Interpersonal Problem Type, Gender,

and Outcome in Psychotherapy

by

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ABSTRACT

This study examined the relationship that gender in interaction with interpersonal problem type has with outcome in psychotherapy. A sample of 200 individuals, who sought psychotherapy at a counselor training facility, completed the Outcome Questionnaire-45(OQ-45) and the reduced version of the Inventory of Interpersonal Problems (IIP-32). This study was aimed at examining whether gender (male and female), was related to treatment outcome, and whether this relationship was moderated by two interpersonal distress dimensions: dominance and affiliation. A hierarchical regression analyses was performed and indicated that gender did not predict psychotherapy treatment outcome, and neither dominance nor affiliation were moderators of the relationship between gender and outcome in psychotherapy.

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INTRODUCTION

Interpersonal behavior is said to be a key component of psychological well-being. The ability to interact with others in a wide range of settings is believed to be vital to psychological well-being, and the inability is believed to be associated with distress and even psychopathology (e.g. Horney, 1950; Tracey, 1993). It is important to understand the relationship that interpersonal problem type has to outcome in therapy. Past research has shown that interpersonal problems are related to the therapeutic process and the client outcome (Dinger & Henning, 2010). According to Cross and Madson (1997) men and women demonstrate many differences in emotion and social behavior which may affect problem type and outcome. The present study utilizes a brief measure of interpersonal problems to examine the relation between gender and interpersonal problem type on outcome. Gender was selected in this study because while previous research has found a weak relationship between gender and outcome in psychotherapy, researchers have suggested that past studies have failed to look at possible interaction effects when examining gender and outcome (Garfield, 1994).

Moderating Variables

The present study is aimed at looking at interpersonal problem type as a moderating variable. Moderating variables describe "when" and "for whom" a variable will more strongly predict an outcome variable (Holmbeck, 1997). Therefore a moderating variable may alter the direction or strength of the relationship between the predictor variable and the outcome. According to Jaccard, Turrisi, and Wan (1990) it is

important that interaction effects, or moderators, are studied because they occur often in psychological research.

Interaction effects are important for more than just studies of intervention. There are many times when researchers are interested in knowing if a predictor and outcome variable is stronger for one person than another. The field is also said to be more sophisticated when complex understanding of these types of relationships are found (Aguinis, Boik, & Pierce, 2001) and according to Cohen, Cohen, West, and Aiken (2003) it is the basis of theory in the social sciences.

One example from Corning (2002) demonstrates how we can increase our understanding of relations between predictors and outcomes by looking at moderating variables. Corning (2002) observed that there was a positive relationship between perceived discrimination and psychological distress in individuals with low self-esteem, but not with individuals who had high self-esteem. As Frazier, Tix, and Barron (2004) put it, "self-esteem 'buffered' the effects of discrimination on distress." (p.116). It is important to distinguish mediators from moderators, because oftentimes they are confused. Mediating variables describe "how" or "why" a variable causes or predicts the outcome variable. According to Baron & Kenny (1986) moderating variables are often examined when there are weak or inconsistent relations between the predictor and outcome variables in multiple studies that can't be otherwise explained. By looking at moderating variables the researcher may find that one specific intervention is weak because there is only evidence of its effectiveness for some people. For example when looking at the relationship between the variables social support and mental health indicators (such as depression), Lakey & Drew (1997) reported that evidence of the

relationship frequently does not turn out as strong as the researcher would expect. From this, they concluded that social support may be related to depression more highly for some than it is for others. Based on existing theories they decided to look at gender as a moderating variable, because according to Cross and Madson (1997) relationships are more important to women than men, and therefore the relationship between depression and social support may be stronger for women than it is for men. This research highlights the importance of examining the relationship of problem type and gender to outcome in therapy, because it suggests that there are differences in gender that may contribute to problem type.

Interpersonal Problems as Moderating Variables and Outcome

Interpersonal theory suggests that a person's interpersonal problems can be described by a circumplex around the dimensions of affiliation (friendliness-hostility) and control (dominance-submissiveness) (Carson, 1969; Kiesler, 1983). According to Horrowitz and Vitkus (1986), "affiliation" is related to nurturance, friendliness and love, whereas "dominance" is related to power and control. In studies involving psychotherapy research, Keisler's idea of the interpersonal circumplex is used to operationalize "interpersonal problems". The Inventory of Interpersonal Problems (IIP) is frequently used to assess these "interpersonal problems," by measuring the problems on the two dimensions, affiliation and control (Horowitz, Alden, & Wiggins, 2000). Many studies have found a positive correlation between individual's that have strong affiliation having positive outcomes (e.g., Ruiz et al., 2005) and some studies show that the relationship between these two variables may change depending on the treatment modality that is utilized (Puschner, Kraft, & Bauer, 2005).

