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The Influence of Level of Training and Gender on Counseling Outcome in a University Counseling Center

Scott Andrew Sokoloski
University of Tennessee - Knoxville

To the Graduate Council:

I am submitting herewith a dissertation written by Scott Andrew Sokoloski entitled "The Influence of Level of Training and Gender on Counseling Outcome in a University Counseling Center." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.

Jacob Levy, Major Professor

We have read this dissertation and recommend its acceptance:

Gary Klukken, John Lounsbury, Tricia McClam

Accepted for the Council:
Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

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THE INFLUENCE OF LEVEL OF TRAINING

AND GENDER ON COUNSELING OUTCOME

IN A UNIVERSITY COUNSELING CENTER

A Dissertation

Presented for the

Doctor of Philosophy

Degree

The University of Tennessee, Knoxville

Scott Andrew Sokoloski

December 2007

DEDICATION

This dissertation is dedicated to my father, Donald Francis Sokoloski.

Though my father did not live to see this through completion, I would never have been

able to accomplish this goal without his love and support. Both tough and tender, he

drove me to succeed through setting an example in his life of hard work and

perseverance. His presence in my life inspired, and inspires, me. I miss him every day.

This dissertation is also dedicated to my mother, Susan Elizabeth Sokoloski.

She is the foundation that allows me to succeed. Her strength is legend, not only in

emotional terms but in spiritual ones. Without her, I would never have been able to find

the strength within myself to complete this. Her love is unyielding, unbounded, and

unconditional. Top o' the world, Ma. Top o' the world!

Though these words attempt to explain the depth of meaning behind my parents' love and

support, they are woefully inadequate to express how I truly feel about them.

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ABSTRACT

This study examined the effects of counselor level of training and gender on counseling outcome in a university counseling center environment. Data was collected from an archival database of approximately 4500 clients seen over a six-and-a-half year time period at a mid-sized Southeastern university counseling center. The Outcome Questionnaire 45.2 was used to measure client outcome, which consists of 45-items scored on a five-point Likert scale. The OQ produces three subscale scores (Symptom Distress, Interpersonal Relations, and Social Role) and a Total Score. The Social Role subscale was found to have low reliability in this study, and was omitted from further consideration. Data on client and counselor gender were also included in this study. Two analyses were performed on the archival data. In the first analysis, 338 clients who completed an OQ at intake and after their fourth session were assigned to groups based on the training level of their assigned counselor (Senior Staff, Pre-Doctoral Intern, and Master's Extern). A series of repeated-measures and one-way ANOVAs were conducted. Total Scores and subscales decreased significantly for clients in all three groups between sessions. There were no significant differences on OQ scores between the groups at intake. However, Master's level clients showed a significantly greater decrease than Senior Staff or Pre-Doctoral clients on the Interpersonal Relations subscale at fourth session. A significant difference was also found for client gender on the IR subscale at both intake and fourth session, with males scoring higher than females. There were no client/counselor gender matching effects observed. In the second analysis, 2772 clients were assigned to groups based on whether or not they returned to counseling after their intake session (Returnees and Non-Returnees). A one-way MANOVA showed a small,

but significant difference between the groups at intake, with Returnees showing slightly

higher OQ scores than Non-Returnees. Follow-up ANOVAs showed this was due to a

significant difference on the IR subscale. Implications for counseling center outcome

assessment and treatment and directions for future research were discussed.

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CHAPTER ONE

INTRODUCTION

In the current health care environment, accountability is considered to be a vital

component of the managed care system (Alleman, 2001; Lyons, 1997; Newman, 2004).

In order for insurance companies and health maintenance organizations (HMOs) to pay

for the provision of services to clients, there must be a method by which the effectiveness

and appropriateness of those services is measured. Due to the rising costs of health care,

it would be advantageous to both the client and the clinician to obtain this data using low-

cost and relatively fast methods of data collection.

Many in the field of psychology have called for the need of research-driven

methods of monitoring accountability (Cooper & Gottlieb, 2000; Sanderson, 2003;

Steenbarger, Smith, & Budman, 1996). Hawkins & Mathews (1999) proposed a three-

level model of conducting research. The highest level, Level 3, consists of the most

stringent scientific study of psychological phenomena, conducted under tightly controlled

conditions and with very specific theoretically-based goals in mind. Its primary purpose

is to understand why changes occur. Level 2 Research will also measure the effectiveness

of a particular phenomenon or program, but it does so less strictly, often without the same

strong theoretical basis. It serves as a balance between scientific study and practical

utility. The primary consumers of such research are practitioners or support systems, such

as a board of directors or other administrative group. The third level of research is called

Level 1 Research, and it is here that Hawkins & Mathews recommend that accountability

research be focused. It involves the monitoring of clinical outcomes in a practical setting, looking at how change is facilitated without the need to understand why those changes occur. The data, gathered frequently by way of brief, simple measures, may assist practitioners in clinical planning for clients or programs.

Kane, Bartlett and Potthoff (1995) advocate for improved accountability through the use of "clinically meaningful information" collected directly from clients in a structured format. This information would include a focus on counseling outcome as reported by clients, gathered through the use of empirically-based measurements.

Lyons (1997) suggests that the consumers of mental health services themselves have prompted the use of research-driven measurement of outcomes. He notes that four different methodologies have been used to varying degrees of success in outcome assessment: Change Analysis, Decision Analysis, Outcome Prediction, and Needs-Based Planning. The Change Analysis method attempts to estimate the amount of benefit received, most commonly through one-time satisfaction surveys. Another, more powerful strategy of change analysis is studying the "dose-response" relationship (Howard, Kopta, Krause, & Orlinsky, 1986). The dose-response assumption is that receiving more of a successful program or therapy should yield better results than receiving less of the program. In Decision Analysis, the focus is on the development of prediction models for clients, based on the client characteristics that led to a particular decision being made. Outcome Prediction is a more robust strategy that attempts to predict results based on a client's specific characteristics and the type of service provided. Finally, Lyons states that Need-Based Planning is a strategy that is directly influenced by the needs of the clients who utilize a particular system. It may incorporate the other three strategies, but is

focused on the systems as a whole rather than on individual clients or clinicians. Each of these four methodologies may provide valuable information in measuring outcomes, ultimately satisfying consumers and providing valuable therapeutic information to clinicians who must demonstrate accountability.

The impact of the managed care system has also been felt in college and university counseling centers (UCC). While measurement of the effects of managed care on UCCs is under debate, there is evidence that the changes in the health care system have resulted in changes in what is important in UCCs, including cost-effectiveness, accountability, and training (Williams & Edwardson, 2000). These foci are similar to those found in traditional mental health services, which have also included a push toward brief therapy rather than long-term care (Scheid, 2003). While UCCs may not be directly affected by interactions with HMOs and other managed care programs, they are still held accountable by accreditation organizations, the university administration, and the community at large for ethical and successful treatment of their clients. Outcome assessment is a key component in providing accountability data for UCCs. Snell, Mallinckrodt, Hill, and Lambert (2001) noted that there has been only limited research focusing on outcome measurement in UCCs, when compared to private, community, and managed care sources. This study was designed to address that gap in the literature.

