confidence in mental health professionals, and have less interpersonal openness than individuals committed to European culture or to both cultures. This finding is consistent with the observation that level of acculturation to the dominant culture may impact the link between the need for culturally sensitive treatment and treatment effectiveness (Price & McNeil, 1992). Following this logic, effective treatment with Native American individuals might begin with an assessment of acculturation status (Renfrey, 1992). However, the empirical literature on the link between acculturation and treatment effectiveness is lacking.

Furthermore, evidence regarding the recently developed orthogonal cultural identification theory suggests that identification with any culture is essentially independent of identification with any other culture (Oetting & Beauvais, 1991; Oetting, 1997), which complicates the interpretation of previous literature based on models in which cultural identification with one culture is not independent of identification with another. Orthogonal cultural identification theory has proven successful for assessing cultural identification, and its relationship to other variables (e.g., Oetting & Beauvais,

Differences in cultural values between AIAN and European Americans could impact assessment and treatment processes. AIAN culture has been characterized as sociocentric, holistic, present-oriented, with learning as a passive process, whereas European American culture has been characterized at the other extreme of the continuum: egocentric, dualistic, future-oriented, and with learning as an active process (Dillard & Manson, 2000). Erroneous judgments due to differences in cultural values can lead to misunderstanding, overpathologizing, or implementing a culturally-inconsistent treatment plan. For example, some evidence suggests that although American Indians endorse more instances of having visions, seeing things that others do not see, and guiding one’s life according to the spirits, compared to European American counterparts, they do not see these experiences as indicative of either poor or good mental health (Earle, 1998). Also, presentation with a subdued manner and lack of eye contact (cultural expressions of interpersonal respect in some AIAN communities) could be mislabeled as symptoms of schizophrenia or depression (Dillard & Manson, 2000; O’Nell, 1996), and lead to an ineffective treatment plan.

Furthermore, some clients may respond to stressful conditions in culturally unique ways that are not considered pathological in a cultural context (Trimble, Fleming, Beauvais, & Jumper-Thurman, 1996). According to Trimble et al. (1996), from a traditional Sioux perspective, individuals may experience wackino (“pouting”) in certain burdensome familial situations that may include symptoms of withdrawal and psychomotor retardation suggestive of depression. However, in the traditional Sioux
perspective, these symptoms are considered a solution to a problem, and not a cause of a problem in need of treatment (Trimble et al., 1996). In addition, tribally-specific normative behaviors may be used to deal with stressful and problematic situations, many of which might have yet to be identified (Trimble et al., 1996). Overall, these potential cultural value differences regarding mental health could lead to differences in psychological treatment preference and selection.

There is further evidence regarding value differences that need to be considered in conducting therapy with Native American clients. For instance, Trimble (1981) investigated the connection between self-perceptions and commitment to social values in American Indians. On self-report questionnaires, participants with highly positive self-perceptions tended to endorse items related to kindness, honesty, self-control, social skills, social responsibility, and reciprocity significantly more than participants with lower self-perceptions. The author concluded that American Indians with highly positive self-perceptions tend to feel more strongly about certain values. Further, counselors working with American Indian clients should consider the possibility that negative self-perceptions could be related to unstable value orientations. Thus, the counselor could assist a client in examining the relations between values, problems, and ways to understand them.

Finally, there are some studies specifically examining Native American attitudes towards mental health treatment demonstrating that this may be relevant to conducting therapy with Native Americans. "Mental health values" have been defined as values that refer specifically to what constitutes healthy emotional functioning, such as ability to get along with others (Tyler and Suan, 1990). Mental health values are likely to be relevant
to treatment acceptability in that a treatment that reflects the mental health values of Native Americans would likely be seen as more acceptable to Native Americans. Tyler and Suan (1990) looked at differences in mental health values between Native Americans and Caucasian Americans and found some significant differences based on cultural group. Specifically, Native Americans more strongly associated negative personal traits with poor mental health compared to their Caucasian counterparts. In addition, Native Americans were significantly more likely to associate achievement and religious commitment with good mental health. Finally, Caucasian participants viewed receptivity to unconventional experiences as more indicative of poor mental health than Native American participants. The results suggest that there are cultural differences in mental health values that could be useful in looking at treatment preference in Native Americans.

In a more recent investigation (Earle, 1998) in the Northeastern US looking at the attitude of American Indians (primarily Haudenosaunee) towards mental health values (Earle, 1998), findings supported some differences between Native Americans and European Americans regarding attitudes towards mental health. For example, European American respondents indicated that flexibility is not related to good or poor mental health, whereas Native American participants reported that flexibility is closer to good mental health (Earle, 1998).

It is unclear to what extent these value differences need to be attended to in modifying a standard intervention to make it acceptable to Native Americans. However, there is some indication that attending to value issues in type of therapy method as well as client-clinician match can enhance the effectiveness of a psychological treatment.
Therapeutic Models

Although there have been few empirical investigations of the relations between treatment effectiveness and theoretical orientation with American Indian clients, many authors have written on the topic and made recommendations. The literature in this area is mostly anecdotal and in large part comes from the field of counseling psychology. The authors in this area come to contradictory conclusions regarding recommended theoretical orientation with Native American clients. Although limited, there is some empirical evidence supporting the use of a directive style with American Indians. Further, there is some information available suggesting that cognitive behavioral therapy is an effective model with some AIAN individuals.

Some authors argue for the use of non-directive approaches with AIAN clients (e.g. Tanaka-Matsumi & Higginbotham, 1996). Burton (as cited in Trimble, Fleming, Beauvais, & Jumper-Thurman, 1996) and Richardson (1981) recommend a directive or non-directive counseling style depending on the client’s communication style. Other authors argue against psychodynamically oriented therapy in favor of behavioral approaches that focus more on the current environmental impacts on behavior (e.g. Helms & Cook, 1999; Paniagua, 1994; Tanaka-Matsumi & Higginbotham, 1996). However, interpersonal therapy (Klerman, Weissman, Rounsaville, & Chevron, 1984) has been recommended as a promising intervention for Native American individuals (Neligh, 1990). Dauphinais, Dauphinais, and Rowe (1981) and LaFromboise, Trimble, and Mohatt (1988) recommended the use of a directive style exclusively.
There is some support for the use of a directive style with American Indians (Dauphinais, Dauphinais, & Rowe, 1981; LaFromboise et al., 1980). Both Dauphinais et al. (1981) and LaFromboise, Dauphinais & Rowe (1980) found that American Indian students reported feeling more comfortable with a directive compared to a non-directive approach. Dauphinais et al. (1981) and LaFromboise et al. (1980) proposed that the directive style may be more effective because American Indian clients (especially more culturally committed ones) may initially have expectations that they are seeking advice from a respected professional.

One line of reasoning suggests that family therapy is a reasonable approach, given the cultural commitment to community and family relationships in many Native American communities (Beiser & Attneave, 1978). Further, this approach is consistent with recent recommendations regarding the importance of looking at cultural context in both counseling and clinical psychology (Trimble, 2000; Trimble & Hayes, 1984; Trimble & LaFromboise, 1987) and is consistent with empirical evidence demonstrating that group interventions may be an efficacious treatment modality (e.g., Dufrene & Coleman, 1992; Edwards & Edwards, 1984; Morrison, 2001).

It is possible that models of healing stemming from a Native American cultural perspective may be preferred over adaptations of Western approaches for treating AIAN individuals (Kerring, 1992; Neligh, 1990; Thomason, 1991). For example, actively referring clients to Indigenous healers, actively working with Indigenous healers, and supporting the viability of Indigenous methods of healing may all be effective forms of collaborating with an Indigenous healing system (Trimble, Fleming, Beauvais, & Jumper-Thurman, 1996). Many professionals argue for the importance of using
culturally unique and conventional psychological interventions for important social and political reasons, such as Native American empowerment (LaFromboise, 1992; Neligh, 1990). Overall, there are many factors that have been considered in the style of treatment that would be most beneficial for AIAN individuals, yet there have been few empirical investigations in this area.

**Cognitive Behavior Therapy and Native American Clients**

Until very recently, the literature regarding the use of cognitive behavioral therapy with Native Americans was seriously lacking. A review of 11 major cognitive-behavioral and behavioral journals through 1990 yielded no studies addressing AIAN treatment issues (Renfrey, 1992). This finding reflects a serious gap in the literature considering the rise in scientific status of cognitive behavioral interventions. To look at whether clinicians are attending to issues of ethnicity in practice, Harper and Iwasama (2000) recently surveyed therapists who were members of the Association for the Advancement of Behavior Therapy (the overwhelming majority of whom used CBT in their clinical work) regarding their perceptions and practice of addressing issues of ethnicity with ethnic minority adolescents. The authors found that only 72% of respondents discuss issues of ethnicity with clients, even when a client presents to treatment with issues clearly related to ethnicity (Harper & Iwasama, 2000). Moreover, the majority of therapists (73%) indicated that ethnicity is important when formulating a functional analysis of behavior. Therefore, although most therapists recognize the importance of ethnic issues, many are not following through and bringing these issues into therapy. Harper and Iwasama (2000) concluded that multicultural issues need to be
more formally addressed in training so that practitioners will be competent to address issues of ethnicity when conducting therapy with ethnic minority clients.

There is a growing body of literature suggesting that cognitive behavioral therapy might be congruent with the needs, values and expectations of Native American clients (e.g. Harper & Iwasama, 2000; Hayes & Toramino, 1995; Helms & Cook, 1999; Iwamasa, 1997; LaFromboise, 1988; Peniston & Burman, 1978; Renfrey, 1992; Tafoya, 1989). Treatments embodying culturally-congruent characteristics that are also congruent with cognitive behavioral interventions (e.g., specific in their directives to change behavior, involve homework, and concentrate on present behaviors) may maximize treatment adherence (Helms & Cook, 1999; Renfrey, 1992; Tafoya, 1989). Hayes and Toramino (1995) emphasized that if therapists conduct an appropriate functional analysis then cultural issues would be considered in a treatment plan. Tanaka-Matsumi, Seiden, and Lam (1996) developed a Culturally Informed Functional Assessment as a practical approach to incorporating cultural information into a functional analysis. However, it is also recommended that clinicians should avoid implementing CBT in the conventional manner, but rather must make cultural adjustments in style (Renfrey, 1992). Cultural modifications may make CBT more relevant and acceptable to Native American clients (Renfrey, 1992).

Fortunately, there is recent evidence demonstrating that culturally modified cognitive behavior therapy is a useful model for treating AIAN, and other ethnic minority, individuals (Helms & Cook, 1999; Renfrey, 1992). For example, Trimble (1992) modified a cognitive behavioral intervention for drug use prevention among American Indian adolescents with positive results. The cognitive behavioral components
in the treatment included training in life skills, drug awareness information, problem-solving, coping skills, interpersonal communication, and decision making. The modification involved consultation with an American Indian advisory group. The consultation process led to the inclusion of local values, customs, and lifestyles, as well as training local community members in implementation of the treatment.

Another investigation has demonstrated that culturally modified cognitive behavioral therapy can be effective (Manson & Brenneman, 1995). These authors adapted the “Coping with Depression Course” (Lewinsohn, Munoz, Youngren, & Zeiss, 1986), a well-established treatment for Depression based on social learning principles, to aid in the prevention of psychological problems accompanying chronic disease in American Indian elders. Building on information gathered from empirical research regarding the nature of depression in Native American communities (e.g. Manson & Shore, 1981; Manson, Shore, & Bloom, 1985; Shore & Manson, 1983), the authors modified the cognitive behavioral approach for use with four Pacific Northwest Native communities. Manson and Brenneman (1995) found that older clients use constructive thinking based on indigenous philosophies to resolve situationally-specific stressors, to maintain coping, and to avoid negative mood states. Thus, modification provided the opportunity to find commonalities between social learning theory and constructive thinking based on indigenous philosophies to create an overlapping system of coping with and adaptation to chronic illness. The authors noted a particular concern that the individual orientation of the cognitive-behavioral intervention would inadvertently weaken community-oriented indigenous modes of coping. However, they stated that “the collective competence of the group or family was more likely to be strengthened by
increasing the coping capacities of the older adult member, who is better able to deal with personal stressors of this nature, as well as contributing to the collective coping processes of his or her family or support network” (p. 293). The standard intervention was further modified by using culturally-based descriptions and examples of symptoms. Moreover, the researchers extended the duration of treatment from 12 to 16 sessions to compensate for potential language and cultural barriers, and to allow older adults time to learn and practice techniques (e.g., progressive relaxation, pleasant events scheduling, cognitive restructuring, and social skills training). Further, they used a group format for cost-effectiveness and to allow for social interaction and group problem-solving. Finally, the course was retitled, “The Coping and Stress Course,” and framed as an educational activity in order to reduce the stigma regarding mental health services that has been found to be particularly high among older American Indians (Manson & Brenneman, 1995).

Using a quasi-experimental design that included a waitlist control condition, the culturally-modified treatment resulted in decreased depressive symptomatology. Specifically, from pre- to post-assessment participants evidenced a significant decrease on a self-report measure of depression and on number of unpleasant events (Manson & Brenneman, 1995). Further, compared to the control group, participants reported significant increases in number of pleasant events and enjoyment of pleasant events. Finally, an ongoing one page self-report process evaluation demonstrated that the behavioral components of the intervention (e.g. pleasant events scheduling) were enjoyed more, were understood better, and were more easily mastered by both instructors and participants than the cognitive components of the intervention (Manson & Brenneman, 1995).
Although there is promising evidence that cognitive behavioral interventions are effective with Native American clients, gaps remain in the literature. For example, in studies using a culturally modified CBT, the methodology of the investigation did not include an unmodified comparison condition. Therefore, it is uncertain whether the culturally modified version is more effective than the original intervention version. Further, there have been no empirical investigations of CBT with Native Americans for other prevalent forms of psychopathology (e.g., anxiety disorders). Finally, given the recent professional movement towards demonstration of empirical support according to specific criteria (Chambless et al., 1998), this gap in the literature warrants immediate attention.

**Empirically Supported Therapies**

First published by the Division 12 Task Force on Promotion and Dissemination of Psychological Procedures (Task Force, 1995), specific criteria (see appendix A) for choosing empirically supported treatment approaches (ESTs) were created to scientifically guide practitioners, clients, researchers, and clinical trainers in the selection of psychological treatments (Chambless et al., 1998). The EST approach focuses on treatment efficacy, or how the treatment compares to other treatments. Efficacy answers the question of whether a treatment works under experimental conditions (Howard, Moras, and Brill, 1996), and can be positioned as part of the process of internal validation (Chambless & Hollon, 1998). In order to be labeled an EST, the approach necessitates that a treatment have its efficacy clearly demonstrated in one of three ways. Specifically, the treatment can be demonstrated to be significantly better than nothing or to another
treatment. In addition, a treatment could be shown to be equal to an already established treatment. Or finally, a treatment could be demonstrated to be efficacious through a series of single case design experiment. All of these options must also include the use of treatment manuals, clear specifications of the client sample used, and demonstration of effects by at least two different investigatory groups. Currently, the criteria retain their original form in spite of disagreement about the specific terms and the appropriateness of individual criterion (Chambless et al., 1998).

An increasingly large number of EST’s have been flagged by the task force, and listed annually in a report provided by members of the task force (Chambless et al., 1998). Well-established treatments have been identified for many problems, including anxiety disorders and mood disorders (Chambless et al., 1998). Recently, meta-analysis has been used to provide a detailed description of the current standing of ESTs (Westen & Morrison, 2001). The authors included studies of well-established treatments for depression, Panic Disorder and Generalized Anxiety Disorder. Results indicate that a substantial proportion of patients with Panic Disorder improve by post-treatment assessment and remain improved at follow-up assessment. In addition, treatments for depression and GAD demonstrate substantial short term improvements, but most individuals did not improve or remain improved at follow-up assessments to a clinically significant degree.

Although an interpersonal approach is included among the well-established treatments (Klerman, Weissman, Rounsaville, & Chevron, 1984), almost all of the identified treatments are based on behavioral or cognitive-behavioral interventions. For example, all of the well-established treatments for anxiety disorders are from a cognitive-
behavioral framework (Chambless et al., 1998). ESTs have been further described as sharing certain technical characteristics that include skill building, a specific problem focus, incorporation of continuous assessment of client progress, brief client-therapist contact, and 20 or fewer sessions (O'Donohue, Buchanan, & Fisher, 2000). Finally, most ESTs are based on samples described using psychopathological categories from the DSM-IV-TR (APA, 2000), that offers a consistent descriptive nomenclature and standardized diagnostic interviews for study participant inclusion (Chambless & Hollon, 1998).

A debate regarding the relative merits of effectiveness and efficacy of treatment interventions has resulted from the empirically supported treatment movement (e.g. Borkovec & Castinguay, 1998; Chambless & Hollon, 1998; Howard, Moras, Brill, Martinovich, & Lutz, 1996). Efficacy is related to the benefit of an intervention over no treatment or another treatment in a tightly controlled investigation, whereas effectiveness refers to the effect of an intervention under actual treatment conditions in the field. The current trend in the field is to demonstrate efficacy and then to attend to issues of effectiveness (Chambless & Hollon, 1998). Although the “well established” treatments have been shown to be beneficial in scientific studies, effectiveness, or treatment utility, is not a requirement for empirically supported status. Effectiveness answers the question of whether a treatment works in actual practice (Howard et al., 1996), and can be seen as part of the process of external validation (Chambless & Hollon, 1998). Developers of the criteria recommend that issues of efficacy take priority over effectiveness (Chambless & Hollon, 1998). Yet some critics of the empirically-supported treatment approach argue that efficacy is attended to at the expense of effectiveness (e.g. Blount, Bunke & Zaff,
2000; Halpern, 1999; Westen & Morrison, 2001). However, other researchers see efficacy and effectiveness as parts of a process, with demonstration of effectiveness as the next step in determining the usefulness of an efficacious treatment (Borkovec & Castinguay, 1998; Chambless & Hollon, 1998). Psychologists disagree about the strengths and limitations of the Division 12 empirical approach to treatment selection, but overwhelmingly come to the conclusion that the system for choosing treatments is less than perfect (Beutler, 2000; Borkovec & Costonguay, 1998).

Many of the criticisms regarding the EST approach to treatment selection center around a theme of lack of attention to diversity issues (e.g. Bernal & Scharron-Del-Rio, 2001; Case & Smith, 2000; Howard, Moras, & Brill, 1996; Hufford, 2000). For instance, some researchers have argued that an EST is an average response to a particular treatment method, that leads to neglect of individual patient variables (S. Sue, 2001). In addition, it has been argued that psychological researchers overemphasize internal validity at the expense of external validity (S. Sue, 1999). More specifically, some attention has been given to criticisms regarding the cross-cultural application of ESTs (e.g. Kendall, Flannery-Shroeder, & Ford, 1999; Kurasaki, Sue, Chun, & Gee, 2000; S. Sue, 2001). For example, Kendall and colleagues (1999) argued that ethnicity may be an important moderating variable in treatment outcome research. There are many questions about differences in effectiveness across cultures that need to be addressed.

Another debate focuses on the inappropriateness of the current position of individual differences in the EST movement (e.g., Borkovec & Castinguay, 1998). Some researchers (e.g., S. Sue, 1999) propose that treatment efficacy is not adequately demonstrated by simply including ethnic minorities in EST research and specifying the
sample used, although that approach is consistent with current National Institute of Health policy. Some investigators recommend using heterogeneous patient samples to make studies more ecologically valid (Barlow, 1996; Borkovec & Castinguay, 1998; Seligman, 1996). However, including ethnic minority individuals in treatment research may obscure within-ethnic group variability (Beutler, Brown, & Crothers, 1996; Kendall et al., 1999; S. Sue, 1999; Trimble, 1990). For example, there are likely to be within group differences (for European Americans as well as ethnic minorities) based on immigration history and recency, language skills, acculturation, ethnic-racial identity, perceived minority status, experiences with discrimination, and SES (Alvidrez, Azocar, & Miranda, 1996). Furthermore, assumptions made on socioeconomically disadvantaged ethnic minorities might be inappropriate for generalization to other members of a particular ethnic minority group (Hall, 2001). Lack of attention to within-ethnic group differences can be conceptualized as a methodological flaw (Hall, 2001).

There is little research published in clinical psychology journals on ethnic minority issues in clinical psychology (Hall & Maramba, 2001), related to the Division 12 criteria. For example, from 1993 to 1999 only 5% of articles in The Journal of Consulting and Clinical Psychology (JCCP) involved ethnic minorities, whereas 14% did in Journal of Counseling Psychology (Alvidrez, Azocar, & Miranda, 1996; Hall & Maramba, 2001). Some researchers contend that psychotherapy research with ethnic minorities requires expertise with psychotherapy research and in ethnic minority issues (Hall, 2001; S. Sue, 2001). This level of specialization would lead to greater theoretical attention to ethnic minority issues in treatment research. For example, currently, ethnic minorities are included in psychotherapy research without consideration of making the
ESTs culturally relevant (Hall, 2001). It is possible that treatments developed for and by middle-class European Americans will be most appropriate for ethnic minority individuals who are most like middle-class European Americans (Hall, 2001). That is, ethnic minority individuals who are acculturated, speak English, educated, are not socioeconomically disadvantaged, do not strongly identify with ethnic minority cultures, and have not experienced much discrimination are likely to experience the most positive outcome from current ESTs (Hall, 2001; S. Sue, 1998). Moreover, it has been suggested that ethnic minority individuals who are more culturally similar to European Americans might be most likely to be the ones who participate in treatment research (Hall, 2001).

Simple inclusion of ethnic minorities in psychotherapy research can be seen as a preliminary step toward demonstrating treatment efficacy with ethnic minority individuals, but further advancement is needed (Alvidrez, Azocar, & Miranda, 1996; Hall, 2001; S. Sue, 1998). Hall (2001) proposed specific criteria for the inclusion of ethnic minorities in treatment research: crossing treatment and ethnicity when comparisons by ethnicity and treatment are made, assessing outcomes for clients from more than one ethnic group, and using culturally-cross validated assessment instruments. However, no current psychotherapy efficacy studies involving ethnic minorities meet these criteria (Hall, 2001). There remains a cultural sensitivity gap in empirically-supported treatment research that spans both efficacy and effectiveness issues.

Following the need for culturally sensitive treatment outcome research is a need to develop culturally sensitive therapies, which can be tested empirically (Hall, 2001). But what is a culturally sensitive therapy (CST)? According to Hall (2001), a CST can be conceptualized as an EST for a particular ethnic group. The author goes on to argue
that including attention to cultural mechanisms in psychotherapy research would demonstrate that current ESTs can be considered CSTs for a particular ethnic group, European Americans. The EST approach without cultural context is unlikely to be useful to ethnic minority individuals, but at the same time, CSTs are unlikely to become part of mainstream psychological science without empirical support (Hall, 2001). In this manner, culturally sensitive research and the EST movement can benefit each other (Hall, 2001).

