

The Relation of Ethnicity to Outcome
as Moderated by Interpersonal Distress

by

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ABSTRACT

This work analyzed the role of interpersonal problems in interaction with ethnicity to predict psychotherapy outcome. A total of 262 individuals, who underwent psychotherapy at a counseling training facility, completed the Outcome Questionnaire-45 (OQ-45) and the reduced version of the Inventory of Interpersonal Problems (IIP-32). This study posited the following research question: Is the magnitude of the effect of ethnicity on treatment outcome conditional on certain IP dimensions (dominance or affiliation)? The purpose of this research was to determine whether or not ethnicity, represented by 3 ethnic groups (Whites, Hispanics, and Asians), was related to treatment outcome, and if this relationship was moderated by two interpersonal distress dimensions: dominance and affiliation. The results of the hierarchical regression analyses indicated that ethnicity did not predict post-treatment outcome gain, and neither affiliation nor dominance was a moderator of the relationship between outcome and ethnicity.

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Chapter I

Introduction

Multiple research studies have attempted to develop predicting models for psychotherapy outcome. When dealing with ethnically diverse client populations, these models become more complex because additional cultural variables should be taken into account. Some of those variables may be related to the interpersonal styles and problems that are representative of specific ethnic groups.

Ethnicity and Outcome

Statistics reveal that ethnic minority populations in the U.S. have dramatically increased in the past years (U.S. Census Bureau, 2010) and this phenomenon brings different types of implications, the mental health of minority individuals being one ramification. Several studies indicate that ethnic minorities in the U.S. are less likely to receive appropriate health services, tend to have different psychotherapy processes, exhibit worse treatment outcomes, have higher dropout rates, underutilize mental health services, and report less satisfaction and progress in therapy compared to Whites (e.g., Dixon & Vaz, 2005; Gomez, Ruiz, & Rumbaut, 1985; Institute of Medicine, 1999; Lee & Mixson, 1995; Solomon, 1988; S. Sue, 1977; U.S. Department of Health and Human Services, 2001; Wierzbicki & Pekarik, 1993; Zane, Enomoto, & Chun, 1994).

Researchers have identified some cultural factors that may account for the differences in the psychotherapy processes and outcomes in minorities compared

to Whites. Some examples include their world-views (Carter, 1990, 1991; Ibrahim, 1991; Kluckhohn & Strodtbeck, 1961), communication styles and ways of expressing affects (Sonderegger & Barrett, 2004), views of psychotherapy (D. W. Sue & S. Sue, 2003), and other personality, cognitive, vocational, and neuropsychological variables (Suzuki, Meller, & Ponterotto, 2008).

Numerous efforts have been made to address cultural differences in the psychotherapy process and outcome of ethnic minorities. For instance, the American Psychological Association (2003) highly emphasizes multicultural education for therapists due to the existing challenges and issues of treating ethnically diverse clients. Additionally, cultural competence guidelines are broadly recommended for therapists treating minority clients (D. W. Sue, 2001; D. W. Sue, Arredondo, & McDavis, 1992; D. W. Sue, et al., 1982). Furthermore, positive outcomes have resulted from culturally adapted interventions (Griner & Smith, 2006; Jani, Ortiz, & Aranda, 2009; Yeh, Takeuchi, & Sue, 1994).

Interpersonal Problems and Outcome

One factor frequently associated with treatment outcome is the level of interpersonal problems (IP) also referred to as interpersonal distress. Interpersonal problems are the difficulties that a person subjectively experiences in the interactions with others (Horowitz, 1994) and is one of the major motivations to seek psychotherapy (Horowitz, Rosenberg, & Bartholomew, 1993). Several researchers classify interpersonal problems in a two-dimensional space. The first dimension, “affiliation,” is related to friendliness, love, and nurturance. The

second dimension, “dominance,” is related to power and control (Horowitz & Vitkus, 1986).

The circumplex representation of the Inventory of Interpersonal problems is a comprehensive depiction of the two main dimensions, dominance and affiliation (see Figure 1). Based on this model, an individual can be positioned in the circular space by locating his or her dominance and affiliation scores. Additionally, this representation includes 8 sub-categories, called octants, which describe specific interpersonal themes (Horowitz, et al., 1993).

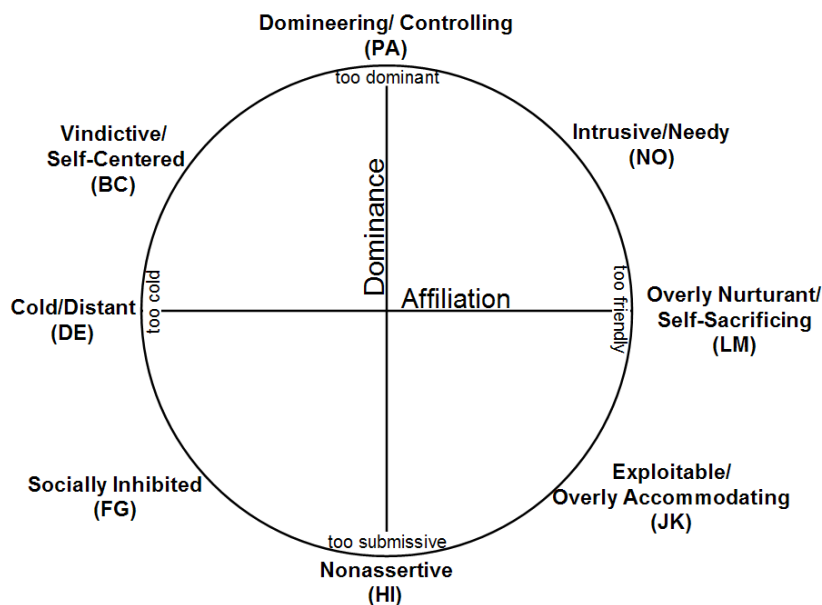


Figure 1. Circumplex Representation of the Inventory of Interpersonal Problems (IIP)

Multiple studies show that some interpersonal problems may be related to various types of psychopathology (e.g., Matano & Locke, 1995; Pincus & Wiggins, 1990; Soldz, Budman, Demby, & Merry, 1993, Tracey, Rounds, & Gurtman, 1996). Besides analyzing the relationship between IP and

psychopathology, researchers have also analyzed the relationship between IP and positive or negative psychotherapy outcomes.