Outcome Assessment

The field of outcome assessment began in the 1930s, originally focusing on highly-controlled, scientifically-based studies that often compared the efficacy of one psychological theory to another (Lambert, Okiishi, Finch, & Johnson, 1998). The current focus of outcome research has a more practical and patient-centered approach, frequently

utilizing standardized self-report measures (Asay, Lambert, Gregersen, & Goates, 2002; Lambert et al., 1998). Froyd, Lambert, and Froyd (1996) conducted a review of outcome studies published between January 1983 and October 1988 in 21 major psychological journals. They identified 851 unique outcome measures used in the literature, the most frequent of which included the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), the State-Trait Anxiety Inventory (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983), the Hamilton Rating Scale for Depression (Hamilton, 1960), and the Symptom Checklist 90 and 90R (Derogatis, 1977). Froyd et al. (1996) determined that the typical outcome measurement involved the use of a self-report instrument on which an individual rated his or her behavior and symptoms. However, many of the scales used were designed to measure specific states or disorders, limiting their usefulness in practice. Okiishi, Lambert, et al. (2006) note that much of the recent outcome research has focused strictly on specific treatment effects for specific disorders, rather than on the individual counselors and clients. Most clinicians do not have the time or financial means to utilize a large battery of assessments to measure these different treatments or disorders (Lambert et al., 1998), or to deal with the sheer number of assessments currently available and in development by researchers (Froyd et al., 1996). This is especially true in UCCs, where Gallagher (1995) noted that student demand for services has outpaced availability of resources (as cited in Snell et al., 2001). In addition, Snell et al. (2001) stated that much of the outcome assessment literature from the psychotherapeutic community at large may not be generalizable to UCCs.

Stone and Archer (1990) identified 17 challenges for UCCs in the 1990s, many of which focused on the increase in demand for services. These challenges fit into one of six

function areas: clinical services, outreach and consultation services, training, staff development, research, and administration, and they offered 43 strategies for meeting those challenges in the future. In the area of research, those strategies included: 1) a strong commitment by the Director to support staff engaging in research; 2) having the staff become involved in research, though it need not necessarily be "empirical;" 3) having the Center establish and maintain a database of research activity; 4) the appointment and maintenance of a research coordinator staff position; and 5) the Director providing sufficient resources for the staff to conduct research. Guinee and Ness (2000) followed-up that study by conducting a survey to determine how well UCCs met and overcame these challenges during the five-year period between 1990-91 and 1995-96, utilizing the strategies outlined by Stone and Archer. Their survey showed significant changes in 23 of the 43 overall strategies during this period. However, they noted that counseling center-based research continued to rank last in terms of resource allocation, with the only significant improvement in the number of centers who maintained a research database. The same trend was observed in a 2002 study by Cooper and Archer, who determined that research activities in UCCs falls well below other activities in terms of priority. While complimentary of how psychologists have worked to adapt to the changes in UCCs throughout the 1990s, Guinee and Ness encouraged the continued expansion of research by counseling center personnel.

Reflecting back on Hawkins & Mathews (1999), who suggested that research on outcome measurement should be conducted utilizing pragmatic, brief instruments, the UCC is an environment which necessitates inexpensive and timely methods for gathering data. In addition, having a method of measurement which has a strong empirical basis,

while maintaining cost-effectiveness and ease of use, will provide stronger results in measuring outcome.

To meet this need, the Outcome Questionnaire 45.2 (OQ) was developed to assess client change over brief periods of time and track the quality of mental health treatment (Lambert et al., 1996). The psychometrics of the OQ will be discussed at length in the Method section later in this study. While the OQ has been used in a variety of environments, including hospitals, community mental health centers, and by medical researchers, it was developed by a university-based group in conjunction with two managed-care programs, and has proven particularly beneficial to measure client progress in UCCs (Lambert et al., 1998). It has also been shown to be sensitive to client change (Vermeersch, Whipple, et al., 2004; Vermeersch, Lambert, & Burlingame, 2000).

One of the OQ's advantages is that it is inexpensive to use; after the payment of a small fee and signing a licensing agreement, the instrument may be photocopied as often as necessary, resulting in a per-use cost of approximately $0.03 per use (Lambert et al., 1998). In addition, it can typically be completed in five minutes for most clients (although some may take up to 20 minutes), and may be used by those who read at a sixth-grade level or above (Lambert, Gregersen, & Burlingame, 2004). It can be used repeatedly to measure client progress over brief periods of time, and may also be quickly scored by hand without the use of a key, adding to its value (Lambert et al., 1998). The OQ was the instrument used in this study to measure client outcome over time.

<center>Counselor Level of Training</center>

One area which has received attention in the literature is the effect that a counselor's level of training may have on counseling outcome. In many university

counseling centers, services may be provided not only by senior staff, but also by

trainees at varying levels, including pre-doctoral interns, master's students enrolled in an

internship, or practicum students engaging in their first training experiences. With these

varying levels of training within one environment, one might expect varying levels of

experience, which would then translate into differences in outcome for those clients with

whom they work. However, it is not clear whether or not this would be the case, as there

are conflicting results and confounds in the psychological literature.

Mallinckrodt and Nelson (1991) investigated the effects of counselor training

level on the development of the therapeutic working alliance. The working alliance

between a counselor and a client, as defined by Bordin (1979), consists of three

components: 1) an emotional bond; 2) agreement about the goals of treatment; and 3)

agreement about the tasks by which those goals will be achieved (as cited in Mallinckrodt

& Nelson, 1991). For their study, they divided therapists into three distinct groups: 1)

novices, who were in their first practicum (n=18); 2) *advanced trainees*, whose training

level ranged from second practicum to pre-doctoral internship (n=24); and 3) *experienced*

counselors, representing postdoctoral staff members (n=8). They hypothesized that,

between the three groups, the smallest difference would be in the bonding component, the

largest difference in the goal component, and an intermediate difference in the task

dimension. Their reasoning was that counseling training tends to follow a sequential path,

beginning with rapport-building skills and moving through task development into the

more sophisticated realm of goal-setting. Utilizing the Working Alliance Inventory

(Horvath & Greenberg, 1989), which was completed by both the counselor groups and

the clients, they found a significant main effect for training level, $F(6,90) = 4.18$, $p <$

.001, with the greatest significant difference in the goal setting component of the working alliance and a smaller significant difference in the task component. There were no significant differences found in the bond component of the working alliance. While these results fully supported Mallinckrodt and Nelson's hypotheses and suggest that a counselor's level of training will impact the therapeutic alliance (and may possibly influence counseling outcome), they noted that there were noteworthy limitations to their study, including a relatively small sample size which may reduce generalizability.

In a meta-analysis of psychotherapy with children and adolescents, Weisz, Weiss, Alicke, and Klotz (1987) defined training level as paraprofessionals, graduate students, and degreed professionals. They found that trained professionals (holding either a master's or doctoral degree) were equally as effective with clients between the ages of 4 and 18, and that graduate students and paraprofessionals were more effective with younger clients. However, they did not find a significant result for the overall main effect of training level.