For example, two studies found that interpersonal problems that were related to affiliation did not have a relation to symptomatic improvement (Davis-Osterkamp, Strauss, & Schmitz, 1996; Dinger et al., 2007). On the other hand, there were findings on the control dimension by Davis-Osterkamp et al. (1996); patients that had high submissiveness had the most successful outcome, whereas patients with high submissiveness in the Dinger et al. (2007) study did not have high outcomes. With findings like these it is important to examine interaction effects that may be underlying the results.

Dinger and Henning (2010) did a study examining the relationship of client's interpersonal problems and the cohesion, or belongingness, that the client felt in group therapy. The study consisted of 327 inpatients that had mixed diagnoses. The researchers hypothesized that the amount of cohesion experienced by each group member would relate to his or her outcome in therapy, depending on his or her interpersonal problem type. More specifically, they believed that an increase in cohesion would benefit patients who were less affiliative, and a decrease in cohesion would benefit patients who were more affiliative. They looked at the interaction effects between cohesion and interpersonal problems and found that high cohesion and increase in cohesion predicted symptom improvement. They found that the affiliation dimension moderated this result; dismissive patients that experienced an increase in cohesion over time benefited from it, whereas affiliative patients improved when there was a slight decrease in cohesion. These findings implicate the importance of different techniques in therapy for different types of people and problems (Dinger & Henning, 2010).

Gender, Interpersonal Problem type, and Outcome

According to Ogrodniczuk, Piper, Joyce, and McCallum (2001), very little is understood about the relation of gender with outcome in psychotherapy. While some studies have suggested that females receive more positive outcomes in psychotherapy (Jones & Zoppel, 1982; Kershner, Genack & Hauser, 1978), other studies have suggested that both males and females experience significant improvement from psychotherapy (Jones, Krupnick, & Kerig, 1987). According to the research available, it appears that there is a weak relationship between gender and outcome in psychotherapy (Zlotnick, Shea, Pilkonis, Elkin, & Ryan, 1996; Beutler & Machado, 1994; Thase, Reynolds, Frank, Simons, McGeary, Fasiczka, Garamoni, Jennings, & Kupfer, 1994; Sotsky, Glass, Shea, Pilkonis, Collins, Elkin, Watkins, Imber, Leber, & Moyer, 1991). While there is little understanding of the relationship between gender and outcome, many researchers believe that there are certain aspects of therapy that are more beneficial for women, and certain aspects that are more beneficial for men (Kaplan, 1986; Stiver, 1986). According to Cross and Madson (1997), men and women have very different models of the self, men were considered more "independent" and women were considered more "interdependent". These models of self may help to explain the qualities that men versus women benefited from in psychotherapy. For example, women preferred and benefited more from a relationship in therapy that was characterized by affiliation, empathy, and emotional expressiveness (Kaplan, 1986; Stiver, 1986). Stiver (1996) coined this type of therapy as "supportive". According to Allen and Gordon (1990) men benefited more from therapists that employed interventions which allowed them to examine their emotions, which Piper, Joyce, and McCallum (1998) referred to as "interpretive" therapy. In order to better

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understand the relationship that gender has on outcome in psychotherapy, Ogrodniczuk, Piper, Joyce, and McCallum (2001) examined the relationship between different types of short term psychotherapy and gender. They found that men reported better outcomes in "interpretive" forms of therapy over "supportive", and women reported better outcomes in "supportive" forms of therapy over "interpretive". This difference in outcome based on therapy type could also have implications for how outcome in therapy may be affected by the individual's characteristics (for example interpersonal problem) in relation to gender.

