Theses and Dissertations

2019-08-01

The Effect of Inconsistent Therapy Attendance by Client and Therapist on Therapeutic Outcomes

Elyssa Louise Zimmerman
Brigham Young University

Follow this and additional works at: https://scholarsarchive.byu.edu/etd

The Effect of Inconsistent Therapy Attendance by Client and

Therapist on Therapeutic Outcomes

Elyssa Louise Zimmerman

A dissertation submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

Vaughn Eugene Worthen, Chair
Mark E. Beecher
Lane Fischer
Derek Griner

Department of Counseling Psychology and Special Education

Brigham Young University

ABSTRACT

The Effect of Inconsistent Therapy Attendance by Client and
Therapist on Therapeutic Outcomes

Elyssa Louise Zimmerman
Department of Counseling Psychology and Special Education, BYU
Doctor of Philosophy

Inconsistent therapy attendance is a problem for clients and clinicians. Clients who don't attend therapy consistently, whether because of their own actions or therapist reasons, may experience difficulty making therapy work effectively for them. Most of the literature regarding inconsistent therapy attendance has examined the demographics of those who are inconsistent and some of the reasons that may contribute to inconsistency. There are only two known studies (Defife et al., 2010; Erekson et al., 2015) that have attempted to examine the impact of inconsistent therapy attendance on therapy outcomes. This study investigated whether inconsistent therapy attendance patterns had a significant impact on client outcomes, as measured by total OQ-45 (Lambert et al., 1994) score. Participants were drawn from counseling center clientele at a large, private, religious university and included 11,794 clients with attendance data for 67,329 scheduled sessions. Hierarchal linear model was used to first determine if the intercept, linear, and quadratic trends had enough initial OQ-45 score variation from client to client to warrant investigating predictors, and second, to determine if consistency, as well as consistency over time, have an impact on the full score OQ-45 starting points and recovery curves. The impact of consistency was found to be significant on the intercept and linear trend of OQ-45 scores. Clients with perfect consistency scores were found to have OQ-45 starting points that were, on average, 10 points lower than their inconsistent peers. In addition, clients with higher levels of consistency across time were found to decrease their symptomology by an average of 2.19 points per session attended, while clients with high inconsistent attendance patterns did not have a significant increase or decrease in OQ-45 score per session. Implications of this study could extend to policies regarding consistency, as well as session limits that could help increase consistency.

ACKNOWLEDGEMENTS

I would first like to thank my chair, Vaughn Worthen, for all the time he put into helping me get to this place. He has been so patient and kind as he waited for me to be in a place in my life, personally, where I was ready to finish my dissertation. Second, I would like to thank Lane Fischer, who spent many hours with me teaching me about statistics so that I could know it well enough to explain it to others. I would also like to thank Peter Sanders who shared his knowledge and enthusiasm for data and statistics with me; and encouraged me to see the value in what was, for me, the most difficult part of my dissertation. Thanks and gratitude also go to the other members of my committee, Mark Beecher and Derek Griner, who gave valuable feedback and much needed encouragement.

I would be remiss without expressing gratitude to Aaron Jackson and Diane Hancock for keeping me on course through my program and dissertation, despite my various attempts at avoidance. Without either of them, I likely would not have ever known what I needed to do or had the courage to do it.

My mentor of many years, Yohan Delton, was also a large part of how I got to where I am now. From my sophomore year of college, he has seen what I was capable of, and has pushed me to get it. Not a conversation has gone by since I began my Ph.D. that he didn't ask me how my dissertation was going, and when I would be done.

My mother and father deserve as much praise as about anyone in my process. From my birth, they have both tirelessly shown me the power that I hold, and the limits that can't stop me. I never doubted that I could do whatever I wanted, as long as I valued it enough to put in the leg work.

TABLE OF CONTENTS

LIST OF TABLES

Table 1 *Initial Estimate of OQ-45 Total* Score 10

Table 2 *Model Demonstrating Intercept Estimate and Variance Around the Intercept*............11

Table 3 *Prediction Model Including Linear Trend (Labeled as Session Number)*....................12

Table 4 *Predictive Model Demonstrating Linear Trend Estimate and Variance Around Linear Trend* 13

Table 5 *Predictive Model Including Quadratic Predictor (Labeled as Session Quadratic)* 14

Table 6 *Predictive Model Indicating Quadratic Trend Estimate, and Variance Around Quadratic Trend* 15

Table 7 *Predictive Model Including Consistency* 16

Table 8 *Predictive Model Including a Level 2 Predictor of Consistency Over Time (Labeled as Session x Consistency)*..17

DESCRIPTION OF DISSERTATION STRUCTURE AND CONTENT

This dissertation, *The Effect of Inconsistent Therapy Attendance by Client and Therapist on Therapeutic Outcomes*, is prepared using a hybrid format. A hybrid format includes the necessary elements for university submission on the early pages. It also contains the elements and style necessary for journal publication, which allows for a more rapid transition from dissertation submission to journal article submission. While a traditional dissertation is often written in chapters, including the literature review, in the hybrid format, the literature review is included in the appendix.

Introduction

"A skeptic, I would ask for consistency first of all." -Sylvia Plath

Research has been conducted beginning as early as the 1950s regarding whether therapy is effective or not, and also what makes it effective. A review of the literature demonstrates that these questions are still being investigated today. The field has established that, in general, therapy is effective and that two-thirds of those who participate are better off than those who have not participated in therapy (Asay & Lambert, 1999; Munder et al., 2019). Researchers have identified factors that contribute to effective therapy outcomes, such as a personal relationship between therapist and client, expectations for therapy, and clients taking healthy actions (Wampold, 2015). Common factor models provide trans-theoretical explanations for evidence-based practice and offer a how and why to therapeutic effectiveness. These models attribute little to therapeutic modality and emphasize client and therapist characteristics as well as the therapeutic relationship and personal external factors (Bergin & Garfield, 1994; Wampold, 2015). However, these models do not completely account for client motivation or the practical elements of committing to make use of therapy, which may also play a role in therapeutic effectiveness.

The personal characteristics of clients influence therapy outcomes, but the strength of the therapeutic alliance (the interaction of clients with a therapist) has also been shown to be a strong contributor to effective therapy (Wampold, 2015). Given these factors, it is important to understand how commitment to therapy (consistent or inconsistent therapy attendance) impacts therapy outcomes. It seems logical, but has not been empirically tested, that consistently attending scheduled sessions would play a role in how well a client fares in therapy.

Thinking of therapy as dose-effect (it takes so many doses to have good outcomes), has been one way in which consistency has been examined in the literature. It has been demonstrated that an effective "dose" of therapy (borrowing terminology from pharmacology) is anywhere from 8 to 18 sessions, with an effective dose being defined as about 50% of individuals experiencing significant benefits from therapy (Barrett, Chua, Crits-Cristoph, Gibbons, & Thompson, 2008; Hansen, Lambert, & Forman, 2002; Howard, Kopta, Krause, & Orlinsky, 1986). While many analyses have been conducted to determine at what point an effective dose takes place, one aspect that has been only minimally researched is the consistency of the therapy attendance pattern (Defife, Conklin, Smith, & Poole, 2010; Erekson, Lambert, & Eggett, 2015). Therefore, is taking two scheduled doses more effective than taking two doses that are hit and miss and part of an inconsistent therapy attendance pattern? The question of consistency may contribute to the literature on effective therapy and identify another variable that contributes to improving therapy outcomes.