Stein and Lambert (1995) conducted a meta-analysis of the literature on therapy outcome levels involving therapists of differing training levels. They found a small treatment effect for training level and therapy outcome, suggesting that therapists with more training tend to be associated with better client outcomes. However, they also cautioned that many of these studies had significant methodological concerns which may have skewed the results and restricted applicability. Specifically, they noted that there was limited use of independent observers in controlled studies, larger sample sizes, and more objective outcome measures. The presence of these factors may increase the

probability of finding significant results. In addition, failing to control for client attrition may have resulted in biased results.

In a meta-analysis of Rational Emotive Therapy (RET) outcome studies, Lyons and Woods (1991) found significant differences in effect size based on therapist training level. In this analysis, therapists were coded into three groups: those with a MA degree, those who were Ph.D. candidates or psychiatry residents, and those who were Ph.D. level psychologists or psychiatrists with at least one year of post-degree experience. They concluded that more experienced therapists utilizing RET produce more effective treatments; however, they also noted that a lack of follow-up data and missing data on attrition may limit the results.

While there has been some support for differences in client outcomes based on level of training, continued examination of this area is needed. The intent of this study was to contribute to this area of research by exploring the influence of therapist training level on change in client outcome over time.

Gender Matching

Another area of investigation has been an examination of similarities between counselors and clients that may influence counseling outcome. For example, many studies have included gender matching as either a component of a larger study, or as the primary factor under consideration; results of these studies have been mixed. Some studies have shown that gender matching may be relatively unimportant when selecting a counselor (Blier, Atkinson, & Geer, 1987; Striley, Margavio, & Cottler, 2006). Tryon (1984) hypothesized that same-sex counseling dyads would show a higher number of counseling sessions than opposite-sex dyads, but found that there were no significant

differences between the groups. Instead, the number of sessions attended depended more on the type of presenting problem than on gender match.

Henderson & Lyddon (1997) studied the relationships between a client's gender role attitude, gender match, and counselor ratings as measured by the Counselor Rating Form (Barak & LaCrosse, 1975). They found significant differences in counselor ratings based on client gender, with female clients rating the counselors higher overall, but no significance in counselor ratings based on counselor gender.

Lee, Park, & Park (2004) investigated whether client gender and positive or negative self-disclosure affected counselor's evaluation of the clients. They found that male clients who negatively disclosed were evaluated more negatively by counselors than female clients, regardless of counselor gender. When clients positively disclosed, there were no significant differences between genders. Weinstock (2000) utilized a self-report symptom checklist adapted from the Symptom Checklist-90-R (Derogatis, 1977) to examine symptom reduction over time and how it related to client gender, gender match between counselor and client, therapist training level, treatment length, and presenting problem. No significant differences were observed.

Okiishi, Lambert, et al. (2006) conducted a large-scale study on therapist treatment effects in a UCC. Over a six-year period, data was collected on 6,499 clients, using the OQ as a measure of client progress during each session. In addition, information on a total of 71 therapists was gathered, including level of training (pre-internship, internship, and post-internship), theoretical orientation (cognitive-behavioral, behavioral, humanistic, psychodynamic), gender, and type of training (counseling psychology, clinical psychology, social work, marriage and family). Data was analyzed

using Bryk & Raudenbush's (1992) hierarchical linear modeling (HLM), a multi-level analysis that accounts for and estimates missing data and, according to the authors, performs particularly well with naturalistic studies. They found that client outcome was not significantly influenced by differences among the four variables under consideration. They also found no significance between therapists' clients' initial OQ scores, suggesting that the therapists' caseloads were relatively equal in severity. However, significant differences were observed between clients' rate of improvement based on the specific counselor with whom they worked, suggesting that there may be individual therapist factors influencing client change that were not addressed.

In an examination of client disclosure in therapy, Pattee (2004) hypothesized that the working alliance between client and counselor would be impacted by gender matching, and have a significant effect on how much clients' disclosed. Results of the study supported this hypothesis. Women experienced greater self-disclosure if the working alliance was considered to be strong, regardless of counselor gender. However, women who worked with female therapists found it more difficult to disclose and were more concerned about the impact of their disclosures than male clients, or women who worked with male therapists. These results suggest that, while women tend to self-disclose more in therapy than men, they may also be more strongly influenced by the gender of the counselor.

<center>Client Attrition</center>

The rate of attrition in the counseling field is a concern for both researchers and practitioners, and its impact on outcome has been widely studied both in community agencies (Kissin, Svikis, Moylan, Haug, & Stitzer, 2004; Ward & McCollum, 2005) and

in UCCs (Anderson, 1987; Archer, 1984; Levy, Thompson-Leonardelli, Smith, & Coleman, 2005; May, 1990). It becomes difficult to obtain data on individuals who choose not to return to counseling after their intake session, although successful attempts have been made through the use of follow-up interviews and surveys (Archer, 1984; Freund, Russell, & Schweitzer, 1991; May, 1990). Determining the causes of attrition and methods by which to combat the problem has been a primary focus of this area of literature.

Another research focus has been an effort to develop a model by which one can predict who will or will not return to therapy. Longo, Lent, and Brown (1992) attempted to apply Bandura's (1986) social cognitive theory to this end. Social cognitive theory consists of the elements of self-efficacy, outcome expectations, and goals, each of which plays a role in the decision to remain in counseling. Self-efficacy may be described as an individual's belief about their capacity to perform a certain behavior in a given situation. Outcome expectations refer to a person's beliefs about the consequences of performing a specific behavior. Goals involve an individual's intention to behave in a particular manner. Subjects coming for an intake session at a UCC were given a self-efficacy instrument designed specifically for their study, which measured three factors that could potentially influence their decision to return to counseling: 1) the ability to engage in emotional expression; 2) the ability to manage any obstacles that could impede returning to counseling (such as scheduling problems); and 3) the ability to take personal initiative in working to solve his or her problems. Subjects were also given two scales from the Expectations About Counseling (EAC) questionnaire (Tinsley, Workman, & Kass, 1980): the Motivation scale and the Outcome scale. The results showed that the three elements

of social cognitive theory may all be useful tools in predicting potential client attrition, especially self-efficacy, which accounted for more of the variance than outcome expectations and goals.

Freund, Russell, and Schweitzer (1991) noted that the impact of lengthy delays in starting treatment had not been adequately measured. Their study examined the length of time between intake and first counseling session in a community counseling agency. During the intake sessions, clients were told to expect a delay of up to four weeks; the actual time ranged from four to 53 days. Clients who did not return for their first appointment and did not initiate contact with the agency within three weeks were classified as "no-shows." Clients who missed their first appointment, but contacted the agency and later attended, were classified as "continuers." Their results suggested that there was no significant effect of length of delay between no-shows and continuers.

Other studies have also examined variables which may or may not contribute to client attrition. Tryon (1984) examined the effect of both counselor and client gender in determining whether or not clients returned for therapy. No significant relationship was found between the gender of the counselor and the gender of the non-returning client. Betz and Shullman (1979) found that clients of both genders were less likely to return to counseling if they saw a male counselor at intake, or if they were assigned to a male counselor, but found no significance effect between counselor level of training and likelihood to return.