According to Gurtman and Lee (2009), very few studies have examined gender differences and interpersonal problem type. After examining past research Paulhus (1987) found that Bem's (1974) scales of "Masculinity" and "Femininity" closely resembled traits on the Interpersonal circumplex, specifically dominance and nurturance. While there is controversy regarding how well the masculine and feminine scales represent actual gender differences, it is generally agreed upon that the "Masculinity" represents "agency," a trait characterized by dominance, control, and independence, whereas "Femininity" represents "communion," a trait characterized by sensitivity, friendliness, and concern for others (Eagly, 1995). In regards to the interpersonal problem circumplex, Lippa (1995) found significant correlations between gender and problem type. Specifically, he found that problems with being cold, vindictive, and domineering were higher for men, and problems with being nonassertive, overly nurturant, and exploitable were higher for women. Gurtman and Lee (2009) performed a study to examine these differences and in line with previous research found that the biggest difference between males and females was between the dimensions of Hostile-Dominance versus Friendly-Submission. Due to the fact that researchers have found that

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different interpersonal problem types relate to outcome in therapy, and the fact that researchers have found different prevailing interpersonal problem types in males and females, it is important to examine the relationship that interpersonal problem type and gender may have to outcome in therapy. More specifically, it is important to examine whether an interaction between gender and problem type is present, because the research that suggests that men and women experience different interpersonal problems, paired with the research that suggests that women benefit from more "supportive" forms and men benefit from more "interpretive" forms of therapy, may imply that certain levels of interpersonal problems may affect treatment outcome differently in men versus women. For example if women have high levels of affiliation, which is characterized by nurturance, friendliness and submission, paired with the fact that women prefer and benefit more from supportive types of therapy (that are characterized by similar traits such as nurturance and friendliness), they are likely to have a more positive outcome in therapy. In contrast, if men have high levels of dominance, which is characterized by controlling and manipulative behavior, these characteristics may interfere with their ability to allow the therapist to employ an intervention that allows for them to examine their emotions, resulting in poor outcome. Low levels of dominance in men, on the other hand, may allow them to accept an intervention to examine their emotions, because they will not find it necessary to control the situation, thus maximizing therapy outcome.

Hypotheses

The goal of the present study was to examine the contribution separately and interactively of interpersonal problem dimensions and gender to outcome, that is, symptomatic improvement in psychotherapy. Interpersonal problem dimensions were

represented by dominance and affiliation scales on the IIP. Symptomatic distress was represented by the total score on the OQ-45 (and not the symptom distress subscale of that instrument), as measured before the first session and before the final session of counseling. The two administrations of the distress measure together constituted a measure of improvement, or outcome, as it is generally referred to in this study. Based on the information presented, several observations can be highlighted. First, there appears to be a weak relationship between gender and outcome in psychotherapy. Second, males and females tend to display different interpersonal styles, which may be related to different interpersonal problems (men tend to be more "cold" and "domineering," and women tend to be more "non-assertive" and "exploitable")(Lippa, 1995). Third, researchers have suggested that different levels of dominance and affiliation are related to both positive and negative outcomes in psychotherapy (high levels of dominance as an interpersonal problem type have been related to poor outcomes and high levels of affiliation as an interpersonal problem type have been related to positive outcomes) (Lagattuta, 2007; Ruiz et al., 2005; Horowitz, et al., 1993; Horowitz, et al., 1992). Lastly, several studies have suggested that interpersonal problem type acts as a moderator between psychotherapy outcome and other variables (such as cohesion). Researchers have also suggested that interaction variables should be examined in regard to the relationship between gender and outcome. Therefore, it is possible that the relationship between treatment and gender may vary as a function of interpersonal problem type. In other words, there may be an interaction effect between gender and interpersonal problem type in relation to outcome in psychotherapy. Several questions were of interest regarding the prediction of outcome. First, is there a relation of gender with outcome? Secondly, is

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there a relation of dominance and affiliation as an interpersonal problem type on outcome? And lastly, is the relationship between gender and outcome in psychotherapy moderated by interpersonal problem type? The following hypotheses were tested:

Hypothesis 1: There will be no overall effect of gender on treatment outcome: There will be no difference in outcome between females and males. According to the literature, there is a weak relationship between gender and outcome. (Ogrodniczuk et al., 2001)

Hypothesis 2: There will be an overall effect of dominance problems on treatment outcome: Higher levels of dominance, as a problem type (as measured by the IIP), will be related to more negative outcomes. Studies have shown that problems involving dominance are related to poor treatment outcome (Horowitz et al., 1993). Due the fact that dominance is characterized by controlling and manipulative behavior, characteristics that are not conducive to the therapeutic relationship, it is hypothesized that high levels of the dominance subscale will relate to poor outcomes.