It is clear that, for a therapist, client no-shows are at least frustrating, if not detrimental to treatment (Defife et al., 2010; American Psychological Association 2014). For therapists and agencies, no-show appointments are an efficiency and financial issue, but inconsistency in therapy attendance likely leads to less helpful treatment for patients (Lacy, Paulman, Reuter, & Lovejoy, 2004). Missed appointments affect therapist morale, as they are left waiting for clients who will not be attending treatment that day (Molfenter, 2013). In addition, many clinicians in private practice settings depend on the income from billable hours. Clients who do not attend scheduled sessions often end up with balances on their bills due to no-show fees that are not covered by insurance. Inconsistent therapy attendance patterns are a problem for therapists and potentially for clients and certainly warrant further examination.

The medical field has conducted research predicting outcomes related to well-being and healthcare utilization when individuals do not attend their appointments. Hwang et al. (2015) found that patients who missed appointments were more likely to use healthcare systems ineffectively and be labeled as "high risk patients." Missing appointments increases the health care risks for a patient when they don't see a doctor regularly, which leads to being unable to identify and intervene at the onset of important symptoms and illnesses (Guzek, Fadel, & Golamb, 2015). Guzek et al.'s (2015) research also determined that conflicts with schedules and forgetting appointments were the most likely causes of inconsistent attendance at medical appointments. If a single visit to the doctor is considered a dose of treatment, it appears that regular and consistent attendance at appointments will improve health monitoring for individuals and allow for timely interventions. Taking a cue from medicine, it seems important that mental health outcome research also include questions about inconsistency in therapy attendance.

Most of the research in the mental health field has focused on factors predicting missed appointments and how to address missed appointment patterns with clients and not on its impact (Beckham, 1992; Chapman & Rosenthal, 2016; Delgadillo, Moreaa, Murphy, Ali, & Swift, 2015; Fenger, Mortensen, Paulsen, & Lau, 2011). Missing appointments is sufficiently prevalent that the American Psychological Association (APA) regularly releases guidelines and articles on what a psychologist can and should do to handle this problem. In 2014, the APA released a short informative document discussing the use of informed consent regarding development and implementation of policies and procedures when a client does not keep an appointment. Miller-Matero, Clark, Brescacin, Dubaybo, and Willens (2016) found that literacy and level of depression were two out of nine factors they examined that predicted inconsistent therapy attendance with a psychologist. In another study, four broad categories were identified by

therapists who were asked for reasons a client might miss scheduled therapy sessions: clinical problems, practical matters, negative reactions to treatment, and low motivation (Defife et al., 2010). In a retrospective study, Daniels and Jung (2009) found that a substantial number of clients who miss first appointments, and reschedule, go on to become inconsistent therapy attenders later in the process. Another researcher found that those who attend therapy inconsistently tend to have higher rates of therapy drop-out (Beckham, 1992). These findings suggest that inconsistency in the initial stages of therapy might contribute to lower doses of therapy and that this pattern of less doses of therapy might continue to be observed for the duration of treatment. However, in the context of this article, inconsistency is largely used as only a predictive variable and not an explanatory one. It is clear that there are efficiency costs when a session is missed, but the research has not examined what happens to the client outcomes when therapy inconsistency occurs. It should be noted that inconsistency in therapy can also be caused by therapists who cancel or reschedule therapy sessions due to personal or professional concerns.

One study performed by Erekson et al. (2015) peripherally studied inconsistent therapy attendance and therapy outcomes. This study examined many attendance variables relating to client outcomes. He labeled one of those variables as the "flakiness" index, calculated as a ratio of sessions attended over sessions scheduled. Flakiness was included as a peripheral variable in a much larger model and was given little attention in the context of the study; however, it was found to have a significant effect size in one iteration of a predictive model. In the context of this study, Erekson et al.'s (2015) flakiness index only examined the inconsistent attendance of the client and did not take into account a pattern of inconsistency from both client and counselor.

For the purposes of this study, therapy outcome will be measured by using the Outcome Questionnaire-45 (OQ-45, Lambert, Lunnen, Umphress, Hansen, & Burlingame, 1994). This measure is designed to assess the psychosocial functioning of an individual. This assessment is designed as a repeated measure to be taken by the client each session to indicate whether a client is progressing as expected towards improvement (Lambert et al., 1996). The archival data set used in this study has session-by-session OQ-45 scores for the years 2008-2018.

Previously cited studies focus on predictions and treatment utilization patterns, but they do not address the therapeutic effect of inconsistent therapy patterns. The questions addressed by these studies seem to be more clerical than clinical and leave open a substantial line of questioning regarding what happens to individuals when they fail to attend their scheduled therapy sessions, whether by their own accord or the cancelling or rescheduling of sessions by a counselor. This study is focused on examining whether clients with inconsistent attendance patterns have poor therapy outcomes. This study does not address reasons for inconsistency. Based on a review of the literature, there is little information regarding the effect of inconsistent attendance on therapy outcomes. Since inconsistent therapy attendance seems to be a problem for some clients and perhaps some therapists, it is important to know how this inconsistent pattern affects therapy outcome. The research questions for the current study are listed below.

1. Does total score OQ-45 data demonstrate enough variance in outcomes to warrant an examination of possible predictors of therapy outcomes?

2. What role does inconsistent therapy attendance, defined by the number of no-shows, cancellations, and rescheduled appointments of both clients and therapists, play in explaining the variance in full scale OQ-45 starting point, linear trends, and quadratic trends?

Methods

Participants

Data was retrieved from the archives of a university counseling center from a large, predominantly white, private, religious university in the Mountain West region of the United States. The sample consists of archival data containing session attendance data from the years 2008 to 2018. To be included in the study, all participants must have three points of data for the OQ-45, which will correspond to a minimum of two sessions, as some clients take the OQ-45 close enough to their intake appointment that they need not take another at that time. This is important as a quadratic trend must have at least three points of data to indicate whether scores decrease initially, followed by an increase. This means that those clients who schedule an intake appointment, but do not have at least three points of data and attend at least two sessions, although potentially having some level of inconsistency, will not be included, as it is not possible to determine a quadratic trend without three points of data. In addition, participants will be limited to those that attended ten or fewer sessions. This sub-section of the population comprises more than 60% of the data and allows examination of only those clients who are most similar to what would be seen on a regular basis. In addition, it is a common cutoff in outcome research (Draper, Jennings, Baron, Erder, & Shankar, 2002). Furthermore, the recovery slope is steeper in the first ten sessions than for clients who attend 40 or more sessions. The final dataset included 11,794 participants who scheduled a total of 67,329 sessions.

Measures

The therapy outcome assessment used for this study is the Outcome Questionnaire-45 (OQ-45), routinely given to each client at each therapy session. The OQ-45 is intended to be part of the decision-making process intended to provide information for the counselor to help assess

therapy progress and to potentially adjust therapy to maximize therapy outcomes. This assessment consists of 45 questions, which are divided into three subscales. The Symptom Distress subscale is intended to measure the severity of symptoms related to depression and anxiety. The Interpersonal Relations subscale is intended to measure the level of distress relating to relationships. The Social Role Performance subscale is intended to measure an individual's ability to function in the roles required of them in daily life. These subscale scores are combined to create a full-scale score, which is a general indication of an individual's symptomology. Higher scores indicate greater symptomology and distress. The OQ-45 is perhaps the most widely known instrument for measuring outcomes. It is regularly used to assess outcomes for the purposes of evidence-based practices. It was originally developed and normed by Lambert et al. (1996). At the time of development, it was found to have strong reliability (test-retest of 0.84) and validity (concurrent of 0.60-0.88) as well as to have the ability to differentiate between levels of distress of those in a clinical population and those who are functioning more normally (Lambert et al., 1996; Umphress, Lambert, Smart, Barlow, & Clause, 1997). Since that time, it has been widely used and validated with many populations and ethnicities (Lambert et al., 2006; Limb, Baker, Wood, & Hedley, 2017; Machado & Fassnacht, 2015).