Arechiga (2006) attempted to determine if the OQ can be used as a screening instrument to predict dropout and success rates among clients seeking treatment for obesity, hypothesizing that higher OQ scores would predict higher rates of program

attrition and lower overall weight loss. The author stated that he chose the OQ because it has been used successfully in predicting dropout in clinical populations. A total of 78 clients participated in the study, and completed the OQ and reported their current weight at the beginning of each treatment session. The results found that clients who had high pre-treatment OQ scores were significantly less likely to complete the program; additionally, the same results were observed when controlling for gender, ethnicity, and site of treatment. Pre-treatment OQ scores did not, however, predict weight loss success. In this case, the OQ was shown to have predictive value in the treatment of obesity. However, can this result be extrapolated to other areas of counseling? The current study attempted to examine this question.

Statement of the Problem

With the growing need for accountability data in the field of mental health, research must be conducted that concentrates on outcomes in an increasingly-demanding service environment. The benefits of such research include the careful allocation of monetary and personnel resources, improvement in success rates, and lower attrition. In comparison to the array of research on outcome measurement, there are relatively few published studies focusing specifically on outcome measurement in university and college counseling centers. This study attempted to address this gap in the literature, identifying pre-therapy factors which may contribute to positive outcomes and assist in treatment planning. Utilizing the psychometrically-sound, brief, and low-cost Outcome Questionnaire 45.2, this study examined change in OQ scores as a function of counselor level of training and gender match. This study addressed the following hypotheses and research questions:

Hypothesis 1: Clients of counselors with higher levels of training will show greater improvement on the OQ between intake and fourth session than those with less training.

Hypothesis 2: Clients who do not return to counseling after their intake session will show lower initial OQ scores than those who return.

Hypothesis 3: No gender matching effects will be observed between counselors and clients.

Research Question 1: What is the client profile, as indicated by gender and OQ scores, that may predict the most improvement within the first four therapy sessions at a university counseling center?

Research Question 2: What is the client profile, as indicated by gender and OQ scores, that predicts which clients will return after intake and which will not?

CHAPTER TWO

METHODS

Participants

This study utilized data culled from an archival database compiled at a mid-sized public Southeastern university counseling center between January 11, 1998 and June 7, 2004. Potential participants included approximately 4500 undergraduate college student clients who visited the on-campus counseling center in order to obtain personal counseling. Before their intake session at the counseling center, clients were provided with an informed consent document which outlined the use of demographic and testing information for research purposes. In addition, clients completed an outcome measure before intake, and those who continued in counseling completed the same outcome measure after their fourth session. All identifying information on each client was removed from the database, with the exception of a sequentially-assigned ID number.

Two data sets for use in this study were compiled from the archival database. For both data sets, clients who did not provide consent for their data to be used for research purposes were excluded. Additionally, this author completed a Pre-Doctoral Internship at this counseling center; thus, all subjects with whom he worked were excluded. Also, clients who saw biofeedback therapists or the on-site dietician were excluded, as these clients did not participate in the traditional-style counseling sessions under study.

In the first data set, clients who had completed both an outcome questionnaire at intake and a second outcome questionnaire after their fourth session were initially

included. Clients who did not complete the two questionnaires within a two-month

time period were removed, in order to account for external influences outside of

counseling that may have contributed to change and also to account for clients who had

not attended counseling and instead had completed a second intake interview at a later

date. Additionally, clients with missing demographic information (gender), missing

therapist information (therapist gender and/or level of training), and/or missing

questionnaire data (individual responses and/or scores) were excluded. Some clients had

attended counseling on multiple occasions, separated by a gap in time ranging from one

to three years. In these cases, only the clients' initial counseling experiences were

included, in an effort to control for the influence of previous counseling experience or

pre-existing counseling relationships. A total of 338 clients met the inclusion criteria for

the first data set, and thus constituted the participants for this part of the study. These

participants were classified into three groups, based on the training level of the therapists

with whom they worked: Senior Staff, Pre-Doctoral, and Master's. Table 1 includes the

group sizes for each training level, separated by client gender and by therapist gender.

For the second data set, all clients who had visited the counseling center were

initially included. Clients who attended an intake session and did not return for another

session within a six month time period were classified as Non-Returnees. Clients who

attended intake and returned for counseling within a three month time period were

classified as Returnees. Clients with data that fell between the three and six month time

periods were excluded. As with the first data set, clients with incomplete or missing

demographic or questionnaire data were excluded. Also, in the cases of clients who had

multiple visits to the counseling center with large time gaps between appointments, only

data from their initial visit to the counseling center was included. A total of 2772

participants were included in the final data set. See Table 2 for Non-returnees and

Returnees group sizes, divided by gender.

<div align="center">Instrumentation</div>

Outcome Questionnaire 45.2 (OQ)

The Outcome Questionnaire 45.2 (Lambert, Hansen, et al., 1996) is a self-report

instrument designed to assess psychological distress and functioning. It was intended to

serve as an easily administered measure, and is an inexpensive means of outcome

assessment that is suitable for repeated use in nonpatient settings (Lambert, Okiishi,

Finch, & Johnson, 1998). It has been found to be sensitive to change over brief periods of

time, indicating that the instrument accurately reflects changes in client functioning over

the course of therapy (Lambert, Gregersen, & Burlingame, 2004; Vermeersch, Whipple,

et al., 2004; Doerfler, Addis, & Moran, 2002; Vermeersch, Lambert, & Burlingame,

2000). The OQ is appropriate for individuals age 18 and older, and those who read at a

sixth-grade level (Lambert, Gregersen, & Burlingame, 2004).

The OQ consists of 45 items, divided into three subscales which represent

important areas of client functioning: Symptom Distress (25 items), Interpersonal

Relations (11 items), and Social Role Performance (9 items). The Symptom Distress

subscale assesses symptoms for common mental disorders, especially anxiety and

depression; it also includes two items that test for substance abuse. The Interpersonal

Relations subscale measures difficulties with interpersonal relationships, as well as

satisfaction with those relationships. The Social Role Performance subscale assesses

dissatisfaction and distress with employment, family, and leisure roles (Lambert,

Gregersen, & Burlingame, 2004). Each of the individual items on the OQ falls onto only one of the three subscales. These subscales are then added together to form a Total Score, which is indicative of an overall level of functioning or distress. Higher scores indicate increased distress and dysfunction. For each item, clients are asked to rate how they have been feeling over the past week on a five-point Likert scale (Never = 0; Rarely = 1; Sometimes = 2; Frequently = 3; Almost Always = 4). Scores range on the Symptom Distress subscale from 0-100, with a cutoff score of 36; on the Interpersonal Relations subscale from 0-44, with a cutoff of 15; and on the Social Role Performance subscale from 0-36, with a cutoff of 12. Additionally, the Total Score ranges from 0-180, with a cutoff score of 63 (Lambert, Hansen, et al., 1996). Scores above these cutoff levels suggest that a client is responding similarly to a more dysfunctional population (Lambert, Hansen, et al., 1996).