Hall (2001) outlined a method for collaboration between EST researchers and culturally based researchers that involves taking a well-established EST and evaluating its cultural relevance (i.e., assessing variables such as immigration history and recency, language skills, acculturation, ethnic-racial identity, perceived minority status, experiences with discrimination, SES, family and community relationships and influence, relationships with people of different cultural backgrounds, and religious/spiritual beliefs). Moreover, in order to assess both short term and long term effects, identification of culturally relevant dimensions would take place, including cultural mechanisms that might be relevant for the disorder under study, unique cultural aspects of the group involved in the research compared to other ethnic minority groups, and outcome measures based on culture-specific norms (Okazaki & Sue, 1995). Further, the identified EST would be adapted to make it more culturally sensitive and manualized the treatment package. In addition, client feedback would be solicited regarding such variables as subjective discomfort, interpersonal relationships, social role functioning (Lambert, Hansen & Finch, 2001), therapist credibility, and level of trust in therapist (Atkinson & Lowe, 1995). Another useful dimension for assessment could be social validity of the
intervention. *Perhaps* treatment acceptability would be a useful means to assess attitude toward the intervention in a cross-cultural context.

The culturally sensitive therapy movement described above seems to reach across the boundaries of both efficacy and effectiveness research, and that broad reach *seems* to parallel a debate within the field regarding the relative merits of efficacy and effectiveness. It could be that conducting studies regarding effectiveness of well-established treatments that takes into consideration factors related to cultural sensitivity could demonstrate increased effectiveness of those treatments. In addition, understanding and respect for cultural factors *could lead* to the creation of therapies that would evidence increased treatment efficacy for individuals from a particular cultural group (McNeil, 1997). Specifically, increased cultural sensitivity could likely enhance treatment credibility and acceptability, which would then affect efficacy (McNeil, 1997).

**Treatment Acceptability**

There are many important reasons for attending to treatment acceptability, both within the context of treatment effectiveness, and in addition to treatment efficacy. For example, as the list of well-established treatments lengthens, choices about treatment will be based on factors other than efficacy (Hall & Robertson, 1998). The American Psychological Association’s Task Force on Psychological Guidelines (as cited in Hall & Robertson, 1998) has mandated that professional panels *must consider* issues of treatment utility, *in addition* to considering empirical evidence of a treatments efficacy, as treatment guidelines are developed. Further, in recent times recipients of health care are increasingly likely to view themselves as consumers who actively participate in treatment
choice (Hall & Robertson, 1998; Seligman, 1995). In addition, treatment acceptability is relevant to compliance, adherence, and treatment effectiveness (Reimers, Wacker, & Koeppl, 1987). If a given treatment is judged as being effective, appropriate, ethical, and comfortable, then it is likely to be acceptable. Furthermore, if a treatment is acceptable to health professionals and others who influence treatment decisions, it is likely that they will encourage use of such a treatment (Foster & Mash, 1999). Finally, a major purpose for assessing acceptability is to determine whether a treatment fits community values (Foster & Mash, 1999).

**The Construct of Treatment Acceptability**

Treatment acceptability is placed under the domain of social validity (Foster & Mash, 1999; Wolf, 1978). In his initial call to attend to issues of social validity in psychological intervention research, Wolf (1978) described the need for three levels of judgments concerning the social importance of interventions. First, the goal of treatment should be socially significant (i.e. behaviors targeted for change are deemed socially important and relevant). Second, treatment procedures should be considered socially appropriate. Finally, the effects of a treatment must be socially important or have meaningful clinical significance (Kazdin, 1999). The main focus in social validity research has centered on the appropriateness of procedures, usually referred to as treatment acceptability. A definition of treatment acceptability is “judgments by lay persons, clients, and others of whether the procedures proposed for treatment are appropriate, fair, and reasonable for the problem of the client” (Kazdin, 1981, p. 493). Further, Kazdin (1977), and more recently Foster and Mash (1999), proposed that
effectiveness can be evaluated primarily through subjective evaluation and social comparison.

There are three models of intervention acceptability that are regularly found in the literature (Padula, Conoley, & Garbin, 1998). The first model (Elliott, Witt, & Galvin, 1984) is consistent with the initial work on social validity from the late 1970s. It contains four factors regarding the reciprocal and sequential relationships between treatment acceptability, treatment use, treatment integrity, and treatment effectiveness. Treatment selection is hypothesized to begin with initial judgments about treatment acceptability that impact use of the treatment. The way the treatment is used then affects the treatment integrity (i.e. the extent to which the procedures are implemented as intended), and thereby plays a role in the effectiveness of an intervention. A further implication of the model is that if an intervention is determined to be effective, then it is hypothesized that initial judgments regarding treatment acceptability will be enhanced (Elliott, Witt, & Galvin, 1984).

The second model is an expanded version of the one presented by Witt and Elliott (1985). Reimers, Wacker, and Koeppel (1987) added that a treatment must be understood before acceptability can be evaluated by the client. The authors argue that initial acceptability judgments are mediated by level of knowledge and understanding of a treatment before its implementation. Following from this model, if a treatment is not understood, compliance and effectiveness will be diminished.

Conoley, Conoley, Ivey, and Scheel (1991) expanded the two previous models by adding several variables. The model helps to further explain the relationship between acceptability, implementation, and maintenance. According to these authors, treatment
acceptability comes from the client's perception of the match between problem and intervention, the client's belief about the level of difficulty, effectiveness, and benevolence of the intervention, and the quality of the client-professional relationship.

Padula, Conoley and Garbin (1998) conducted an empirical study designed to investigate the dimensions affecting acceptability ratings based on the Conoley, Conoley, Ivey and Scheel (1991) model. Previous studies based on the earlier models demonstrated relations between acceptability and type of intervention, severity of problem, time and difficulty involved in implementing an intervention, use of jargon, and effectiveness information. Padula et al. (1998) used loneliness interventions (either cognitive behavioral modification of dysfunctional beliefs and behaviors, or Gestalt present moment awareness and experiencing of self) in a counseling setting as an exemplar. In using a Multidimensional Scaling method to analyze the results, the authors found 4 dimensions that clients consider when a loneliness intervention is presented to them. They concluded that these dimensions make up treatment acceptability from the perspective of the potential client. The most important dimensions to be considered when evaluating the acceptability of a recommended intervention were activity level of the intervention, the relationship between professional and client, the level of difficulty of the intervention, and the fit between problem and intervention. Limitations of the study include a somewhat subjective interpretation of dimensions resulting from the use of the Multidimensional Scaling method, and a lack of sample diversity. However, it appears to be a promising model in that it seems to incorporate the most complex understanding of the variables likely to be involved in treatment acceptability.
Models of treatment acceptability are useful heuristics to guide research on treatment acceptability (Calvert & Johnston, 1990). However, one major criticism of all models of treatment acceptability currently presented in the literature is a lack of attention to diversity issues. For example, there are no variables related to culture in the models presented. This lack of attention to diversity is paralleled at the empirical level, as well. None of the studies reviewed looked at cultural variables in their a priori hypotheses or in a posteriori analyses. Further, the Padula et al. (1998) study was the only one reviewed that even mentioned attention to diversity issues as an area for future research. Even at the level of heuristic aid, models of treatment acceptability need to incorporate individual difference variables, such as culture, if they are to further research on treatment acceptability.

The Measurement of Treatment Acceptability

The use of treatment acceptability measures in research has been examined systematically. Most recently, Carr et al. (1999) reviewed articles published in the Journal of Applied Behavior Analysis to look at trends in the use of social validity measures (operationalized as having consumers complete questionnaires of acceptability and by comparing treatment outcomes with established norms). The authors assessed measures of treatment outcome, treatment acceptability and analyzed analog versus naturalistic setting of treatment intervention. The results of the review showed that social validity measures were rarely used until the late 1970’s. There was an increase in the 1980’s, and since then there has been a stabilization at 12% of research articles reporting treatment outcome and 16% reporting treatment acceptability. The overall percentage reporting either of these social validity measures has slowly declined to 25% of research
articles. In addition, the authors found that of the studies reviewed, those conducted in naturalistic settings (e.g. hospitals) were about seven times more likely to report treatment acceptability measures. Why are treatment acceptability measures not regularly included in research? Carr et al. (1999) proposed several possibilities including lack of editorial requirements or suggestions, many social validity methods suffer from content validity limitations or have unknown psychometric properties, and a primary focus in research is on elucidation of basic processes rather than treatment implementation and evaluation. The authors argue that there are several problems with this low level use of social validity measures. For example, development of technology in the absence of consumers' opinions of procedures and outcomes could lead to the creation of interventions that will not be utilized. Assessment of treatment acceptability provides a method for researchers/practitioners to predict the rejection of interventions either during or after treatment. Therefore, if treatment acceptability is not assessed the options are limited for means to predict rejection. The authors go on to state that “the willingness of relevant community members to continue current behavioral programs and their openness to future programs could potentially be jeopardized by failure to assess social validity” (p. 229). In addition, if social validity measures are not frequently reported then they may not be developed at a sufficient pace.

Treatment acceptability is usually measured via questionnaire where respondents rate fairness and expected effectiveness of interventions using a likert-type scale. Initial efforts at measuring treatment acceptability were created to assess behavioral interventions for children (Kazdin, 1980a; Kazdin, 1980b). There are fewer adult measures of treatment acceptability in the literature. Some of the measures currently
available for adults are modified versions of the measures originally designed to assess children’s’ interventions. More recent measures have been designed specifically for older populations, including elders and adults, but they are far fewer in number than those available for children’s’ interventions. Perhaps one of the greatest limitations of the literature on measurement of treatment acceptability is lack of attention to issues of cultural diversity. Therefore, in the cross-cultural use of treatment acceptability measures, researchers should proceed with caution.

The first questionnaire designed to assess treatment acceptability of interventions for children was the Treatment Evaluation Inventory (TEI; Kazdin, 1980a; Kazdin, 1980b). It was designed specifically to evaluate acceptability of treatments for children with behavior problems. Items are phrased as questions on acceptability and fairness of treatment, potential side effects, perceived effectiveness, and suitability of treatment for children. The TEI has been modified for use with an adult population and has a significant amount of use in research (e.g. Landreville & Guerette, 1998). Specifically, the TEI contains questions that ask respondents to rate a treatment based on acceptability, willingness to carry out the treatment, suitableness of treatment for individuals with problems other than those specified, cruelty or unfairness of the treatment and, whether the respondent likes the procedure.

There have been other efforts at designing measures to assess treatment acceptability. For instance, the Treatment Evaluation Inventory-Short Form (TEI-SF; Kelley, Heffer, Gresham, & Elliott, 1989) includes 9 items on a 5-point scale. Consistent with the TEI, it was designed for parents to evaluate behavioral interventions for kids. In several empirical studies, it was preferred over TEI and was rated as easier to read.
The TEI-SF was demonstrated to contain two factors, described as acceptability and an ethical issues/discomfort factor (Finn & Sladeczek, 2001). However, the TEI is the more comprehensive option (Landreville & Guerrette, 1998), with a longer history of use in the empirical literature.

In addition, the Treatment Acceptability Questionnaire (TAQ; Hunsley, 1992) was developed to measure the treatment acceptability of psychological treatments for both adults and children, with the recognition of a need for a psychometrically sound measure of treatment acceptability for adults. The TAQ contains 6-items rated on a 7-point likert scale. All references to treatment are phrased generally so it can be used with individual or group treatments. Items focus on acceptability, ethics, effectiveness, negative side effects, the psychologist’s knowledge, and the psychologist’s trustworthiness. It was designed to be completed after provision of information about an intervention. One unique aspect of the TAQ is that it includes items regarding judgments about the therapist who suggests and implements the procedures (Hunsley, 1992). The original definition of treatment acceptability offered by Kazdin (1977) was expanded to incorporate the evidence that perceptions of the therapist as knowledgeable and trustworthy are related to treatment effectiveness. However, the TAQ has limitations, as well. Although it demonstrates reasonable internal consistency, the TEI seems to outperform it in that area (Hunsley, 1992). Further, the authors of the TAQ recommended further validation include larger samples to elucidate factor structure, samples with more men to look at gender issues, use of non-student populations, use of treatment vignettes that vary in modality (e.g. group, individual) as well as therapeutic orientation, and use of actual consumers of psychological services (students may be
overly conservative). In addition, the TEI has the benefit of a longer history of use in research.

**Overview of Empirical Research regarding Treatment Acceptability**

Empirical investigation of treatment acceptability usually involves quasi-experimental analogue studies with large samples (e.g. Calvert & Johnston, 1990; Eckert & Shapiro, 1999; Kazdin, 1980a). There is a substantial body of literature examining treatment acceptability and related variables in the areas of child and school psychology. A smaller body of empirical research on treatment acceptability exists for interventions in adult populations. This research centers on geriatric and adult psychological interventions, as well as medical treatments. Unfortunately, information regarding cross-cultural empirical investigation of treatment acceptability is almost non-existent in the literature.

**Research from Child and School Psychology**

Treatment acceptability research in the field of school psychology has focused on assessment procedures and practices, specific behavioral strategies, and interventions delivered through specific methods of delivery (e.g., consultation). Overall, this research demonstrates a significant, yet complex, relations between treatment acceptability and treatment outcome.

The perception of treatment acceptability is positively related to participation in and compliance with treatment, which in turn effects treatment effectiveness. For example, Kazdin (2000) examined the hypothesis that perceived barriers to treatment participation would be negatively related to treatment acceptability among antisocial
children and their families. He found that perceived barriers to treatment predicted acceptability as rated by both parents and children. That is, families with many barriers viewed the intervention as less acceptable than families receiving the same intervention with fewer barriers. Some of the salient barriers measured included obstacles to coming in for treatment, as well as perceptions that the treatment is demanding and is not relevant to the child's problem, and a poor relationship with the therapist was also seen as a barrier to treatment participation. Further, perceived barriers to treatment predicted low treatment acceptability over and above socioeconomic disadvantage, parent psychopathology and stress, and severity of child dysfunction for parents' ratings of children's interventions and their own interventions (Kazdin, 2000). In a related study, investigators examined the relations between parent treatment acceptability and adherence to an ADHD intervention (Bennett, Power, Rostain & Carr, 1996). At the follow-up assessment, they found a trend for treatment acceptability to predict the number of sessions attended. However, the authors did not find a significant relationship between feasibility of treatment (i.e. lack of financial, scheduling, and traveling barriers) and number of sessions attended.

Kazdin (2000) conducted follow-up analyses to determine whether treatment acceptability was related to therapeutic change in the children over the course of therapy. Indeed, there was a significant relationship between therapeutic change and treatment acceptability, reflecting a large reduction in symptoms over the course of treatment (Kazdin, 2000). This finding is consistent with Kazdin's earlier research demonstrating a positive relationship between treatment efficacy and treatment acceptability (Kazdin, 1981).
There is a growing body of literature demonstrating relations between several professional issues and treatment acceptability (e.g. Fairbanks & Stinnett, 1997; Noell & Gresham, 1993). For example, there is an interaction of professional group membership by intervention type on ratings of treatment acceptability (Fairbanks & Stinnett, 1997). In addition, professional consultation has been shown to affect both parents’ and teachers’ treatment acceptability of children’s interventions (Ehrhardt, Barnett, Lentz, Stollar & Reifin, 1996; Noell & Gresham, 1993). In addition, Ehrhardt et al. (1996) found that the acceptable interventions were successful in reducing problem behaviors in children. In a related vein of research, Kutcsick, Gutkin and Witt (1991) found that treatments reported to have been developed by teachers and psychologists collaborating together were more acceptable to teachers and parents than treatments reported to have been developed by either teachers or psychologists alone.

The largest body of literature in the area of child interventions has looked at differences in treatment acceptability by types of behavioral intervention. Comparative evaluation demonstrates that positive interventions are preferred over those perceived negatively (e.g. Kutcsick, Gutkin and Witt (1991). Similarly, Waas and Anderson (1991) found that intervention type interacted with grade level in children’s perceptions of treatment acceptability and treatment expectancy. Using both analog and naturalistic settings for investigation, Reimers, Wacker, Cooper, and DeRaad (1992a) demonstrated a main effect for type of treatment, with positive reinforcement found to be the most acceptable and medication the least acceptable. In addition, Reimers et al. (1992a) found a significant interaction effect for type of treatment and severity of problem behavior.
Further significant relationships were demonstrated between acceptability, effectiveness, and compliance (Reimers, Wacker, Cooper, & DeRaad, 1992b).

Overall, the literature on treatment acceptability from the areas of child and school psychology offers the strongest body of support for the complex connection between treatment acceptability and treatment efficacy.

**Research on Treatment Acceptability for Adult Interventions**

To a large extent, treatment acceptability has been overlooked in the adult treatment domain for both behavioral and non-behavioral interventions (Hunsley, 1992). Empirical studies of treatment acceptability using adult samples are far fewer than those found in the child and school psychology literature. The majority of studies conducted in this area have been comparisons of acceptability of different treatment approaches for treating psychopathology in adults. Overall, there is a complex relation between acceptability and treatment choice, both in clients and in practitioners who recommend treatments and make referrals.

Consistent with the child literature, there is a relation between perception of treatment efficacy and treatment acceptability in the adult treatment literature (Spirrison & Mauney, 1994). Spirrison and Mauney (1994) used an undergraduate sample to rate treatment acceptability of a range of behavioral interventions (e.g. time out procedure). Participants were given graphs depicting six possible treatment outcomes and asked to determine whether the treatment increased the amount of time the hypothetical client spent not engaging in a problematic behavior (self-injurious behavior). The process of visual analysis was used as a measure of judgment about the efficacy of a treatment based on visual inspection of graphed data. The authors found that extragraphic factors
influenced visual analytic judgments, and concluded that an acceptability bias effects judgment of treatment efficacy. That is, more positive perceptions of treatment acceptability are related to more generous appraisals of treatment efficacy, whereas more negative appraisals of acceptability are associated with more negative estimates of efficacy (Spirrison & Mauney, 1994).

Within the domain of psychotherapy treatment acceptability comparisons, investigators pick a target problem, a target population, and then compare acceptability of various forms of psychotherapy. From this body of literature, there is a preference for individual over group interventions in women with sexual dysfunction (Wilson & Wilson, 1991). In addition, there is a preference for positive interventions that interacts with diagnosis (Lundervold & Young, 1992). Furthermore, there is a preference for less restrictive treatment in developmentally disabled individuals (Miltenberger & Lumley, 1997; Miltenberger, Lennox, & Erfanian, 1989; Tarnowski, Mulick, & Rasnake, 1990).

In another vein of research, investigators have examined the treatment acceptability of paradoxical interventions. Researchers have found that participants rated the paradoxical intervention as less acceptable than the nonparadoxical directive intervention (Betts & Remer, 1993). Finally, Fox and Wollersheim (1984) found a preference for behavioral treatment rationales over psychodynamic ones in undergraduates, regardless of problem severity.

Studies examining the difference in acceptability between psychological and medical treatments for specific problems also demonstrate a complex relationship. For example, investigators compared social workers’ acceptability ratings of behavioral treatments and pharmacotherapy for the management of geriatric behavior problems and
found a main effect for type of treatment (positive reinforcement was the highest, time out, and then haloperidol) for each type of behavior problem (Osterkamp, Mathews, Burgio, & Hardin, 1997). In another study of interventions for older adults (Lundervold, Lewin, & Bourland, 1990), investigators assessed older adults' acceptability of a number of treatments for behavior problems and found a main effect for type of treatment, and a treatment by behavior problem interaction. These authors also found overall high ratings for differential reinforcement of other behaviors, non-contingent attention, and counseling. Furthermore, time out received high acceptability ratings for use with aggression. Interestingly, restraint and medication were both seen as barely or only somewhat acceptable as interventions for problem behaviors. These findings are consistent with those in the child psychology field regarding higher acceptability for positive interventions, although more negative interventions are sometimes acceptable for severe problems.

Looking specifically at acceptability of treatments for panic disorder, there is a complex relationship between acceptability and treatment effectiveness. There is some evidence to suggest that family practice physicians find drug therapy more effective than client-centered psychotherapy, but they find cognitive behavioral therapy equally acceptable to pharmacotherapy (Hecker, Fink & Fitzler, 1993). The authors looked at the acceptability of three approaches to treating panic disorder (imipramine, cognitive behavior therapy, and client-centered therapy). They found a main effect for type of intervention on treatment acceptability, with cognitive behavior therapy rated as the most acceptable, non-directive therapy as the least acceptable, and drug therapy in between, but not significantly different from either. In addition, the researchers found that drug
therapy was ranked as most effective by significantly more family practice physicians (64%). They concluded that their findings illustrate the distinction between treatment effectiveness and treatment acceptability; drug therapy was rated as the most effective, but CBT was seen as most acceptable.

In an earlier study of treatment preference for Agoraphobia (Norton, Allen, & Walker, 1985), the same relationship was not found. Norton et al. (1985) used a sample of undergraduates to rate the acceptability of three psychological treatments (in vivo exposure, behavioral therapy focusing on relationships, and cognitive therapy), and two drug procedures (anti-depressants and a minor tranquilizer). It was consistently found that psychological treatments were rated as both more effective and more acceptable than the drug treatments. In regards to psychological intervention preference in treating panic disorder, Cox, Fergus, and Swinson (1994) found that all treatment components of CBT for Panic Disorder with Agoraphobia were liked and found to be useful for both group and phone therapies. Moreover, Cox et al. (1994) found that all treatment components were perceived as efficacious, however, the usefulness ratings of the exposure components were significantly higher than the “personally liked” ratings (which were the lowest of all components). Overall, these studies point to the necessity of considering both consumers’ and practitioners’ opinions of multiple treatment options when evaluating treatment acceptability. In addition, they underscore the complexity of the relations between acceptability, perceptions of effectiveness and treatment outcome. Future research is warranted to shed light on multiple contributing factors to these relations.
Culture and Treatment Acceptability

One gap that remains in the literature on treatment acceptability is related to diversity. Unfortunately, there are no studies looking specifically at cross-cultural issues regarding treatment acceptability. Treatment acceptability could be a useful construct through which to gain an understanding of the treatment utility and social validity of psychological interventions with ethnic minority individuals, such as Native American groups for whom cultural sensitivity seems to be particularly important. Moreover, given the cultural commitment to community and family relationships in many Native American communities, looking at issues of social validity seems particularly appropriate.

Summary

The American Indian population represents a diverse cultural group in the United States with over 500 different federally-recognized tribes (LaFromboise, 1998). American Indian communities face substantial psychosocial challenges (e.g., poverty, discrimination, and high rates of violent death in their communities) that are associated with increased risk for psychopathology. Among the psychopathological issues with the highest prevalence rates in Native American communities are depression, substance abuse and dependence, and anxiety problems (e.g., posttraumatic stress disorder, panic disorder, and phobias). Despite the significance of their mental health needs, many American Indian communities are underserved by mental health services. There is a need to find treatments for anxiety-related problems in AIAN communities. The meager
outcome literature on cognitive behavioral therapy with AIAN individuals has not looked at treatments for anxiety disorders.