Positive treatment outcomes may be related to specific IP according to some researchers, and they have identified several cases. First, individuals with an “exploitable” interpersonal style may improve more frequently in brief psychodynamic therapy compared to other styles. An individual with an “exploitable” style would typically be taken advantage of by others, (Horowitz, et al., 1993). The “exploitable” style would also be described as gullible and with difficulties to feel and express anger (Alden, Wiggins, & Pincus, 1990). Second, the results of another study showed that the “secure” style may be related to better outcomes in cognitive therapy compared to the “insecure” style. An “insecure” style would be high in either underinvolvement (i.e., hard to socialize or to experience love for others) or overinvolvement (i.e., being too sensitive to rejection or easily influenced by others). A “secure” style would be low in both underinvolvement and overinvolvement (Saatsi, Hardy, & Cahill, 2007). Third, a study involving individuals with avoidant personality disorder showed that clients who had an “exploitable” interpersonal style, characterized by being easily coerced and controlled by others, benefited from more than one treatment compared to those clients who did not have the “exploitable” style (Alden & Capreol, 1993). Fourth, Horowitz, Rosenberg, & Kalehzan (1992) identified that patients with “affiliative” interpersonal problems may be better candidates for

psychodynamic treatment. The “affiliative” style was related to the degree of nurturance, and it ranges from hostile or cold to friendly behavior.

Negative treatment outcomes can also be related to certain IP according to other studies. For instance, some researchers found that the “cold” and “socially avoidant” IP may be associated with poorer outcomes after a conjugal bereavement (Lagattuta, 2007). In this study, an individual with a “cold” style would find it hard to express affection, feel love, and be generous with others. The “socially avoidant” individual would experience high anxiety and embarrassment in the presence of others, and would have difficulties in expressing feelings and socializing. Likewise, other studies describe that the “dominating,” “vindictive,” and “cold” IP may not improve frequently in brief psychodynamic therapy (Horowitz, et al., 1993). The “dominating” person would be controlling and manipulative, the “vindictive” would be distrustful and suspicious, and the “cold” would be unable to express love and generosity. Finally, another study explained that the “walling off and avoidant” style –which would be low in affiliation and high in self-focus and autonomy– may be related to poor outcomes (Henry, Schacht, & Strupp, 1986).

After analyzing the above examples of positive and negative outcomes under a “dominance-affiliation” perspective, a noteworthy pattern can be identified. In general, positive outcomes were associated with IP high in “affiliation” (e. g., affiliative) and low in “dominance” (e. g., exploitable). Comparably, negative outcomes were associated with IP low in “affiliation” (e.g.,

cold, and socially avoidant) and high in “dominance” (e. g., dominating, vindictive, and dominant).

Interpersonal Problems and Ethnicity

Research has identified multiple differences between minorities and Whites in terms of mental health. One example are the lower utilization rates of psychological services by minorities, which are usually associated to other factors such as discrimination, trust in the treatment, lack of ethnically similar counselors, and unavailability of culturally appropriate interventions among others (e.g., Brinson & Kottler, 1995; Burgess, Ding, Hargreaves, van Ryn, & Phelan, 2008; Gottesfeld, 1995; Herrick & Brown, 1998; Nadeem, Lange, Edge, Fongwa, Belin, & Miranda, 2007; Snowden, & Yamada, 2005). Additionally, some studies suggest that minorities have poorer therapy outcomes, and one indicator is related to the premature termination rates (S. Sue, 1977; Wierzbicki & Pekarik, 1993). Furthermore, it appears that minorities report lower levels of satisfaction with the treatment and higher levels of skepticism compared to Whites (Dixon & Vaz, 2005; Lee & Mixson, 1995).

Researchers have identified different ways to express interpersonal problems and different interpersonal styles across ethnic groups. In general, the interpersonal demonstration of respect in many non-Western cultures is different from that of the Western cultures. Some examples encompass different types of eye contact, postures, emotional expressions, and direct question and answer conversation styles (Parsons, 1990).

Asians in particular are characterized by low confrontation, low disputing of authority figures, high value of privacy (D. W. Sue & S. Sue, 2003), high emphasis on group identity, group conformity and group goals (Hedstrom, 1992), emphasis of reputation with parents and peers (Hall, Sue, Narang, & Lilly, 2000), harmony in interpersonal relationships (Chin, 2001), linear structured relationships compared to Western collateral structures (Carter, 1991), and strong alliance to family and community while making decisions (Baruth & Manning, 1991; D. W. Sue & S. Sue, 2003). In summary, these characteristics resemble the “nonassertive” IP style, which is low in “dominance.” Asians are also characterized by a low degree of nurturance according to some authors (Yuen & Tinsley, 1981), and their expression of emotions is characterized by balance, moderation, self-constraint (Zane & Song, 2007), and emotional self-control (Kim, Atkinson, & Yang, 1999; Park & Kim, 2008). These additional characteristics might be related to the “cold” style, which is low in “affiliation.”

Similarly, Hispanics have particular interpersonal characteristics. In general, Hispanic individuals greatly value group identity and interpersonal relationships (Fischer, Jome, & Atkinson, 1998; Rosselló & Bernal, 1999). Researchers have identified several constructs related to interpersonal relationships, such as “familismo” (close bonds with family), “respeto” (obedience and deference to elders), “alocentrismo” (valuing the collective), and “simpatia” (minimizing interpersonal conflict and fostering agreeableness and sympathetic attitudes) (e.g., Galanti, 2003; Garza & Watts, 2010; Niemeyer,

Wong & Westerhaus, 2009; Ramírez-Esparza, Gosling, & Pennebaker, 2008). Furthermore, high levels of nurturing have been found in Hispanics compared to other ethnic groups (Brown-Pullam, 1999).

In summary, Asians' interpersonal characteristics may resemble the "non-assertive" interpersonal style in terms of the "dominance" dimension of IP. They may also display a "cold" style in terms of "affiliation" because of the way they express emotions. Analogously, Hispanics' interpersonal style may as well be "non-assertive" in terms of "dominance," but "warmer" in regards to "affiliation."