Procedures

The treatment and subsequent outcomes measured were gathered at a counseling center at a large, private, religious institution. This counseling center is free to all students enrolled full-time at the university. At the time the data was collected, there were no session limits in place. Data was collected from clients who agreed that their de-identified information could be used for research at this university. Data used for the purposes of this study include number of sessions

attended, number of sessions missed (which includes rescheduling, cancelling and no-shows for both client and therapist), and therapy outcome as measured by the OQ-45.

At the initiation of therapy, clients are asked to fill out an intake questionnaire and as a part of that are asked to discuss their current reason for attending therapy and relevant information regarding history and context. They are also asked to complete the OQ-45. The therapist has the opportunity to review this questionnaire before seeing the client. Once clients have completed the intake questionnaire, they contact the office staff of the counseling center to schedule an initial appointment with a clinician, to whom a client is randomly assigned, unless they require a specific level of care or requests have been made by the client.

Either before or upon arrival at the first appointment and at every subsequent appointment, clients are asked to complete the OQ-45 on a tablet or online before meeting with their therapist. These data are collected and organized on a graph using OQ-Analyst™ that the clinicians access and use as a way to help assess the amount of improvement or deterioration clients have experienced. These data are collected and organized into databases to be stored and used for current and future research.

Data Analysis

Data were analyzed using a multi-level longitudinal model. In this model, level one determined if there were significant differences in the variances of the intercept (OQ starting point for each participant), linear trend, and quadratic trend. Level 2 determined what role inconsistent therapy patterns have on the prediction model.

Question 1. The first step in data analysis was to free the intercept as well as linear slope and quadratic trend. To do this, the fixed terms were sectioned into their individual terms and the variance around that particular term. This variance is a measurement of error for each individual

aspect of the prediction model. The goal at this juncture was to determine if there is enough variance in OQ-45 scores for further explanation in that variance.

Question 2. The next step seeks to answer questions regarding the consistency of therapy attendance patterns to further understand the variance in initial OQ score, as well as the linear and quadratic trends of OQ change. At this level, inconsistent therapy attendance was translated into a continuous variable, defined as the percentage of scheduled sessions that were attended. As previously stated, this included all inconsistency in attendance, whether from therapist or client.

This consistency variable was then added to the hypothesized model of prediction to determine how much of the variance in initial OQ score could be explained by consistency. In order to attempt to explain the variance of the linear trend, a cross-level interaction term was created by multiplying the linear trend and the consistency variable. This indicated the amount of error specific to those terms that can be better understood in terms of consistency.

Results

Given the nested nature of the data, Hierarchical Linear Modeling was used to analyze these data. The dataset was determined to have two levels of hierarchy: Session number (time, L1) and individual (L2).

Research Question 1

Does full score OQ-45 data present enough variance that it warrants an examination of potential predictors? In this study, those predictors are consistency, as well as consistency over time.

Model 1. The base estimate of all OQ-45 scores with a mean and the variance around the mean can be seen in Table 1 below. In model one, all variance is within-subject variance.

Table 1

Initial Estimate of OQ-45 Total Score

Model 1	
2 Parameters	Estimate
Fixed Parameters	
Intercept	65.26
Random Parameters	
σ^2_e	530.33

Note. Deviance (-2LL) = 6132463.

In Model 2 the intercept is freed, allowing for a partitioning of the residual variance into between and within subject variance. The data in Table 2 demonstrates that a large proportion of the variance is explained between subjects (ICC =.70). This indicates that 70% of the data is left unexplained and could be explained by other predictors. There is sufficient between subject variance in OQ-45 scores that this data warrants multilevel modeling. The deviance differential shows significant deviance from Model 1 to Model 2 (5569140.35, *p<0.001*). This indicates that Model 2 provides further explanatory power. This leads to research question two, regarding whether consistency in session scheduling and attendance accounts for a significant portion of that variance.

Table 2

Model Demonstrating Intercept Estimate and Variance Around the Intercept

Model 2			
3 Parameters	Estimate	CRT	Sig.
Fixed Parameters			
Intercept	65.14		
Random Parameters			
σ^2_e	160.14		
σ^2u_i	372.84	70.52	$p<0.001$

Note. Deviance (-2LL) = 563322.11. Deviance Differential = 5569140.35. CRT = Critical Ratio Test.

Research Question 2

What role does inconsistent therapy attendance play in explaining the variance in OQ-45 starting point and linear trends?

Model 3 attempts to explain the remaining variance by adding session number as a predictor (see Table 3). It was found that session number is a significant predictor of OQ-45 score trajectory. The slope of Session Number is -0.94 which indicates that on average, clients' OQ-45 scores drop 0.94 units per session. The deviance differential from Model 2 to Model 3 is positive and significant (1624.75, $p<0.001$), indicating increased explanatory from Model 2 to Model 3.

Table 3

Prediction Model Including Linear Trend (Labeled as Session Number)

Model 3			
4 Parameters	Estimate	CRT	Sig.
Fixed Parameters			
Intercept	67.76		
Session number	-0.94	-40.7	$p<0.001$
Random Parameters			
σ^2_e	155.35		
$\sigma^2_{u_i}$	375.84	70.73	$p<0.001$

Note. Deviance (-2LL) = 561697.36. Deviance Differential = 1624.75. CRT = Critical Ratio Test.

In Model 4, the slope for session number is freed, which allows for a determination of whether there is significant variance among individual slopes around the mean slope of – 0.94. This model (see Table 4) indicates that there is significant variance around the average slope (CRT=34.76, $p<0.001$). This indicates that individuals scores are varied enough from the predictor, that it warrants further exploration of what potential factors might influence those score differences, the deviance differential from Model 3 to Model 4 is positive and significant (5001.051, $p<0.001$).

Table 4

Predictive Model Demonstrating Linear Trend Estimate, and Variance Around Linear Trend

5 Parameters	Model 4		
	Estimate	CRT	Sig.
Fixed Parameters			
Intercept	67.83		
Session number	-1.26	-33.31	*p*<0.001
Random Parameters			
σ^2_e	121		
$\sigma^2 u_i$	390.28	68.99	*p*<0.001
$\sigma^2 u_{1i}$	7.15	34.76	*p*<0.001

Note. Deviance (-2LL) = 556696.31. Deviance Differential = 5001.051. CRT = Critical Ratio Test.

Model 5 includes the predictor Quadratic Session Number. A quadratic shape is more indicative of OQ-45 response curve and better predicts OQ-45 score (CRT-5.04, *p*<0.001). The quadratic predictor decreases the distance from actual score to predicted score. In the presence of the quadratic predictor, the linear slope becomes steeper (-1.51), and remains significant (*p*<0.001). This suggests that changes in OQ-45 scores experience a sharp initial decrease, with a decelerating slope as treatment progresses (see Table 5). The deviance differential from Model 4 to Model 5 is positive and significant (17.29, *p*<0.001).