Cognitive behavioral therapy has been well-established as a treatment for numerous forms of psychopathology, and there is very strong empirical support of its efficacy in treating panic disorder. However, lack of attention to ethnic minority issues within the empirically-supported treatment movement is related to a lack of well-established treatments shown to be effective for Native American individuals.

The literature regarding Native American utilization of psychotherapy points to a need to attend to cultural issues in the establishment of effective treatments for Native Americans. Cultural sensitivity seems to be particularly important concept in many Native American communities. There are culturally-specific issues that need to be attended to in treating American Indians, such as tribe-specific cultural and historical factors and issues related to cultural identification.

It could be argued that standard cognitive behavioral therapy reflects European American culture and, therefore, would be less acceptable to many Native American individuals. Establishment of the acceptability of a treatment is an important preliminary step before assessing the efficacy of that treatment in Native Americans.

The Current Project

As a first step before looking at the effectiveness of cognitive behavioral therapy (CBT) for panic disorder (PD) in a specific AIAN culture, the rationale of a well-established CBT for PD was culturally adapted for use in the Passamaquoddy community of Indian Township, Maine. The process began with a focus group, which included
mental health professionals and appropriate community members in the process of modifying a standard CBT rationale for panic disorder treatment. The culturally-relevant themes identified through the focus group were incorporated into the standard rationale through an iterative process. The final culturally sensitive therapy for panic disorder was comparable to the original CBT in length and comprehensiveness.

In the second part of the project, treatment acceptability of the modified version of the cognitive behavioral treatment rationale was compared to the standard treatment rationale in a randomly selected sample of Native Americans from the community in which the cultural modifications were identified. It was expected that the culturally-modified version would be found to be more acceptable to community members than the standard version. Furthermore, the two versions were presented to a matched sample of European Americans, and it was expected that cultural group membership would significantly affect treatment acceptability, with Passamaquoddies preferring the CST and European Americans preferring the CBT.

In addition, it was expected that Passamaquoddy community members’ ratings of treatment acceptability would vary according to culturally significant variables. Specifically, level of acculturation and biculturalism would likely interact with cultural group and form of treatment on treatment acceptability. Moreover, mental health values would also interact with cultural group and form of treatment.

**Research Hypotheses**

Hypothesis 1: European Americans would find the treatment rationales more acceptable than Native Americans.
Hypothesis 2: European Americans would find the standard CBT rationale more acceptable and would evaluate it more positively than the culturally-modified treatment rationale. Conversely, Native Americans would find the culturally-modified treatment rationale more acceptable and evaluate it more positively than the standard rationale.

Hypothesis 3: Individuals who endorse the value of receptivity to unconventional experiences as an indicator of poor mental health would find the cognitive behavioral therapy rationale more acceptable and would evaluate it more positively.

Hypothesis 4: Native Americans who endorse the value of religious commitment would find the culturally sensitive therapy rationale more acceptable and would evaluate it more positively. In contrast to European Americans, there would be no interaction between religious commitment and type of therapy rationale on treatment acceptability and treatment evaluation.

Hypothesis 5: Cultural identification would affect treatment acceptability and treatment evaluation. Individuals in the Native American cultural group who endorse Native American cultural identification would prefer (find more acceptable and evaluate more positively) the culturally sensitive therapy rationale. In addition, individuals in the Native American cultural group with European American cultural identification would prefer the cognitive behavioral treatment rationale. Finally, individuals from the Native American cultural group who endorse both Native American and European American cultural identification (i.e. are bicultural) would find the culturally sensitive treatment rationale more acceptable and rate it more positively.
METHODS

The current study used a combination of methodologies: participatory research, a qualitative focus group and a quasi-experimental controlled comparison design. This combination is warranted because the traditional scientific research process is frequently problematic and perceived negatively in Native American communities (Beauvais, 1999; Darou, Hum, & Kurtness, 1993; Duran & Duran, 1995; McNeil, Porter, Zvolensky, Chaney, and Kee, 2000; LaFromboise & Howard-Pitney, 1994; Smith, 1999; Quigley, 2001). For instance, in a Cree community in northern Quebec eight psychological studies were conducted, but seven of the researchers were expelled from the community prior to completing their projects (Darou et al., 1993). For a research project to be successful in a Native American community, some modification from the traditional scientific research process is likely to be helpful (LaFromboise & Howard-Pitney, 1994). Recently, it has been recommended that a participatory research design, which involves increased attention to participants' ways of knowing, might reconcile some of the ethical and other problems encountered with conducting research in Native American communities (Norton & Manson, 1996; Quigley, 2001). The participatory design is composed of a process of collective investigation of problems with the active participation of those individuals affected by the research at all stages of the research process (Participatory Research: An Introduction, 2001). It has been suggested that the personal approach, with the researcher regarded as a key figure in the process within the community, has been an important element in the acceptance of participatory designs in Native communities (Darou et al., 1995). The current study used elements of a participatory design whenever possible and appropriate to increase the likelihood of acceptance of research, to decrease
problems associated with a standard quasi-experimental procedure, and to increase the
validity of the findings. There is some indication that the creative and considerate
application of this combined methodology for the dissertation process is scientifically
sound and practically useful (Maguire, 1993).

The first phase of the current project consisted of a focus group procedure, which
included mental health professionals and appropriate community members in the process
of modifying a standard CBT rationale for panic disorder treatment. Focus groups have
the potential to elicit more information than can be obtained using other formats due to
the interaction with peers (Ward, Bertrand, and Brown, 1991). In addition, focus groups
can facilitate conversations about topics that participants are reluctant to talk about in
other formats (Zeller, 1993).

The second phase of the methodology involved a quasi-experimental procedure
for comparing treatment acceptability of the standard and culturally modified rationales
in Native American and European American community samples. Although an
experimental design would be the preferable means by which to investigate causal
relationships, the quasi-experimental design is a necessity for the current procedure since
cultural group and cultural identification are not open to random assignment.

Consistent with a participatory procedure, at each stage of the research
methodology, such as approaching the community, planning the focus group, choosing
measures, and implementation of the procedure, efforts were made to solicit feedback
from appropriate mental health professionals and community members.
Phase 1: The Focus Group

Participants

The focus group (n = 12) primarily included staff members of the Indian Township Health Center (e.g. Director of Adult Clinical Services, Director of Child Clinical Services, Executive Director, Director of Human Relations, Director of Child Welfare Services, Cultural Coordinator, Consultant Psychiatrist, direct care workers from the community), which is an Indian Health Service funded comprehensive health service center serving the Passamaquoddy tribal community of Indian Township, Maine. In addition, community elders (e.g. the tribal governor) were invited to attend the focus group, but did not attend. All participants were compensated for their time by a buffet-style meal and door prizes.

Measures

The focus group questions (see Appendix B) were developed according a structured questioning format to facilitate discussion and enhance clarity and consistency of the questions (Krueger, 1998). Fourteen questions were developed for the current project, and twelve were asked during the focus group to guide the discussion. Specifically, six short answer questions were asked to introduce topics. In addition, four to six questions were asked that required about a ten-minute answer to focus on the major content areas of the study (i.e. use of scientifically supported treatments, cultural-sensitivity, modification of a standard treatment, and treatment acceptability). Finally, two questions at the end were used to summarize the proceedings and solicit final comments from participants. The two questions that were developed but discarded during the focus group, were
considered by the Lead Investigator to have been answered in the context of a related question, and thus were omitted.

**Materials**

A Sony digital audio recording device was situated in the center of the room during the focus group in order to record the proceedings.

**Procedure**

The protocol for the focus group was modeled after procedures described in *The Focus Group Kit* (Morgan and Krueger, 1998). The lead investigator acted as moderator for a moderately structured two-hour focus group with the aid of one research assistant who was responsible for recording the session and noting any nonverbal group behaviors. The moderator began by obtaining informed consent and signed consent forms were collected by the research assistant. The moderator opened the discussion by explaining that the research project involves modification of a standard treatment for panic disorder for use in the Passamaquoddy community. Following the introduction, a standard rationale for CBT for panic disorder based on a well-established therapy (Hecker & Thorpe, 1992) was read (see appendix C) and participants were asked to follow along with an accompanying handout that outlined the features of the rationale (see appendix D). The moderator then asked participants to discuss modifications of the standard rationale for CBT that would be necessary to make it culturally sensitive toward the Passamaquoddy community. The moderator initiated conversation when there was a lull in the participants’ discussion. At those times, the moderator guided the group to discussion in culturally-relevant areas including language skills, acculturation and
biculturalism, ethnic-racial identity, perceived minority status, experiences with discrimination, SES, family and community relationships and influence, relationships with people of different cultural backgrounds, cultural mechanisms that might be relevant for anxiety, and unique culture aspects of the group involved in the research compared to other ethnic minority groups. During the session, the moderator also prompted group members with non-directive phrases (e.g. “Does anyone else agree that attention to family context is an important cultural issue for this community?”). All feedback from participants was briefly summarized on a flowsheet by the moderator, and the session was ended.

**Analyses**

Transcription based analysis is considered the most rigorous of the focus group analytic procedures (Krueger, 2000). Due to the dynamic nature of group discussion, analysis proceeded by systematically identifying prominent themes and illustrative statements. The themes and statements were identified by careful readings of a transcript of the focus group session, which was completed by the moderator, the research assistant, and an independent observer. After identifying themes, the moderator met with the other analysts to discuss their findings with the goal of organizing the majority of the responses into discrete categories, with an effort made to code all participant responses. A theme represents a topic discussed both frequently and in depth by several focus group participants. The themes identified through the analysis were diagrammed in table form and used to modify the standard rationale for cultural sensitivity.
Cultural Modification Process

The modification of the standard rationale took place by incorporating the identified themes into the rationale (e.g., using the Passamaquoddy term for “mental health”). However, the main components of the standard procedure of CBT for PD remained (e.g., the physiological component of panic treatment). The moderator revised the standard rationale by incorporating the themes, and then met with the other analysts to discuss the revisions. Feedback on revisions was incorporated until a final version was agreed upon. The modified rationale was sent to all the original focus group members for their feedback and final approval. Through this iterative process (Piantanida & Garman, 1999), the final culturally sensitive rationale (CST) was produced. Finally, the CST was scripted and audiotaped for a 7-minute presentation.

Phase 2: The Quasi-Experimental Procedure

Participants

Participants consisted of a sample of adults who fell into two cultural groups, Passamaquoddy community members of Indian Township, and a comparison group of European Americans from the Orono, Maine area. An attempt was made to match participants as closely as possible on age, gender, and education level.

Measures

Treatment acceptability.

The Treatment Evaluation Inventory (TEI; Kazdin, 1980a), originally designed to assess the acceptability of children’s interventions, has been modified for use with adults
and has a substantial foundation of use in research (see appendix E). In addition, both the original form and the short form have demonstrated acceptable psychometric properties. The TEI contains questions that ask respondents to rate a treatment based on acceptability, willingness to carry out the treatment, suitableness of treatment for individuals with problems other than those specified, cruelty or unfairness of the treatment and, whether the respondent likes the procedure. The measure consists of 15 items in a likert-type format (1 = not at all; 7 = very much). The total score on the TEI can range from 15 to 105, with high scores indicating greater acceptability. Furthermore, a total score of 60 would represent a moderate acceptability rating. For the purposes of the current investigation, an additional item was included on the TEI to assess community treatment acceptability (i.e., "How suitable is this treatment for the community in which you live?").

The factor structure of the TEI is a matter of some dispute in the literature (Kazdin, 1980a; Kazdin, 1980b; Kelley, Heffer, Gresham & Elliott, 1989; Landreville & Guerette, 1998; Spirrison, Noland, & Savoie, 1992). For instance, Spirrison et al. (1992) found that the factor structure of the TEI varied with the treatment it was used to evaluate (e.g. differential reinforcement of other behavior, electric shock). Some researchers have criticized the multidimensional findings from factor analyses (e.g. Lundervold, Young, Bourland, & Jackson, 1991), suggesting that the TEI is not a "pure" measure of treatment acceptability. Alternative measures to the TEI have been developed to take into consideration the problematic findings regarding factor structure. For instance, the Treatment Evaluation Inventory-Short Form (TEI-SF; Kelley, Heffer, Gresham, and Elliott, 1989) includes 9 items each rated on a 5-point scale. In several empirical studies
(e.g. Kelley et al., 1989), it was preferred over TEI and was rated as easier to read (i.e., reading level 4.2, versus 5.1 on TEI). However, the TEI-SF was also demonstrated to contain two factors, described as acceptability and an ethical issues/discomfort factor (Finn & Sladeczek, 2001).

A one factor solution, described as treatment acceptability, has been found with some consistency with the TEI, which has a long history of research in the treatment acceptability literature. In addition, the TEI demonstrates reliable internal consistency (Kelley, Heffer, Gresham, & Elliott, 1989). Furthermore, it has been reasonably argued that the broader range of items found on the TEI is more useful as a heuristic aid to guide research (Spirrison, 1992). Specifically, a range of items allows for a more comprehensive examination of the relationship between acceptability and specific types of items. According to Spirrison (1992), “a broad understanding of the treatment acceptability construct, and the factors that influence it, hinges on understanding why treatment acceptability results are inconsistent, rather than on trying to avoid inconsistency” (p. 264). Therefore, the TEI was a reasonable measure to use for the current project, since it gives a comprehensive snapshot of treatment acceptability.

In addition to the TEI, the Semantic Differential Scale (SDS; Osgood, Suci, & Tannenbaum, 1957) was used as a second dependent measure to further assess evaluation of the treatment rationales. The SDS is a self-report questionnaire consisting of bipolar adjectives that represent the Evaluative, Potency, and Activity dimensions of the scale (see appendix F). Items from each dimension were included in the study, and were chosen on the basis of their factor loadings (Osgood, Suci, & Tannenbaum, 1957). These items include: kind-cruel (Evaluative), strong-weak, heavy-light (Potency), and fast-
slow, active-passive (Activity). The adjectives are rated on a 7-point scale to indicate which one best describes a participant’s reaction to the treatment rationale. In addition, a total score is obtained by summing responses, ranging from 11 to 77, which can be considered an index of attitude intensity (McCroskey, Prichard, & Arnold, 1967-1968). The total score of the three dimensions has high scores indicating more positive on the Evaluative dimension, ranging from 6 to 42, more powerful on the Potency dimension, ranging from 3 to 21, and more active on the Activity dimension ranging from 2 to 14.

Although there is some disagreement in the literature on the validity of assessing opposing adjectives along a single bipolar dimension (e.g. Cacioppo & Berntson, 1994), the semantic differential scale has been used fruitfully in previous research on attitudes towards treatments (Hecker, Fink, & Fritzler, 1993; Landreville & Guerette, 1998). Furthermore, Kazdin (1980a) found that judgments of treatment acceptability were significantly related to the Evaluative dimension of the SDS. In addition, the Potency and Activity dimensions provide additional information that may be relevant to the acceptability of a treatment by reflecting judgments regarding the strength of treatment procedures (Kazdin, 1980a).

Finally, the validity of using bipolar adjectives in research has been demonstrated cross-culturally using a Native American population (Barry & Bennett, 1992). In addition, the semantic differential construct has demonstrated validity cross-culturally (Osgood, May, & Miron, 1975; Osgood, Suci, & Tannebaum, 1957; Tzeng, Hoosain, & Osgood, 1987).
Culturally-relevant variables.

The Mental Health Values Questionnaire (Tyler, Clark, Olson, Klapp, & Cheloha, 1983) is a 99-item self-report questionnaire designed to assess dimensions which people commonly use to conceptualize healthy emotional adjustment (see appendix G). The MHVQ yields scores for eight scales which were derived through factor analysis: Achievement, Affective Control, Negative Traits, Good Interpersonal Relations, Self-Acceptance, Untrustworthiness, Religious Commitment, and Receptivity to Unconventional Experiences.

Construction of the instrument originated with information collected from samples of college students, mental health center directors, and psychiatric inpatients regarding conceptions of good mental health (Tyler et al., 1983). Responses from the open-ended survey were pooled and rated by undergraduates (n = 171) and submitted to principal axis factor analyses with Varimax solutions. Factor analysis demonstrated that a 7 factor solution accounted for 31% of the test variance and demonstrated the most meaningful interpretation. Reliabilities of scales of the MHVQ ranged from .76 (Affective Control) to .88 (Good Interpersonal Relations), suggesting that scale items hang together. The final version of the MHVQ, containing 99-items across 8 scales, was tested using a new sample of undergraduates (n = 154). The 8th scale, Unconventional Experiences, was added and emerged as a new factor. Although factor analysis suggested that the Self-Acceptance and Good Interpersonal Scales seemed to combine as one factor, the 8-factor solution remained since each scale seemed to reflect conceptually distinct dimensions.
There is some evidence of convergent and discriminant validity suggesting that the MHVQ taps a unique domain of content (Tyler et al., 1983). For instance, significant correlations have been obtained between some scales on the MHVQ and the Eysenck Personality Questionnaire (EPQ). Specifically, males demonstrated significant correlations between Self-Acceptance and the Neuroticism scale of the EPQ, as well as Affective Control and Psychoticism, and Good Interpersonal Relations and Neuroticism. For females, significant correlations were demonstrated between Achievement and Extraversion, Affective Control and Psychoticism and Affective Control and Neuroticism.

The MHVQ has demonstrated external validity through cross-cultural investigation of attitude toward psychological treatment. In a study of 91 Caucasian American and 90 Japanese American undergraduates (Suan & Tyler, 1990), investigators found that the MHVQ significantly differentiated the two groups. For instance, Japanese subjects rated negative personal traits as stronger predictors of poor mental health than did Caucasian subjects.

Finally, there is some indication that mental health values may be related to psychotherapy outcome (Tyler, Clark & Wittenstrom, 1989). Tyler et al. (1989) demonstrated that agreement between patient and clinician regarding mental health values may be predictive of response to chemical dependency treatment.

Participants were given a second measure that could affect the connection between cultural group and treatment acceptability. An adult version of the Orthogonal Cultural Identification Scale (OCIS; Oetting, Swaim & Chiarella, 1998) was used to measure levels of Native American, European American, and bicultural identification.
(see appendix H). The scale is based on the orthogonal cultural identification model (Oetting & Beauvais, 1990-1991), which is unique in its position of the independence of cultural outcomes, allowing monocultural, bicultural or multicultural identification. In addition, the orthogonal model allows for a zero point, or the possibility of no identification with any or multiple cultures.

The OCIS, a self-report questionnaire, contains 14 items concerning aspects of cultural involvement (e.g. “Do you live by or follow...”), followed by items related to different ethnic groups (e.g., “American Indian way of life”). The items on the OCIS are rated using a 4-point Likert-type scale (1 = not at all; 4 = a lot). Responses are added to provide indices of cultural involvement for five different ethnic groups (i.e., American Indian, White American, Spanish or Mexican American). Cultural identification scores are obtained by averaging responses to six questions related to cultural identification by ethnic group. An average item score for any culture of > 3 is considered a high level of identification with that culture, scores from 2 to 3 are classified as medium identification, and scores < 2 are considered low identification (Oetting & Beauvais, 1991). Only the White American and Native American cultural identification scales were employed in the current investigation to assess cultural identification with these two ethnic groups.

The original scale has been found to discriminate between identification with several cultures at differing levels, including White American (European American), Native American, in several studies (e.g. Johnson, Wall, Guanipa, Terry-Guyer, & Velasquez, 2002; McNeil, Porter, Zvolensky, Chaney, & Kee, 2000; Oetting & Beauvais,
1990-1991; Oetting, Swain, & Biarella, 1998). The adult version is similar to the original, but with some items modified to be appropriate for use with an older population.

**Panic symptoms.**

An adapted version of the Panic Attack Questionnaire – Revised (PAQ-R; Cox, Norton & Swinson, 1992) was used to assess symptomatology related to Panic Disorder. The PAQ-R is a revised version of the Panic Attack Questionnaire (PAQ; Norton, Dorward, & Cox, 1986), and is consistent with the criteria for Panic Disorder in the DSM-IV-TR (APA, 2000). This self-report paper and pencil measure contains 27 items that provide descriptive ideographic information and quantitative data regarding panic symptoms (see Appendix I).

The PAQ and PAQ-R have been used extensively in nonclinical samples to identify individuals who experience panic attacks (e.g., Norton, Cox, Malan, 1992). In addition, they have been used to examine features of panic attacks in clinical samples (e.g., Cox, Endler, & Swinson, 1995). Moreover, cross-cultural studies of panic symptomatology are consistent with studies completed on European American samples in African American samples (Ginsburg & Drake, 2002), and Native Canadian samples (Norton, Rockman, Malan & Cox, 1995).

**Materials**

**Cognitive behavior therapy rationale.**

A 7-minute standardized rationale for cognitive behavior therapy for panic disorder (CBT) was scripted and recorded on a CD. The standard rationale was taken from a well-established treatment for panic disorder and agoraphobia (Hecker & Thorpe, 1992). The
Hecker and Thorpe (1992) manual contained detailed treatment “scripts” for each stage of therapy, and the current rationale was taken almost verbatim from those scripts in an effort to minimize potential confounds. A research consultant, unfamiliar with the hypotheses of the project, was used to record the treatment rationale.

**Culturally sensitive therapy rationale.**

The standard rationale was modified by incorporating the culturally-relevant themes identified during the focus group (described above). A 7-minute culturally-modified rationale for panic disorder was scripted and recorded on a CD by the same individual who created the CBT tape.

**Other materials.**

A portable audioplayer was used to play both rationales to each participant, and the rationales were presented in random order. In addition, a stopwatch was used by the researcher to time the presentation of the rationales to each participant.

**Procedure**

Recruiting procedures were similar in each cultural group. Adult members of the Passamaquoddy community were invited to participate in the study through flyers hung in public areas and through word-of-mouth from staff members at the health center. In the Orono community, adults were invited to participate through public flyers and through Introductory Psychology courses at the University of Maine. All participants were informed to call for an appointment. During the phone call the project was briefly described to them as one in which they would listen to two CDs on which a therapy is described and then answer questions about how they liked them. In addition, they were
told that they would be asked to fill out a few other questionnaires regarding culture. They were also informed that the procedure takes about 1 hour, and that they would receive financial compensation for their time ($10.00)\(^3\). An appointment was scheduled for a designated room at the Indian Township Health Center or the University of Maine Psychological Services Center.

Upon arrival on the appointed day, the participant was invited into a quiet room and asked to be seated at a chair facing a table. The project was again briefly explained to the participant as one in which researchers, community members and the health center would like to get a better idea of what kinds of therapy would be preferred in the community. In addition, the participants were told that the procedure involves listening to two different CDs that describe a type of therapy. At the end of each CD, the participant was asked to complete a survey regarding the extent to which they found the described therapy an acceptable form of treatment. In addition, participants were told that after listening to the descriptions and completing the surveys, they would be asked to complete a few questionnaires regarding culture. If they gave verbal consent to participate, an informed consent procedure took place, during which time participants were informed that a thorough debriefing would take place at the end of the procedure.