Interpersonal Problems as a Moderator

Research shows that IP do not only act as a predictor but also as a moderator of treatment outcome. For instance, in a study involving psychodynamic therapy, the "affiliation" dimension of IP moderated the relationship between individual cohesion and outcome. This means that different levels of cohesion were required for different levels of affiliation in the patients (from high "affiliative" to "dismissive" patients) in order to obtain good outcomes (Dinger & Schauenburg, 2010).

In another study, the "dominance" dimension of IP moderated the outcome of dynamic therapy as a function of treatment group (manualized and non-manualized). In specific, "dominance" did not impact the outcome for manualized treatment but impacted the outcome for non-manualized treatment

because the higher the level of dominance in clients, the better the outcomes were when using a non-manualized approach (Vinnars, et al., 2007).

Likewise, IP acted as a moderator of outcome in one more study. Patients with more IP had better rates of change with transference interpretation therapy compared to therapy with no interpretation (Høglend, Johansson, Marble, Bøgwald, & Amlo, 2007).

Rationale

Based on the above information, four major observations can be highlighted. First, treatment outcome seems to be different across ethnic groups. Second, ethnic groups display different interpersonal styles, which may be related to different IP (e.g., being Asians “non-assertive” and “cold,” and Hispanics, “non-assertive” and “warm”). Third, different levels of dominance and affiliation are related to positive or negative outcomes. Fourth, IP have been shown to be a moderator between treatment outcome and other variables (treatment was more effective for some IP dimensions in relation to individual cohesion or treatment type). Likewise, there is a possibility that treatment would be more effective for some ethnic groups with some specific IP. In this case, there would be a moderator effect, and therefore interactions, between ethnicity and IP (dominance or affiliation) in relation to outcome.

Several questions concerning the prediction of outcome can be defined: 1) Is there an overall effect of ethnicity on outcome? 2) Is there an overall effect of

the two dimensions of IP, dominance or affiliation, on outcome? 3) Is the magnitude of the effect of ethnicity conditional on certain IP dimensions (dominance or affiliation)?

Hypotheses

H1: There will be an overall effect of ethnicity on treatment outcome: Whites will have better outcomes compared to Asians and Hispanics.

H2: There will be an overall effect of dominance on treatment outcome: High levels of dominance will be related to poor outcomes.

H3: There will be an overall effect of affiliation on treatment outcome: High levels of affiliation will be related to positive outcomes.

H4: The IP dimensions (dominance or affiliation) will moderate the relationship between ethnicity and treatment outcome as follows:

H4-a: High affiliation will be more strongly related (enhancing interaction) to better outcomes for Hispanics compared to Asians and Whites.

H4-b: Low dominance will be more strongly related (enhancing interaction) to better outcomes for both Asians and Hispanics compared to Whites.

Chapter II

Method

Participants

Clients attending a counseling training center located in the southwest were requested to voluntarily participate in a research study. In total, 262 participants were considered for this study: 176 females (67%) and 86 males (33%). The age distribution of the participants was as follows: 17% were from 18 to 25, 17% from 26 to 35, 11% from 36 to 45, 8% from 46 to 55, 6% were over 55, and 42% did not report age. The ethnic distribution of the participants was: 211 were White (81%), 32 were Asian (12%), and 19 were Hispanic (7%). The distribution of their marital status was: 40% were single, 36% were married, 15% were divorced, 6% were living with a significant other, 2% were widowed, and 1% did not report marital status. The income distribution of the participants was: 39% reported an income above \$40,000, 16% reported from \$30,000 to \$39,999, 13% reported from \$20,000 to \$29,999, 18% reported from \$10,000 to \$19,999, 8% reported from \$0 to \$9,999, and 6% did not report income.

Procedure

The clients who agreed to participate received a consent form indicating the purpose and description of the study, as well as their rights concerning confidentiality and withdrawing from the study. In the first counseling session, the participants completed the OQ-45 and the IIP-32 questionnaires. Subsequently,

they completed only the OQ-45 questionnaire every time they attended a counseling session. One more IIP-32 questionnaire was completed at the end of the treatment.

The participants attended counseling sessions on a weekly basis. Out of the 262 participants, 26% attended 2 to 4 counseling sessions, 22% attended 5 to 7 sessions, 34% attended 8 to 10 sessions, and 18% attended 11 to 14 sessions. They received counseling from graduate level therapists. At least 85% of the clients were seeing a counselor who had more than one client. The highest number of clients that a therapist saw in a 4-month period was approximately 6 clients. The presenting problems of the participants included the following conditions among others: anxiety, stress, low self-esteem, depression, communication issues, partner related problems, family issues, socialization issues, child abuse history, career issues, anger management, grief, and substance abuse.

Measures

Outcome Questionnaire-45.

OQ-45 (Lambert, et al., 1996). This is a 45-item Likert scale that uses five points (0=Never, 4=Almost always) and has three subscales. The total score (OQ-Tot) indicates the level of general distress, and the subscales measure specific types of distress such as symptom distress (OQ-SD), interpersonal relations (OQ-IP), and social roles (OQ-SR). Research on the psychometric properties of the OQ

indicates that this instrument presents both reliability (Lambert, et al., 1996; Wells, Burlingame, Lambert, Hoag, & Hope, 1996) and validity (Mueller, Lambert, & Burlingame, 1998; Umphress, Lambert, Smart, Barlow, Clouse, & Hensen, 1997; Wells, et al., 1996).

In this study, the OQ-Tot score was utilized because an overall indicator for distress was needed to measure clinical change (before and after treatment), rather than a score related to specific areas of psychological functioning. Higher OQ-Tot scores indicated higher levels of distress. For this sample, the test-retest reliability for OQ-Tot scores obtained in the first and second sessions was .90. Other studies have reported test-retest reliabilities for OQ subscales ranging from .66 to .86 (Lambert, et al., 1996). Additionally, in order to test the reliability of the internal consistency for this sample, the Cronbach's Alpha statistic was obtained ($\alpha = .93$). Other studies have reported reliabilities of the internal consistency ranging from .70 to .90 (Lambert, et al., 1996).

Inventory of Interpersonal Problems-32.