Table 5

Predictive Model Including Quadratic Predictor (Labeled as Session Quadratic)

Model 5			
6 Parameters	Estimate	CRT	Sig.
Fixed Parameters			
Intercept	68.05		
Session Number	-1.51	-24.18	*p*<0.001
Session quadratic	0.04	5.04	*p*<0.001
Random Parameters			
σ^2_e	121.12		
$\sigma^2 u_i$	390.17	69	*p*<0.001
$\sigma^2 u_{1i}$	7.05	34.44	*p*<0.001

Note. Deviance (-2LL) = 556679.02. Deviance Differential = 17.29. CRT = Critical Ratio Test.

Model 6 maintains all previous predictors and frees the slopes of the Quadratic Session Number predictor. In this model (see Table 6), the variance around the mean quadratic change was significant, meaning that individuals have different quadratic trends, and their curves vary significantly on those trends such that the variance can be explored further (CRT=6.32, *p*<0.001). The deviance differential from Model 5 to Model 6 is positive and significant (51.59, *p*<0.001).

Table 6

*Predictive Model Indicating Quadratic Trend Estimate, and Variance
Around Quadratic Trend*

7 Parameters	Model 6		
	Estimate	CRT	Sig.
Fixed Parameters			
Intercept	68.04		
Session Number	-1.47	23.48	*p*<0.001
Session quadratic	0.03	3.85	*p*<0.001
Random Parameters			
σ^2_e	120.06		
$\sigma^2_{u_i}$	389.69	69.1	*p*<0.001
$\sigma^2_{u_{1i}}$	6.65	30.3	*p*<0.001
$\sigma^2_{u_{2i}}$	0.02	6.32	*p*<0.001

Note. Deviance (-2LL) = 556627.47. Deviance Differential = 51.59. CRT = Critical Ratio Test.

Model 7 adds the level 2 predictor of consistency (see Table 7). The Consistency predictor is significant in the presence of Session Number and Quadratic Session number (CRT=-12.76, *p*<0.001). This means that adding Consistency adds more predictive power to the regression equation. This average starting score with a consistency score of zero would be 77.55. With a consistency score of 1, indicating that all scheduled appointments were attended, the average starting score is 65.68, 12.87 points lower than with a consistency score of zero. This indicates that consistency is a significant predictor and can be translated into a cross-level interaction term to further explain consistency as it relates to time. The deviance differential from Model 6 to Model 7 is positive and significant (163.26, *p*<0.001).

Table 7

Predictive Model Including Consistency

8 Parameters	Model 7		
	Estimate	CRT	Sig.
Fixed Parameters			
Intercept	77.55		
Session Number	-1.47	23.45	*p*<0.001
Session quadratic	0.03	3.82	*p*<0.001
Consistency	-12.87	-12.76	*p*<0.001
Random Parameters			
σ^2_e	120.24		
$\sigma^2 u_i$	383.6	68.97	*p*<0.001
$\sigma^2 u_{1i}$	6.54	30.05	*p*<0.001
$\sigma^2 u_{2i}$	0.02	6.39	*p*<0.001

Note. Deviance (-2LL) = 556464.17. Deviance Differential = 163.26. CRT = Critical Ratio Test.

Model 8 adds a cross level interaction of a level 1 predictor (Session number) and a level 2 predictor (Consistency) (see Table 8). In the presence of all prior predictors, the cross-level interaction of Session number and Consistency is significant. This means that consistency over time better explains change in OQ-45 than prior models did. Other predictors remain significant, excepting Session Number. A perfect consistency score of one would, on average, correspond to 2.19 points of OQ-45 change per session. Whereas a consistency score of zero would, on average, see no change per session, as Session Number was not significant in the presence of Session x Consistency. The deviance differential from Model 7 to Model 8 is positive and significant (162.26, *p*<0.001).

Table 8

Predictive Model Including a Level 2 Predictor of Consistency Over Time
(Labeled as Session x Consistency)

Model 8			
9 Parameters	Estimate	CRT	Sig.
Fixed Parameters			
Intercept	75.8		
Session Number	0.15	0.88	$p=0.38$
Session quadratic	0.04	4.16	$p<0.001$
Consistency	-10.5	-10.14	$p<0.001$
Session x Consistency	-2.19	-10.13	$p<0.001$
Random Parameters			
σ^2_e	120.23		
$\sigma^2 u_i$	383.47	68.99	$p<0.001$
$\sigma^2 u_{1i}$	6.44	29.93	$p<0.001$
$\sigma^2 u_{2i}$	0.02	6.29	$p<0.001$

Note. Deviance (-2LL) = 556363.15. Deviance Differential = 101.02. CRT = Critical Ratio Test.

Discussion

Summary

The first research question examined whether OQ-45 scores are different enough that exploration of what contributes to those differences would be warranted. The initial analysis indicated that there was sufficient variance between OQ-45 scores to explore the differences in OQ-45 scores. This question was important because if there is not enough variance among total score OQ-45 recovery curves, then there would be no predictors to examine, as there would be nothing more to predict.

All subsequent models (Tables 3-8) address the second research question, which explores whether therapy attendance consistency and its interaction term with time are significant predictors. These models indicate that when examining client's recovery curves in the presence of session number, the quadratic trend, and consistency, the cross-level interaction between

consistency and session number are significant, showing that consistency over time has a significant impact in explaining variance between individual recovery curves. The addition of the interaction of consistency over time changes the prediction weight of session number, which was previously a significant predictor of recovery, into a non-significant predictor. In addition, consistency over time explains more change per session than session attendance did in any model. This indicates that the actual change that is sometimes attributed to having more sessions is better explained by consistency in attendance over time. Consistency by itself as a variable accounts for variance in the intercept, indicating that individuals with higher consistency scores tend to have a lower average OQ-45 score at the onset of treatment.

Conclusions

Inconsistency in therapy attendance has received attention over the years (Guzek et al. 2015; Hwang et al., 2015; Lacy et al., 2004; Molfenter, 2013), but much of the research has focused on how to increase consistency in therapy attendance without measuring how substantial the impact of consistency is on therapy progress and outcome. This study used a large database of 11,794 participants having attended 67,329 sessions to investigate the impact therapy attendance consistency has on therapeutic outcome. Understanding this will help therapists make informed and intentional decisions regarding how much clinical focus should be given to inconsistency, whether their own or that of a client. The results indicate that consistency is related to how severe an individual's symptomology is at the onset of treatment, with elevated OQ-45 scores associated with greater inconsistency.

These results demonstrate that inconsistency in therapy attendance does have an impact on therapy outcomes. Thus, when clients begin to exhibit some inconsistency, even as early as the first session, this should become a focus of discussion in therapy. That inconsistency might

even warrant policies being developed to encourage and incentivize consistency. Some clients may need increased support to achieve consistency, which could potentially be assessed based on early levels of symptomology. This assertion is supported by the results of this study demonstrating that those with high consistency scores tend to have OQ-45 scores that are significantly lower than their more inconsistent counterparts. Early OQ-45 scores could help clinicians determine which clients might be at greater risk for increased inconsistency and help shape conversations around how to increase the likelihood of being consistent. This could mean clinicians having conversations regarding how to remove barriers to attendance or how to build supports that encourage attendance. Although it is ultimately the choice of a client to attend or not attend a session, it is possible that having those conversations early on in treatment could lead to improved attendance, and therefore more consistent doses of therapy, which would have a significant impact on the outcome of clients. Clients being aware of the impact it could have on their recovery may also, on its own, incentivize some clients to increase their efforts towards consistency. Treatment policies might also be devised to reward attendance in therapy and discourage inconsistent attendance.