Hypothesis 3: There will be an overall effect of affiliation problems on treatment outcome: Higher levels of affiliation, as a problem type (as measured by the IIP), will be related to more positive outcomes. According to the literature, high levels of affiliation may be related to positive outcomes (Horowitz et al., 1992). Due to the fact that affiliation is related to nurturance and submission, paired with the fact that the therapeutic relationship most often consists of empathy and support, it is hypothesized that high levels of affiliation subscale will relate to more positive outcomes.

Hypothesis 4: The Interpersonal Problem dimensions (dominance and affiliation) will moderate the relationship between gender and outcome in psychotherapy in the following ways:

High affiliation scores will be more strongly related to positive outcomes for females compared to males.

It is hypothesized that high levels of affiliation problem type in women will relate to more positive outcomes in therapy due to the fact that the literature suggests that women benefit more from "supportive" forms of therapy, paired with the fact that high levels of affiliation are characterized by qualities that relate back to the need for a supportive relationship (submission, friendliness, nurturance).

Low levels of dominance as measured as a problem type will be more strongly related to positive outcomes for males compared to females.

Due to the fact that men benefit more from interventions in therapy that allow them to examine their emotions, men with low scores on the dominance subscale are more likely to allow these interventions to occur. Due to the fact that men are described as "independent" as opposed to women, who are described as "interdependent" or "relational," it is especially important to minimize characteristics in men that are associated with dominance problems, such as control, in order to maximize their outcome in therapy.

Chapter 2

METHOD

Participants and Procedures

The data used were drawn from an existing data set. Participants in the data set have been assigned identification numbers with no identifiable meaning, such that no identifying information is included in the data set. Prior to clients first session of counseling they were given information about the data collection used for the study and were provided with a standard intake packet to complete. Each client received a consent form, which described the description and purpose of the study as well as their rights concerning confidentiality and withdrawal from the study. Forty-five percent of clients that attended therapy at the clinic agreed to participate in the study. Throughout the course of therapy clients were asked to complete a battery of instruments either before or after the therapy session. The instruments in the battery that were utilized in the present study include the Inventory of Interpersonal Problems-32 (IIP-32), a brief measure of interpersonal problems, and the Outcome Questionnaire-45 (OQ-45), a measure of outcome in psychotherapy. Clients filled out both the IIP-32 and the OQ-45 before their first therapy session and again prior to their final session. Clients completed the OQ-45 before each counseling session that they attended. Scores from the IIP-32 first session and the OQ-45 first and last session were utilized for the present study. Two hundred participants completed the instruments that were utilized for the study.

The study consists of a sample of 200 clients who sought services at a mental health-training center located in the Southwest. The original data set included data from 385 clients, but clients who had missing data related to the study were excluded (e.g.

gender, affiliation, dominance, and outcome data).Participants received weekly counseling services from graduate level counselors who were supervised by licensed psychologists. Approximately 67% of the clients were female and 33% were male. Caucasian participants made up the majority of the sample (71%), followed by Asian/Pacific Islander (12%), Hispanic (7%), Black (1%), and American Indian (1%). Eight percent of the clients reported their ethnicity as "other". Twenty-five percent of the clients were between the ages of 19-25, 27% were 26-35, 24% were 36-49, 15% were 50 years and older, and 3% of clients did not identify their age. Out of the 200 participants, 26% attended 2 to 4 counseling sessions, 22% attended 5 to 7 counseling sessions, 34% attended 8 to 10 sessions, and 18% attended 11 to 14 sessions. Clients received therapy from 85 therapists enrolled in masters and doctoral level practicums at a large university in the southwest. Each counselor had a caseload of 4-5 clients and 50% of the therapists worked with more than one of the clients in the present study. The presenting problems of the clients included: depression, anxiety, relationship issues, family issues, grief, career related issues, and stress, to name a few.