IIP-32 (Horowitz, Alden, Wiggins, & Pincus, 2000). This 32-item scale is a reduced version of the 64 item IIP-C developed by Alden et al. (1990). The IIP-32 assesses levels of interpersonal distress using a five point Likert scale (0=Not at all, 4=Extremely). There is a total score called "elevation" (IIP-Tot), two dimension scores (dominance distress and affiliation distress), and octant scores: PA= Domineering/Controlling, NO= Intrusive/Needy, LM= Self-Sacrificing, JK= Overly Accommodating, HI= Nonassertive, FG= Socially Inhibited, DE=

Cold/Distant, BC= Vindictive/ Self-Centered). Existing studies support the psychometric properties of the IIP (Gurtman, 1996; Horowitz, et al., 2000; Soldz, Budman, Demby, & Merry, 1995; Tracey, et al., 1996).

For this sample, the test-retest reliability considering the two IIP sets of scores was calculated using scales given at intake and at termination. Reliability for “dominance” was .79, for “affiliation” was .73, and for the subscales the reliability ranged from .60 to .81. Other studies have reported test-retest reliabilities for IIP subscales ranging from .80 to .90 (Horowitz, Rosenberg, Baer, Ureño, & Villaseñor, 1988). In order to test the reliability of the internal consistency of the instrument for this sample, the Cronbach’s Alpha statistic was obtained ($\alpha = .90$). Other studies have analyzed the internal consistency of the IIP obtaining values of alpha ranging from .82 to .94 (Horowitz, et al., 1988). This instrument operationalized a construct based on a Western culture.

Analysis

A hierarchical regression analysis following guidelines to find moderator effects was carried out (J. Cohen & P. Cohen, 2003; Frazier, Tix, & Barron, 2004). Several models were built, and the outcome variable in all models was the post-test OQ-Tot score (post-OQ). Because different clients started with different levels of distress, the pre-test OQ-Tot score (pre-OQ) was considered as a predictor and was included in the first step in all regression models in order to account for the initial variations. OQ-Tot scores were obtained by calculating the average of the 45 items. In general, higher OQ-Tot scores indicate higher levels of

distress. The other regression variables were: ethnicity, which was considered as a predictor variable, and dominance (Dom) and affiliation (Aff), which were the moderator variables. A p value of less than .05 was required for significance, and two-tailed tests were used.

In order to be able to use ethnicity as a predictor variable, dummy coding was used because ethnicity is a nominal variable (White, Asian, and Hispanic). “White” was selected as the reference group because it had the biggest sample size compared to the other ethnic groups. The code variables were Eth₁ and Eth₂. Eth₁ contrasted Asians with Whites (1 for Asian and 0 for others). Eth₂ contrasted Hispanics with Whites (1 for Hispanics and 0 for others).

In order to calculate the moderator variables –dominance and affiliation– from the IIP-32 items, octant scores were calculated first. Each octant score was obtained by computing the average of 4 specific items. Accordingly, the octant scores and their corresponding items are as follows: PA (Domineering/ Controlling) included items 1,9, 17, and 25; BC (Vindictive/ Self-Centered) included items 2, 10, 18, and 26; DE (Cold/Distant) included items 3, 11, 19 , and 27; FG (Socially Inhibited) included items 4, 12, 20, and 28; HI (Nonassertive) included items 5, 13, 21, and 29; JK (Overly Accommodating) included items 6, 14, 22, and 30; LM (Self-Sacrificing) included items 7, 15, 23, and 31; and NO (Intrusive/ Needy) included items 8, 16, 24, and 32.

Once the octant scores were obtained per participant, the dominance and affiliation scores were calculated using the following formulas:

$$\text{Dom} = \text{PA} + .71 * (\text{BC} + \text{NO}) - .71 * (\text{FG} + \text{JK}) - \text{HI}$$

$$\text{Aff} = \text{LM} + .71 * (\text{NO} + \text{JK}) - .71 * (\text{BC} + \text{FG}) - \text{DE}$$

These dominance and affiliation scores were mean centered in order to avoid non-essential multicollinearity while creating cross products later on.

In order to test the joint effects of the predictor and moderators on the outcome variable Post-OQ over and above their separate effects, four interaction terms that combined the predictor (ethnicity) and the moderators (dominance and affiliation) were obtained. The interactions considered the dummy coded variables corresponding to ethnicity, so the resulting product terms were: Eth₁ X Dom, Eth₁ X Aff, Eth₂ X Dom, and Eth₂ X Aff.

Once the outcome, predictor, moderator, and product terms were in place, several regression analyses using statistical software were conducted. In all the analyses, post OQ-Tot was the outcome variable. The first step in the hierarchical regression analysis included the pre-OQ score, and the second step included the two ethnicity codes, Eth₁ and Eth₂. The resulting model was used to test the first hypothesis (find an overall effect of ethnicity). The regression equation that describes this model is: $\hat{Y} = B_1\text{Pre-OQ} + B_2\text{Eth}_1 + B_3\text{Eth}_2 + B_0$.

In the third step, the moderator variables (Dom and Aff) were included in the model. Finally, the product terms were added in the fourth step. The final model was used to test the fourth hypothesis which aims to identify the moderator

effects of dominance or affiliation on treatment outcome. The regression equation for this model is:

$$\hat{Y} = B_1\text{Pre-OQ} + B_2\text{Eth}_1 + B_3\text{Eth}_2 + B_4\text{Dom} + B_5\text{Aff} + B_6(\text{Eth}_1 \times \text{Dom}) + B_7(\text{Eth}_1 \times \text{Aff}) + B_8(\text{Eth}_2 \times \text{Dom}) + B_9(\text{Eth}_2 \times \text{Aff}) + B_0$$

In order to test the second and third hypotheses (find overall effects of dominance or affiliation), two additional models were built including dominance and affiliation as predictor variables respectively. The individual regression equations that describe these models are: $\hat{Y} = B_1\text{Pre-OQ} + B_2\text{Dom} + B_0$ and $\hat{Y} = B_1\text{Pre-OQ} + B_2\text{Aff} + B_0$.

Chapter III

Results

Descriptive Statistics

The means, standard deviations, and correlations of the study variables are presented in Table 1.