Further implications apply to how a therapist may manage their own scheduling. The level of consistency studied included both client and therapist consistency combined into one variable. This means that a therapist canceling or rescheduling is a factor in this analysis of what contributes to client change. Although it is sometimes necessary to cancel with short notice, it may be important for therapists to make an increased effort to minimize these occurrences, particularly with clients who can be identified as being at risk for attending therapy inconsistently. A therapist being aware of a client's potential risk for inconsistency, or their current rate on consistency, could help guide how that clinician might manage a case load in the

best interests of a client. Hannan, Lambert, Harman, Nielsen, and Smart (2005) indicated that

therapists are relatively poor judges of who will be successful in therapy and those who might

deteriorate. Implementing structure around how consistency is handled therapeutically could

provide some important information regarding who might see more success from therapy than

has previously been available to therapists.

Although the per session impact of consistency over time on outcome may seem small to

moderate, it is statistically and practically significant, especially when considering what that

change would look like in as few as seven sessions. It is also larger than the impact of sessions

attended. Reliable change on the OQ-45, or change that is not due to chance, is considered to be

change of 14 or more points (Lambert et al., 2004). A client with perfect consistency could

experience this amount of change over the course of seven sessions from consistency alone. One

idea underlying dose effect is that clients see improvement when they attended more session

sessions (Draper et al., 2002). The current study indicates that attending more sessions is only

part of the picture and that the pattern of attendance is also important.

Consistency's impact on outcome provides initially compelling evidence to help inform

policies around promoting consistency. Many university counseling centers as well as insurance

companies enforce a session limit to either increase the number of people seen or to decrease

costs. Some have implemented these policies without any solid evidence to indicate where a

session limit should be established (Schwartz, 2016; Wolgast, Lambert, & Puschner, 2003).

Wolgast et al.'s research indicates that it took 14 sessions for most individuals to experience

reliable change. It is possible that implementing strategies that increase consistency would allow

for this number to be as low as seven. Schwartz (2016) indicates that clients are significantly

more likely to arrive for their next session in the earlier sessions of therapy. If consistency can be emphasized and capitalized on, short term model of treatment might see increased effectiveness.

Limitations

The sample in this study was taken from a counseling center at a single university. It is possible the center's policies regarding attendance, how to support it, as well as a relatively short term therapy model influence what consistency looks like at that particular center. However, because this sample comprises the data of clients over the course of ten years, it is impossible to take into consideration what those policies were and what impact they might have had on consistency.

There are many factors beyond therapy attendance consistency not yet accounted for that play a role in client recovery: matching diagnosis or personality traits to a specific clinician, transference and counter-transference, motivation, or a client's specific needs at that time, to name a few. It is always possible that, in an effort to measure client consistency, what is actually being measured is a piece of some other larger component. For instance, client consistency could actually be a measure of something like the consistency of a client's access to transportation or a therapist's health conditions, a motivational issue, interference from the severity of mental illness issues, or it may reflect a poor therapeutic alliance. This motivates a question as to whether different causes contributing to inconsistency (e.g., finding childcare or reliable transportation), might have different outcomes than inconsistency due to severe mental illness or a lack of commitment to treatment (Defife et al., 2010). It would be helpful to examine whether various reasons contributing to inconsistency differentially impact therapy outcomes.

For the purposes of this study, therapist and client inconsistency were given the same weight and studied together under the larger descriptor of consistency. It is possible that one has

a stronger impact on the recovery curve than the other. Therapist inconsistency tends to be significantly less common, accounting for only 5.7% of all appointments analyzed in this study, while client inconsistency accounted for 19.3% of missed or canceled appointments. This makes the impact of therapist inconsistency more difficult to study. However, studying therapist inconsistency alone might lead to more clear and robust findings regarding what factors a therapist ought to consider in a situation where he or she might have a choice in rescheduling. For the purposes of this study, the two were considered together largely for two reasons. First, this study is an early investigation into an unstudied area of outcome research. It will, hopefully, serve as a starting point for further research on consistency and therapeutic outcome. Secondly, a previous study by Erekson et al. (2015) found client inconsistency alone not to be a particularly strong predictor in the presence of many other factors. However, it is possible that therapist inconsistency alone would lead to discovering a different impact, as a therapist often sets the tone for sessions and attitudes held in them. It is also possible that the timing of the inconsistency, whether early on in the sessions or after a therapeutic relationship has been established, could affect outcomes, as individuals tend to be more committed once a relationship has formed.

Another important limitation is that not all inconsistency can be captured by the variable used in this research. There are other ways that clients and therapists might demonstrate inconsistency, like coming late for or leaving early from scheduled appointments or committing to and not following through on commitments made in therapy. While this speaks to commitment, it also demonstrates inconsistency. Using attendance data does not allow for exploration of the more qualitative aspects of inconsistency.

Finally, whether or not the data is able to be generalized plays an important role in all research. The sample is very large, consisting of 11,794 participants, which is helpful in increasing the confidence in the findings. However, with any sample, there is a risk that individuals in the sample will not be representative of those in the population to which the research findings are applied. In this particular sample, individuals tend to be highly religious. This certainly could differentiate the current sample from the general population in terms of attitudes and beliefs. The current sample, like much research conducted, is comprised entirely of college students. This means that there are some minimum levels of functioning necessary to be eligible to seek treatment at the counseling center, and therefore be in the sample. It is possible that a community sample would be more heterogeneous in functioning and performance. Individuals in this study were seeking treatment on campus. It is possible that greater levels of inconsistency would be seen in a community sample where it is not generally as convenient to get to a clinic as it is when that clinic is on the same campus where one attends classes. Another important difference is that clients in this study do not pay for treatment. This could lead to more casual attitudes about attendance.

Future Research

Consistency, as examined in this study, was able to explain some of the variance in the linear slopes of therapeutic improvement. It demonstrated that clients with inconsistent attendance patterns start with more distress on the OQ-45. It showed that those with inconsistent patterns have very little change in the OQ-45 over time. Future research could be helpful in understanding the variety of factors, such as aspects of therapy and personality traits or diagnoses, that could help explain variance in the rates of change of different individuals. Furthermore, research can also be focused on the impact of various reasons for inconsistency.

This study indicates that therapy outcomes might be improved by identifying inconsistent therapy attendance and then intervening to change those patterns. Assessing whether early identification and intervention actually increases consistency could shape important policies regarding what a clinician or center chooses to do about client inconsistency.

Cultural views may impact client's views of time and how they think of therapy. Some might only come to a session if they feel they are in crisis, and therefore miss appointments if they feel okay. Others might be more casual in the way the view time and be late or miss appointments. Future research could be aimed at better identifying cultural groups whose interpretation of time is more flexible and determine if that influences either what is viewed as inconsistency or the impact of consistency on outcomes. A multi-cultural approach to this question could certainly help clinicians better help clients from varied backgrounds.