According to Lambert, Gregersen, & Burlingame (2004), these clinically significant cutoff scores were derived from comparisons between nonpatient and patient normative samples, and suggest a moderate level of distress that would be more likely found in an inpatient population than a nonpatient one. Normative data for the OQ were initially collected from nonpatient samples of community members, undergraduate students from three different states, and business persons. In addition, data from a range of clinical samples were used, consisting of inpatients, university counseling clients, university outpatient clinic patients, employee assistance program patients, community mental health center patients, and outpatient private practice and clinic patients. Significant mean score differences were observed between the two sample groups,

leading to the development of the cutoff scores for the subscales and Total Scores of the OQ.

In an attempt to provide construct validation of the OQ, Mueller, Lambert, and Burlingame (1998) performed a confirmatory factor analysis, investigating three-factor, two-factor, and single-factor structure models. In examining the three-factor model, which focuses on the subscales of the OQ, they found that there were high correlations between the three subscales. Symptom Distress correlated at .92 with Interpersonal Relations, and at .89 with Social Role Performance. Interpersonal Relations correlated at .84 with Social Role Performance. Mueller and his colleagues suggest that while the subscales may have some utility for clinicians, the interpretation and use of the subscales should be approached with caution. The two-factor and single-factor models were also not supported. Their study found that the composite Total Score, however, may still be useful in tracking client change. These findings were also supported by Umphress, Lambert, et al. (1997).

Concurrent validity of the OQ was measured by comparing the instrument to a variety of established symptom distress measures: the Symptom-Checklist-90-R (SCL-90; Derogatis, 1977); the Inventory of Interpersonal Problems (IIP; Horowitz, Rosenberg, et al., 1988); and the Social Adjustment Scale-Self Report (SAS-SR; Weissman & Bothwell, 1976). Each of these measures was compared to the corresponding subscale on the OQ: the SCL-90 with the Symptom Distress, the IIP with Interpersonal Relations, and the SAS-SR with Social Role Performance, as well as with the OQ Total Score, using patient and nonpatient samples (Umphress, Lambert, et al., 1997). Pearson product moment correlation coefficients were conducted for these comparisons; high validity

coefficients were found between the OQ and the criterion measures, implying high concurrent validity (Lambert, Gregersen, & Burlingame, 2004). However, while the results indicated that the Total and Symptom Distress scores showed higher correlations than the other two subscales (thus suggesting that these two scores may discriminate between patient and nonpatient groups), their study did not support the prediction of high correlations between the subscales and their matched criterion measures. Therefore, as noted earlier, the utility of the subscales should be considered tentative.

Test-retest and internal consistency reliability for the OQ were assessed using an assortment of undergraduate student samples. Test-retest coefficients ranged between .66 and .86 after a seven day interval. Internal consistency coefficients were above .90 for the Total Score and the Symptom Distress subscale, .70 for the Interpersonal Relations subscale, and .74 for the Social Role Performance subscale (Lambert, Gregersen, & Burlingame, 2004). Lambert, Gregersen, & Burlingame (2004) also note that there are no clinically important differences between men and women, nor are there significant age differences. Limited studies have been conducted that compare differences among ethnic groups. Nebeker, Lambert, and Huefner (1995) compared an African American sample to the established normative data and found no significant differences. Gregersen, Nebeker, Seely, and Lambert (2004) compared Asian and Pacific Islander samples to a Caucasian sample, and found that both groups scored higher overall than Caucasians, suggesting that there may be higher pathology levels present or possible cultural differences in symptom patterns of Asians and Pacific Islanders. Further research is necessary to validate these results.

For the current study, Cronbach's Alphas were calculated as internal consistency estimates of reliability for the Total Score, Symptom Distress, Interpersonal Relations, and Social Role subscale scores on each administration of the OQ. In the first administration, the Symptom Distress (α = .913), Interpersonal Relations (α = .764), and Total Scores (α = .928) were found to be sufficiently reliable, and have similar reliability coefficients to those found in previous studies. However, the Social Role subscale (α = .657) did not meet reliability inclusion criteria of .70, and was excluded from all subsequent analyses. In the second administration, the Symptom Distress (α = .936), Interpersonal Relations (α = .817), and Total Scores (α = .946) were again found to have moderate to high reliability, with the Social Role subscale (α = .647) once again failing to meet reliability inclusion criteria.

Procedures

The institution at which this archival database was created offers comprehensive individual counseling to enrolled students at no additional charge. Upon their initial visit to the counseling center, clients were asked to complete a form requesting demographic information before their intake session, and were assigned a sequential identification number for tracking purposes. Clients also completed the Outcome Questionnaire 45.2 (OQ), intended to measure their level of distress and assist the intake counselor in determining the best course of treatment. Based on the intake interview and OQ data, students were assigned to a counselor based on the severity of their presenting problems and the availability of counselors. Counselors included Doctoral-level Senior Staff, Pre-Doctoral Interns, and Master's-level trainees identified as Externs. Students who continued through the counseling process were asked at the end of their fourth session to

complete the OQ a second time, in order to assess their progress and to assist in continued treatment planning. Demographic data and OQ information (individual responses, subscale scores and Total scores) were entered into a Microsoft Access database by the counseling center staff.

Data Analysis

Independent variables for the first data set were Therapist Group (Senior Staff, Pre-Doctoral Interns, Master's Externs), Client Gender (Female, Male), Therapist Gender (Female, Male), and Gender Matching dyads (Female Counselor-Female Client; Male Counselor-Male Client; Female Counselor-Male Client; Male Counselor-Female Client). The dependent variable was change in symptom distress and functioning over time, as measured by the Total Score and subscale scores of the OQ obtained during a subject's intake session and after their fourth session.

For the second data set, independent variables were Return Status (Non-Returnees, Returnees) and Client Gender (Female, Male). The dependent variable was initial symptom distress and functioning, as measured by the Total Score and subscale scores of the OQ.

CHAPTER THREE

RESULTS

OQ Scores (Intake and Fourth Sessions): Within-Group Differences

A series of repeated measures analyses of variance (ANOVAs) were conducted to determine if clients' OQ scores (Symptom Distress, Interpersonal Relations, and Total Score) differed between their intake session and fourth counseling session. For both subscales and the Total Score, significant differences were found between the sessions (Symptom Distress: Wilks's Λ = .706, $F(1, 338)$ = 140.505, p <.001, η^2 = .294; Interpersonal Relations: Wilks's Λ = .809, $F(1, 338)$ = 79.692, p <.001, η^2 = .191; Total Score: Wilks's Λ = .709, $F(1, 338)$ = 138.131, p <.001, η^2 = .291).

Between-Group Differences

Training Level

A series of one-way analyses of variance (ANOVAs) were conducted in order to measure the effect of the three levels of counselor training (Senior Staff, Pre-Doctoral, and Master's) on clients' OQ scores (Symptom Distress, Interpersonal Relations, and Total Score) as measured during their intake and fourth counseling sessions. Significant alphas were tested at the .025 level. No significant differences were found at intake (Symptom Distress: $F(2, 338)$ = .566, p = .568; Interpersonal Relations: $F(2, 338)$ = .098, p = .907; Total Score: $F(2, 338)$ = .317, p = .729). See Table 3 for descriptive statistics of the three groups at intake.