Table 1
Correlations and Descriptive Statistics for Predictors and the Outcome Variable (N= 262)

Measures	1	2	3	4	5	M	SD
1. Post-OQ						1.31	0.57
2. Pre-OQ	.79**					1.5	0.53
3. Eth ₁	.05	.13*				0.12	0.33
4. Eth ₂	.15*	.16*	-.01*			0.07	0.26
5. Dom	-.16**	-.20**	-.04	-.08		-1.08	2.01
6. Aff	-.12	-.09	-.04	-.13*	-.10	1.12	2.01

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

The results of the descriptive statistical analyses show that the average pre-OQ score was 1.50, which is higher than the average post-OQ score (1.31). This difference was significant $t(261) = 8.56, p < .001$. The pre-OQ scores ranged from 0.27 to 2.93, and the average post-OQ scores ranged from 0.02 to 3.51. On average, Hispanics had the highest pre-OQ scores (Mean= 1.79, $SD = .48$), followed by Asians (Mean= 1.68, $SD = .47$), and Whites (Mean=1.44, $SD = .53$). These differences were significant, $F(2,259) = 6.154, p < .01$. In terms of post-OQ scores, the same order was maintained: Hispanics (Mean= 1.61, $SD = .42$), then Asians (Mean= 1.39, $SD = .50$), and finally Whites (Mean= 1.27, $SD = .59$). These

differences were significant, $F(2,259) = 3.468, p = .03$. All differences between pre- and post- test scores by ethnic group were significant.

The dominance scores ranged from -5.95 to 4.99 (Mean = -1.08, $SD = 2.01$). On average, Whites had the highest dominance scores (Mean = -1.00, $SD = 2.03$), followed by Asians (Mean = -1.30, $SD = .30$), and Hispanics (Mean = -1.66, $SD = 2.22$). However, these differences were not significant, $F(2,259) = 1.16, p = .32$. The affiliation scores ranged from -8.00 to 6.62 (Mean = 1.12, $SD = 2.01$). Whites had the highest average affiliation scores (Mean = 1.24, $SD = 1.99$), followed by Asians (Mean = .91, $SD = 1.84$), and Hispanics (Mean = .21, $SD = 2.38$). Nevertheless, these differences were not significant, $F(2,259) = 2.50, p = .09$.

Correlation coefficients were computed among all variables (five predictors and outcome variable) and they are presented in Table 1. The results show that the correlation between pre-OQ scores and post-OQ scores is strong and significant, $r(260) = .79, p < .001$.

Dominance was inversely correlated to both pre-OQ and post-OQ scores. These correlations were small but significant, $r(260) = -.20, p = .001$ and $r(260) = -.16, p = .004$ respectively. Affiliation was inversely correlated to both pre- and post-OQ, but the relationships were not statistically significant, $r(260) = -.09, p = .15$ and $r(260) = -.12, p = .05$.

In terms of ethnicity and outcome, several relationships were found. Eth₁ (1=Asians, 0=Others) was correlated with pre-OQ. The effect size was small but significant, $r(262) = .13$, $p = .04$. Comparatively, Eth₂ (1=Hispanics, 0=Others) was not only correlated with pre-OQ but also with post-OQ. The correlations were small but significant, $r(262) = .16$, $p = .01$ and $r(262) = .15$, $p = .02$.

In regards to the correlations between the IP domains (dominance and affiliation) and ethnicity, the results show that all correlations were negative. However, the only significant correlation was between affiliation and Eth₂. Affiliation was inversely correlated with Eth₂ (1=Hispanics, 0=Others), $r(262) = -.13$, $p = .04$.

Multiple Regression Analyses

The results of the regression analyses are summarized in Table 2. The first two models were built to test the first hypothesis –there will be an overall effect of ethnicity on treatment outcome: Whites will have better outcomes compared to Asians and Hispanics–. The first model showed that pre-OQ scores can predict post-OQ scores (see model 1 in Table 2), and the model was statistically significant, $F(1, 260) = 430.22$, $p < .001$. Approximately 62% of the variance in post-OQ scores was accounted for by its linear relationship with pre-OQ scores, $R^2 = .62$, adjusted $R^2 = .62$. The regression equation that describes this relationship is as follows: $\hat{Y} = .04 + .85X_1$.

Table 2

Multiple Regression Results: Predicting Therapy Outcome by Sets of Predictors (N=262)

Model	R^2	Adj. R^2	ΔR^2	B (SEB)	β	sr^2
1. Pre-test model	.62**	.62**				
Intercept				0.04 (0.07)		
Pre-OQ				0.85 (0.04)**	0.79**	.62
2. Ethnicity model	.63**	.62**				
Intercept				0.04 (0.07)		
Pre-OQ				0.85 (0.04)**	0.79**	.60
Eth ₁				-0.09 (0.07)	-0.05	.00
Eth ₂				0.04 (0.09)	0.02	.00
3. Dominance Model	.62**	.62**				
Intercept				0.04 (0.07)		
Pre-OQ				0.85 (0.04)**	0.79**	.60
Dominance				-0.00 (0.01)	-0.01	.00
4. Affiliation Model	.63**	.62**				
Intercept				0.04 (0.07)		
Pre-OQ				0.84 (0.04)**	0.79**	.61
Affiliation				-0.01 (0.01)	-0.05	.00
5. Full Model	.63**	.62**				
Intercept				0.05 (0.07)		
Pre-OQ				0.85 (0.04)**	0.79**	.57
Eth ₁				-0.09 (0.07)	-0.05	.00
Eth ₂				0.05 (0.09)	0.02	.00
Dominance				-0.01 (0.01)	-0.03	.00
Affiliation				-0.01 (0.01)	-0.04	.00
Eth ₁ x Dominance				0.03 (0.04)	0.03	.00
Eth ₂ x Dominance				0.02 (0.04)	0.02	.00
Eth ₁ x Affiliation				-0.04 (0.04)	-0.04	.00
Eth ₂ x Affiliation				0.02 (0.04)	0.02	.00
Model Comparisons						
Models 1 & 2			.01			
Models 1 & 3			.00			
Models 1 & 4			.01			
Models 1 & 5			.01			
Models 2 & 5			.00			

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

However, when ethnicity was added to the regression model (see model 2), the additional amount of variance explained was about 1%. The regression equation for this model is as follows: $\hat{Y} = .04 + .85X_1 - .09X_2 + .04X_3$, where X_1 is Pre-OQ, X_2 is Eth₁, and X_3 is Eth₂. For Whites (Eth₁=0 and Eth₂= 0), the regression equation is reduced to $\hat{Y} = .04 + .85X_1$. For Asians (Eth₁=1 and Eth₂= 0), the reduced equation is: $\hat{Y} = -0.05 + .85X_1$. For Hispanics, the reduced equation is $\hat{Y} = 0.08 + .85X_1$. The overall contribution of ethnicity over and above pre-OQ scores was not significant, $\Delta R^2 = .01$, $F(2,258)=1.03$, $p=.36$. In specific, the unique contributions of Eth₁ (Asians) and Eth₂ (Hispanics) were not significant, $t(258)=-1.27$, $p=.21$ for Eth₁ and $t(258)=-.49$, $p=.62$ for Eth₂. In summary, the first hypothesis was not supported.