There are many components that facilitate change and recovery. These may include more obvious issues like severity of mental illness, type of diagnosis, therapist experience and comfort, client readiness to change, the strength of the therapeutic alliance, to more subtle and difficult to measure aspects like the layout of an office, the distance a client has to travel, the demeanor of how a client is greeted, or the color of paint. Understanding factors that influence therapy outcomes is important. This study suggests that inconsistent therapy attendance can be added to the list of factors that can impact therapy outcomes.

References

American Psychological Association (2014, November 6). Practitioner pointer: How to handle late and missed appointments. *Retrieved from* https://www.apaservices.org/practice/update/2014/11-06/late-missed-appoitments

Asay, T. P., & Lambert, M. J. (1999). The empirical case for the common factors in therapy: Quantitative findings. In M. A. Hubble, B. L. Duncan, S. D. Miller, *The heart and soul of change: What works in therapy* (pp. 23–55). Washington, DC: American Psychological Association. https://doi-org.erl.lib.byu.edu/10.1037/11132-001

Barrett, M. S., Chua, W. J., Crits-Christoph, P., Gibbons, M. B., & Thompson, D. (2008). Early withdrawal from mental health treatment: Implications for psychotherapy practice. *Psychotherapy: Theory, Research, Practice, Training*, *45*(2), 247-267.

Beckham, E. E. (1992). Predicting patient dropout in psychotherapy. *Psychotherapy: Theory, Research, Practice, Training*, *29*(2), 177-182.

Bergin, A. E., & Garfield, S. L. E. (1994). *Handbook of psychotherapy and behavior change*. Hoboken, NJ: John Wiley & Sons.

Chapman, A. L., & Rosenthal, M. Z. (2016). Enhancing therapy attendance. In *Managing therapy-interfering behavior: Strategies from dialectical behavior therapy* (pp. 75-98). Washington, DC, US: American Psychological Association. doi:10.1037/14752-005

Daniels, M. K., & Jung, S. (2009). Missed initial appointments at an outpatient forensic psychiatric clinic. *Journal of Forensic Psychiatry & Psychology*, *20*(6), 964-973.

Defife, J. A., Conklin, C. Z., Smith, J. M., & Poole, J. (2010). Psychotherapy appointment no-shows: Rates and reasons. *Psychotherapy: Theory, Research, Practice, Training*, *47*(3), 413-417.

Delgadillo, J., Moreea, O., Murphy, E., Ali, S., & Swift, J. K. (2015). Can low-cost strategies improve attendance rates in brief psychological therapy? Double-blind randomized controlled trial. *Journal of Clinical Psychology*, *71*(12), 1139-1152. doi:10.1002/jclp.22228

Draper, M. R., Jennings, J., Baron, A., Erdur, O., & Shankar, L. (2002). Time-Limited Counseling Outcome in a Nationwide College Counseling Center Sample. Journal of College Counseling, 5(1), 26–38. https://doi-org.erl.lib.byu.edu/10.1002/j.2161-1882.2002.tb00204.x

Erekson, D. M., Lambert, M. J., & Eggett, D. L. (2015). The relationship between session frequency and psychotherapy outcome in a naturalistic setting. *Journal of Consulting and Clinical Psychology, 83*(6), 1097–1107. https://doi-org.erl.lib.byu.edu/10.1037/a0039774

Fenger, M., Mortensen, E. L., Poulsen, S., & Lau, M. (2011). No-shows, drop-outs and completers in psychotherapeutic treatment: Demographic and clinical predictors in a large sample of non-psychotic patients. *Nordic Journal of Psychiatry*, *65*(3), 183-191.

Guzek, L. M., Fadel, W. F., & Golomb, M. R. (2015). A pilot study of reasons and risk factors for 'no-shows' in a pediatric neurology clinic. *Journal of Child Neurology*, *30*(10), 1295-1299. doi:10.1177/0883073814559098

Hannan, C., Lambert, M. J., Harmon, C., Nielsen, S. L., Smart, D. W., Shimokawa, K., & Sutton, S. W. (2005). A lab test and algorithms for identifying clients at risk for treatment failure. *Journal of Clinical Psychology*, *61*(2), 155-163.

Hansen, N. B., Lambert, M. J., & Forman, E. M. (2002). The psychotherapy dose-response effect and its implications for treatment delivery services. *Clinical Psychology: Science and Practice*, *9*(3), 329-343.

Howard, K. I., Kopta, S. M., Krause, M. S., & Orlinsky, D. E. (1986). The dose–effect relationship in psychotherapy. *American Psychologist*, *41*(2), 159-164.

Hwang, A. S., Atlas, S. J., Cronin, P., Ashburner, J. M., Shah, S. J., He, W., & Hong, C. S. (2015). Appointment 'no-shows' are an independent predictor of subsequent quality of care and resource utilization outcomes. *Journal of General Internal Medicine*, *30*(10), 1426-1433. doi:10.1007/s11606-015-3252-3

Lacy, N. L., Paulman, A., Reuter, M. D., & Lovejoy, B. (2004). Why we don't come: Patient perceptions on no-shows. *The Annals of Family Medicine*, *2*(6), 541-545.

Lambert, M. J., Smart, D. W., Campbell, M. P., Hawkins, E. J., Harmon, C., & Slade, K. L. (2006). Psychotherapy outcome, as measured by the OQ-45, in African American, Asian/Pacific Islander, Latino/a, and Native American clients compared with matched Caucasian clients. *Journal of College Student Psychotherapy*, *20*(4), 17–29. https://doi-org.erl.lib.byu.edu/10.1300/J035v20n04_03

Lambert, M., Morton, H., Hatfield, D., Harmon, C., Hamilton, S. Reid, R., … Burlingame, G. (2004). *OQ©-45 administration and scoring manual*. Salt Lake City, UT: OQ Measures.

Lambert, M. J., Burlingame, G. M., Umphress, V., Hansen, N. B., Vermeersch, D. A., Clouse, G. C., & Yanchar, S. C. (1996). The reliability and validity of the outcome questionnaire. *Clinical Psychology & Psychotherapy*, *3*(4), 249-258.

Lambert, M. J., Lunnen, K., Umphress, V., Hansen, N., & Burlingame, G. M. (1994). Outcome Questionnaire 45.2. [Measurement Instrument]. Retrieved from Psyctests, doi:10.1037/t00830-000

Limb, G. E., Baker, C. L., Wood, D. S., & Hooley, C. (2017). Therapeutic OQ-45 outcome

differences: A Native American and Caucasian comparison. *Research on Social Work

Practice*, *27*(6), 726–733. https://doi-org.erl.lib.byu.edu/10.1177/1049731515610637

Machado, P. P. P., & Fassnacht, D. B. (2015). The Portuguese version of the Outcome

Questionnaire (OQ-45): Normative data, reliability, and clinical significance cut-offs

scores. *Psychology & Psychotherapy: Theory, Research & Practice*, *88*(4), 427–437.

https://doi-org.erl.lib.byu.edu/10.1111/papt.12048

Miller-Matero, L. R., Clark, K. B., Brescacin, C., Dubaybo, H., & Willens, D. E. (2016).

Depression and literacy are important factors for missed appointments. *Psychology,

Health & Medicine*, *21*(6), 686–695. https://doi-

org.erl.lib.byu.edu/10.1080/13548506.2015.1120329

Molfenter, T. (2013). Reducing appointment no-shows: Going from theory to practice. *Substance

Use & Misuse*, *48*(9), 765-771.