At session four, a significant difference was found among training levels for the Interpersonal Relations subscale ($F(2, 338) = 3.807$, $p = .023$). A post-hoc analysis indicated that this finding was due to significant differences between Master's group and both the Pre-Doctoral (mean difference = -2.493, $p < .046$) and Senior Staff (mean difference = -2.143, $p < .039$) groups. See Table 4 for descriptive statistics on the three groups for session four, and Table 5 for the total change between intake and session four.

Client and Therapist Gender Effects

A series of one-way analyses of variance (ANOVAs) were conducted in order to determine the impact of therapist and client gender on clients' OQ scores (Symptom Distress, Interpersonal Relations, Social Role, and Total Score) as measured during their intake and fourth counseling sessions. A significant difference was found for client gender on the IR subscale at both intake, $F(1, 338) = 4.336$, $p = .038$, and return, $F(1, 338) = 9.184$, $p = .003$. In both cases, males scored slightly higher than females. No significant differences were found for therapist gender at either administration period. See Table 6 for descriptive statistics on client gender.

Gender Match

Analyses of variance (ANOVAs) were conducted in order to determine the effect of counselor/client gender match (groups: both counselor and client female, both counselor and client male, counselor female and client male, and counselor male and client female) on symptom distress outcomes as measured by the OQ (Symptom Distress subscale, Interpersonal Relations subscale, and Total Score). Using the Bonferroni method, each ANOVA was tested at the .0125 level. No matched pair was found to be significantly different on the dependent variables (Gender Match and Symptom Distress:

F (3, 338) = .447, p = .720, η^2 = .004; Gender Match and Interpersonal Relations: F (3, 338) = 3.243, p = .022, η^2 = .028; and Gender Match and Total Score: F (3, 338) = .560, p = .642, η^2 = .005).

Secondary Analysis

A one-way MANOVA was conducted to examine the difference in OQ scores between clients that return to counseling after their intake session and those who do not return. A significant difference was found between the two groups (Wilks's Λ = .978, $F(1, 2772)$ = 21.096, $p < .001$, η^2 = .022). Follow-up ANOVAs showed that the difference was due to a significant difference on the Interpersonal Relations subscale ($F(1, 2772)$ = 9.422, p = .002, η^2 = .003). However, the effect size of this significant result is very small, and significance was likely found due to the large sample size.

CHAPTER FOUR

DISCUSSION

The current study was designed to evaluate the efficacy of treatment in a college

counseling center with a strong training component. It also was an attempt to focus on the

influence of managed care on campus counseling centers, and on the field of mental

health in general. Furthermore, it served as a response to the calls for additional research

which were noted earlier in the literature review. Hawkins and Mathews' Level 1

research mandate, which suggested monitoring outcome in a practical setting while

concentrating on how the change occurs rather than on why it occurs, strongly influenced

this study. This study also focused on the structured collection of "clinically meaningful

information" directly from clients through the use of empirical measures, as advocated by

Kane, Bartlett and Potthoff (1995). It specifically examined outcome in a university

counseling center environment, as encouraged by Snell, Mallinckrodt, Hill, and Lambert

(2001), and examined the effectiveness of brief therapy in a training environment as

suggested by Williams and Edwardson (2000) and Scheid (2003). Additionally, this study

offered support for the use of the Outcome Questionnaire 45.2 as a practical and reliable

tool for the brief, cost-effective assessment of outcome.

The three hypotheses and two research questions examined the impact of varying

levels of counseling training on outcome, as well as to attempt to develop a client profile

that may help counselors to predict counseling success and reduce attrition. While these

hypotheses were only partially supported, valuable information was obtained that can

assist in the continued development of treatment for college students, as well as offer

an important contribution to the existing body of literature on outcome research, training

level, and client retention.

<div align="center">Hypothesis 1</div>

Hypothesis 1 stated that clients who saw counselors with higher levels of training

would improve more over four sessions than those who saw counselors with less training.

This hypothesis was only partially supported by the results. Clients generally came to this

counseling center experiencing distress levels above the OQ's clinical cutoff scores (on

each subscale and the Total), and each of the three training groups was approximately

equal in severity to the others. After the fourth session clients in each group improved,

and fell at or below the clinical cutoff on all subscales and the Total. Clients who met

with Senior Staff members improved slightly more than those who saw Pre-Doctoral

counselors, but neither group improved as much as those who saw Master's counselors.

This was especially true on the Interpersonal Relations subscale, with Master's clients

showing approximately an 80% improvement over Senior Staff clients, and slightly over

double the improvement of Pre-Doctoral clients.

However, the impact of this result must be viewed with caution. As noted earlier,

numerous studies (Lambert, Gregersen, & Burlingame, 2004; Mueller, Lambert, &

Burlingame, 1998; Umphress, Lambert, et al., 1997) have suggested that the clinical

utility of the subscales is limited, at best. In this study, the reliability of the Interpersonal

Relations subscale was higher than had been previously observed during the development

of the OQ, and the reliability of the Social Role subscale was much lower which led to its

omission from the data analysis. This may suggest that there was something unique about

the sample population in this study that differed from the normative groups, and which specifically affected their responses on the IR and SR subscales.

Another important point to consider is that the IR scale has only 11 items, so a small difference between groups may appear to have more significance than may be noticed in practice. A two point difference on this subscale may be less relevant than larger, non-statistically-significant changes on the Total Score, which has been shown to have much higher reliability and more potential utility for practitioners (Mueller, Lambert, & Burlingame, 1998). When focusing on the Total Score, Master's clients still showed greater improvement than either Senior Staff or Pre-Doctoral counselors, though not to the same degree as the IR scale.

In comparing this study to the research previously noted in the literature review, these results did not offer additional support for those conclusions. The findings contradicted Stein and Lambert's (1995) meta-analysis of the effect of training level on outcome. Where they found that more experienced therapists tended to produce better outcomes, this study found the opposite, with Master's counselors outperforming both Senior Staff and Pre-Doctoral counselors. In their meta-analysis, Stein and Lambert noted serious methodological concerns that were found in numerous studies, including a lack of large sample sizes and the use of objective outcome measures. Their belief was that the presence of these factors would increase the probability of finding significant results. The current study attempted to address these issues, but it did not appear to lead to improved significance.

The results also did not fully support the findings of Mallinckrodt and Nelson (1991), in which more experienced counselors scored higher on both self- and client-

ratings on the Working Alliance Inventory. This may be in part due to fundamental

differences between the two studies. For one, Mallinckrodt and Nelson focused on the

impact of counselor training level on the development of the working alliance, while the

current study did not examine the specific components of the relationship between clients

and counselors, instead looking more generally at the overall outcome. Exploring the

working alliance, as well as many other potential areas, may or may not have impacted

these results. Additionally, while the groups in both studies were similarly developed,

there were significant differences. Counselors in Mallinckrodt and Nelson's study were

divided into "novices," "advanced," and "experienced." Their advanced group contained

counselors that would fit into the current study's Master's and Pre-Doctoral groups. This

limits comparison to their study. Still, there appears to be some effect of training level on

the counseling experience, which is in partial support of Mallinckrodt and Nelson's

findings.