Measures

The *Inventory of Interpersonal Problems-32* (Horowitz, Alden, Wiggins, & Pincus, 2000) is a 32 item abbreviation of the Inventory of Interpersonal Problems-Circumplex (IIP-C) or IIP-64. The IIP-C consists of two dimensions, dominance distress and affiliation distress, and 8 octants that pertain to interpersonal difficulty. The following themes are measured by the 8 octants: domineering/controlling, vindictive/self-centered, cold/distant, social inhibited, nonassertive, overly accommodating, self-sacrificing, intrusive/needy. The IIP-C includes 64 items that aim at measuring the

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identified dimensions of interpersonal difficulty. Participants are asked to respond to

each item related to interpersonal problem type using a 5-point likert scale that ranges

from 0 (not at all) to 4 (extremely), with higher scores indicating a higher level of

interpersonal distress. For example, the client indicates a 0-4 on questions such as, "It is

hard for me to get along with other people". The IIP yields a total score that indicates the

level of global interpersonal distress, or elevation, it yields 2 dimension scores of

dominance and affiliation distress, and 8 octant scores (Horowitz et al., 2000). The IIP is

based on a theoretical structure of interpersonal behavior and has been heavily supported

for its structural validity (Borkovec, Newman, Pincus, & Lytle, 2002; Ruiz Pincus,

Borkovec, Eschemendia, Castonguay, & Ragusea, 2004; Tracey, Rounds, & Gurtman,

1996). The IIP-32 consists of the most highly correlated items in each scale from the IIP-

C (Horowitz et al., 2000) and is different from other shortened versions of the IIP-C

(Barkham, Hardy, & Startup, 1996; Soldz, Budman, Demby, & Merry, 1995). The

internal consistency is high ranging from .68-.87, with a total score reliability also high at

.93. Test-retest reliability yielded coefficients that showed a moderate to strong

relationship and were comparable to those found with the IIP-C, indicating that the IIP-32

does not lose much by abbreviating the instrument.

The *Outcome Questionnaire-45* (Lambert, Hansen, Umphress, Lunnen, Okiishi,

Burlingame, Huefner, & Reisinger, 1996) is a self-report measure consisting of 45 items

designed to measure symptomatic distress and client progress. Participants are asked to

respond to 45 items using a 5-point likert scale that ranges from 0 (never) to 4 (almost

always), for scoring purposes it is important to note that 9 of the items are reverse scored,

in other words for one question a zero may indicate high symptom distress whereas for

another question a four may indicate high symptom distress. The item responses have three subscales including symptom distress (n items= 25), interpersonal relations (n items= 11), and social role performance (n items= 9). The subscales are added up to yield a total score, which may be described as a "total index of overall mental health" (p.10, Lambert et al., 1996). The symptom distress subscale is intended to measure symptoms associated with psychological disorders (e.g. anxiety, depression), the interpersonal relations subscale is intended to measure the client's satisfaction and problems regarding interpersonal relationships, and the social role subscale is intended to measure the participants ability to perform important life tasks (e.g. school, work). The total score and subscale scores are compared to cutoff scores that aim at identifying when there is a clinically significant concern (Lambert et al., 1996). The OQ-45 exhibits good concurrent validity for measures of depression and anxiety (Umphress, Lambert, Smart, Barlow, Clouse, & Hensen, 1997). The one-week test-retest reliability for total symptom distress is reported as .84, and the subscale test-retest reliabilities range from .66 to .86 (Umphress et al., 1996). The internal consistency for total symptom distress was .93 and the subscales ranged from .70 to .90 (Lambert et al., 1996).

Data Analysis

The research question was directed toward the relation of gender and interpersonal problem (affiliation and dominance) on symptomatic improvement in therapy. Specifically, interaction effects between gender and interpersonal problems were of interest. Therefore a hierarchical regression analysis to examine moderator effects was utilized (J. Cohen & P. Cohen, West, & Aiken, 2003; Frazier, Tix, & Barron, 2004). Due to the fact that participants started with varying levels of distress, the initial

OQ score (OQ-Initial) was included as a predictor variable and was therefore included as the first step in each of the regression models in order to control for the initial participant variability in OQ-45 scores. The OQ-Initial scores were obtained by calculating the average of the 45 items in the questionnaire. Higher scores on the OQ-Initial typically indicate higher levels of distress. Gender (Gen) was included as a predictor variable, and dominance (Dom) and affiliation (Aff) were included as moderator variables. In order to qualify as significant, a *p* value of less than .05 was required.

The categorical variable, gender, was coded using dummy coding (0 for female and 1 for male). "Female" was selected as the reference group because it had the largest sample size compared to males.