Once the participant completed the consent procedure, the materials were identified and described. The audioplayer was positioned at the far end of the table with the first of the rationales placed within it. The participant was told that the description lasts 7-minutes and that the researcher would leave the room while the participant listens to the tape, and return when the tape is finished to give the questionnaire. The researcher

\(^3\) Individuals recruited through Introductory Psychology courses were given the option of $10.00 or extra credit.
then pressed play and left the room. Outside the room, the researcher timed the presentation using a stopwatch. At the end of the 7-minute presentation, the researcher re-entered the room and placed the TEI and SDS in front of the participant with a pencil. The directions for completing the questionnaires were given and the participant was told that the researcher would wait outside the room while the survey is completed and that he or she should notify the researcher when they finished the survey. After completion of the first survey the same procedure was repeated for the second rationale and survey. After the participant has completed the second rationale, the researcher gave him or her the culturally relevant questionnaires to complete.

After the participant notified the researcher of the completion of those measures, the debriefing occurred where the project was described in more detail, as one that will help find treatment interventions that have scientific support and are culturally appropriate. The participant was asked for any feedback regarding the project, which was noted by the Lead Investigator. The participant was then financially compensated ($10.00), and thanked for their time. Finally, the researcher requested that the participant not discuss the project with any other community members until project completion in case others in the community participate in the project as well.

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4 Due to concerns around reading level and literacy in Indian Township, all participants were given a choice of reading the questionnaires or listening to the questions on a CD. All participants chose to read the measures themselves.
RESULTS

Phase 1: Qualitative Analyses: Cultural Modification of a Cognitive Behavioral Therapy for Panic Disorder

Once the 60-minute focus group discussion (n = 12 members: 6 Native Americans, 6 non-Native staff members) was fully transcribed\(^5\) by the research assistant, three analysts (i.e., the lead investigator, research assistant, and independent assessor) used a transcription-based analytic procedure to identify themes that emerged in the focus group discussion, and generally followed the focus group guide. After independently analyzing the transcript, all analysts agreed that the identified themes reflected the spirit of the participants’ opinions. Next, the identified themes were given to the members of the focus group to obtain feedback about whether these initially-identified themes were indeed those that emerged in the discussion. It was the consensus of the focus group members that these themes reflected the substance of the discussion.

Two themes emerged reflecting major domains relevant to the task of culturally-modifying a well-established cognitive behavioral therapy for panic disorder, one focusing on psychological interventions in general, and another focusing specifically on the cognitive behavioral therapy for panic disorder presented to the group. In addition, several sub-themes were identified for each of the main themes. Furthermore, a third theme emerged regarding the context of the focus group. Sub-themes from this third theme will be presented first, in an effort to lay the contextual foundation.

\(^5\) Transcript available upon request.
The Focus Group Context

The way in which the focus group fit into the community of Indian Township, and into the mental health system at the Indian Township Health Center set the stage for the discussion and emergent themes. For instance, there were equal numbers of non-Native and Passamaquoddy individuals attending the group. Moreover, there was a substantial difference in professional and social power between individuals in the group, reflected in occupational role (e.g., doctor of psychology, doctor of osteopathy, social worker, counselor, parent support worker, staff assistant, Health Center Director, Tribal Historic Preservation Officer). The analysts remarked that the individuals with less professional occupational roles made fewer comments. Therefore, it is likely that the power differential between group members influenced the flow of the conversation and the responses given.

Responses within the focus group were quite consistent, which was reflected in the analysis of the transcript as well as behavioral observations during the group. One exception occurred when two group members disagreed regarding specific culturally-relevant natural examples to use as metaphors for relaxation during relaxation training. During this interaction, a non-Native focus group member suggested using “calm or cool animals” to create culturally-appropriate relaxation images. A Native American group member suggested that a more community-relevant image might focus on the land or water, rather than on animals. Overall, although group members gave every appearance of sharing views, it remains impossible to know whether any individual refrained from verbally expressing disagreement. The following description of the emergent themes and sub-themes are considered valid and appropriate for the use of modifying a standard
cognitive behavioral intervention for panic disorder for use in the Passamaquoddy community of Indian Township.

**Psychological Interventions in General**

A theme clearly emerged from the discussion on the culturally-appropriate use of psychological interventions. Overall, there was an emphasis on individual differences in the Indian Township community. For instance, in regards to attitude towards psychotherapy, it was reported that small children like therapy, adults seem to have mixed feelings about therapy, and elders in the community are skeptical at best.

In addition, it was reported that it is important for a therapist/counselor to know the history of the individuals with whom they work. This knowledge should encompass basic geography of the area, individuals and families in the community, and the unique history of the Passamaquoddy tribe (including the history of relationships with the dominant cultures and other tribes in the area, and the legacy of historical trauma and cultural oppression). Understanding the history of the community can help a therapist/counselor attend to the unique characteristics and therapeutic needs of community individuals. Because of the value of knowing the individuals in the community and building on a client’s strengths, the importance of listening to the client was underscored.

Related to attending to individual differences, a sub-theme emerged of bridging a larger body of psychotherapeutic literature, research, and related experiences with community understanding. The value was expressed of bringing together “best practice” from a scientific perspective with a deep understanding of the community to create psychological interventions in the places where the two overlap. Similarly, while it was
offered that empirically-supported psychological interventions are likely to be more efficacious, the point was stressed that the empirical support should be specific to the community. That is, the community should be used as a foundation for developing empirical support, and empirically-supported treatments should always be placed in a community context. Furthermore, the value of using culture-based techniques for positive change was mentioned.

In addition to attending to issues surrounding individual difference, several subthemes emerged regarding psychotherapeutic process in Indian Township. For instance, it was articulated that individuals may not be honest about their attitudes towards therapy. And more broadly, that it is important for clinicians to attend to what is not said during a therapy session. “What is not said” can include such experiences as physical gestures, which can act as important means of communication.

The issue of trust of the clinician by the client in the therapeutic relationship emerged prominently during the focus group. For instance, due to factors such as cultural mistrust of members of the dominant culture in the context of mistrust due to an individual’s history of trauma, it was recommended that the timing of any technical intervention may need to occur after the development of a long-standing therapeutic relationship. Furthermore, factors associated with the experiences of historical trauma and internal and external oppression can act as reminders to the therapist that trust factors need to be attended to on an ongoing basis (e.g., by the clinician assuming the role of student to those experiences).
Cognitive Behavioral Therapy for Panic Disorder

While the sub-themes regarding such issues as the therapist-client relationship, and timing of psychotherapeutic interventions can certainly be applied to the process of modifying an empirically-supported cognitive behavioral therapy for panic disorder, a theme specific to modifications of the described intervention emerged separately, and included sub-themes highly relevant to the task. The specific sub-themes identified were language, culturally-relevant examples and analogies, visual skills, story telling, relationship factors, and knowledge of the community. Each of these themes will be discussed in more detail below.

Language was a very complex sub-theme reflecting several different concerns. First, language that is technical, “distant,” or “condescending,” should be avoided when giving the CBT treatment description, and that failure to avoid such language would likely create barriers to comprehension. Group members repeatedly noted that special consideration should be given to concepts attached to specific words in the CBT treatment description that would likely create “power barriers” (e.g., “scientist,” “expert” and). It was recommended that such words be avoided.

Second, attention to bilingual issues encompasses the reality that community individuals vary along a continuum of proficiency in Passamaquoddy. Thus it would be important to choose language at a level of comprehension for individuals across that proficiency continuum. For instance, while many individuals lack proficiency in Passamaquoddy, there is a community value to include aspects of the language in mental health and other services. In addition, language with concepts identifiable to community members (e.g. community landmarks, characters and symbols) should be included.
Overall, the importance of attending to reading level, concepts attached to words, and community-based language emerged as prominent language-based factors in the cultural modification of the CBT for Panic Disorder.

Related to the use of language tied to community constructs, was the sub-theme of use of culturally-relevant examples to illustrate the cognitive behavioral components of the treatment. This sub-theme was less complex than that of language, but resulted in considerable discussion among focus group members before consensus was approached. It was agreed upon that culturally-relevant examples should be used to illustrate technical concepts. For instance, when describing the relaxation technique, a person who is known to community members and seems to embody calmness in many situations (e.g., Elizabeth Neptune) could be used as an illustration of a relaxed state. In addition, analogies focusing on land, water, and animals that are familiar to individuals in the community, and further, are personally-relevant to the individual receiving the treatment rationale, should be used to illustrate the technical concepts in the CBT. For instance, one community member might identify the feeling of being in the forest on the reservation as illustrative of a relaxed state. Further, to help community individuals understand a cognitive behavioral perspective on panic disorder, the cultural concept of "buck fever" could be used as an analogy. Buck fever is the experience of aiming a rifle at a deer, becoming anxious, and shooting off or ejecting all the bullets from the gun. The local treatment for buck fever is exposure to hunting situations until the hunter learns, out of necessity of feeding loved ones, to fire appropriately. The parallel was drawn between the exposure component of the treatment for Buck Fever, and the use of interoceptive and in-vivo exposure in a cognitive behavioral perspective on panic.
Consistent with the concept of using culturally-relevant examples is a sub-theme of attending to visual skills as a culturally-based strength of individuals in the community. For instance, using culturally-relevant images and cues to illustrate CBT concepts and techniques (e.g., "calm like Big Lake"), rather than using excessive verbal-linguistic activity, is likely to facilitate communication.

Furthermore, incorporating a narrative approach to the manner in which the treatment rationale is described would be consistent with the cultural practice of storytelling. Therefore, when presenting the treatment rationale to a client it could be framed as a "story" rather than as a scientific lecture.

Relationship factors were discussed frequently during the group, and although it emerged as a sub-theme under psychological interventions, in general, it also emerged as a sub-theme specific to the CBT for panic disorder. Similar to the language sub-theme, it had multiple components that need to be attended to in the presentation of a cognitive behavioral therapy for panic disorder to individuals in the Indian Township community. Indian Township was described as a relationship-based community, therefore relationship factors were viewed as extremely important in the therapeutic process. The connection between the therapist presenting the treatment and the community is likely to be a factor in a client’s perception of the credibility of the CBT. Furthermore, related to issues described above regarding trust in the therapeutic relationship, it is likely that development of a trusting therapeutic alliance might require a long period of time before the implementation of techniques such as guided relaxation and breathing retraining, which often involve asking a client to close his/her eyes. Further, these techniques might need to be modified to minimize the direction of eye closure. Perhaps a more decisive
example would be the level of trust involved in beginning to practice interoceptive exposure.

Another relationship factor to attend to in the use of a CBT for panic disorder is acceptance and respect for the client as she/he presents for treatment and brings his/her knowledge to the therapeutic context. An approach of “teaching techniques to the client’s experience” should follow from this theme. This approach can be conceptualized as an ideographic implementation of the manualized technique. For instance, there could be points during the treatment description when the therapists asks the client to reflect on their past experience to develop an image appropriate for the exemplification of a concept or technique.

Overall, qualitative methodology was used to analyze the focus group data and there was a great deal of useful information generated to aid in the cross-cultural application of psychotherapy, in general, and in the modification of a specific manualized CBT for panic disorder. Several themes were identified, emerging easily from the focus group data, that could be used to modify the standard treatment rationale for use in the unique community of Indian Township. In particular, there were several sub-themes that emerged with high frequency throughout the focus group - individual differences, language issues, relationship factors, and knowledge of the community.

**Development of the Modified Treatment Description**

The themes and sub-themes emerging from the focus group were applied to the transcript of the well-established cognitive behavioral therapy for panic disorder by the Lead Investigator. The CBT transcript was repeatedly reviewed with the list of themes
and sub-themes present in table form, and then the identified themes were incorporated into the rationale systematically. For instance, first the standard rationale was reviewed for language. Any "scientific" language was removed or replaced (e.g., the term "scientists" was replaced with "students" and "cognitive behavioral therapy" was changed to "skill therapy"). Then, culturally-relevant examples replaced some of the original examples (e.g., panic in response to threat of a lion was replaced with a bear). In addition, the sub-theme of capitalizing on visual skills was incorporating by changing language to pull for visualization (e.g., "get a clear picture"). In addition, attention was given to the sub-theme of tailoring the treatment to the individual (e.g., "Can you think of someone you might know who doesn't leave the house because they are afraid to get anxious and panic?"). Also, the sub-theme of "story-telling" was incorporated by placing the treatment description in the context of a story about a woman.

Finally, one component was added to the modified treatment rationale that was absent in the standard treatment description. In an effort to directly attend to the therapeutic relationship, the following paragraph was added at the beginning of the treatment description,
In the beginning, Mary started seeing a therapist. The therapist (or counselor) was someone who is familiar with the people and families in this community and knows about the history of the people from here. Mary and the therapist created a good relationship, and then she began to learn the skill therapy.

Overall, each of the sub-themes for modifying the CBT treatment description was incorporated. However, while there were many changes made, all the main components of the standard procedure of CBT for PD remain (e.g., interoceptive exposure).

After the modification was complete, the research assistant and independent observer offered feedback on the revised transcript (e.g., naming the woman “Mary,” which is a common name in Indian Township). There were no disagreements about revisions, and a final version was agreed upon quickly. The modified rationale was sent to the original focus group members for their feedback and final approval, and no recommendations for changes were received from focus group members. Through this iterative process (Piantanida & Garman, 1999), the final culturally sensitive rationale (CST) was produced (see Appendix J). It was audio taped for a 7-minute presentation (to match the CBT treatment description).
Phase 2: The Quasi-Experimental Comparison of a Well-established CBT and a CST

Power Analysis

A power analysis was conducted to determine the appropriate sample size per cell at an adequate level of power (.80; Cohen, 1988) to evaluate whether the underlying research questions could be adequately assessed. Power analytic software was accessed via the world wide web (www.department.obg.cuhk.edu.hk/researchsupport/sample_size_compmean.asp), and was based on power analytic procedures presented in Sokel and Rohlf (1981).

Unfortunately, there were no studies uncovered in the literature reporting means and standard deviations for the main dependent measure comparing Native American and European American groups. However, there is at least one study reporting means and standard deviations of treatment acceptability for a cognitive behavioral therapy for panic disorder (Hecker & Finch, 1993). These authors compared the acceptability of three approaches to treating panic disorder (imipramine, cognitive behavior therapy, and client-centered therapy). Thus, the treatment acceptability means and standard deviations reported for the two types of psychotherapy were used as a reasonable approximation in the current power analysis (cognitive behavioral therapy: \( M = 74.34, \ SD = 13.15 \); client-centered psychotherapy: \( M = 67.29, \ SD = 13.93 \)). It was determined that at alpha level of .05, and a power level of .80, 56 individuals per cell were required to adequately assess the main research questions.
Sample Description

The sample initially included 98 individuals, but 5 were excluded from all analyses because they were not part of either the European American or Passamaquoddy cultural groups. Of the remaining 93 participants, 51 were from the Passamaquoddy cultural group and 42 from the European American group. Overall, there were 42 men and 51 women, with an average age of 33 years old (SD = 12.86). Participants, on average, had some college/professional school, and an annual household income in the $25,000 to $34,999 range. There was a significant difference between the European American and Passamaquoddy Cultural groups for both education level, $\chi^2 = 18.26, df = 5, p = .003, n = 93$, and for annual household income, $\chi^2 = 11.67, df = 6, p = .07, n = 89$. European Americans had a median education level of Some College/Professional School, and a median household income in the $25,000 to $34,999 range. Individuals in the Native American group had a median education level of High School/GED, and a median household income in the $15,000 to $24,999 range. There were approximately equal numbers of men and women in each group, $\chi^2 = .724, df = 1, p = .40, n = 93$, of approximately the same age, $F(1, 89) < 1, p = .900$ (see Table 1).

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6 The European Americans were sampled from two communities, with 31 participants from Orono, Maine, and the remaining 11 from White River Junction, Vermont due to a movement of residence of the Lead Investigator. Both are rural New England communities in the two states with the highest percentage of European Americans (Census, 2000).
Table 1. Income, education level, age, and gender of sample by cultural group.

<table>
<thead>
<tr>
<th>Cultural Group</th>
<th>Median Income</th>
<th>Median Education</th>
<th>Mean Age</th>
<th>Gender&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>European American&lt;sup&gt;b&lt;/sup&gt;</td>
<td>$25,000 - $34,999</td>
<td>Some College</td>
<td>33.55</td>
<td>M = 21 F = 21</td>
</tr>
<tr>
<td>Passamaquoddy&lt;sup&gt;c&lt;/sup&gt;</td>
<td>$15,000 - $24,999</td>
<td>High school</td>
<td>33.20</td>
<td>M = 21 F = 29</td>
</tr>
<tr>
<td>Total&lt;sup&gt;d&lt;/sup&gt;</td>
<td>$15,000 - $24,999</td>
<td>Some College</td>
<td>33.36</td>
<td>M = 42 F = 51</td>
</tr>
</tbody>
</table>

<sup>a</sup>Gender data missing for one individual in the Passamaquoddy group. <sup>b</sup>n = 42. <sup>c</sup>n = 51. <sup>d</sup>N = 93.

In the current study, presence of lifetime panic symptoms and current panic disorder were assessed with the PAQ-IV, adapted (see Table 2). 37 participants (24 women and 13 men) reported having experienced a panic attack at least once in their lifetime, and 16 (11 women and 5 men) currently met criteria for panic disorder (n = 91; information was missing for two individuals). A 2-tailed 2 X 2 chi square analysis was performed to compare the proportions of panic disorder and previous panic attacks between cultural groups. There was a significantly higher proportion of European Americans who had had a panic attack, $\chi^2 = 4.42$, df = 1, p = .04, but not who currently met criteria for panic disorder, $\chi^2 = .80$, df = 1, p = .37. A univariate ANOVA was performed to compare mean severity rating of panic symptoms for those individuals who
met criteria for panic disorder. There was not a significant effect of cultural group on panic severity, $F(1, 16) < 1, p = .69, \eta^2_p = .012$.

Table 2. Frequencies and percentages of panic symptoms for Passamaquoddy and European American cultural groups.

<table>
<thead>
<tr>
<th>Cultural Group</th>
<th>Ever Panicked</th>
<th>Panic Disorder</th>
<th>Mean Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>European American(^a)</td>
<td>$n = 22(52.4%)$</td>
<td>$n = 9(21.4%)$</td>
<td>58.89(SD 16.11)</td>
</tr>
<tr>
<td>Passamaquoddy(^b)</td>
<td>$n = 15(30.6%)$</td>
<td>$n = 7(14.3%)$</td>
<td>62.71(SD 20.99)</td>
</tr>
<tr>
<td>Total(^c)</td>
<td>$n = 37(40.7%)$</td>
<td>$n = 16(17.6%)$</td>
<td>60.56(SD 17.84)</td>
</tr>
</tbody>
</table>

\(^a\) $n = 42$. \(^b\) $n = 49$. \(^c\) $n = 91$.

In looking at the frequency of previous treatment, 26 individuals reported previous treatment for an anxiety or nervous disorder, 32 for depression, 26 for an alcohol or drug problem, and 10 for other psychological disorders (see Table 3). A two-tailed 2 X 4 chi square analysis was performed to compare the proportions of previous treatment between cultural groups. There was not a significantly higher proportion of treatment for depression, $\chi^2 = .60$, df = 1, $p = .44$, anxiety, $\chi^2 = .229$, df = 1, $p = .63$, or for other psychological problems, $\chi^2 = 2.49$, df = 1, $p = .12$, in the Native American group. However, there was a significantly higher proportion of individuals with previous treatment for substance-related disorders in the Native American group, $\chi^2 = 7.81$, df = 1, $p = .005$. 
Table 3. Frequencies and percentages of previous treatment for Native American and European American cultural groups.

<table>
<thead>
<tr>
<th>Cultural Group</th>
<th>Anxiety Disorder</th>
<th>Depression</th>
<th>Other Disorder</th>
<th>Substance Disorder</th>
</tr>
</thead>
<tbody>
<tr>
<td>European American(a)</td>
<td>13 (31.7%)</td>
<td>13 (31.7%)</td>
<td>7 (17.1%)</td>
<td>6 (14.6%)</td>
</tr>
<tr>
<td>Passamaquoddy</td>
<td>13 (27.1%)(b)</td>
<td>19 (39.6%)</td>
<td>3 (6.4%)(c)</td>
<td>20 (41.7%)(b)</td>
</tr>
<tr>
<td>Total</td>
<td>26 (29.2%)(d)</td>
<td>32 (36%)(d)</td>
<td>10 (11.4%)(e)</td>
<td>26 (29.2%)(d)</td>
</tr>
</tbody>
</table>

\(a\) n = 41. \(b\) n = 48. \(c\) n = 47. \(d\) n = 89. \(e\) n = 88.

Data Analyses

For all analyses, mixed model repeated measures ANOVA's or ANCOVA's were run using SPSS 11.0 General Linear Model designs for the two dependent measures, treatment acceptability and treatment evaluation, separately. If violation of sphericity occurred, a Greenhouse Geiser correction for F is reported (Herzog & Rovine, 1985). Alpha was set at .05 for all comparisons.

To test for order-presentation effects, initially, 2 (cultural group) X 2 (order presentation) X 2 (treatment type) mixed model repeated measures ANOVA's were run for both dependent measures. The main effect of order presentation was not significant on treatment acceptability, \(F(1, 89) < 1, p = .94, \eta^2_p = .000\) or treatment evaluation, \(F(1, 88) = 1.53, p = .22, \eta^2_p = .017\). Thus, data were collapsed across order presentation in subsequent analyses.
To test hypotheses 1 and 2, the proposed 2 (cultural group) X 2 (treatment rationale type) ANOVA design was used. To test hypotheses 3 and 4, 2 (cultural group) X 2 (treatment type) ANCOVA’s were computed with total score on the MHVQ subtests of unconventional experiences and religiosity entered as covariates.

To test hypothesis 5, participants in the Native American group were placed in subgroups according to their score on the OCIS. Native American identification was operationalized as an average score equal to or greater than a 3 (“some” to “a lot”) on only Native American identification. European American identification was an average score equal to or greater than a 3 on only European American identification. Bicultural identification was an average score equal to or greater than a 3 on both European American and Native American identification. Low or No cultural identification was an average score less than 3 (“a few” to “None at all”). This method produced four possible cultural identification groups, Native American (N = 25), European American (N = 5), bicultural (N = 11), and Low or No primary cultural identification (N = 7) for conducting the 4 (cultural identification) X 2 (treatment rationale type) ANOVA’s. Furthermore, pairwise comparisons of cultural identification were tested using Tukey-Kramer Honestly Significant Difference adjustments because of unequal sample size (Kirk, 1995).