Model number 3, containing pre-OQ and dominance as predictors, was constructed to test the second hypothesis –there will be an overall effect of dominance on treatment outcome: high levels of dominance will be related to poor outcomes–. This model showed that after accounting for the variance explained by pre-OQ, dominance accounts for approximately 0.0034% of the variance in post-treatment outcome, and the difference in variance was not statistically significant, $\Delta R^2 \approx .00$, $F(1,259)= .02$, $p=.88$. In conclusion, the second hypothesis was not supported.

Model number 4 contained pre-OQ and affiliation as predictors. This model was constructed in order to test the third hypothesis –there will be an overall effect of affiliation on treatment outcome: high levels of affiliation will be

related to positive outcomes-. The results indicated that after accounting for the variance explained by pre-OQ, affiliation accounts for about 1 % of the variance in post-treatment outcome, and the difference in variance was not statistically significant, $\Delta R^2 = .01$, $F(1,259)= 1.68$, $p=.20$. Overall, the third hypothesis was not supported.

To test the fourth hypothesis –the IP dimensions (dominance or affiliation) will moderate the relationship between ethnicity and treatment outcome–, a full model (model 5) containing all predictors was built. This model showed that after accounting for the variance explained by pre-OQ, the linear combination of ethnicity, dominance, affiliation, and the interactions (Eth₁ X Dom, Eth₁ X Aff, Eth₂ X Dom, Eth₂ X Aff) accounted for approximately 0.9 % of the variance in post-treatment outcome, and the difference in variance was not statistically significant, $\Delta R^2 = .009$, $F(8,252)= 0.76$, $p=.64$. Comparatively, after accounting not only for pre-OQ but also for ethnicity (Eth₁ and Eth₂), the full model accounted for approximately 0% of the variance in post-treatment outcome, $\Delta R^2 \approx .00$, $F(6,252)= 0.67$, $p=.68$.

Additionally, this hypothesis posited two specific proposals: 1) High affiliation will be more strongly related to better outcomes for Hispanics compared to Asians and Whites (enhancing interaction), and 2) Low dominance will be more strongly related to better outcomes for both Asians and Hispanics compared to Whites (enhancing interaction). In order to test these two proposals, individual analyses for the interactions were conducted. First, the analysis of the

interaction Eth₂ X Aff indicated that the relationship between affiliation and outcome does not vary significantly across different ethnicities (and thus, it is not stronger for Hispanics), $t(260) = .43, p = .67$. The Eth₂-by-Affiliation interaction accounted for only .027 % more of the variance in post-OQ than the model that did not contain the interaction, $\Delta R^2 = .00027$.

Second, the relationship between dominance and outcome does not vary significantly across different ethnicities (and thus, it is not stronger for Asians or Hispanics), $t(260) = .79, p = .43$ for Eth₁ X Dom, and $t(260) = .51, p = .62$ for Eth₂ X Dom. The Eth₁ X Dom interaction accounted for only .1% more of the variance in post-OQ than the model that did not contain the interaction, $\Delta R^2 = .001$.

Analogously, the Eth₂ X Dom interaction accounted for only .037 % more of the variance in post-OQ than the model that did not contain the interaction, $\Delta R^2 = .00037$. The remaining interaction, Eth₁ X Aff was not part of any hypotheses previously mentioned; nevertheless, it was not statistically significant.

Chapter IV

Discussion

The results of treatment outcome, as measured by the OQ-45 instrument, were examined for the whole sample and separately by ethnic group. From a general perspective considering the whole sample, the OQ-45 scores diminished from pre-treatment to post-treatment suggesting that on average, most clients improved. This is consistent with past studies reporting that psychotherapy is effective and the majority of clients undergoing a psychological treatment show some benefit (Lambert & Archer, 2006; Lambert & Ogles, 2004; Wampold, 2000).

From an ethnic group perspective, the differences between pre- and post-test outcome scores for each ethnic group were significant, which suggests that psychotherapy was effective for the three groups (Whites, Asians, and Hispanics). In addition, Hispanics and Asians showed higher pre- and post- test distress levels compared to Whites. Other studies reported mixed findings when analyzing differences in psychological distress across ethnic groups. For instance, one study reported that Mexicans presented similar or lower levels of distress compared to Whites (e.g., Burnam, Timbers, & Hough, 1984; Mirowsky & Ross, 1980; Roberts, 1980). Other studies reported that distress levels may vary within the same ethnic group depending on the country of origin. One study showed that Puerto Ricans reported higher levels of distress compared to Cubans and Mexicans (Shrout, et al., 1992). Another study found that Southeast Asians have

lower levels of functioning than Chinese Americans (Uehara, Takeuchi, & Smukler, 1994), and one more reported that Southeast Asians show less improvement in mental health services compared to other Asian groups (Ying & Hu, 1994; Lau & Zane, 2000).

Differences in IP dimensions (dominance and affiliation) across ethnic groups were also analyzed. Even though literature says that different ethnic groups have distinctive interpersonal styles (i.e., describing Asians as “cold” and Hispanics as “warm”), no significant differences in IP styles were found in this study. Dominance scores in Whites were the highest, but the difference with other ethnic groups was not significant. Hispanics had the lowest affiliation scores but again, the differences were not significant. It is unclear if the characteristics of the sample, such as the sample size, played a factor in the results obtained.