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

After the octant scores were calculated, the following formulas were then used in order to calculate the dominance and affiliation scores:

Dom = PA + .71 * (BC + NO) -.71 * (FG+JK) - HI

Aff = LM + .71 * (NO + JK) -.71 * (BC+FG) – DE

Once the dominance and affiliation scores were obtained they were mean centered in order to prevent non-essential multicollinearity when the interaction products were created.

Two interaction terms were created in order to test the effects of the predictor variable (gender) in interaction with each of the moderator variables (affiliation and dominance) on outcome. The predictor variable (gender) was combined with the moderator variables (affiliation and dominance) to create the following interaction terms: AffXGen and DomXGen. The final OQ-45 score (OQ-Termination) was the outcome variable, with lower scores indicating improved levels of distress.

Several regression analyses were then conducted using a statistical analysis program (SPSS). Six models were created in the hierarchical regression analysis and OQ-Termination was used as the outcome variable for all models. The first model included the OQ-Initial scores and the second model added gender in order to examine the first hypothesis, whether there was an overall effect for gender.

In the third and fourth models, the moderator variables (Dom and Aff) were added to examine the relationship of dominance and affiliation with outcome. Dominance and affiliation were used as predictor variables in this model in order to test the second and third hypothesis. The final model included the interaction terms, which were aimed at identifying the moderator effects of dominance and affiliation on outcome. The final model was created to test the fourth and fifth hypothesis.

Chapter 3

RESULTS

Descriptive statistics

The means, standard deviations, and correlations of the measures are presented in

Table 1.

Table 1

Correlations and Descriptive Statistics for Predictor and Outcome Variables (N=200)

Measures	1	2	3	4	5	*M*	*SD*
1. OQ-Initial	1.00					65.14	24.40
2. OQ-Termination	.81**	1.00				57.31	26.08
3. Gender	.06	-.01	1.00			.66	.48
4. Dominance	-.14*	-.12*	-.08	1.00		-1.00	2.05
5. Affiliation	-.11	-.12	.09	-.04	1.00	1.00	2.09

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

The results of the descriptive statistical analyses displayed that the mean OQ-

initial score was 65.14 (SD= 24.40), which was higher than the mean of the OQ-

termination score, averaging 57.31 (SD= 26.08). There was a significant difference

between the average OQ-initial score and the average OQ-termination score, $t(197)=$

19.14, $p<.001$.

Correlation coefficients were also calculated between the predictor and outcome

variables and are presented in Table 1. The results displayed that the correlation between

OQ-initial scores and OQ-termination scores was strong and significant $r(198)=.81$,

$p<.001$.

Dominance was inversely correlated with initial and termination OQ scores and the correlations were small, but significant, $r(198)=-.14$, $p=.02$ and $r(198)=-.12$, $p=.04$. Affiliation was also inversely correlated with the initial and termination OQ scores, but the correlations were not statistically significant, $r(198)=-.11$, $p=.06$ and $r(198)=-.12$, $p=.05$.

The correlations between gender and initial and termination OQ scores, were not statistically significant, $r(198)=.063$, $p=.19$ and $r(198)=-.01$, $p=.46$. There were no statistically significant correlations between the IIP domains (affiliation and dominance) and gender. The correlation between dominance and gender was negatively related, but was not statistically significant, $r(198)=-.08$, $p=.13$. The correlation between affiliation and gender was positive, but also not statistically significant, $r(198)=.09$, $p=.10$.

Multiple Regression Analyses

The results of the hierarchical multiple regression analyses are presented in Table 2. The first two models were aimed at testing the hypothesis that there would be no overall effect of gender on treatment outcome. The first model displayed that OQ-initial scores can predict OQ-termination scores (see Model 1, Table 2), the model was statistically significant $F(1, 198)=366.38$, $p<.001$. Approximately 65% of the variance in the OQ-termination scores can be accounted for by its linear relationship with OQ-initial scores, $R^2=.65$, Adjusted $R^2=.65$.

However, once gender was added to the regression model (see Model 2, Table 2) it accounted for only .003% of the additional variance and was not statistically significant, $\Delta R^2=.003$, $F(1, 197)=1.91$, $p=.17$. Due to the fact that he overall contribution

of gender above and beyond OQ-initial score was not significant, the first hypothesis was

supported.