**Hypotheses**

The first hypothesis was that there would be a main effect of cultural group on ratings of treatment acceptability and treatment evaluation across treatment type such that individuals in the European American cultural group would demonstrate more positive ratings on both the CBT and CST relative to individuals in the Native American group.
The groups did not differ in total TEI score, $F(1, 90) < 1, p = .910$ (European American $M = 79.98, SD = 1.70$; Passamaquoddy $M = 80.24, SD = 1.55$), but there was a significant main effect of cultural group on total SDS score, $F(1, 90) = 4.99, p = .028$ (see Table 4). Furthermore, the strength of effect was moderately robust, $\eta_p^2 = .053$ (small $\eta_p^2 = .01$, medium $\eta_p^2 = .06$, large $\eta_p^2 = .14$; Cohen, 1988). However, the significant effect was demonstrated in the opposite direction, with the Passamaquoddy group reporting more positive evaluations of the treatment descriptions on average.

Entering the activity, potency, and evaluative SDS subtest scores in the 2 (cultural group) X 2 (treatment rationale type) ANOVA revealed that the significant effect of cultural group on treatment evaluation was found for the activity dimension, $F(1, 90) = 4.933, p = .029, \eta_p^2 = .052$, and the evaluative dimension, $F(1, 90) = 3.957, p = .05, \eta_p^2 = .042$, but not the potency dimension, $F(1, 90) = 1.16, p = .28, \eta_p^2 = .013$ (see Table 4).

Table 4. Mean ratings of treatment evaluation across treatment type by cultural group.

<table>
<thead>
<tr>
<th>Group</th>
<th>Activity M</th>
<th>Activity SE</th>
<th>Potency M</th>
<th>Potency SE</th>
<th>Evaluative M</th>
<th>Evaluative SE</th>
<th>Total M</th>
<th>Total SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>EA</td>
<td>8.58</td>
<td>.24</td>
<td>13.77</td>
<td>.43</td>
<td>32.93</td>
<td>.78</td>
<td>55.41</td>
<td>1.11</td>
</tr>
<tr>
<td>Passa</td>
<td>9.31</td>
<td>.22</td>
<td>14.40</td>
<td>.39</td>
<td>35.04</td>
<td>.72</td>
<td>58.77</td>
<td>1.02</td>
</tr>
<tr>
<td>Total</td>
<td>8.95</td>
<td>.16</td>
<td>14.09</td>
<td>.29</td>
<td>33.98</td>
<td>.53</td>
<td>57.09</td>
<td>.75</td>
</tr>
</tbody>
</table>

Note. Reported means are estimated marginal means. $^a n = 42$. $^b n = 50$. 

$^7$ Reported means are estimated marginal means.
The second hypothesis was that European Americans would find the standard CBT rationale more acceptable and would evaluate it more positively than the culturally modified treatment rationale, and conversely, that Passamaquoddies would find the culturally modified treatment rationale more acceptable and evaluate it more positively than the standard rationale. The interaction was not significant on Total TEI score, $F(1, 90) < 1, p = .90, \eta^2_p = .001$ or total SDS score, $F(1, 90) = 1.50, p = .23, \eta^2_p = .016$ (see Table 5).

Table 5. Mean ratings of treatment acceptability and treatment evaluation for type of treatment description and cultural group.

<table>
<thead>
<tr>
<th>Treatment and Group</th>
<th>Treatment Acceptability</th>
<th>Treatment Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>SD</td>
</tr>
<tr>
<td>CBT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>European American</td>
<td>78.21</td>
<td>13.74</td>
</tr>
<tr>
<td>Pasamaquoddy</td>
<td>78.34</td>
<td>11.97</td>
</tr>
<tr>
<td>CST</td>
<td></td>
<td></td>
</tr>
<tr>
<td>European American</td>
<td>81.74</td>
<td>10.19</td>
</tr>
<tr>
<td>Pasamaquoddy</td>
<td>82.13</td>
<td>11.74</td>
</tr>
</tbody>
</table>

There was a significant within subjects effect of type of treatment description on treatment acceptability, $F(1, 90) = 13.21, p < .001, \eta^2_p = .13$, with higher ratings for the CST ($M = 81.95, SD = 11.00$), than for the CBT ($M = 78.28; SD = 12.74$). The findings
for treatment evaluation were consistent, with a significant main effect for type of
treatment description, \( F(1, 90) = 10.59; p = .002, \eta_p^2 = .105 \), with higher ratings for the
CST \( (M = 58.27, SD = 7.46) \) than for the CBT \( (M = 56.20, SD = 8.51) \). Entering the
SDS subtest scores as measures of treatment evaluation, it was found that the significant
effect of treatment description was due to the activity, \( F(1, 90) = 5.82; p = .018 \), and
evaluative, \( F(1, 90) = 7.73, p = .007 \), dimensions, but not potency dimension, \( F(1, 90) =
2.41; p = .12 \) (see Table 6).

Table 6. Mean ratings of treatment evaluation dimensions by cultural group.

<table>
<thead>
<tr>
<th>Group</th>
<th>Activity M</th>
<th>Activity SD</th>
<th>Potency M</th>
<th>Potency SD</th>
<th>Evaluative M</th>
<th>Evaluative SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>European Americana</td>
<td>8.43</td>
<td>1.93</td>
<td>13.43</td>
<td>3.46</td>
<td>32.07</td>
<td>6.01</td>
</tr>
<tr>
<td>Passamaquoddyb</td>
<td>8.96</td>
<td>1.84</td>
<td>14.32</td>
<td>3.30</td>
<td>34.78</td>
<td>5.41</td>
</tr>
<tr>
<td>Total</td>
<td>8.72</td>
<td>1.99</td>
<td>13.91</td>
<td>3.39</td>
<td>33.54</td>
<td>5.82</td>
</tr>
<tr>
<td>CST</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>European American</td>
<td>8.74</td>
<td>1.99</td>
<td>14.12</td>
<td>2.34</td>
<td>33.79</td>
<td>4.61</td>
</tr>
<tr>
<td>Passamaquoddy</td>
<td>9.66</td>
<td>1.69</td>
<td>14.49</td>
<td>3.01</td>
<td>35.30</td>
<td>5.55</td>
</tr>
<tr>
<td>Total</td>
<td>9.24</td>
<td>1.88</td>
<td>14.32</td>
<td>2.72</td>
<td>34.61</td>
<td>5.17</td>
</tr>
</tbody>
</table>

\( ^a n = 42. \quad ^b n = 50. \)
The third hypothesis was that the mental health value of receptivity to unconventional experiences would act as a covariate on the acceptability and evaluation of the treatment descriptions for cultural group. The group X time interaction effect from the ANCOVA of cultural group on treatment acceptability with receptivity to unconventional experiences total score as a covariate was not significant, \( F(1, 86) < 1, p = .87, \eta_p^2 = .001 \). The between subjects effect of cultural group was not significant, \( F(1, 86) < 1, p = .90, \eta_p^2 < .001 \). However, there was a trend towards an effect of receptivity to unconventional experiences, \( F(1, 86) = 3.67, p = .06, \eta_p^2 = .041 \), on treatment acceptability.

The ANCOVA on treatment evaluation with receptivity to unconventional experiences as a covariate revealed a non-significant group X time interaction, \( F(1, 86) < 1, p = .415, \eta_p^2 = .008 \). However the between subjects effect of cultural group was significant, \( F(1, 86) = 5.99, p = .016, \eta_p^2 = .065 \) (CBT EA adjusted \( M = 53.98, SD = 8.63 \); CBT NA adjusted \( M = 58.42, 8.00 \); CBT Total adjusted \( M = 56.37, SD = 8.55 \); CST EA adjusted \( M = 56.73, SD = 6.45 \); CST NA adjusted \( M = 59.98, SD = 7.36 \); CST Total adjusted \( M = 58.48, SD = 7.11 \)). There was not a significant effect of receptivity to unconventional experiences on treatment evaluation, \( F(1, 86) = .088, p = .77, \eta_p^2 = .001 \).

Similarly, the fourth hypothesis was that the mental health value of religiosity would act as a covariate on the dependent measures. The ANCOVA on treatment acceptability with religiosity as a covariate found a non-significant group X time interaction, \( F(1, 86) < 1, p = .86, \eta_p^2 < .001 \). The between subjects effect of cultural group on treatment acceptability was not significant, \( F(1, 86) < 1, p = .861 \). The within subjects effect of treatment type was not significant, \( F(1, 86) < 1, p = .71, \eta_p^2 = .002 \).
The effect of religiosity on treatment acceptability was not significant, $F(1, 86) = 2.83, p = .10, \eta^2 = .032$.

The ANCOVA on treatment evaluation with religiosity as a covariate found a non-significant group X time interaction, $F(1, 86) < 1, p = .99, \eta^2 < .001$. The effect of cultural group on treatment evaluation with religiosity as a covariate was significant, $F(1, 86) = 5.21, p = .03, \eta^2 = .06$. The within subjects effect of treatment type was not significant, $F(1, 86) < 1, p = .03, \eta^2 = .009$. The effect of religiosity was not significant, $F(1, 86) = 2.16, p = .15$.

The fifth hypothesis was that individuals within the Passamaquoddy cultural group who endorse Native American cultural identification or bicultural identification would prefer the CST, and that those with European American cultural identification would prefer the CBT. The interaction effect between cultural identification and type of treatment rationale on treatment acceptability was not significant, $F(1, 44) = 1.077, p = .369$, in spite of the medium strength of association, $\eta^2 = .068$. However, there was a significant effect of treatment rationale type across cultural identification on treatment acceptability, $F(1, 44) = 6.520, p = .014$, with a robust strength of association, $\eta^2 = .129$.

There was a significant main effect of cultural identification on treatment acceptability, $F(3, 44) = 4.99, p = .005$, with European American cultural identification associated with the most positive treatment acceptability across treatment type, and Native American cultural identification associated with the least positive (see Figure 1). Furthermore, the strength of the associations was robust, with $\eta^2 = .254$. The cubic trend for cultural identification on treatment acceptability was significant, $p = .001$, and the linear trend approached significance, $p = .069$. 
Figure 1. Mean ratings of treatment acceptability across treatment type by cultural identification of the Native American group.

Pairwise comparisons demonstrated that the predicted differences on treatment acceptability were significant between European American ($M = 92.50$) and Native American ($M = 77.13$) cultural identification, $SE = 4.612$, $p = .002$, and Native American and Bicultural identification, $SE = 3.41$, $p = .013$. Furthermore, a post hoc comparison, using Tukey’s HSD modification, demonstrated a non-significant trend for a difference between European American ($M = 92.50$) and Low to No identification ($M = 79.07$), $SE = 5.513$, $p = .085$.\(^8\)

The relationship among means was slightly different for the two dependent variables. For treatment evaluation, the main effect of cultural identification was not

\(^8\) Reported means for pairwise comparisons are estimated means.
significant, $F(1, 44) = 1.32, p = .28, \eta^2_p = .083$. The effect of treatment type was found, $F(1, 44) = 4.71, p = .036, \eta^2_p = .097$. The interaction was not significant, $F(1, 44) < 1, p = .77, \eta^2_p = .025$. See table 7 for mean treatment evaluation ratings.

Table 7. Mean ratings of treatment evaluation within the Native American group by cultural identification.

<table>
<thead>
<tr>
<th></th>
<th>CBT</th>
<th>CST</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>SD</td>
</tr>
<tr>
<td>Native American (N = 25)</td>
<td>56.92</td>
<td>8.05</td>
</tr>
<tr>
<td>European American (N = 5)</td>
<td>61.00</td>
<td>4.08</td>
</tr>
<tr>
<td>Bicultural (N = 11)</td>
<td>59.75</td>
<td>8.08</td>
</tr>
<tr>
<td>Low or None (N = 7)</td>
<td>60.43</td>
<td>9.45</td>
</tr>
</tbody>
</table>

**Post Hoc Analyses**

Exploration of the correlations between the two dependent measures was completed. In addition, examination of the effects of cultural group and cultural identification on community acceptability was conducted using ANOVA’s. Furthermore, the effects of previous treatment and panic history were examined by adding these variables to cultural group and conducting ANOVA’s on the dependent measures. To further examine hypotheses 1 and 2, gender was added as a factor to the originally proposed 2 (cultural group) X 2 (treatment rationale type) design. Thus, 3-way ANOVA’s were computed,
adding gender as a between groups variable. Finally, exploratory ANOVA’s were conducted to examine the effect of cultural group on mental health values.

**Dependent measure correlations.**

The correlations between the two dependent measures, treatment acceptability and treatment evaluation, were examined using Pearson two-tailed tests for significance. All correlations between dependent measures were significant at $p < .001$ (see Table 8).

Table 8. Correlations between treatment acceptability and treatment evaluation by treatment type.

<table>
<thead>
<tr>
<th></th>
<th>Acceptability CBT</th>
<th>Acceptability CST</th>
<th>Evaluation CBT</th>
<th>Evaluation CST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptability CBT</td>
<td>1</td>
<td>.684**</td>
<td>.613**</td>
<td>.509**</td>
</tr>
<tr>
<td>Acceptability CST</td>
<td></td>
<td>1</td>
<td>.485**</td>
<td>.656**</td>
</tr>
<tr>
<td>Evaluation CBT</td>
<td></td>
<td></td>
<td>1</td>
<td>.694**</td>
</tr>
<tr>
<td>Evaluation CST</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

** $p < .001$

---

9 Data for one participant was missing for treatment evaluation and treatment acceptability measures.
Community acceptability.

An item was added to the TEI asking for ratings of community acceptability, “How suitable is this treatment for the community in which you live,” from “Not at all Suitable” to “Very Suitable” using the same 7-point likert-type scale found in the TEI. A 2 (cultural group) X 2 (treatment type) mixed model ANOVA was conducted on community acceptability. The main effect of cultural group was not significant, $F(1, 88) < 1, p = .33, \eta^2_p = .011$. However, the within subjects effect of treatment type was significant, $F(1, 88) = 4.61, p = .04, \eta^2_p = .035$. In addition, the interaction effect was significant, $F(1, 88) = 3.86, p = .05, \eta^2_p = .042$ (see Figure 2).

Figure 2. Community acceptability of cognitive behavioral and culturally sensitive treatment descriptions by cultural group.
In addition, a within Passamaquoddy group 2 (cultural identification) X 2 (treatment type) ANOVA was conducted on community acceptability. The interaction was not significant, $F(1, 43) < 1, p = .41, \eta^2 = .065$. The main effect of cultural identification was not significant, $F(1, 43) = 1.34, p = .35, \eta^2 = .073$. The within subjects effect of treatment type was significant, $F(1, 43) = 9.56, p = .003, \eta^2 = .18$, with more positive ratings for the CST, $M = 5.85, SD = 1.32$, compared to the CBT, $M = 5.21, SD = 1.27$.

**Panic history.**

2 (cultural group) X 2 (panic history) X 2 (treatment type) ANOVA’s were conducted to determine whether panic history was related to acceptability or evaluation. The 3-way interaction was not significant on acceptability, $F(1, 86) < 1, p = .79, \eta^2 = .001$, or evaluation, $F(1, 86) = 2.04, p = .16, \eta^2 = .023$. The interaction between panic history and treatment type was not significant for acceptability, $F(1, 86) < 1, p = .99, \eta^2 < .001$, or evaluation, $F(1, 86) < 1, p = .74, \eta^2 = .001$. The interaction between panic history and cultural group was not significant on acceptability, $F(1, 86) = 1.68, p = .20, \eta^2 = .019$, or evaluation, $F(1, 86) = 1.02, p = .32, \eta^2 = .012$. The main effect of history of panic was not significant on acceptability, $F(1, 86) < 1, p = .51, \eta^2 = .005$, or evaluation, $F(1, 86) < 1, p = .50, \eta^2 = .005$.

2 (cultural group) X 2 (panic disorder) X 2 (treatment type) ANOVA’s were conducted to determine whether panic disorder was related to acceptability or evaluation. The 3-way interaction was not significant on acceptability, $F(1, 86) < 1, p = .72, \eta^2 = .002$, or evaluation, $F(1, 86) < 1, p = .45, \eta^2 = .007$. The interaction between panic disorder and treatment type was not significant on acceptability, $F(1, 86) = 1.78, p = .19$,
η_p^2 = .020, or evaluation, F(1, 86) < 1, p = .94, η_p^2 < .001. The interaction between panic disorder and cultural group was not significant on acceptability, F(1, 86) < 1, p = .51, η_p^2 = .005, or evaluation, F(1, 86) < 1, p = .72, η_p^2 = .002. The main effect of panic disorder was not significant on acceptability, F(1, 86) < 1, p = .48, η_p^2 = .006, or evaluation, F(1, 86) < 1, p = .94, η_p^2 < .001.

**Previous treatment.**

Repeated measures ANOVA’s were conducted to test the effects of cultural group, previous treatment, and treatment type on the dependent measures. The 3-way interactions on treatment acceptability were not significant for previous treatment for anxiety, F(1, 84) < 1, p = .90, η_p^2 < .001, depression, F(1, 84) < 1, p = .54, η_p^2 = .005, or another psychological disorder, F(1, 84) < 1, p = .44, η_p^2 = .007. However, the 3-way interaction was significant for previous treatment for a substance-related disorder, F(1, 84) = 4.36, p = .04, η_p^2 = .049 (see Figure 3). Specifically, those individuals in the European American group without previous treatment rated the CST as more acceptable than the CBT, t(34) = 2.50, p = .02 (two-tailed). In the Passamaquoddy group, those individuals with previous treatment rated the CST as more acceptable than the CBT, t(19) = 2.99, p = .01 (two-tailed).
There were no significant interaction effects on treatment acceptability of cultural group and previous treatment for anxiety, $F(1, 84) = 2.60, p = .11, \eta^2 = .030$, depression, $F(1, 84) = 1.43, p = .24, \eta^2 = .017$, or substance related problem, $F(1, 86) < 1, p = .622, \eta^2 = .003$. However, the 2-way interaction between cultural group and previous treatment for another psychological problem was significant, $F(1, 85) < 1, p = .755, \eta^2 = .001$, such that individuals in the Passamaquoddy group with previous treatment found both treatments more acceptable, whereas there was no difference between cultural groups for those individuals without previous treatment (see Figure 4).
The interaction effects were not significant between treatment type and previous treatment for anxiety, $F(1, 84) < 1, p = .65, \eta_p^2 = .002$, depression, $F(1, 84) < 1, p = .95, \eta_p^2 < .001$, substance-related problem, $F(1, 84) < 1, p = .53, \eta_p^2 = .005$, or other psychological problem, $F(1, 84) < 1, p = .44, \eta_p^2 = .001$. The main effects were not significant for anxiety, $F(1, 84) = 1.48, p = .23, \eta_p^2 = .017$, depression, $F(1, 84) < 1, p = .44, \eta_p^2 = .007$, substance-related problem, or other psychological problem, $F(1, 83) < 1, p = .66, \eta_p^2 = .002$.

The 3-way interactions on treatment evaluation were not significant for previous treatment for anxiety, $F(1, 84) < 1, p = .36, \eta_p^2 = .010$, or another psychological disorder, $F(1, 84) < 1, p = .93, \eta_p^2 < .001$. However, the 3-way interactions were significant for previous treatment for depression, $F(1, 84) = 7.44, p = .008, \eta_p^2 = .081$, and for a substance-related problem, $F(1, 84) = 4.37, p = .04, \eta_p^2 = .049$. Specifically, individuals
in the European American group without previous substance-related treatment evaluated the CST more positively than the CBT, \( t(34) = 3.01, p < .01 \) (two tailed), and individuals in the Passamaquoddy group with previous treatment rated evaluated the CST more positively than the CBT, \( t(19) = 2.84, p = .01 \) (two tailed). Individuals in the EA group without previous treatment for depression evaluated the CST more positively than the CBT, \( t(27) = 3.39, p < .01 \) (two tailed), whereas there was no such difference in the Passamaquoddy group, \( t(18) = 1.77, p = .10 \) (see Figure 5).

There were no significant interaction effects on treatment evaluation of cultural group and previous treatment for anxiety, \( F(1, 84) < 1, p = .91, \eta_p^2 < .001 \), depression, \( F(1, 84) < 1, p = .34, \eta_p^2 = .011 \), a substance related problem, \( F(1, 83) = 2.06, p = .16, \eta_p^2 = .024 \), or for another psychological problem was significant, \( F(1, 84) < 1, p = .84, \eta_p^2 = .001 \). The interaction effects were not significant between treatment type and previous treatment for anxiety, \( F(1, 84) < 1, p = .37, \eta_p^2 = .004 \), depression, \( F(1, 84) = 1.59, p = .21, \eta_p^2 = .001 \), substance-related problem, \( F(1, 84) < 1, p = .83, \eta_p^2 = .001 \), or other psychological problem, \( F(1, 83) < 1, p = .49, \eta_p^2 = .006 \). The main effects were not significant for anxiety, \( F(1, 84) < 1, p = .95, \eta_p^2 < .001 \), depression, \( F(1, 84) < 1, p = .34, \eta_p^2 = .011 \), substance-related problem, \( F(1, 83) < 1, p = .87, \eta_p^2 = .001 \), or other psychological problem, \( F(1, 83) = 1.14, p = .29, \eta_p^2 = .014 \).
Figure 5. 3-way interactions of cultural group, treatment type, and previous treatment on treatment evaluation.

Substance-related Treatment

![Graph showing 3-way interactions for Substance-related Treatment]

Depression Treatment

![Graph showing 3-way interactions for Depression Treatment]
Gender effects.

To further examine hypothesis 2, 2 (cultural group) X 2 (gender) X 2 (treatment rationale type) ANOVA’s were computed for the two dependent variables. The 3-way interaction (cultural group, treatment type, and gender) was not significant for treatment acceptability, $F(1, 88) = 1.982, p = .163, \eta_p^2 = .022$, or treatment evaluation, $F(1, 88) = 129, p = .720, \eta_p^2 = .001$. However, there was a 2-way interaction between gender and type of treatment description on both treatment acceptability, $F(1, 88) = 4.130, p = .045$, and treatment evaluation, $F(1, 88) = 6.580, p = .012$, with more positive ratings of the CST for women and no difference in ratings for men (see Figure 6). Furthermore, the strength of association was moderately robust for each, $\eta_p^2 = .045$ and $\eta_p^2 = .070$, respectively.

Figure 6. Gender differences in ratings of treatment type on each dependent measure.
Exploration of gender effects within the Native American group were also conducted due to the observation that all of the individuals with European American cultural identification were women. A within groups 2 (treatment type) X 4 (cultural identification) ANOVA was computed using only the women in the Native American group (n = 29). There was a non-significant trend of cultural identification on treatment acceptability, $F(1, 25) = 2.62, p = .07, \eta_p^2 = .24$ (although the linear and cubic trends were both significant). Pairwise comparisons using Tukey’s HSD found a non-significant trend for a difference between EA and NA, SE = 5.53, $p = .09$. The effect of cultural identification on treatment evaluation for just the women in the Passamaquoddy sample was not significant, $F(1, 24) = < 1, p = .69, \eta_p^2 = .058$.