This study was similar to a 2006 study by Okiishi, Lambert, et al., both in scope

and in intent. In the Okiishi article, which used the OQ as a measure of client progress,

one of the independent variables tested was level of training, which was divided into

three groups (pre-internship, internship, and post-internship), similar to those in the

current study. They also included gender as a variable, and studied the counselors'

theoretical orientations and the types of training they had received. They found that while

client outcome was not influenced by level of training, gender, theoretical orientation, or

type of training, there were significant differences between clients' rates of improvement.

This may have been due to additional, unknown factors relative to the counselors with

whom they worked. The results of the current study only partially supported those found

by Okiishi. While there were also no gender interactions in this study, the small effect found with the Master's group contradicts their main findings. It is unclear whether or not the presence of additional factors, such as counselor orientation or type of training, may have skewed the current results either toward or away from significance.

One crucial distinction to note is the difference between statistically significant change and clinically significant change. As Lambert, Hansen, et al. (1996) stated, clinically significant ("reliable") change as measured by the OQ occurs after a +/- 14 point variance in Total Score. While improvements were made across all three groups, only the Master's group met this criterion of clinically significant change, with a decrease of 15.89 points in Total Score from intake to fourth session. Surprisingly, this was not statistically significant from the other two groups, though it may have been expected given that the decreases in Total Score from intake to return for the Senior Staff group was 11.48 points and the drop for the Pre-Doctoral group was 9.23 points. The results of this study seem to offer support to Snell, Mallinckrodt, Hill, and Lambert (2001), who stated that it may take between 8 and 16 sessions to reach clinically significant change. These clients generally appear to be moving toward a "reliable change," with an average reduction in Total Score of almost 12 points in just four sessions.

It is important to remember, however, that, outside of the measurement of the level of clinical or statistical significance in this study, clients generally showed improvement between their intake and return sessions. Regardless of the training level of the counselor with whom the clients worked, their levels of distress decreased; in short, they appeared to get better. With the systemic influences of managed care and the need for accountability now affecting university counseling centers, it becomes vitally

important to show that clients utilizing their services are indeed improving. This study has accomplished this task.

Consideration must also be given to the question of exactly *why* these clients seemed to improve more dramatically while working with Master's counselors than with Senior Staff or Pre-Doctoral counselors, especially on the IR subscale. Based on the available data, it is unclear exactly why this occurred, but there are numerous possibilities. There could have been an age effect, with Master's counselors possibly being closer in age to clients than either the Pre-Doctoral or Senior Staff counselors. In addition, it is possible that Master's counselors were assigned clients with less-severe diagnostic profiles, allowing for more substantial changes to occur. The inconsistent diagnostic information in the archival database, as well as the lack of the ages of the counselors, made such comparisons impossible in the current study. When looking specifically at the IR scale, the result may have been due to the nature of the items on the IR scale itself, which focus on problems the client is having interacting with others. The focus is outward, rather than inward, and relief may be obtained more quickly than with internally-oriented distress. This, in combination with the possible influence of age, clinical diagnosis, and other unknown variables, could explain the results of this study.

Hypothesis 2

Hypothesis 2 stated that clients who did not attend counseling after intake would show lower OQ scores than those who chose to return. This hypothesis was supported by the results of this study. Clients who did not return to counseling had lower scores than those who returned. This result was due to the difference in scores on the IR scale, which was much larger than that of the SR and Total, and may also have been affected by the

large sample size. Conceptually, the idea was that clients who were in less distress initially would be less likely to return for a variety of factors, including the possibility of a natural reduction in distress due to a situational change or other factors in the clients' everyday lifestyle; those in greater distress would be more motivated to seek help initially and to continue with counseling. In this study, those who returned showed significantly higher IR scores than those who did not, but the effect size was very small. Again, the impact of the IR scale on the results is noteworthy. Perhaps it is people's inability to cope with problems with others that motivates them to continue with counseling. It may also be that people who experience greater distress may behave in ways that provoke a loved one, a teacher, a friend, or other individuals on campus to urge or force the client to attend counseling.

Another factor that may have influenced the results is one that was previously addressed by Freund, Russell, and Schweitzer (1991). They examined the length of time between intake and first session at a community counseling center, and found no difference between clients who waited for a brief or long time period between sessions. Unfortunately, this data was not available in the archival database, although the counseling center's wait time for first sessions was generally one week. It is difficult to say whether or not this information would have influenced the results, although one might predict an outcome similar to the Freund, Russell, and Schweitzer study.

Without conducting a follow-up survey, it is difficult to determine the factors that may have influenced clients' into returning or not returning, such as presenting problem, diagnostic information, racial profile, or other demographic data. Given the archival nature of this study, such a follow-up survey was not possible.

Hypothesis 3

As Hypothesis 3 stated, no gender matching effects between counselors and clients were predicted. This hypothesis was fully supported by the results. The lack of any therapist-client gender effects indicated that, in general, everyone improved, regardless of the gender dyad. Previous research on the subject was widely varied, with some in support of gender effects and some in opposition. It is important to note that Lambert, Gregersen, and Burlingame (2004) found that there are no clinically important differences between men and women on the OQ, which in turn may suggest that there will be no overall gender effects on the results.

While there were no gender matching effects in the current study, there were some interesting gender-related findings. At both intake and after their fourth session, male clients showed much higher levels of distress on the IR scale than women. This difference on the IR scale, which has been a common theme throughout this study, may be explained by the nature of the IR scale itself. Stereotypically, males may express their discomfort in interpersonal relationships in external terms, rather than looking at their own level of distress and relevant personality factors. Males may blame others rather than themselves for their problems, while females may internalize problems with others. This may potentially lead to a lower level of distress on the IR subscale and a higher level of distress on the SD subscale and Total Score for females, although the current study did not find such a result.

Self-disclosure in males may also have influenced the results. Pattee (2004) found that gender matching influenced the working alliance, and affected the amount of self-disclosure. Male clients tended to self-disclose less than female clients, who were also

more strongly affected by the gender of the counselor. While the current study did not find gender matching effects, the suggestion that males may self-disclose less is relevant, as the items on the IR scale involve more external declarations of distress than personal, internal ones.

Research Questions

Two research questions were proposed, both of which focused on the development of a client profile based on gender and outcome scores that would offer predictive information to help retain clients in counseling, as well as to improve counseling efficacy. Unfortunately, the results of this study did not allow for the development of such profiles. While the lack of a client profile may appear to be a problem, this may not be the case. As is true throughout the results of this study, it may be that the influence of individual client differences far outweighs the information obtained through the basic demographic and outcome data available in the archival database.

Current Limitations and Future Research

While this study has offered a significant contribution to the research literature on outcome in a counseling center setting, there are a number of limitations which should be addressed. First of all, the data collected in this study was of a self-reported, archival nature, making it difficult to control whether or not observed changes were the result of the counseling or due to external factors. Additionally, reliance on self-report data is observational in nature and has inherent concerns, as researchers again have less control over the conditions under study. Furthermore, this study was conducted at a medium-sized Southeastern university, which may limit its generalizability to other locations

around the country. Future research should attempt to replicate this study at locations

across the United States, with a focus on improving racial and regional diversity.