Table 2

Summary of hierarchical regressions focusing on the moderation of outcome in therapy (N=200)

	R^2	Adj. R^2	df	F	ΔR^2	Δdf	ΔF	β	t
Model 1	.65*	.65*	1,198	366.68*					
OQ-Initial								.81	19.14
Model 2	.65	.65	1,197	184.99	.003	1	1.90		
OQ-Initial								.81	19.24
Gender								-.06	-1.38
Model 3	.65	.65	1,196	122.78	.000	1	.08		
OQ-Initial								.81	18.97
Gender								-.06	-1.40
Dominance								-.01	-.28
Model 4	.65	.65	1,195	91.85	.001	1	.33		
OQ-Initial								.81	18.71
Gender								-.06	-1.33
Affiliation								-.02	-.57
Model 5	.65	.65	1,194	73.11	.000	1	.01		
OQ-Initial								.80	18.51
Gender								-.06	-1.32
Dominance								-.01	-.32
Affiliation								-.03	-.43
Model 6	.66	.65	1,193	61.21	.002	2	1.25		
OQ-Initial								.80	18.45
Gender								-.06	-1.38
Dominance								-.08	-1.10
Affiliation								-.05	-.64
DomXGen								.08	1.11
AffXGen								.01	.81

* p <.05 ** p <.01

The third model, which contained OQ-initial scores and dominance as predictors,

was created in order to test the hypothesis that there would be an overall effect of

dominance on treatment outcome. More specifically, that higher levels of dominance

would be related to more negative outcomes. Dominance accounted for only .0001% of

the variance in outcome and was not statistically significant, $\Delta R^2 \approx .00$, $F(1,196)=.08$, $p=.78$. Due to the fact that the overall contribution of dominance above and beyond OQ-initial score was not significant, the second hypothesis was not supported.

The fourth model, which contained OQ-initial scores and affiliation as predictors, was created in order to test the hypothesis that there would be an overall effect of affiliation on treatment outcome. More specifically, that higher levels of affiliation would be related to more positive outcomes. Affiliation accounted for only .001% of the additional variance and was not statistically significant, $\Delta R^2 \approx .00$, $F(1, 195)=.33$, $p=.57$. Due to the fact that overall contribution of affiliation above and beyond OQ-initial score was not significant, the third hypothesis was not supported.

The final model, which contained all predictors (OQ-initial, Gender, Dominance, Affiliation, AffiliationXGender, and DominanceXGender) was created to examine the hypothesis that the IIP domains of dominance and affiliation moderated the relationship between gender and treatment outcome. The results of this model displayed that the interaction between affiliation and gender (AffXGen) along with dominance and gender (DomXGen) accounted for .002% of the variance above and beyond the variance explained by OQ-initial score, gender, affiliation, and dominance. This result was not statistically significant, $\Delta R^2 \approx .00$, $F(2,193)=.02$, $p=.53$. Specifically, there was no significant interaction between gender and affiliation or dominance in relation to outcome, $\beta= .017$, $t(197) = .239$, $p=.81$ and $\beta=.083$, t(197)=1.12, p=.27.

Chapter 4

DISCUSSION

The results of treatment outcome in psychotherapy, as measured by the OQ-45 were examined for the entire sample. While there was no significant difference between males and females, scores decreased from OQ-initial to OQ-termination overall, suggesting that, on average, clients did experience improvement from psychotherapy. This result is congruent with past research that asserts that psychotherapy is an effective form of treatment and the majority of clients do show some benefit from psychotherapy (Lambert & Archer, 2006; Lambert & Ogles, 2004).

Similar to past findings, there was no relationship between gender and outcome in therapy. Due to the consistently weak relationship between outcome and gender, Hyde (2005, 2007) postulated that men and women have more similarities than differences.

The differences in Interpersonal Problem dimensions (dominance and affiliation) were also examined across gender. Despite the fact that the literature suggests that males and females tend to have distinct interpersonal styles with males being more dominant and females being more nurturant, (Gurtham & Lee, 2009; Paulhus, 1987) there were no significant differences in interpersonal style between gender. While females had higher affiliation scores and males had higher dominance scores, the differences were not significant.

The relationship between interpersonal problem type and outcome was also examined. Dominance was both inversely correlated to OQ-initial score and OQ-termination score, and the relationship was weak but significant. This suggests that higher levels of dominance may be related to lower levels of distress. Affiliation was also

inversely correlated with both OQ-initial and OQ-termination scores, but this relationship was not statistically significant.