Munder, T., Flückiger, C., Leichsenring, F., Abbass, A., Hilsenroth, M., Luyten, P., . . .

Wampold, B. (2019). Is psychotherapy effective? A re-analysis of treatments for

depression. *Epidemiology and Psychiatric Sciences, 28*(3), 268-274.

doi:10.1017/S2045796018000355

Schwartz, A. J. (2016) Session Limits and the Probability of the Next Visit. *Journal of College

Student Psychotherapy*, *30*(4), 238-251, doi: 10.1080/87568225.2016.1219609

Umphress, V. J., Lambert, M. J., Smart, D. W., Barlow, S. H., & Clouse, G. (1997). Concurrent

and construct validity of the Outcome Questionnaire. *Journal of Psychoeducational

Assessment*, *15*(1), 40-55.

Wampold, B. E. (2015). How important are the common factors in psychotherapy? An

update. *World Psychiatry: Official Journal of the World Psychiatric Association

(WPA)*, *14*(3), 270–277. doi:10.1002/wps.20238

Wolgast, B. M., Lambert, M. J., & Puschner, B. (2003). The dose-response relationship at a

college counseling center: Implications for setting session limits. *Journal of College

Student Psychotherapy*, *18*(2), 15–29. https://doi-

org.erl.lib.byu.edu/10.1300/J035v18n02_03

APPENDIX

Literature Review

Much research has been conducted on the dose-response over the last two decades. Although initially explored in the 50's and 60's, the first large push for a meta-analytic review of dose-response theory was not until 1986 (Howard, Kopta, Krause, & Orlinsky, 1986). The question about the efficacy of therapy was posed and it was suggested that, like in pharmacology, effective therapy could be determined by identifying at what point the most good was being done for the greatest number of people. This was largely an effort to determine what length of treatment did the most good for patients, while still being able to be time limited. Initial data suggested that by eight sessions, 50% of clients had experienced measurable improvement and that by 26 sessions, 75% experienced measurable improvement. The Howard et al. (1986) study did not account for theoretical orientation. When researchers examined improvement based on diagnosis, they found that those with depression and anxiety responded more quickly than those with more "border-line psychotic" diagnoses. Howard et al.'s (1986) study was among the first to establish on a large scale that the dose-effect was an effective way to measure therapy outcomes. Simply put, it began to answer the question: how many doses (sessions) of therapy does it take for a client to reliably improve?

In the early 2000's, and with the creation of the OQ-45 by Lambert, Lunnen, Umphress, Hansen, and Burlingame (1994), researchers began to realize that they could respond to some of the criticism of the earlier meta-analytic reviews of dose-response theory (Howard et al., 1986). The primary criticism being that there was no reliable way to measure outcome. Using the OQ-45 and accessing a vast array of data through a research consortium of college counseling centers led researchers to discover that routine monitoring of therapy outcomes can improve therapy

outcomes as evidenced by Draper, Jennings, Baron, Erder, and Shankar (2002). The Draper et al. (2002) study utilized the idea of dose-response to examine improvement. The findings were that in general, clients improved the more therapy they attended. Some interesting findings demonstrated that those who terminated in the fourth session seemed to experience about the same improvement as those who terminated in the tenth. This was largely attributed to sampling error, as the general trend held that more sessions, up to ten where the study was cutoff, led to more improvement. Using the OQ-45 in routine practice led researchers to see that they could identify clients not progressing in the usual recovery pattern and then target interventions to potentially improve outcomes. One factor in therapy outcomes that has not been examined in much detail is whether consistency in therapy attendance affects therapy outcomes. There is some evidence that doses of therapy that are more consistent or closer together can lead to better outcomes (Erekson, Lambert, & Eggett et al., 2015).

The questions of why people start treatment but don't reliably come to therapy are not new ideas. Although questions regarding reasons and motivations for inconsistency are not the central focus of this literature review, they are very closely related to pertinent questions and literature. Given that attendance at therapy (for billing purposes) is how many clinicians make a living, it seems this would be an important issue in a business setting. And, indeed, much attention has been focused on how to predict whether or not a client will come to session and what and how to charge that client if they don't attend. This literature review will address the questions that have been asked in regard to therapy attendance, and then will identify what information seems to be lacking.

Questions regarding no-show appointments begin to show up pretty regularly in the literature around the mid 1970's (Dervin, Stone, & Beck, 1978; Slaikeu, Lester, & Tulkin. 1973;

Walfish, Tapp, Tulkin, Slaikeu, & Russell, 1975). In a replication study that was slightly more rigorous than its predecessor, researchers began wondering whether the technical effectiveness of telephone crisis workers related to whether clients would attend a first session (Walfish et al., 1975). Researchers studied 70 taped crisis calls and found that when a client was able to identify a specific problem, those clients were less likely to attend a subsequent in person therapy session. This led crisis workers to attempt to help clients focus more on identifying a specific problem, and when clients had trouble identifying a specific problem, these clients became a higher priority for making appropriate referrals to a therapy session later.

Inconsistency in therapy attendance has continued to be an issue. In response to this, researchers continued to develop theories as to why this was so. A popular theory was that those with a lower socio-economic class were more likely to drop out of therapy without warning (Hollingshead & Redlich, 1958). This was challenged in a 1975 study where 36 women with diagnoses of depression and who fit the criteria for lower socio-economic status were treated and their participation and engagement in therapy was studied (Deykin, Weissman, Tanner, & Peusoff, 1975). Although the participants were identified as lower socio-economic status and held relatively negative attitudes about the effectiveness of psychotherapy, their attrition rates were extremely low. This result was unexpected, as other studies had previously found that lower socio-economic status as associated with higher drop-out rates and lower engagement in therapy. The study suggested that having a time-limited therapy contract might help with a client's commitment to therapy, since they knew when the contact would end. They also identified that an important factor in keeping attendance and engagement high could have been the flexibility provided to clients seeking therapy. This flexibility included making in-person or phone contacts,

as well as choices regarding the modality of individual, family, group, or with various other individuals of the client's choosing.

By the mid 1980's the scope of the problem of therapy dropouts had begun to be firmly established. Some studies in the late 1970's to early 1980's found rates of attrition anywhere from 30-60% of clients seen (Baekeland & Lundwall, 1975). Much of the research on dropouts defined it as attending a lower number of sessions than expected. Pekarik (1985) believed that this method of defining dropouts was ineffective and incorrectly identified some clients as dropouts when they might have received successful treatment. A discrepancy between client and therapist goals and expectations may lead to a mislabeling of dropouts in clinical settings. Clients may leave therapy when they experience relief, even if the therapist believes more treatment would be better. The primary solution presented by Pekarik (1985) was that therapists needed to be better trained in and more inclined to use treatments that were more crisis oriented so that client's expectations were more likely to be met, and therefore they were more likely to complete treatment. Pekarik (1985) cites other potential solutions such as reducing wait times, preparation before therapy begins, and therapy contracts. He emphasizes that using a method that better fit client expectations would result in the most improvement.