**Mental health values.**

Exploratory analyses were conducted to inspect the relations among cultural group and mental health values examined for hypotheses 3 and 4. Univariate ANOVA’s demonstrated non-significant trends of cultural group on religiosity, $F(1, 90) = 3.579, p = .062, \eta_p^2 = .039$, and on receptivity to unconventional experiences, $F(1, 90) = 3.307, p = .072, \eta_p^2 = .036$, with Native Americans evidencing more positive scores than European Americans (see Table 9).
Table 9. Measures of central tendency and total score of mental health values for Native American and European American cultural groups.

<table>
<thead>
<tr>
<th></th>
<th>Religiosity</th>
<th>Receptivity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>SD</td>
</tr>
<tr>
<td>European American</td>
<td>29.51</td>
<td>2.55</td>
</tr>
<tr>
<td>Passamaquoddy</td>
<td>30.23</td>
<td>3.83</td>
</tr>
</tbody>
</table>

In addition, correlations between mental health values and the dependent measures were computed to assess the adequacy of these measures as covariates (see Table 10).

Table 10. Correlations among dependent measures and covariates.

<table>
<thead>
<tr>
<th></th>
<th>Acceptability</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CBT</td>
<td>CST</td>
</tr>
<tr>
<td>Religiosity</td>
<td>.16</td>
<td>.18</td>
</tr>
<tr>
<td>Receptivity</td>
<td>.17</td>
<td>.22*</td>
</tr>
</tbody>
</table>

Note. Correlations are Pearson's correlations conducted with a two-tailed test. $p < .05$
DISCUSSION

It was hypothesized that the development of a culturally-sensitive cognitive behavioral therapy for panic disorder would be more acceptable in the culture for which it was modified in conjunction with factors related to cultural group membership. To test the assertion, the rationale of a well-established CBT for panic disorder was culturally adapted for use in the Passamaquoddy community of Indian Township, Maine, through the use of focus group methodology, in an effort to gain qualitatively rich information for the process of modification (phase 1). To examine concurrent and discriminant validity, the modified treatment description was compared to the standard treatment description, both within the community of origin and in comparison to a European American community (phase 2).

Furthermore, it was a goal of the current project to gain a deeper understanding of psychosocial factors likely to affect treatment acceptance. Thus, it was expected that community members' ratings of treatment acceptability would vary according to culturally significant variables. Specifically, level of acculturation and biculturalism were expected to interact with cultural group and form of treatment on treatment acceptability. Moreover, mental health values were expected to be related to cultural group and form of treatment.

Phase 1: Creating the Culturally-sensitive Treatment Description

As predicted, the focus group provided qualitatively rich information leading to the development of a culturally-modified treatment description based on a well-
established CBT for panic disorder. Overall, 3 themes emerged from the focus group data.

First, there are factors to consider, generally, in the transportation of psychological interventions to the Passamaquoddy community. The resulting sub-themes were somewhat reflective of the literature on non-specific factors in therapy (e.g., Asay & Lambert, 1999; Weinberger, 1995), which is consistent with the observation of Trimble and colleagues (1996) that common factors should be considered a starting point in working with AIAN clients. Furthermore, these sub-themes are consistent with the literature regarding psychological treatment with AIAN individuals in noting the importance of knowledge of the history of the community, and being mindful of a legacy of forced acculturation and cultural mistrust, which could negatively impact the therapeutic relationship (e.g., LaFromboise & Dixon, 1981; LaFromboise, Dauphinais, & Rowe, 1980; S. Sue, 1990; Trimble & Hayes, 1984). However, most of the empirical literature on AIAN client-therapist match has been conducted from the client perspective, which was limited in the focus group.

Furthermore, while many similarities were uncovered with the extant literature on clinical interventions with AIAN clients, the host community in the project is a unique cultural group, and thus, the emergent themes are likely reflective of some factors unique to individuals served by mental health services at the Indian Township Health Center. For instance, the importance of clinicians gaining knowledge of the unique history of the Passamaquoddy community at Indian Township was underscored during the discussion. In addition, religiosity/spirituality did not emerge in the discussion, which might have been expected in AIAN communities (Tyler & Suan, 1990). Overall, the focus group
provides preliminary evidence of convergent validity for some of the psychosocial factors reported in the literature on psychological treatment with AIAN populations.

Second, the theme of modifications to the CBT for panic disorder provided detailed information for the cultural modification task. For instance, culturally-relevant examples replaced some of the original examples (e.g., panic in response to threat of a lion was replaced with a bear). Similarly, La Marr and Abab (2003) adapted a substance abuse intervention for Pacific Coast American Indian adolescents through the use of culturally-relevant images for those individuals (e.g., a canoe journey). Furthermore, similar to Manson and Brenneman (1995), language was attended to by avoiding “scientific” words (e.g., “scientist”), and describing the treatment as “skill therapy.”

The importance of relationship factors was addressed by adding the following sentence at the beginning of the treatment description, “Mary and the therapist created a good relationship, and then she began to learn the skill therapy.” It is unknown whether past efforts at modifying CBT’s for AIAN communities incorporated relationship factors directly into the treatment description. However, Manson and Brenneman (1995) noted that the clinicians in their study were careful to work on therapeutic alliance factors with their clients.

In addition, the sub-theme of “story-telling” was incorporated by placing the treatment description in the context of a story about a woman. Prior cultural modifications of CBT’s were not uncovered that used a narrative approach for the treatment description. Overall, the resulting culturally-modified treatment description reflected both consistencies with empirical literature on the use of CBT in other AIAN
communities (e.g., La Marr and Abab, 2003; Manson and Brenneman, 1995; Trimble, 1992), and seemed to tap into the unique needs of Indian Township.

It is interesting that a third theme developed around the context of the focus group in the community. For instance, the discussion included only adults, and did not include children or elders from the community. Using focus group methodology in the current study facilitated the sharing of information in a contextual relational framework. This is consistent with the importance of relationship factors in the community that emerged as a sub-theme, and that have been reported in the literature on AIAN populations (e.g., Norton & Manson, 1996), as well as the general literature on cross-cultural psychotherapy (e.g., Helms & Cook, 1999; Sue, 2003). Overall, a culturally-relevant treatment description was developed in active collaboration with community members and with mental health professionals who serve the community.

The focus group was constructive in a number of additional ways. For example, the process and results of cultural modification used in the current project add to the literature. There have been past efforts at culturally modifying cognitive behavioral therapies for AIAN populations (e.g., La Marr and Abab, 2003; Manson and Brenneman, 1995; Trimble, 1992). These prior efforts adapted CBT treatments for depression in AIAN elders, and substance use prevention in AIAN adolescents. The current study adds to the literature by providing a systematic method for developing a culturally-modified CBT for panic disorder for an adult population in an Eastern tribe. There were no prior attempts at modifying a well-established treatment description for panic disorder (or any anxiety disorder) for an AIAN community uncovered in the literature. Thus, the current
project helps to fill a gap in the literature on provision of culturally-appropriate effective treatments in AIAN communities.

The use of a focus group as a component of integrating participatory research methodology in the treatment literature on AIAN mental health is rare in the literature, which is unfortunate as it provides a foundation of collaboration between researchers and community members, enabling cultural modification themes to emerge primarily from within the community served. Only one study was uncovered that used focus groups to aid in the adaptation process (La Marr & Abab, 2003). Thus, the current endeavor is an important attempt at overcoming a history of problematic relationships between AIAN American communities and researchers (Darou, Hum, & Kurtness, 1993), and attends to the call to adapt research questions and methodologies to the needs of AIAN communities (e.g., LaFromboise, 1998). Overall, the current project represents a successful endeavor to employ collaboration in the research process.

Finally, basing phase 1 of the current project at the IHS-funded mental health center that serves the community provides a bridge between research and staff development. For example, staff members participating in the focus group noted that by having the discussion they had become more mindful of issues that might be important to consider in treating their clients. Furthermore, the information gathered will be used for staff development purposes in the future.

In conclusion, phase 1 provided qualitative evidence that a CBT treatment description for panic disorder can be adapted to enhance its cross-cultural acceptability. In addition, the qualitative evidence provided convergent validity of factors predicted to need attention in the mental health treatment of AIAN populations. Furthermore, the
collaborative nature of the methodology helped to overcome negative research bias common in AIAN communities. Finally, phase 1 provided a dissemination bridge between research and the mental health center staff, with the potential for organizational change (Backer, Liberman & Kuehnel, 1986; Wilson, 1997).

**Phase 2: Factors Influencing Treatment Acceptability**

**Effects of Cultural Group on Treatment Acceptability**

Contrary to initial predictions, the two cultural groups differed in their evaluation of the treatment descriptions, but not in the manner expected, and did not differ in their ratings of acceptability of the treatments. Initially, it was expected that since the original treatment description was developed from a European American (EA) cultural foundation and the preponderance of research on cognitive behavioral therapy (CBT) has been conducted with EA individuals, the EA cultural group would report more positive ratings (Renfrey, 1992).

The current findings for acceptability of a CBT description for panic disorder are somewhat consistent with previous research, which has focused on treatments for agoraphobia and panic disorder. Prior studies found that agoraphobics and undergraduates rated CBT as an acceptable treatment (Norton, Allen & Hilton, 1983; Norton, Allen & Walker, 1985). In addition, Hecker, Fink and Fitzler (1993) found that family practice physicians rated CBT as an acceptable treatment. In the current study, a sample of adults from rural New England communities and a sample of Passamaquoddies rated CBT as an acceptable treatment for panic disorder.

Inconsistent with the findings for treatment acceptability, the two cultural groups evaluated the treatments differently. Individuals in the Passamaquoddy cultural group
evaluated both treatment descriptions more positively than their European American counterparts. And on closer examination of the dimensions of treatment evaluation, they rated the descriptions as more active and evaluated them more positively (e.g., the treatment is fast-acting and kind), but did not rate the potency of treatments more positively.

Why did individuals in the Passamaquoddy group evaluate the descriptions more positively and rate them as more active? One possibility might be related to prior experience with psychological interventions. The Passamaquoddy group had a higher proportion of individuals who had received previous treatment for substance-related disorders. Perhaps prior familiarity with psychological interventions predisposed this group favorably towards the current treatment descriptions. Although there was not an interaction between cultural group and previous treatment for a substance-related disorder, individuals living in the Passamaquoddy cultural group with a history of treatment for a psychological disorder besides anxiety, depression, or substance abuse (e.g., marital issues) rated the both treatments, as more acceptable. Whereas, for individuals living in a European American cultural group previous treatment did not make a difference in their preference. In addition, although type and location of substance-related treatment was not assessed, at the time of measurement, the substance abuse treatment program available through the Indian Township Health Center had a strong cognitive behavioral component. On the other hand, there were no differences in ratings for individuals with previous treatment for an anxiety disorder, which would likely be more similar to the current treatment descriptions. Perhaps this was due to measurement error in the assessment of previous treatment; 4 of the 10 individuals with
previous treatment of another psychological disorder wrote in an anxiety disorder (i.e., agoraphobia or PTSD). Further, 4 more did not write in the disorder for which they received previous treatment, leaving the possibility open that the treatment was for an anxiety-related issue.

Overall, it is possible that the Passamaquoddy community sampled is somewhat unique compared to other AIAN communities regarding positive attitude towards psychological interventions. In the literature, there is evidence that many AIAN communities have a negative bias towards psychological interventions (e.g., LaFromboise, 1998; Manson, 2000; Wells, Golding, Hough, & Burnam, 1988), although there is an indication that mental health service utilization in some reservation settings is on the rise (LaFromboise, Berman, & Sohi, 1994). However, the literature on AIAN mental health is almost exclusively represented by tribes outside the Eastern United States. Perhaps there is a cultural difference between Western and Eastern tribes reflected by the discrepancy between the current finding and extant literature.

Furthermore, the current treatment descriptions were developed based on a cognitive behavioral intervention for panic disorder. It has been previously observed in the literature that the process and techniques of CBT may be more culturally congruent with AIAN individuals than other interventions (e.g., Helms & Cook, 1999; LaFromboise, Trimble, & Mohatt; Renfrey, 1992; Tafoya, 1989). The current cultural group finding provides some preliminary evidence that this may be the case with a Passamaquoddy community. However, with the lack of empirical studies for comparison, and without replication of the finding, it remains inconclusive that the
Passamaquoddy community has a comparatively positive bias towards psychological treatment, and CBT in particular.

There was a disparity in cultural group findings on treatment evaluation and treatment acceptability. The correlations between the measures in the current study were moderately high (ranging from .61 to .69), which is consistent with previous studies demonstrating substantial correlations between these two measures in the .70 range (e.g., Hecker, Fink and Ftzler, 1997). Furthermore, the semantic differential construct has demonstrated validity cross-culturally (Osgood, May, & Miron, 1975; Osgood, Suci, & Tannebaum, 1957; Tzeng, Hoosain, & Osgood, 1987). One explanation could be that while the Passamaquoddy group may have higher evaluation based on the above-mentioned factors, they still did not find one treatment description more socially valid than the other.

Overall, it was unexpected that the two cultural groups would find psychological treatment equally acceptable, and that the Passamaquoddy group would evaluate psychological treatment more positively. Together, the findings suggest the possibility that the individuals in the Passamaquoddy group sample have a relatively positive predisposition to psychological treatment. Perhaps there was a selection bias, with individuals with positive biases towards psychological treatment more likely to participate in the study at the Indian Township Health Center.

**Preference for the CST**

Contrary to initial prediction, both groups found the CST more acceptable, more fast-acting, and evaluated it more positively. Furthermore, the finding was robust.
Although the preference for the CST cannot be understood conclusively, there are several considerations for why this might have been the case. Anecdotally, some participants in each cultural group reported that they could not differentiate between the two treatment descriptions, but others voiced a clear preference for one description over the other. Several factors were examined for their contribution to the preference for the CST including mental health values, previous treatment, participant gender, and cultural identification, and will be discussed below.

Receptivity to unconventional experiences and religiosity.

It was initially hypothesized that a difference in preference for the CST and CBT based on cultural group could be partially explained by mental health values. If the mental health values of religiosity and receptivity to unconventional experiences had accounted for some of the variance in the interaction between cultural group and treatment type, then the difference between groups on acceptability and evaluation would have been stronger. There was no evidence that the relationship between mental health values and acceptability or evaluation caused a significant difference between groups and treatment types in the expected direction.

However, the cultural group difference on treatment evaluation was marginally enhanced by the relationship between receptivity to unconventional experiences and treatment evaluation (ANCOVA estimated means for EA = 55.41 and NA = 59.15; ANOVA estimated means for EA = 55.41 and NA = 58.77). Passamaquoddies showed a trend toward being less likely to report that receptivity to unconventional experiences is associated with poor mental health, and that difference between cultural groups enhanced
the finding that Passamaquoddies evaluated the treatment descriptions more positively to a limited degree. However, this relationship is different from that originally predicted. In addition, because the difference between cultural groups in evaluation was substantial prior to inclusion of the covariate, it would be erroneous to speculate that receptivity to unconventional experiences mediates the relationship between cultural group and treatment evaluation.

Overall, in the absence of the initial interaction effect, and with such low F values, it was not expected that adding the covariates would lead to significance. It seems questionable whether using mental health values, and in particular religiosity, as covariates for treatment acceptability and evaluation would be warranted in future studies. Adequate covariates should be correlated with the dependent variables of interest (Miller & Chapman, 2001), and in the current study, the covariates and dependent variables had only one significant positive correlation, between receptivity to unconditional experiences and treatment acceptability of the CST.

Post Hoc analyses demonstrated that there was a tendency for Passamaquoddies to rate receptivity to unconventional experiences and religiosity more highly than their EA counterparts, although both groups, on average, rated receptivity to unconventional experiences in the range indicative of poor mental health. However, Passamaquoddies more frequently rated receptivity to unconventional experiences as not indicative of either good or poor mental health. Ratings of religiosity for both cultural groups were in the range indicative of good mental health, suggesting that both cultural groups associate religious commitment with good mental health.
The current findings are somewhat inconsistent with prior research. It was previously found that European Americans are more likely than Native Americans to endorse the value of receptivity to unconventional experiences as an indicator of poor mental health, and that Native Americans are more likely than European Americans to endorse the value of religiosity as an indicator of good mental health (Earle, 1998; Tyler & Suan, 1990). Perhaps there are cultural differences between Passamaquoddies and the Iroquois and Seneca individuals sampled by Earle (1998) and Tyler and Suan (1990) that could explain the discrepancy. For instance, these groups have vastly different historical experiences, which could be related to value differences (Berkhofer, 1978). Although, it is also possible that the discrepancy could be related to a lack of cross-cultural reliability of the MHVQ as the initial reliability ratings for religiosity and receptivity to unconventional experiences, .81 and .79, respectively, were examined in a pool of undergraduates enrolled in a psychology course.

In conclusion, it was found that Passamaquoddies may have some differences in mental health values compared to European Americans. In addition, there was little evidence for using mental health values to help explain the relationship between cultural group and treatment acceptability or evaluation, although it is possible that receptivity to unconventional experiences holds more promise as a covariate in future acceptability research than does religiosity. Overall, the current findings regarding mental health values add to the growing body of empirical support for the existence of value differences between AIAN and European American groups. Although the current study does not provide a clear relationship between cultural group, mental health values, and treatment acceptability, it is reasonable to expect that value differences could effect treatment
outcome, if not by way of treatment acceptability. For instance, a difference in the value of receptivity to unconventional experiences has the potential to lead to diagnostic errors (LaFromboise, Berman, & Sohi, 1994).

**Previous treatment.**

In the current study, previous treatment affected the relationship between cultural group and treatment type. Individuals living in a European American cultural group without a history of treatment favored the CST, whereas individuals living in a Passamaquoddy cultural group with a history of treatment preferred the CST (see Figures 3 and 5). Perhaps there was a lack of social validity in previous therapy experiences for the Passamaquoddis that was not present for their European American counterparts. Thus, modifying the CBT increased the social validity of the intervention for these individuals. Conversely, the European Americans found their prior therapy experience socially valid, and thus did not rate the CST as more acceptable (and even rated it as slightly less acceptable). However, those European Americans who had not been previously socialized into therapy preferred a less technical explanation, with a personal flair. If replicated, this finding might suggest the necessity of tailoring treatment descriptions to cultural background and previous experience in therapy.

**Gender and preference for the CST.**

Post hoc analyses revealed that the women preferred the CST while men had no preference. A brief review of the limited empirical literature regarding treatment preference and gender suggests that there may be a need to adapt treatment based on gender. For instance, in the area of treatment for alcohol-related problems, women are more likely than men to profit from self-help workbooks based on a cognitive behavioral
foundation (e.g., Sanchez-Craig, Davila & Cooper, 1996). In addition, there is a growing body of literature supporting the notion that there are gender differences in the process of change, which could be relevant to the finding that women preferred the CST. For instance, in the area of smoking cessation, there is evidence that women rely more than men on supportive, helping relationships (e.g., Glasgow, Hollis, Ary & Lando, 1990). Thus, it could be that the effort at integrating relationship factors into the CST could have positively predisposed women's preference.

In addition, it is possible that women preferred the CST due to its development as a narrative based on a female character. It is unknown whether there is any systematic attempt in the creation of anxiety disorder treatment manuals or self-help literature to provide case examples somewhat balanced for gender. There was no literature uncovered that could provide any convergent empirical evidence that gender in treatment descriptions effects treatment acceptability. However, it is possible that women were better able to identify with the woman in the story, due to the gender match, which might explain their higher acceptability ratings.

In conclusion, how treatment for PD is described to women may have important treatment implications. Given the findings from the current study, there may be an empirical basis for considering gender in case illustrations, and possibly specialized interventions, more systematically. However, researchers and clinicians must be cautious about assuming that men and women are different in their treatment preference based on the current results. It will be important to directly test whether these differences exist using a priori hypotheses.
Cultural Identification

Contrary to initial predictions, there was not a preference for treatment based on cultural identification. Rather, individuals with EA or bicultural identification found both treatment descriptions the most acceptable compared to individuals with NA identification or individuals without a strong sense of identification with either culture (i.e., marginalized). This pattern is similar to that expected in response to the CBT, and is somewhat consistent with previous literature regarding AIAN receptivity to mental health services (e.g., LaFromboise, Trimble, & Mohatt, 1990). Whereas these authors reported that bicultural or nontraditional AIAN clients are more receptive to mental health services, the current study extends the findings by including evidence that individuals with Native American or low or no primary identification find CBT or culturally-modified CBT less acceptable.

The finding regarding high acceptability of both the CST and CBT for bicultural individuals has important implications. There is a growing body of evidence that bicultural competence may be related to psychological well-being in AIAN and other populations (e.g., LaFromboise, Coleman, & Gerton, 1993). Thus, perhaps the bicultural, compared to the Native American or marginalized, individuals are more open to seeking help from either European American or Passamaquoddy cultural perspectives, thus increasing their pool of available healing resources. Conversely, the lower ratings of treatment acceptability by the Native American and marginalized individuals suggest that improvements could be made to the treatment description that would enhance its acceptability. For instance, it is possible that a cognitive behavioral approach integrating American Indian values and existing problem-solving mechanisms into the therapy
process might enhance acceptability for individuals with higher levels of American Indian identification (LaFromboise, Trimble & Mohatt, 1998).

However, there was a different pattern of relationship between cultural identification and treatment evaluation. Although the lowest evaluation was given by individuals with Native American identification and the highest evaluation was given by individuals with European American identification, these differences were not significant. Overall, this disparity suggests that differences in cultural identification affect social validity of psychological treatment, but not general evaluation.

An important consideration regarding the significant findings for cultural identification is that of gender. Upon closer examination of the demographic characteristics of the Passamaquoddy sample, it was observed that all of the individuals with European American cultural identification were female. The absence of men in the European American identification category made testing the interaction between gender and cultural identification impossible in the current study. However, as a method to gain more understanding of the potential confound of cultural identification and gender, the cultural identification analysis was re-computed looking only at women in the Passamaquoddy group. While cultural identification made a difference on acceptability looking at both genders, the effect was no longer significant looking only at the women (at $p = .07$). This could be a weak indication that the effect of cultural identification on treatment acceptability can not be adequately explained by gender. Furthermore, there is no previous empirical evidence uncovered in the literature supporting a connection between gender, cultural identification, and treatment acceptability, which would provide convergent evidence for such a relationship.
Community Acceptability

An item was added to the TEI for the current project as a gross indicator of community acceptability, which was expected to be an important value in the Passamaquoddy group where cultural preservation is a frequent consideration. The Passamaquoddy group rated the CST as more acceptable for their community compared to the CBT. In addition, their EA counterparts did not find one type of treatment more acceptable for their community. However, there were no differences in community acceptability within the Passamaquoddy group based on cultural identification, which was unexpected. Overall, there is some evidence that acceptability at the community level is more of a consideration in the Passamaquoddy group than in the European American group.