The hierarchical regression analyses did not support the proposed hypotheses. First, an overall effect of gender on treatment outcome was not supported. Second, an overall effect of dominance on treatment outcome was not supported. Despite the hypothesis that high levels of dominance would be related to more negative outcomes, the analysis displayed that dominance was not a significant predictor of outcome. Third, an overall effect of affiliation on treatment outcome was not found. The researcher hypothesized that high levels of affiliation would be associated with more positive outcomes, but the analysis displayed that affiliation was not a significant predictor of outcome. Although the literature suggests that high levels of affiliation and low levels of dominance are associated with more positive outcomes in therapy (Crits-Christoph et al. 2005; Ruiz et al. 2004), this study was unable to repeat those findings. Lastly, neither of the hypothesized interactions (DomXGen and AffXGen) were supported. The researcher hypothesized that there would be significant interactions between females with high affiliation and males with low dominance, but neither hypothesis was supported. Therefore the results failed to show that the

relationship between interpersonal problem type and outcome varies for gender.

Limitations of the Study

It is important to note that the present study had several limitations that may have affected the final results.

Sample characteristics

The outcome of the study did not yield any statistically significant results. This may be due to a lack of statistical power related to the sample size. The sample size of a study can be a crucial element to the outcome of a study. Statisticians such as Kelley and Maxwell (2003) have formulated methods to determine the minimum sample size necessary to obtain statistical power. If this study is replicated, an increase in sample size is suggested.

An additional limitation of the sample is the way in which it was obtained. The sample participants were limited to clients who sought counseling at a counselor training facility at a large university in the southwest and agreed to participate. Therefore it is unclear if the sample is representative of the general population. It is also unclear if there are differences between clients who agree to participate versus those who do not.

Subgroup size variability

Another limitation to the study is the difference in subgroup size by gender. Unequal sample sizes are considered to decrease statistical power according to many researchers (Aguinis et al., 2001; Aguinis & Stone-Romero, 1997). According to many researchers, if the sample size is unequal, power decreases as the sample size gets further away from an equal distribution. The distribution of females to males was approximately .67 to .33. While this distribution may be representative of the ratio of females to males that seek therapy it is not a stratified representation of gender in the population. It is unclear whether the difference in the subgroup sample sizes affected the outcome.

Therapist factors

There are several therapist factors that may have affected the present study. First, while the study aimed at examining gender of the clients, the gender of the therapist was not examined or controlled for. Several studies have examined effects of both client's and therapist's gender. One study found that both male and female clients experienced more positive outcomes after working with a female therapist (Jones & Zoppel, 1982), while other studies have found a weak connection between therapist gender and outcome. It is therefore unclear in the current study how gender of the therapist may have played a role in outcome.

An additional limitation is the differences in theoretical orientation among the therapists. As discussed earlier, Ogrodniczuk et al. (2001) found that while males and females improved in both types of therapy, supportive types of therapy led to larger improvements in outcome for women and interpretive types of therapy led to larger improvements in outcome for men. Therefore the therapist's theoretical orientations may serve as a confounding variable in the present study.

Length of treatment

As discussed earlier, although treatment can consist of up to 14 sessions, the amount of sessions attended varied across clients. While more than half of the clients attended 7 sessions or more, many clients missed sessions and only 18% of clients attended 11 sessions or more. It is unclear if the variability of sessions attended may have affected treatment outcome.

Difference in Psychopathologies

As discussed earlier, the participants reported a large variety of presenting problems including (but not limited to): anxiety, depression, stress, career issues, relationship issues, social issues, and family issues. Certain presenting problems may be more severe than others and may take more time to treat, which can make it problematic to compare treatment outcome across the course of therapy. It is unclear whether this factor affected the present study.

Limited measures

Another limitation to the study is that interpersonal problem type and outcome in therapy were examined using only two measures (IIP-32 and the OQ-45). Additional measures of interpersonal problem type and of outcome may have provided alternative perspectives. It should also be noted that each of the measures are self-report measures and can be limited by the individual's awareness of his or her own problems or behaviors.

Conclusions

Further research may replicate this study and correct for the limitations, which may have affected the results of the study. A larger sample size should be obtained and should be drawn from more than one area. The subgroups should be more equally distributed and presenting problems should be matched. Therapist gender and theoretical orientation should also be controlled for.

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