The relationship between IP dimensions and outcome was also analyzed. Dominance was inversely correlated to both pre-OQ and post-OQ. This means that higher levels of dominance (i.e., controlling behaviors) may be related to lower levels of distress. Additionally, the correlations between affiliation and pre-OQ and post-OQ were also inverse, but they were not significant.

The multiple regression analyses did not confirm the proposed hypotheses. First, an overall effect of ethnicity on treatment outcome was not found. The regression analysis failed to support that ethnicity predicted treatment outcome. Second, an overall effect of dominance on treatment outcome was not found. The intention was to identify if high levels of dominance were related to poor

outcomes. However, the analysis showed that dominance was not a significant predictor of outcome. Third, there was not an overall effect of affiliation on treatment outcome, so affiliation was not a significant predictor either. Literature shows that low dominance and high affiliation are related to better outcomes, but that was not supported in this study. Fourth, none of the 4 hypothesized interactions (Eth₁ X Dom, Eth₁ X Aff, Eth₂ X Dom, and Eth₂ X Aff) were confirmed. It was expected to find significant interactions involving Hispanics with high affiliation, Hispanics with low dominance, and Asians with low dominance. However, the results failed to support that the relationship between affiliation and outcome or dominance and outcome vary significantly across different ethnicities.

Limitations of the Study

It is important to take into account that this study had several limitations which might have affected the observed results.

Length of treatment.

As mentioned earlier, the treatment included 14 sessions; however, the number of sessions varied across clients because of non-attended sessions or dropouts. The majority of clients attended 7 sessions or more (50% of the treatment), but a high number of clients missed appointments and only 18% of the clients attended 11 sessions or more (at least 79% of the treatment). Although this may be representative of real world clients, it is unclear how the inequality in number of sessions may have affected the treatment outcome. It is important to

consider that this sample included only subjects who were willing to participate in the study. There is no information that could tell us how different or similar the sample was compared to the rest of the clients who decided not to participate.

In addition, none of the minority clients completed 14 sessions. The small group of clients who completed all sessions included White subjects only. It is important to consider that there were less Hispanics and Asians than Whites, and a bigger sample might show different attendance/dropout rates. It is still unclear if these rates are representative of the population; however, it appears to be consistent with literature that says that minorities have higher dropout rates compared to Whites (Wierzbicki & Pekarik, 1993).

Sample characteristics.

The results of the multiple regression analyses were not statistically significant. This may be due to a lack of statistical power related to the sample size. The importance of the sample size is crucial, and researchers have proposed methods to determine adequate sample sizes in order to obtain power in regression studies (e.g., Kelley & Maxwell, 2003; Milton, 1986; Nunally, 1967). Increasing the sample may be helpful if this study is replicated. An additional limitation may be the way the sample was obtained. The allocation of the subjects to the study was based on the availability of clients in a counseling facility, where all adult clients were invited to participate, so it was a real life, clinical sample. It is unclear if this sample was a close representation of the general population and how this might have affected the results.

Subgroup size variability.

The unequal size of subgroups by ethnicity might be another limitation. Some researchers consider that unequal sample sizes across groups of categorical variables decrease power (e.g., Aguinis, 1995; Aguinis & Stone-Romero, 1997; Alexander & DeShon, 1994; Stone-Romero, Alliger, & Aguinis, 1994). They consider that, regardless of the overall sample size, power decreases as the subsamples' sizes are different from a .50/.50 distribution. The distribution of Whites, Asians, and Hispanics in this study was approximately .81/.12/.07. Although this distribution may be depicting real life situations in terms of utilization of mental health services across ethnic groups, it was not a stratified representation of the entire population based on race or ethnicity. The U. S. Census Bureau (2010) uses separate definitions for race and ethnicity. Hispanics in particular can belong to different races, so they are not considered in the race distribution. In terms of race, Whites represent 75% of the U.S. population and Asians, 5%. In terms of ethnicity, Hispanics (regardless of race) represent 13%, and non-Hispanic Whites, 65%. Despite the questions of how representative of the general population the subgroups in this study were, the difference in proportions was substantial and it might have impacted the statistical power of the study.

Therapist factors.

As mentioned earlier, the majority of the clients were seeing a counselor who had more than one client, and many therapists treated about five clients

within this sample. It is uncertain how this could have affected the overall results. Another limitation is related to the differences in theoretical orientations among therapists. Even though research says that psychotherapy works regardless of theoretical orientation (Lambert & Archer, 2006; Wampold, 2000), differences in orientations across therapists could represent a confounding variable in these types of studies.

Psychopathology diversity.

As mentioned earlier, subjects displayed a wide array of presenting problems (e.g., anxiety, stress, low self-esteem, depression, communication issues, partner related problems, family issues, socialization issues, career issues, and substance abuse). Some psychopathologies may be harder to treat and may take more time to make progress, so this diversity may be a confounding factor when comparing treatment outcome across clients. It is unclear if this factor affected the results of the study.

Other ethnic factors.

Researchers have identified several variables when studying the psychotherapy process of minorities (e.g., SES, acculturation, language skills, ethnic-racial identity, perceived minority status, and discrimination), and they consider that these variables should be taken into account when evaluating interventions with minorities because the within group variability may be significant (Hall, 2001; Jani, et al., 2009). All participants in the sample regardless of the ethnic group used English during the counseling sessions, but

nothing else was known about the other variables. It is unclear if the within group variability of the minority groups affected the obtained results.

Implications for Practice and Research

Although the proposed hypotheses were not supported, the results of the descriptive statistics were consistent with past literature. For instance, minority clients attended fewer sessions than Whites. Practitioners may take this into account in order to focus on those factors that can increase attendance rates (e.g., cultural competence, racial match, culturally adapted interventions). In addition, minorities had the highest pre- and post- test distress levels. This information is useful for practitioners working with minorities to develop more efficacious interventions for these populations. Furthermore, research indicates that minorities are underrepresented in terms of seeking out mental health services, and it appears that Hispanics were underrepresented in this study. Different types of efforts in the community may be done to encourage the utilization of mental health services in minorities. Further research may replicate this study addressing the limitations found, which could have possibly affected the results of this study. A bigger sample with comparable ethnic subgroup sizes, including subjects with the same or similar presenting problems, and a more consistent number of sessions may be beneficial to obtain clearer results.