Summary

Cultural group alone was not a good predictor of differential preference for a standard treatment description of CBT and a culturally-modified version of the same description. The current findings for acceptability and evaluation of a description of a CBT for panic disorder are consistent with previous research. The unexpected finding that Passamaquoddies evaluated the CBT and CST more positively and rated them as more active treatments is curious. This finding could be reflective of a relationship between previous experience with psychological interventions, or cultural congruence of CBT processes and techniques, and positive attitude towards psychological interventions.
While cultural group alone was not a good predictor of treatment preference, its relationship to other variables leads to a difference in treatment preference. First, Passamaquoddies may have some differences in mental health values compared to European Americans. However, there was little evidence for using mental health values to help explain the relationship between cultural group and treatment acceptability or evaluation, although it is possible that receptivity to unconventional experiences holds more promise as a covariate in future acceptability research than does religiosity.

Second, there was a complex relationship between cultural group, previous treatment, and treatment preference, such that individuals living in a European American cultural group without a history of treatment favored the CST, whereas individuals living in a Passamaquoddy cultural group with a history of treatment preferred the CST. Third, women preferred the CST, while men did not have a preference. Fourth, within the Native American group, cultural identification was related to treatment preference such that bicultural or European American identifying individuals, compared to the Native American or marginalized, individuals found both the CBT and CST more acceptable. Fifth, the Passamaquoddy group found the CST more acceptable for their community compared to the CBT, whereas their EA counterparts did not find one type of treatment more acceptable for their community. Overall, how a treatment is described affects its acceptability in complex ways, taking into account cultural variables, gender, and previous treatment, which has important implications for clinical work.
Limitations

There were several limitations evident in phase 1 of the current project. First, the focus group was created in the context of a dissertation research project. It is likely that the attendance and responses would differ for a focus group was framed in a different context (e.g., program development, community satisfaction campaign).

More generally, in qualitative studies strong opinions and loud voices may outweigh others. Thus, different themes may have emerged with different group members, especially if potential power differences (e.g., different occupational roles) had been considered when determining group membership. In addition, sample sizes are limited because the coding and analytic procedures are labor intensive. Only one focus group was conducted and therefore only a limited sample of community individuals participated in the development of themes for cultural modification. Whose voice was not heard? All participants in the focus group were professionals or support staff of the Health Center or community professionals. There were no young people or elders represented. Also, there were no community members with a history of panic attacks/panic disorder to speak from their experience.

Furthermore, while it did not emerge as a prominent sub-theme during the focus group, in light of the gender findings from phase 2 of the current project, it is interesting that the focus group included 8 women and 2 men. Perhaps more careful attention to balancing gender among focus group participants would have diminished the gap between men and women that occurred during phase 2. Certainly, adding a more representative sample of community members to the focus group, and perhaps increasing
the number of focus groups completed would have increased the reliability, validity, and
generalizability of the current results.

Finally, bicultural or European American identified individuals in the
Passamaquoddy group found both treatment descriptions more acceptable than the
individuals with Native American identification or little to no primary identification.
Thus, the current focus group likely did not tap into themes or sub-themes that would be
relevant for the adaptation of CBT for PD for these sub-groups.

There were several limitations of phase 2, as well. For instance, it is possible that
order effects influenced the repeated measure findings. Although the main effect of order
presentation on treatment acceptability was not significant, given the \( \eta_p^2 < .001 \), it is
possible that a Type II error occurred. It is interesting that the 3-way interaction (cultural
group X order presentation X treatment rationale type) was significant on treatment
acceptability, \( F(1, 88) = 4.63, p = .03, \eta_p^2 = .05 \), such that Native Americans who heard
the CBT first rated the CST more positively than the CBT, and European Americans who
heard the CST first rated the CST more positively than the CBT. There was no
theoretical rationale to hypothesize this effect a priori. Therefore, without replication, it
is likely a spurious finding.

In addition, the current sampling of European Americans and Passamaquoddy has some limitations. The groups were not equivalent in several areas. First, the
European American group had more formal education, and higher annual household
incomes, on average. In addition, the European American group had a higher incidence
of panic disorder. While these factors limit the conclusions possible from the current
results, and limit the generalizability of the findings, it would have been difficult to
control for such differences. Due to the limited size of the Passamaquoddy population from which to sample, it would have been a challenge to match the two groups evenly on such potentially confounding factors.

**Conclusion and Future Directions**

In the area of anxiety disorder intervention and treatment outcome there has been little attention to the potential impact of culturally-relevant factors. Given the need for effective interventions in AIAN communities, and the barriers to treatment use common among AIAN individuals, increasing the acceptability of interventions is important. The current study is likely the first to assess an aspect of social validity and culturally-relevant factors of a cognitive behavioral intervention for panic disorder in an AIAN community.

While research focusing on treatment development and understanding basic processes continues to accrue, measurement of aspects of social validity is infrequent in the literature, which is problematic for a number of reasons. As part of a larger issue of social validity and treatment viability, considering the acceptability of treatments is particularly important as efficacious interventions are transported to community settings, especially settings with diverse populations (Foster & Mash, 1999). For instance, if research on treatment acceptability continues to accrue, researchers, practitioners, program developers, and psychological consultants can be better prepared to handle treatment rejections during or after treatment. Thus, the current project fills a gap in the literature reporting social validity of cognitive behavioral interventions more generally.

The current project could be used as a springboard for research in a number of directions. For instance, given the sampling limitations in phase 1, the refinement of
themes and sub-themes would benefit from the inclusion of a larger pool of community members, such as individuals in treatment for panic disorder.

Furthermore, at the end of phase I, many similarities remained between the standard and modified versions, partly due to its basis in a cognitive behavioral conceptualization of psychopathology and psychological treatment. During the focus group, one member expressed a "wish" for interventions with a foundation in Passamaquoddy culture, which is consistent with recent literature on AIAN mental health service provision on a broader scale (Gone, 2004). Perhaps future research could provide a forum for discussing potential interventions founded in Passamaquoddy culture.

Complications could arise regarding psychologists' obligation to practice within their realm of competence (American Psychological Association, 2002), which is fundamentally trained from a foundation not based in AIAN culture. Manson and Brenneman (1995) argued that their modification provided the opportunity to find commonalities between social learning theory and constructive thinking based on indigenous philosophies to create an overlapping system of coping with and adaptation to chronic illness. Future research with the Passamaquoddy and other AIAN communities could include focused discussions on potential areas of overlap between cognitive behavioral therapy and Passamaquoddy philosophies regarding health, coping, and treating distress. Information gained from such discussions could be used for multiple purposes, such as a springboard for treatment outcome research, program development at mental health centers in Indian Country, and the training of clinical psychologists. Furthermore, it is likely that providing training opportunities for clinical psychologists
and trainees in AIAN communities could provide important instruction on cross-cultural issues in psychological treatment research.

Phase 2 also provides a foundation for future directions in research. There is a limited body of empirical treatment research with AIAN samples. Given the current findings, future research using experimental and quasi-experimental designs to compare the acceptability of treatment descriptions based on different models of therapy would help shed light on the possibility that CBT is consistent with the values and preferences of some AIAN populations. In addition, future studies might look at the influence of previous therapy experience on evaluation of psychological interventions in AIAN populations.

Further empirical examinations of the relations among factors that could be relevant for service utilization and positive treatment outcome among various AIAN groups (e.g. value differences and cultural identification) may help with the culturally-appropriate adaptation and dissemination of efficacious interventions. For instance, it remains unknown whether a culturally-modified panic disorder intervention would be more effective than the current well-established treatment. Given that the few studies uncovered examining outcome variables for CBT modified for AIAN populations did not compare the modified versions to established versions, a follow up study comparing outcomes of a standard and modified version of CBT for panic disorder would help elucidate cross-cultural causal mechanisms of positive outcome.

Finally, there is a paucity of psychological research conducted with tribes in the Eastern United States. Thus, focusing efforts on these populations will help to further an understanding of similarities and differences among AIAN populations.
Given the unexpected finding that women preferred the CST, future research investigating gender differences in treatment acceptability are warranted. Panic disorder without agoraphobia is diagnosed twice as often in women than men, and panic disorder with agoraphobia is diagnosed three times as often (APA, 2000). Thus it is warranted to attend to issues that may enhance the effectiveness of treatments for women. Overall, given that individual difference factors seemed to effect treatment preference, future research geared towards understanding factors influencing treatment acceptability of CBT for panic disorder would be warranted to understand how to best adapt treatment descriptions to maximize their acceptance. Perhaps such research could help enhance the effectiveness of efficacious interventions, more generally.
REFERENCES


*Clinical Psychology Review, 12,* 121-139.


Appendix A

Criteria for Empirically-Validated Treatments

Well-Established Treatments

I. At least two good between group design experiments demonstrating efficacy in one or more of the following ways:

A. Superior (statistically significantly so) to pill or psychological placebo or to another treatment.

B. Equivalent to an already established treatment in experiments with adequate sample sizes.

OR

II. A large series of single case design experiments (n > 9) demonstrating efficacy. These experiments must have:

A. Used good experimental designs and

B. Compared the intervention to another treatment as in IA.

III. Experiments must be conducted with treatment manuals.

IV. Characteristics of the client samples must be clearly specified.

V. Effects must have been demonstrated by at least two different investigators or investigating teams.
**Probably Efficacious Treatments**

I. Two experiments showing the treatment is superior (statistically significantly so) to a waiting-list control group.

OR

II. One or more experiments meeting the Well-Established Treatment Criteria IA or IB, III, and IV, but not V.

OR

III. A small series of single case design experiments (n >3) otherwise meeting Well-Established Treatment
Appendix B

Focus Group Questions

1) What are you hearing people in this community say about psychological treatment?

2) What has been your greatest disappointment with standard psychological treatments?

3) Let’s talk about the needs of the people in this community and the way that standard psychological interventions have met those needs. What cultural needs are being overlooked by standard interventions that should be addressed?

4) In recent years, there has been increasing concern that scientifically supported psychological interventions do not take into consideration cultural factors. Therapists and clients are concerned that they may not be getting culturally appropriate treatments from the scientific community. What should be done to make treatments more acceptable to therapists and clients?

5) How can this community benefit from scientific evidence?

6) Look at this treatment rationale for panic. It has a lot of scientific support for its effectiveness, but none of those studies looked at cultural factors. What cultural factors need to be considered in this treatment rationale to make it more acceptable in this community?

7) Can you tell me five good things about this treatment, no matter how small they might be?

8) If someone handed you this treatment rationale, what kind of changes would you make for this community?
9) What would it take for this treatment to earn a gold star for cultural appropriateness?

10) If you were going to try to convince someone in this community with Panic problems to use this treatment approach, what would you say?

11) Think about all that we have talked about today. What do you think is the most important cultural factor that needs to be considered in this rationale for treatment?

12) Have we missed anything?
Appendix C

Transcript of Cognitive Behavioral Therapy for Panic Disorder

Cognitive behavioral therapy (CBT) of Panic Disorder (PD) has been developed by clinical researchers and has been tested, by itself and with other methods, in clinics and research laboratories around the world. Research reports document that cognitive behavioral therapy can be a powerful and effective treatment for panic disorder. The cognitive behavior therapy that will be described was created from that research.

The therapy has four very important parts. First, we will begin with a description of panic and anxiety from a cognitive behavioral perspective. That way, you can increase your understanding of the nature of panic disorder. And also, you will have a foundation so that you can understand what a client’s role would be in the treatment of panic disorder. Finally, once you have been provided with a description, you will see that there is hope for people who panic to gain control of their problem. The second part of the treatment focuses on the behaviors associated with anxiety that contribute to panic attacks. For instance, people with panic attacks often are very tense when they are in situations where they are afraid they are going to panic. So, the second part of the treatment involves training panickers how to relax when they need to. The third part of the treatment is also very important. It focuses on the thoughts that panickers have that contribute to their rising anxiety. For instance, if someone thinks, “I’ll probably have a heart attack and die if I have panic attack” they are going to get more anxious. So, if the person can challenge those kinds of thoughts with good evidence, like panic attacks are not associated with heart attacks. Finally, the fourth part is very important, although some people find it the most difficult. It involves having the person apply the skills that
they have learned in real life situations. That way, they can prove to themselves that they really work.

Now, I am going to describe each part in more detail so that you will hopefully get a really clear picture of how cognitive behavior therapy for panic disorder works, and what are the important parts of the therapy.

So, the first part is the treatment rationale. First and foremost, it is important to know that this treatment is designed to help people gain control over their anxiety, but the goal is not to completely get rid of anxiety. Anxiety is a natural human emotion and it is not a bad thing. Imagine what would have happened to our ancestors if a wild animal attacked them and they never panicked? They probably would have been eaten. Anxiety is problem when it starts to really interfere with our lives. For instance, if we avoid doing certain things because we are afraid to get anxious and panic. When anxiety is at its most extreme, we call it panic, and panic often strikes out of the blue or with no apparent warning. It is as if the person is literally attacked by panic; that’s why they are called panic attacks. Panic is natural reaction to extreme threat, like an alarm reaction. The alarm goes off in a life-threatening situation. Sometimes people experience this alarm when there is no real threat. It is as if the alarm was accidentally turned on. The panic is just as strong, and many people assume that they are in danger. They search for the reason that they are in danger, and since there is usually nothing going on outside of them that is threatening, they may decide that the danger is something inside of them. Like I said before, it is not uncommon for people who have panic attacks to think that are going to have a heart attack or that they are going crazy. Luckily, not everyone who ever has a panic attack gets panic disorder. When a person has panic attacks frequently, or is really
afraid of having another one and thinks that they could happen any time, then we refer to the problem as panic disorder.

Another important thing about how panic problems get maintained is anxiety in anticipation of another panic attack. When we anticipate some danger, it is natural for us to experience some anxiety. Unfortunately, someone with panic disorder can experience this anxiety, which can then lead to an actual panic attack. You see, when a person is anxious, it causes some of the same physical sensations that occur in a panic attack. And these sensations are seen as signs that the next attack is about to happen. Since the person with panic disorder has interpreted the attack as a very dangerous thing that must be avoided, this causes extreme anxiety, which can result in a panic attack.

We see panic attacks as being the result of the interaction between physical sensation of anxiety and the thoughts that people have about those sensations. The panic attack starts with some trigger, which sets the process in motion. The trigger can be something in the environment that is perceived as threatening. Sometimes, however, the trigger is something that comes from inside the person, like an image or a physical sensation. We believe that whether or not the trigger is internal or external, people who experience panic attacks perceive it as threatening. There are some natural physical sensations that are part of anxiety. These are usually an increase in heart rate, muscle tension, and sweating. The next step in the panic cycle is for the person to interpret the physical sensation in some catastrophic way. So, this kind of thinking is naturally seen as threatening, which leads to greater anxiety, which makes the physical sensations get worse, which is thought of as evidence that the catastrophic thinking is true, and so on.
The various treatment techniques that we use in therapy are designed to break down this cycle. I am going to describe these different parts of treatment next, and talk about how they would be useful in breaking down this cycle of thoughts and feelings.

The first skill that we usually teach people is how to relax. It is important to realize that relaxation is an actual skill that people learn. That way, people can apply it in managing their anxiety. Learning how to put yourself into a deeply relaxed state can be very helpful in managing anxiety and controlling panic attacks.

Think about the panic cycle to see how using relaxation can work. The panic cycle begins with a trigger. Maybe the trigger is some physical sensation. These sensations are often associated with anxiety. By learning to relax, a panicker can decrease the physical sensations that trigger a panic. So, relaxation can interfere with the process where it starts.

A second way that learning to relax can interrupt the panic cycle of thoughts and feelings is with the body sensations. What I mean is, that body sensations that occur when we begin to feel apprehensive can be managed using the relaxation procedure. Once the panicker learns how to control these sensations, it will not longer make sense to view them as dangerous. Therefore, they will be less likely to think of them as being some horrible catastrophe.

Relaxation training involves learning how to tense and then relax all of the major muscle groups throughout a person’s body, like the calf muscles, the legs, the arms and the shoulders. The reason that a person first tenses the muscles and then relaxes them is so they learn how to distinguish tension from relaxation. Achieving a state of deep relaxation is a skill that anyone can learn with practice. And just like any other skill, it
takes practice to master it. With more practice, a person can become more aware of the
tension in their body. Then they can learn to recognize it earlier and be able to relax it
away.

The next skill that people need to learn involving focusing on thinking. As I
already stated, in this cognitive behavior model, thinking plays a central role in
generating panic attacks. First, the person believes that either something inside of them
or outside of them is a threat to their safety or even their life. Then, this belief causes the
person to be apprehensive, and that leads to a whole other set of body sensations. For
instance, if someone feels their heart rate speed up after standing up and thinks “oh my
god, what if I have a heart attack!” This belief can cause their heart to speed up even
more, and maybe their muscle tense up, too. So, with this new threat they are even more
likely to panic.

The second place in the cycle where thoughts play a really important role is with
the body sensations. If a person if feeling apprehensive and they experience some
sensation in their body, how they interpret that sensation influences whether or not they
panic. If the new sensations are seen as further evidence of a threat than the person is
more likely to panic. On the other hand, if these sensations are interpreted in a more
neutral fashion, then it is unlikely that the person would panic.

In therapy for panic disorder, people learn how to identify the thoughts that they
have that make their anxiety worse. They also look at how realistic those thoughts are
and look at alternative ways of interpreting the same sensations. We know from our
work with anxious clients that many of these thoughts are based on faulty logic and that
when people are anxious they tend to concentrate on the worst possible interpretations.
So, the therapy involves examining those thoughts so that the person can discover the logical errors that result from catastrophic interpretations. Then the person learns to generate alternative ways to view body sensations and the triggers that initiate the panic cycle. It is helpful to view the thoughts that are central to panic as guesses about the best way to interpret situations or physical sensations. Sometimes guesses are wrong. In therapy, people try to find the guesses that are most accurate and that reduce, rather than make worse, anxiety. The therapist and the client work together like two scientists. They design experiments to test different guesses to see how well they match up with the available data.

Let me illustrate with a simple example. Let’s say that when you feel warm and flushed, you see this as the first sign that you will have a panic attack. The warm feeling is the trigger in this example. The thought that you will have a panic attack is your guess about why you feel flushed — “I feel warm, therefore I must be about to have a panic attack.” This interpretation may make sense because of past experience with panic attacks. However, there are alternative explanations. It is quite possible that you feel warm because it is hot and stuffy in this room. If there was another person in the room who said that they also feel warm and flushed, you might have an alternative explanation for your feeling. The alternative is less threatening than the thought that you are going to have a panic attack. The new thought might be, “This person is also warm and looks flushed, therefore it must be hot in this room.” By coming up with a less threatening alternative, you have interfered with the process that leads to a panic attack.

The last part of cognitive behavioral treatment for panic disorder follows from the other skills that the person learns. The panicker learns relaxation techniques and
cognitive strategies, and then moves on this last part. This component of treatment, although challenging for many clients, has been shown to be a highly effective method of treating panic disorder. The goal of this part of treatment is for the person to relearn that the sensations they feel are not dangerous. This is done by actually creating the sensations in the therapy session. By repeatedly creating these sensations, the person learns through experience that they are not dangerous.

The person will likely experience some anxiety when those physical sensations are created, based on their past learning. Having some anxiety in session gives the opportunity to practice coping with anxiety by using the relaxation procedures and cognitive strategies that I already talked about. The therapist remains with the client to assist them and helping them to fine tune the skills they have learned. Learning to manage anxiety without panicking during the therapy session, will help the person learn how to manage anxiety in the real world. Also, when the person creates and then controls the sensations of a panic attack, these feelings become far less mysterious than they once were, and the person learns how these sensations are under their control.

Some of the physical sensations that people practice in therapy sessions are breathing very rapidly for two minutes, which tends to produce the sensations of a panic attack in most people.

So, to summarize what you have learned about cognitive behavioral treatment for panic disorder. First, the panicker learns the cognitive behavioral rationale of panic, which involves the cycle between thoughts and sensations that lead to a panic attack. Then the person learns how to relax, so that they can apply that skill to break the cycle. After that, they learn cognitive strategies to change the catastrophic thoughts that
contribute to the panic cycle. And finally, they apply what they have learned in real situations by creating physical sensations associated with panic and using the relaxation procedure and cognitive strategies to break the cycle.
Appendix D

Outline of Cognitive Behavioral Therapy for Panic Disorder

- Cognitive behavioral therapy (CBT) of Panic Disorder (PD) has been developed by clinical researchers and has been tested, by itself and with other methods, in clinics and research laboratories around the world.
- Research reports document that cognitive behavioral therapy can be a powerful and effective treatment for panic disorder.
- The cognitive behavior therapy that will be described was created from that research.
- The therapy has four very important parts:

1. Treatment Rationale
   - This treatment is from a cognitive behavioral perspective
   - This treatment helps people gain control over their anxiety
   - Anxiety is a natural human emotion and it is not a bad thing
   - Anxiety is problem when it starts to really interfere with our lives
   - Panic is anxiety is at its most extreme, and often strikes out of the blue
   - Panic is natural reaction to extreme threat, like an alarm reaction
   - Panic disorder occurs when a person has panic attacks frequently, or is really afraid of having another one and thinks that they could happen any time
   - Panic problems get maintained by anxiety in anticipation of another panic attack
Anxiety causes some of the same physical sensations that occur in a panic attack (e.g. muscle tension and increased heart rate) that are seen as signs that the next attack is about to happen. Since the person with panic disorder has interpreted the attack as a very dangerous thing that must be avoided, this causes extreme anxiety, which can result in a panic attack.

Panic attacks are a result of the interaction between physical sensation of anxiety and the thoughts that people have about those sensations.

The panic attack starts with some trigger (internal or external), which people who experience panic attacks perceive as threatening.

The treatment techniques are designed to break down this cycle.

2. Relaxation Training

The second part of the treatment focuses on the behaviors associated with anxiety that contribute to panic attacks.

Relaxation is a skill that can be learned, practiced, and mastered.

Learning to deeply relax can be very helpful in managing anxiety and controlling panic attacks.

By learning to relax, a panicker can decrease the physical sensations that trigger a panic.

Relaxation can interfere with the process where it starts.

Also, once the panicker learns how to control these sensations, it will not longer make sense to view them as dangerous.
Relaxation training involves learning how to tense and then relax all of the major muscle groups.

The reason that a person first tenses the muscles and then relaxes them is so they learn how to distinguish tension from relaxation.