Another limitation involves the archival database from which this study drew its

information. There was a great deal of missing or inconsistent data, which resulted in the

omission of hundreds of clients from the final analysis. The amount of unusable or

completely missing relevant data, such as detailed demographic and training information

on the counselors, client diagnostic information, and additional client demographics such

as race or age, weakened the study. In addition, the possibility of human error in the entry

of the data negatively influences the strength of the results. It was also often difficult to

determine the number of sessions between reported scores, as many entries in the

database did not indicate the actual session number. Future research should focus on the

development and maintenance of database with the additional data included. The

database should also be closely monitored for accuracy and completeness.

It was also impossible to control for the amount of time between a client's intake

and fourth sessions, and the time period varied widely in the archival database. Some

clients had their fourth session within one month, while for others it was two months and

beyond. The longer the time period between the intake and fourth sessions, the more

potential there is for outside factors to influence the results on the OQ. Future research

should attempt to control for the amount of time between the initial assessment and the

follow-up, if possible.

It is vital for research to continue in the areas of accountability and outcome in a

university counseling center environment. While the results of this study look promising,

the replication of such research in different environments, along with the inclusion of

potentially-critical information such as diagnostic info, age, etc. will reap additional

benefit for CCs. The utilization of brief, cost-effective assessments is essential, as the

workloads placed on counselors on college campuses makes the conduction of scientific

research extremely challenging. With the support of university administrators,

psychological researchers and other psychology professionals, college counselors can

continue to develop new and effective programs for the provision of services to students.

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APPENDICES

APPENDIX A

University of Tennessee Institutional Review Board Approval

June 11, 2007

Title: The Influence of Level of Training and Gender on Counseling Outcome in University
Counseling Centers

Scott A. Sokoloski   Jacob J. Levy, Ph.D.
Psychology   Psychology
5010 Spring Valley Dr.   215G Austin Peay Bldg.
Knoxville, TN 37917   Campus

The project listed above has been reviewed and has been certified as EXEMPT from review by
the Institutional Review Board (IRB).

Unless there are major changes in the experimental methods or project design, no further
reporting to this office is required. The responsibility for oversight of this project becomes that of
the Principal Investigator(s), Student Advisor (if any), and the Departmental Review Committee.

We wish you success in your research endeavor.

Sincerely,

Brenda Lawson
Compliance Officer and IRB Administrator
Office of Research

APPENDIX B

Tables

Table 1.

Breakdown of Level of Training by Client Gender and Therapist Gender

	Client gender		Therapist gender	
Level of training	Female	Male	Female	Male
Senior Staff (n = 189)	138	51	116	73
Pre-Doctoral (n = 75)	62	13	49	26
Master's (n = 74)	54	20	43	31

Table 2.

Breakdown of Client Return Status by Client Gender

	Client gender	
Return status	Female	Male
Non-returnees (n = 2012)	1271	741
Returnees (n = 760)	575	185

Table 3.

Descriptive Statistics for OQ Scales at Intake by Level of Training

OQ scales	Level of training	Mean	SD
Symptom Distress	Senior Staff	42.65	14.087
	Pre-Doctoral	42.11	13.915
	Master's	40.54	15.749
	Total	42.07	14.410
Interpersonal Relations	Senior Staff	16.40	6.002
	Pre-Doctoral	16.52	6.376
	Master's	16.08	7.309
	Total	16.36	6.374
Total Score	Senior Staff	71.93	21.067
	Pre-Doctoral	71.51	22.140
	Master's	69.51	25.261
	Total	71.31	22.235

Table 4.

Descriptive Statistics for OQ Scales at Session Four by Level of Training

OQ scales	Level of training	Mean	SD
Symptom Distress	Senior Staff	34.93	14.964
	Pre-Doctoral	36.07	14.095
	Master's	30.46	13.320
	Total	34.20	14.530
Interpersonal Relations	Senior Staff	14.14	6.319
	Pre-Doctoral	14.49	6.030
	Master's	12.00	6.281
	Total	13.75	6.300
Total Score	Senior Staff	60.49	23.187
	Pre-Doctoral	62.28	21.599
	Master's	53.62	20.824
	Total	59.38	22.498

Table 5.

Sum Changes in Mean Scores Between Intake and Fourth Session, by Training Level

OQ scales	Level of training	Intake	Fourth	Change
Symptom Distress	Senior Staff	42.65	34.93	-7.72
	Pre-Doctoral	42.11	36.07	-6.04
	Master's	40.54	30.46	-10.08
	Total	42.07	34.20	-7.87
Interpersonal Relations	Senior Staff	16.40	14.14	-2.26
	Pre-Doctoral	16.52	14.49	-2.03
	Master's	16.08	12.00	-4.08
	Total	16.36	13.75	-2.61
Total Score	Senior Staff	71.93	60.49	-11.44
	Pre-Doctoral	71.51	62.28	-9.23
	Master's	69.51	53.62	-15.89
	Total	71.31	59.38	-11.93

Table 6.

Descriptive Statistics for OQ Scales by Client Gender

OQ scales	Client gender	Mean	SD
Symptom Distress (intake)	Female	42.35	14.260
	Male	41.20	14.908
Interpersonal Relations (intake)	Female	15.94	6.220
	Male	17.61	6.700
Total Score (intake)	Female	70.90	21.798
	Male	72.54	23.599
Symptom Distress (return)	Female	34.27	14.613
	Male	34.00	14.359
Interpersonal Relations (return)	Female	13.16	5.850
	Male	15.54	7.249
Total Score (return)	Female	58.70	22.245
	Male	61.46	23.258

VITA

Scott Andrew Sokoloski was born in Smithtown, NY, and raised in Goose Creek, SC, graduating from Stratford High School in 1988. He received his Bachelor of Science degree in Psychology from Francis Marion University in 1992, graduating Summa Cum Laude with University Honors. In preparation for graduation, he completed an Honors Thesis entitled "The Role of Gender Schema in Memory and Recognition." While at FMU, he was also the recipient of the L.A. Hoff Psychology Research Award, the University Psychology Award, and the University Honors Award, was named to Who's Who in American Universities and Colleges, and was invited to join the Phi Kappa Phi, Psi Chi, Pi Gamma Mu, Omicron Delta Kappa, and Sigma Tau Delta Honor Societies. In 1993 he moved to Knoxville, TN in order to pursue his Ph.D. in Counseling Psychology from The University of Tennessee, working as a Graduate Assistant in the Department of Educational and Counseling Psychology, the Department of Career Services, and for five years at the Adult Student Services Center. He also began performing throughout the Southeast as a Knoxville-based professional musician in 1995. In July 2003 he successfully completed an APA-accredited Pre-Doctoral Internship at the Appalachian State University Counseling and Psychological Services Center. Upon completion of his degree requirements, he intends to seek employment in a university counseling center setting, as well as to continue research in the areas of counseling center outcome and client retention.