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APPENDIX A

DATA COLLECTED 2006- 2008

DEMOGRAPHIC FORM

Please select the best response

Sex

- Female
- Male

Family Size (including yourself)

- 1
- 2
- 3
- 4 or more

Age

- 0-18
- 19-25
- 26-35
- 36-49
- 50+

Family Income

- \$0 - \$9,999
- \$10,000- \$19,999
- \$20,000- \$29,999
- \$30,000- \$39,999
- \$40,000 +

Ethnicity

- White
- Black
- American Indian
- Hispanic
- Asian/ Pacific Islander
- Others

Client Type

- Student Part-time
- Student Full-time
- Staff/Faculty Part-time
- Staff/Faculty Full-time
- Community member

Marital Status

- Single
- Married
- Divorced
- Widowed
- Living w/Significant Other

Disability

- Not Disabled
- Physically Disabled
- Developmentally Disabled

Outcome Questionnaire (OQ-45.2)

Instructions: Looking back over the last week, including today, help us understand how you have been feeling. Read each item carefully and mark the box under the category which best describes your current situation. For this questionnaire, work is defined as employment, school, housework, volunteer work, and so forth. Please do not make any marks in the shaded areas.

	Never	Rarely	Sometimes	Frequently	Almost Always
1. I get along well with others.	4	3	2	1	0
2. I tire quickly.	0	1	2	3	4
3. I feel no interest in things.	0	1	2	3	4
4. I feel stressed at work/school.	0	1	2	3	4
5. I blame myself for things.	0	1	2	3	4
6. I feel irritated.	0	1	2	3	4
7. I feel unhappy in my marriage/significant relationship.	0	1	2	3	4
8. I have thoughts of ending my life.	0	1	2	3	4
9. I feel weak.	0	1	2	3	4
10. I feel fearful.	0	1	2	3	4
11. After having a drink, I need a drink the next morning to get going. (If you do not drink mark "never")	0	1	2	3	4
12. I find my work/school satisfying.	4	3	2	1	0
13. I am a happy person.	4	3	2	1	0
14. I work/study too much.	0	1	2	3	4
15. I feel worthless.	0	1	2	3	4
16. I am concerned about family troubles.	0	1	2	3	4
17. I have an unfulfilling sex life.	0	1	2	3	4
18. I feel lonely.	0	1	2	3	4
19. I have frequent arguments.	0	1	2	3	4
20. I feel loved and wanted.	4	3	2	1	0
21. I enjoy my spare time.	4	3	2	1	0
22. I have difficulty concentrating.	0	1	2	3	4
23. I feel hopeless about the future.	0	1	2	3	4
24. I like myself.	4	3	2	1	0
25. Disturbing thoughts come into my mind that I can't get rid of.	0	1	2	3	4
26. I feel annoyed by people who criticize my drinking (or drug use). (If not applicable mark "never")	0	1	2	3	4
27. I have an upset stomach.	0	1	2	3	4
28. I am not working/studying as well as I used to.	0	1	2	3	4
29. My heart pounds too much.	0	1	2	3	4
30. I have trouble getting along with friends and close acquaintances.	0	1	2	3	4
31. I am satisfied with my life.	4	3	2	1	0
32. I have trouble at work/school because of drinking or drug use. (If not applicable, mark "never")	0	1	2	3	4
33. I feel that something bad is going to happen.	0	1	2	3	4
34. I have sore muscles.	0	1	2	3	4
35. I feel afraid of open spaces or driving or being on buses, subways and so forth.	0	1	2	3	4
36. I feel nervous.	0	1	2	3	4
37. I feel my love relationships are full and complete.	4	3	2	1	0
38. I feel that I am not doing well at work/school.	0	1	2	3	4
39. I have too many disagreements at work/school.	0	1	2	3	4
40. I feel something is wrong with my mind.	0	1	2	3	4
41. I have trouble falling asleep or staying asleep.	0	1	2	3	4
42. I feel blue.	0	1	2	3	4
43. I am satisfied with my relationships with others.	4	3	2	1	0
44. I feel angry enough at work/school to do something I may regret.	0	1	2	3	4
45. I have headaches.	0	1	2	3	4

IIP-32

Here is a list of problems that people report in relating to other people. Please read the list below, and for each item, consider whether that problem has been a problem for you with respect to any significant person in your life. Then select the number that describes how distressing that problem has been, and write that number to the left of the item on the line provided.

Not at all	A little bit	Moderately	Quite a bit	Extremely
0	1	2	3	4

Example:

____ 00. It is hard for me to talk to my relatives.

If you think that this is moderately hard to do, you would put a 2 in the space to the left of the item.

- ____ 1. It is hard for me to take instructions from people who have authority over me.
- ____ 2. It is hard for me to be supportive of another person's goals in life
- ____ 3. It is hard for me to show affection to people.
- ____ 4. It is hard for me to express my feelings to other people directly
- ____ 5. It is hard for me to be assertive with another person
- ____ 6. It is hard for me to argue with another person
- ____ 7. It is hard for me to let myself feel angry at somebody I like
- ____ 8. It is hard for me to stay out of other people's business
- ____ 9. I manipulate other people too much to get what I want
- ____ 10. It is hard for me to put somebody else's needs before my own
- ____ 11. It is hard for me to feel close to other people.
- ____ 12. It is hard for me to open up and tell my feelings to another person.
- ____ 13. It is hard to be self-confident when I am with other people
- ____ 14. It is hard for me to feel angry at other people
- ____ 15. It is hard for me to set limits on other people.
- ____ 16. I feel too responsible for solving other people's problems.
- ____ 17. I am too independent.
- ____ 18. It is hard for me to really care about other people's problems
- ____ 19. It is hard for me to get along with people.
- ____ 20. It is hard for me to ask other people to get together socially with me
- ____ 21. It is hard for me to be another person's boss.
- ____ 22. I am too gullible
- ____ 23. I try to please other people too much.
- ____ 24. I open up to people too much
- ____ 25. I try to control other people too much.
- ____ 26. I fight with other people too much.
- ____ 27. I keep other people at a distance too much
- ____ 28. I am too afraid of other people
- ____ 29. I am too easily persuaded by other people
- ____ 30. It is hard for me to be firm when I need to be.
- ____ 31. I put other people's needs before my own too much.
- ____ 32. I want to be noticed too much