3. Cognitive Strategies

- Thinking plays a central role in generating panic attacks.
- People learn how to identify the thoughts that they have that make their anxiety worse.
- Beliefs about panic cause the person to be apprehensive, which leads to other body sensations.
- New sensations are seen as further evidence of a threat and the person is more likely to panic.
- Clients look at how realistic their thoughts are and look at alternative ways of interpreting the same sensations.
- Panickers often have faulty logic about body sensations.
- When people are anxious, they tend to concentrate on the worst possible interpretations.
- The therapy involves examining those thoughts so that the person can discover the logical errors that result from catastrophic interpretations.
- Then the person learns to generate alternative ways to view body sensations and the triggers that initiate the panic cycle.
- In therapy, people try to find the guesses that are most accurate and that reduce, rather than make worse, anxiety.
- The therapist and the client work together like two scientists. They design experiments to test different guesses to see how well they match up with the available data

4. Exposure to Body Sensations

- Exposure follows from the other skills that the person learns
- This component of treatment, although challenging for many clients, has been shown to be a highly effective method of treating panic disorder
- The goal to relearn that the sensations they feel are not dangerous
- The sensations are created in the therapy session repeatedly
- The person learns through experience that the sensations are not dangerous
- Having some anxiety in session gives the opportunity to practice coping with anxiety by using the relaxation procedures and cognitive strategies
- The therapist remains with the client to assist them and helping them to fine tune the skills they have learned
- Learning to manage anxiety without panicking during the therapy session, will help the person learn how to manage anxiety in the real world
- When the person creates and then controls the sensations of a panic attack, these feelings become far less mysterious than they once were, and the person learns how these sensations are under their control
Breathing rapidly for two minutes, which tends to produce the sensations of a panic attack in most people, is a common technique
Appendix E

Treatment Evaluation Inventory

Please complete the items listed below. The items should be completed by placing a checkmark on the line under the question that best indicates how you feel about the treatment. Please read the items very carefully because a checkmark accidentally placed on one space rather than another may not represent the meaning you intended.

1. How acceptable do you find this treatment for the person’s problem behavior?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Moderately acceptable</th>
<th>Very acceptable</th>
</tr>
</thead>
</table>

2. How willing would you be to carry out this procedure yourself if you had to change the person’s problems?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Moderately willing</th>
<th>Very willing</th>
</tr>
</thead>
</table>

3. How suitable is this procedure for people who might have other behavioral problems than those described for this person?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Moderately suitable</th>
<th>Very suitable</th>
</tr>
</thead>
</table>

4. If people had to be assigned to treatment without their consent, how bad would it be to give them this treatment?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Moderately bad</th>
<th>Very bad</th>
</tr>
</thead>
</table>

5. How cruel or unfair do you find this treatment?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Moderately cruel</th>
<th>Very cruel</th>
</tr>
</thead>
</table>
6. Would it be acceptable to apply this procedure to institutionalized people, the mentally retarded, or other individuals who are not given an opportunity to choose treatments for themselves?

Not at all _______  moderately _______  very acceptable _______
Acceptable to acceptable to apply this procedure
Apply this procedure

7. How consistent is this treatment with common sense or everyday notions about what treatment should be?

very different _______  moderately _______  very consistent _______
or inconsistent _______  consistent _______  with everyday notions

8. To what extent does this procedure treat the person humanely?

does not treat _______  treats them _______  treats them _______
humanely at all  moderately humanely  very humanely

9. To what extent do you think there might be some risks in undergoing this kind of treatment?

lots of risks _______  some risks _______  no risks are likely _______
are likely _______  are likely _______  likely _______

10. How much do you like the procedures used in this treatment?

do not like _______  moderately _______  like them _______
them at all  like them  very much

11. How effective is this treatment likely to be?

Not at all _______  moderately _______  very effective _______
Effective _______  effective _______  effective _______
12. How likely is this treatment to make permanent improvements in the person?

unlikely _______ moderately _______ very likely _______

13. To what extent are undesirable side effects likely to result from this treatment?

many _______ some _______ no undesirable side effects likely
undesirable side effects _______ would occur

14. How much discomfort is the person likely to experience during the course of treatment?

very much _______ moderate _______ no discomfort _______
discomfort _______ discomfort at all

15. How suitable is this treatment for the community in which you live?

Not at all _______ moderately _______ very suitable _______
Suitable _______ suitable _______ suitable

16. Overall, what is your general reaction to this form of treatment?

very negative _______ ambivalent _______ very positive _______
Appendix F

Semantic Differential Scale

Below you will find opposite adjectives that could be used to describe the treatment description. The items should be completed by placing a checkmark on the line towards that best indicates how you feel about the treatment. Please make your best judgment about what the treatment description means to you. Please read the items very carefully because a checkmark accidentally placed on one space rather than another may not represent the meaning you intended.

<table>
<thead>
<tr>
<th>Psychological Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast</td>
</tr>
<tr>
<td>Passive</td>
</tr>
<tr>
<td>Strong</td>
</tr>
<tr>
<td>Light</td>
</tr>
<tr>
<td>Deep</td>
</tr>
<tr>
<td>Bad</td>
</tr>
<tr>
<td>Wise</td>
</tr>
<tr>
<td>Kind</td>
</tr>
<tr>
<td>Unpleasant</td>
</tr>
<tr>
<td>Honest</td>
</tr>
<tr>
<td>Fair</td>
</tr>
</tbody>
</table>
Appendix G

Mental Health Values Questionnaire

This test measures what people think is important for good mental health. Different people have different ideas about what it means to be mentally and emotionally healthy.

The following statements tell something about a person. Read each statement carefully. Then decide whether the statement means that the person has good mental health or poor mental health.

To the left of each statement is a blank in which you are to record your answer for that statement. For each statement, place a 1 in the blank if the statement indicates very poor mental health. Place a 5 in the blank if the statement indicates very good mental health. If you think the statement falls somewhere in between, place either 2, 3, or 4 according to this guide:

1 = Very poor mental health
2 = Poor mental health
3 = Neutral, statement is not related to mental health
4 = Good mental health
5 = Very good mental health

Enter only one number for each question. Try to answer every question.

___ 1. The person never becomes violent.
___ 2. The person can be trusted.
___ 3. The person has visions.
___ 4. The person likes everyone.
___ 5. The person is very even-tempered.
___ 6. The person believes in God.
___ 7. The person works well with others.
___ 8. The person discusses all of his problems with others.
___ 9. The person doesn’t get along with others very well.
10. The person can communicate with the spirits of the dead.
11. The person seldom gets upset.
12. The person enjoys his or her family.
13. The person is loving.
14. The person does not smile.
15. The person seldom complains about anything.
16. The person makes decisions without consulting others.
17. The person doesn’t think about other’s needs much.
18. The person rarely believes his/her ideas are best.
19. The person has a professional career.
20. The person seldom tells the truth.
21. The person is seldom depressed.
22. The person hears things that others do not hear.
23. The person gets along with others.
24. The person is very religious.
25. The person’s physical health is good.
26. The person thinks life has little meaning.
27. The person is cheerful.
28. The person feels that he/she has special powers to influence others.
29. The person shows consideration of others.
30. The person does not like to live alone.
31. The person is willing to help others.
32. The person believes him/her self to be an agent of God.
33. The person cannot be trusted.
34. The person feels that people can change drastically from day to day.
35. The person is poetic.
36. The person knows his or her own capabilities.
37. The person always keeps his or her cool.
38. The person does not believe in God.
39. The person is usually a leader.
40. The person had very high grades in school.
41. The person experiences the world differently from other people.
42. The person has had a lot of education.
43. The person treats others badly.
44. The person swears.
45. The person is not polite.
46. The person's life is very active.
47. The person is bored most of the time.
48. The person likes to drink.
49. The person drinks a lot.
50. The person is a hard worker.
51. The person says he or she doesn’t have problems.
52. The person views other people pretty much as everyone else.
53. The person is open-minded about other people's ideas.
54. The person has a working system of values.
55. The person does not act without advice from others.
56. The person thinks money is very important.
57. The person is friendly.
58. The person is pleasant.
59. The person comes from a stable family.
60. The person is able to play.
61. The person is dependable.
62. The person distrusts everyone.
63. The person believes it is important to live near relatives.
64. The person is well-groomed.
65. The person views things differently at different times.
66. The person is able to love others.
67. The person believes life has meaning.
68. The person cares for others.
69. The person is reliable.
70. The person makes attempts to improve him or herself.
71. The person is able to forgive other people for their mistakes.
72. The person feels in control of things around him/her.
73. The person is not happy working at his or her job.
74. The person is physically active.
75. The person had average grades in school.
76. The person has confidence in himself (herself).
77. The person is not very religious.
78. The person does not dress very neatly.
79. The person sees things that others do not see.

80. The person's speech is easy to hear and understand.

81. The person accepts full responsibility for his or her own actions.

82. The person believes others know best.

83. The person is seldom fearful.

84. The person likes him or herself.

85. The person communicates directly and honestly with others.

86. The person likes to gossip.

87. The person likes to be with other people.

88. The person is in poor physical health.

89. The person seldom cries.

90. The person is very intelligent.

91. The person sees things as either right or wrong.

92. The person is frank and honest when stating beliefs and wishes.

93. The person is not a hard worker.

94. The person makes good use of his or her talents and abilities.

95. The person is honest.

96. The person is happy most of the time.

97. The person is not satisfied with himself or herself.

98. The person guides his life according to spirits.

99. The person seldom asks for assistance.
Appendix H

**Orthogonal Cultural Identification Scale**

The following questions ask how close you are to different cultures. When answering the questions about "family," think about the family that is most important to you now. How would you define that family? You can include your current family, your family of origin, or both. Answer the questions keeping that definition in mind. You may identify with more than one culture, so please mark all responses that apply to you.

1. Some families have special activities or traditions that take place every year at particular times (such as holiday parties, special meals, religious activities, trips, or visits). How many of these special activities or traditions does your family have that are based on...

<table>
<thead>
<tr>
<th>Culture</th>
<th>A lot</th>
<th>Some</th>
<th>A few</th>
<th>None at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>White American or Anglo culture</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>Asian or Asian American culture</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>Mexican American or Spanish culture</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>Black or African American culture</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>American-Indian culture</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>Other culture</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
</tbody>
</table>

2. In the future, with your own family, will you do special things together or have special traditions, which are based on...

<table>
<thead>
<tr>
<th>Culture</th>
<th>A lot</th>
<th>Some</th>
<th>A few</th>
<th>None at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexican American or Spanish culture</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>Asian or Asian American culture</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>White American or Anglo culture</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>Black or African American culture</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>American-Indian culture</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>Other culture</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
</tbody>
</table>

3. Does your family live by or follow the...

<table>
<thead>
<tr>
<th>Way of Life</th>
<th>A lot</th>
<th>Some</th>
<th>Not much</th>
<th>None at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>American-Indian way of life</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>White American or Anglo way of life</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>Mexican American or Spanish way of life</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>Black or African American way of life</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>Asian or Asian American way of life</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
</tbody>
</table>
4. Do you live by or follow the...

<table>
<thead>
<tr>
<th>Way of Life</th>
<th>A lot</th>
<th>Some</th>
<th>Not much</th>
<th>None at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian or Asian American way of life</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>White American or Anglo way of life</td>
<td>( )</td>
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<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>Mexican American or Spanish way of life</td>
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<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>Black or African American way of life</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>American-Indian way of life</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
</tbody>
</table>

5. Is your family a success in the...

<table>
<thead>
<tr>
<th>Way of Life</th>
<th>A lot</th>
<th>Some</th>
<th>Not much</th>
<th>None at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black or African American way of life</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>Mexican American or Spanish way of life</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>American-Indian way of life</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>White American or Anglo way of life</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>Asian or Asian American way of life</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
</tbody>
</table>

6. Are you a success in the...

<table>
<thead>
<tr>
<th>Way of Life</th>
<th>A lot</th>
<th>Some</th>
<th>Not much</th>
<th>None at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>American-Indian way of life</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>Asian or Asian American way of life</td>
<td>( )</td>
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<td>( )</td>
</tr>
<tr>
<td>Mexican American or Spanish way of life</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>Black or African American way of life</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>White American or Anglo way of life</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
</tbody>
</table>
Appendix I

The Panic Attack Questionnaire – Adapted

Please take your time and read each question carefully. As you are probably aware, anxiety disorders are very complex and therefore the questionnaire is extensive and measures several different factors.

Age________ Sex________ Occupation_________________________

Education Level________________________

Marital Status: _____single (never married)  
__________________married or cohabitating  
__________________separated/divorced/widowed

Today’s Date________________________

Were you ever treated in the past (drugs, psychotherapy, hospitalization) for any of the following?

Yes No

_____ depression

_____ anxiety or nervous disorders

_____ other psychological disorders (Type? __________________)  

_____ heart problems       (Type? __________________)  

_____ migraines

_____ tension headaches

_____ stress related disorders (e.g. ulcers, hypertension)

_____ alcohol or drug problems

_____ neurological problems (e.g. inner ear disturbance)

In this questionnaire we will be asking you questions regarding panic attacks and your history of anxiety problems.

A panic attack is the sudden onset of intense apprehension, fear, or terror, often associated with feelings of impending doom. Some of the most common symptoms experienced during an attack are: dizziness, shortness of breath, chest pain or discomfort, and trembling or shaking.
1. Have YOU ever had one or more panic attacks? Yes____ No____

If you have experienced one or more panic attacks in the PAST YEAR please answer ALL the remaining questions. If you have not experienced a panic attack or have only experienced a panic attack in a life-threatening situation, please go on to the next questionnaire.

a) In the PAST YEAR approximately how many panic attacks have you had? (Please circle)

1 2 3 4 5 6 7 8 9 10 more than 10

If more than 10, how many? _______.

b) In the PAST FOUR WEEKS how many panic attacks have you had?

0 1 2 3 4 5 6 7 8 9 10 more than 10

If more than 10, how many? _______.

c) In the PAST WEEK how many panic attacks have you had?

0 1 2 3 4 5 6 7 8 9 10 more than 10

If more than 10, how many? _______.

2. a) For approximately how many MONTHS OR YEARS have you been experiencing panic attacks?

______ years. _______ months.

b) What age were you when you had your first panic attack? _______.

3. a) Have panic attacks occurred MORE frequently at some time in the past?

Yes____ No____

b) Do you think the panic attacks are becoming more frequent?

Yes____ No____

c) Do you think the panic attacks are becoming more intense?

Yes____ No____

4. What types of places or situations are you avoiding specifically because of fear of having a panic attack?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

________________________________________________________________________
________________________________________________________________________
5. Please indicate how severely you experience each of the following symptoms WHEN YOU ARE HAVING a panic attack.

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Does Not Occur</th>
<th>Mild</th>
<th>Very Moderate</th>
<th>Severe</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficulty breathing</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Heart pounding</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Chest pain or discomfort</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Choking or smothering sensations</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Dizziness, vertigo or unsteady feelings</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Feelings of unreality</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Tingling in hands or feet</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Hot and cold flashes</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Sweating</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Faintness</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Trembling or shaking</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Fears of death or serious illness</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Fear of going crazy</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Fear of doing something uncontrolled</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Feeling of nausea</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Visual difficulties e.g. blurring</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Auditory difficulties e.g. ringing in the ears</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Difficulty concentrating</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Extremely rapid heartbeat</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Fear of causing a scene</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
### Questionnaire on Panic Attacks

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Does Not Occur</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>u) feeling of anger</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>v) thought of escape from scene of panic attack</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>w) flushing</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>x) fear of drawing attention to oneself</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>y) mouth feels dry</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>z) feeling of helplessness</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

**Other symptoms (please describe)**

6. **When a panic attack occurs, generally what is the time speed between the onset of the attack and when the panic is most intense?**
   - a) very rapid (less than 10 minutes)
   - b) moderately rapid (10-30 minutes)
   - c) moderately slow (30 minutes – 1 hour)
   - d) slowly (more than one hour)

7. **How long, on average, does a panic attack last (start to finish)?**
   - a) a few minutes (0-10 minutes)
   - b) 10-30 minutes
   - c) 30 minutes to one hour
   - d) several hours
   - e) more than one day

8. **What do you think or fear might happen during a panic attack? Please describe**

9. **How much distress do the panic attacks cause in your life?**
   - None
   - Mildly Distressing
   - Moderately Distressing
   - Very Distressing
   - Extremely Distressing

<table>
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<tr>
<th>None At All</th>
<th>Mildly Distressing</th>
<th>Moderately Distressing</th>
<th>Very Distressing</th>
<th>Extremely Distressing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

10. **To what degree have the panic attacks caused you to change or restrict your lifestyle (e.g. everyday activities, places you go)?**
    - No Change
    - Some Change
    - A Moderate Amount of Change
    - Quite a Bit of Change
    - Extreme change

<table>
<thead>
<tr>
<th>No Change</th>
<th>Some Change</th>
<th>A Moderate Amount of change</th>
<th>Quite a Bit of change</th>
<th>Extreme change</th>
</tr>
</thead>
</table>
Appendix J

Culturally-Sensitive Therapy for Panic Disorder

I am going to tell you a story about a woman named Mary who suffered with panic attacks and learned skill therapy for panic, which is a powerful and effective treatment for problems with panic attacks. The story will include the important parts of skill therapy so that you will hopefully get a really clear picture of the important parts.

In the beginning, Mary started seeing a therapist. The therapist (or counselor) was someone who is familiar with the people and families in this community and knows about the history of the people from here. Mary and the therapist created a good relationship, and then she began to learn the skill therapy.

First, the therapist gave Mary a good description of the treatment. Mary was told that the treatment is designed to help people decrease their anxiety, but the goal is not to completely get rid of anxiety. Anxiety is a natural emotion and it is not a bad thing. Mary imagined that if a bear attacked her ancestors they never panicked, they probably would have been killed. Mary learned that anxiety is a problem when it starts to really interfere with a person’s life. Can you think of someone you might know who doesn’t leave the house because they are afraid to get anxious and panic?

The therapist went on to explain that when anxiety is at its most extreme, it is called panic, and panic often strikes out of the blue or with no apparent warning. Panic is a natural reaction to extreme threat, like an alarm reaction to seeing an angry bear. Mary experiences this alarm when there is no real threat, but her panic is just as strong, and she assumes that she is in danger. She looks around for the reason that she is in danger, but can’t find anything outside of her that is threatening, and so she decides that the danger is
something inside of her. Sometimes when Mary has a panic attack she thinks that she going to have a heart attack or that she is going crazy! Luckily, not everyone who ever has a panic attack gets panic disorder. Mary has “panic disorder” because she is really afraid of having another panic attack and thinks that they could happen any time.

Mary’s therapist teaches her that panic problems stay around because of fear of another panic attack. When Mary senses some danger, it is natural for her to experience some anxiety. You see, when Mary is anxious, it causes some of the same physical feelings that occur in a panic attack, like increased heart rate, muscle tension, and sweating. And Mary sees these sensations as signs that the next attack is about to happen. Since Mary thinks of the attack as a very dangerous thing that must be avoided, this causes extreme anxiety, which often leads to a panic attack.

Another problem that causes Mary’s panic cycle is that she thinks of the physical sensations as something really horrible. For instance when her heart races, she thinks she might be having a heart attack, and gets even more anxious. This creates a cycle which leads to a panic attack. So, we see a picture of Mary’s panic attacks as coming from the relationship between physical feelings of anxiety and the thoughts that she has about those physical feelings.

Next, Mary’s therapist shows Mary how the treatment is designed to break down this cycle. The first skill that Mary learns is how to relax. What does relaxation mean to you? To Mary, relaxation is what it feels like to be in the forest or on the water, and it reminds her of her Aunt who always seems relaxed. Mary learns a way to relax by tensing up and then relaxing different muscles in her body, like the calf muscles, the legs, the arms and the shoulders. Eventually, she learns to get in a state of deep relaxation by
practicing the skill. Mary learned that just like any other skill, like marksmanship for instance, relaxation takes practice to master it. Mary learned that getting into a deeply relaxed state is helpful in managing anxiety and handling panic attacks. Now that she can relax, she can decrease the physical feelings, like sweating and increased heart rate, that trigger a panic attack. Relaxation breaks the cycle where it starts.

Mary also learns that relaxation breaks the panic cycle of thoughts and feelings by changing her ideas about body sensations. Since she has learned how to control these sensations, she does not view them as dangerous and does not think of them as something horrible.

The next part of the story about Mary is to see what she learned about thinking, which plays an important role in panic attacks. First, Mary believed that either something inside of her or outside of her was a threat to her safety, or even her life. Then, this belief caused Mary to be on edge, which led to new physical feelings. Because she sees the new feelings as more threatening, then she is more likely to panic.

Mary always concentrated on the worst possible ways of looking at a situation. So, in therapy she learned how to find the thoughts that make her anxiety worse. Then she learned to look for different ways to view body sensations and the triggers that start the panic cycle. The therapist and Mary worked together like two students by designing projects to look at different ways to look at situations or physical feelings in order to see how well they match up with the actual triggers.

At first, Mary believed that whenever her face feels warm it is the first sign that she will have a panic attack. The thought that she will have a panic attack was her guess about why she felt warm. This way of looking at it may make sense because of Mary’s
past experience with panic attacks. However, in therapy she learned that there are alternative ways to look at things. It turns out that Mary spends a lot of time in a hot and stuffy room. One time, there was another person in the room who said that they also felt warm, and so Mary had a different way to look at her feeling. Mary’s new thought was, “This person is also warm and looks red in the face, therefore it must be hot in this room.” That different way is less threatening than the thought that she is going to have a panic attack. By coming up with a less threatening way of looking at the feeling, Mary broke the cycle that leads to a panic attack.

Finally, Mary learned the last part of the treatment for panic. What Mary did was to relearn that the feelings she gets in her body are not dangerous. Mary and her therapist actually created the feelings during their time together. At first, Mary was concerned that this part would be very challenging for her, even though her therapist explained that it works very well, and described it as kind of like the treatment for buck fever. For instance, Mary practiced breathing very fast for a minute or so, which for Mary and many other people, feels like a piece of a panic attack. By practicing these feelings many times, Mary finally learned through experience that they are not dangerous.

Mary did have some anxiety when those physical feelings were created, because of her past learning. But, having some anxiety while with her counselor gave Mary the opportunity to practice coping with anxiety by using the things she already learned -- relaxation and challenging her thoughts. Learning to manage anxiety without panicking while she was with her counselor, helped Mary learn how to manage anxiety in the real world. Also, when Mary created and then managed the feelings of a panic attack, these
feelings become far less mysterious than they once were, and she learned how to be free from these feelings.

In summary, Mary felt better because she learned a model for understanding panic attacks, learned to physically relax, and learned to identify thoughts that make anxiety worse and can lead to a panic attack. She learned to fit it all together by practicing the physical sensations in the real world.
BIOGRAPHY OF THE AUTHOR

Elizabeth Ranslow was born in Augusta, Maine on May 1, 1971. She was raised in Maine and St. Croix, US Virgin Islands, and graduated from high school at St. Croix Country Day School, St. Croix, US Virgin Islands. She attended the George Washington University, and completed a Bachelor's of Arts in Psychology and Philosophy in 1993. Prior to beginning the doctoral program at the University of Maine, she received clinical experience in inpatient psychiatric settings as well as a residential setting for American Indian adolescents, and received research experience at the University of New Mexico Department of Psychology.

After receiving her degree, she will complete a postdoctoral fellowship through Dartmouth Medical School with the National Center for Posttraumatic Stress Disorder. She is a candidate for the Doctor of Philosophy degree in Psychology from The University of Maine in December, 2004.