In the early 1990's, the questions regarding who comes and doesn't come to therapy began to shift. Up to that point the focus had been on how to retain clients in therapy once they had begun. However, researchers at this time began to study the factors influencing client decisions about not coming to their first session and how to improve these numbers (Kourany, Garber, & Tornusciolo, 1990). Although this study focused on child psychiatry rather than psychology, the fields do hold some resemblance, and some ideas regarding attendance can be generalized from one to the other. Researchers found that the length of wait time between

scheduling and attending, having had previous treatment experience, and having contact from the office between the time the appointment was made and the day of the appointment played a role in keeping appointments. Clients tend to call when they are in need, and if they are unable to find help quickly, sometimes that need dissipates, which can lead to inconsistent attendance or no-showing. Thus, reminders from the office (which is significantly easier to do with current technologies than it was at the time of this research) seem to improve attendance (Kourany et al., 1990). It is interesting to note that the counseling center where this dissertation data was collected does send regular reminders to their clients regarding upcoming sessions.

Also, in the early 1990's researchers began to grow frustrated with the inconsistency of drop-out literature. Previous studies had looked at client characteristics, therapist characteristics, ethnicity matches, orientation, goals, and most everything up to and including waiting room décor. And up to this point, the findings had been quite mixed, and it was hard to be able to generalize these findings (Kourany et al., 1990; Pekarik, 1985). One researcher's solution to this confusion was to create a theory suggesting that at each different stage of the therapeutic process (intake, evaluation, and what was called "therapy proper" in the research), different client characteristics would predict drop-out at these different stages. Meaning that what makes someone drop out during intake is very different from what makes them drop out during the assessment or therapy portion of treatment (Richmond, 1992). This study found that clients who terminate during intake tend to have fewer mental health complaints and more external complaints, such as drug use or domestic violence, than those who complete therapy. They also tend to be less guilt ridden, have more suicidal intent, and are more likely to be referred from a system rather than self-referred. Those who terminate during evaluation are very similar to those who terminate during intake; however, they tend to have more focus on domestic violence rather

than several different external problems than do those who complete therapy. Finally, those who quit during "therapy proper" tend to be more likely to have Axis II diagnoses and are more prone to somatic complaints. This study demonstrates that while there are some similarities in individuals who drop out of therapy at any stage, there are also some distinct characteristics that are predictive at each phase, and therefore could lend some information in regard to different ways to retain clients at different stages of therapy.

Researchers also began to ask questions about how drop-out rates affect the ability to accurately interpret research of those who continue in therapy. Individuals who remain in therapy likely have different characteristics than those who drop-out. If there are characteristics that lead certain clients to drop-out, then the research that does not take into account drop-outs is only measuring the effectiveness with those clients who do not drop-out, and therefore the research is not nearly as generalizable to those who drop out of therapy. Even with the previously suggested adjustments with more brief therapy, it seems that even some of the briefest therapies do not seem to be brief enough to protect against extreme rates of drop-out (Beckham, 1992). It was in this study that the focus began to fall on how one could predict which clients would likely drop out and which would remain. Up to this point the research had largely been an examination of clients who dropped out, which was problematic for reasons already discussed (Pekarik, 1985; Richmond, 1992; Walfish et al., 1975). Previously, the research had identified clients being in the low SES group as the most consistent predictor of dropouts. Most others had been inconsistent and not well replicated. Beckham's (1992) study found that the most predictive variable of remaining in therapy was the strength of the therapeutic alliance. This was based on a relationship inventory that was completed after a single session. The author extends this to mean that either that rating has more to do with client characteristics than therapist characteristics, or

that clients are inherently good judges of a therapist's ability to make a connection quickly (Beckham, 1992).

This study was the first to directly ask questions relating to client inconsistency, rather than drop out. In a posteriori examination of the data, it seems that those clients who are most likely to drop out before the completion of therapy are those who have missed and canceled appointments in the first few weeks of treatment. Therefore, missed appointments early in treatment serve as a warning sign for those most likely to ultimately drop-out (Beckham, 1992). However, it is also a potential cue in regard to what defines inconsistent therapy attendance and its outcomes.

In studies examining client's prematurely terminating therapy, researchers have attempted to determine if the modality of therapy has an influence on clients dropping out of therapy (Masi, Miller, & Olson, 2003). All types of outpatient therapy involve clients coming and going as the clients please and as their schedules permit and have very high drop-out rates. Given these high drop-out rates, it seems important to determine if perhaps amongst those outpatient modalities, some are stronger than others in regard to retention. Marriage and family therapy represents one sub-set of outpatient treatment. Dropouts for this modality were predicted by having fewer than two children, a problem involving only one spouse, and a male clinician performing the intake (Masi et al., 2003). Marriage and family therapy has significantly different predictors of drop-out than those that are indicated for individual therapy (namely socio-economic). The differences in drop-out predictors might indicate that there could be significantly different drop-out rates for the two. Further, the few previous studies to examine a specific modality's (for example individual, group, family, or couple therapy) effect on drop-out rates had results that were conflicting and were conducted mostly in the early 1970's. Family

treatment was predicted by Masi et al. (2003) to have higher drop-out rates owing to the necessity to coordinate more schedules and develop more therapeutic alliances all around to have buy in from an entire family. Furthermore, combining the therapeutic expectations of many people would obviously be more complicated than aligning expectations between a therapist and one individual client. Therapy drop-out rates among family, individual, and couple's therapy are roughly equal (Masi et al., 2003). The similar drop-out rates between modalities illustrates that perhaps the requirement of establishing relationships and expectations at multiple levels is one that those engaging in marriage and family therapy are well equipped for, and therefore it does not negatively affect the rates of premature termination in clients.

   The 1990's and early 2000's brought about a push to de-stigmatize mental health treatment and as a result, clients sought treatment who may have not have in years past. This brought more clients into more clinics where their information and outcomes could be used to learn about therapy. In 2011, researchers looked again at predictors of premature termination from therapy. This study was performed at a mental health clinic in Denmark, specifically monitoring non-psychotic patients. Fenger, Mortensen, Paulsen, & Lau (2011) found that 38.7% of the 2437 clients studied either stopped coming to therapy without warning or dropped out of therapy before treatment was deemed completed. They discovered that what predicts whether a client will not attend a specific session without prior cancelation were significantly different from what predicted whether or not a client will prematurely terminate therapy. This study found that being younger and less educated was associated with clients who simply stopped coming to therapy, whereas clients with sick leave from their jobs often attend therapy more regularly. They found that substance abuse and personality disorder diagnoses were associated with increased no-show rates. Low socio-economic status had the highest correlation with drop-out

rates, along with being single and having less education (Fenger et al., 2011). Thus, low socio-economic status, being young and single, and having less education all seem to predict increased levels of dropping out of therapy. Based on Fenger et al.'s (2011) study, it appears that dropping out of therapy and not attending a scheduled session are not the same thing when measuring predictors, and may also be an important distinction when measuring inconsistency and its outcomes.

Since no-show and drop-out appointments appear to have different causes (Fenger et al., 2011), this study will examine no-show and cancelled appointments of clients and of therapists. Previous research has lumped these two variables together in the category of therapy non-attendance. However, individuals can have a perfect therapy attendance record and still drop out and they can also demonstrate a struggle in their ability to attend their scheduled sessions and still continue to reschedule and try to attend, sometimes missing and sometimes making it, suggesting an intent for therapy treatment. Previous research has focused mostly on the prediction of no-shows specifically, but Defife, Conklin, Smith, & Poole (2010) conducted a study and included cancellations and rescheduled appointments as well. Clinicians were contacted and asked about the number of no-shows or late cancelations they had during a given week, and they were also asked if they had information regarding why the client did not attend therapy. The study found that about 15% of the appointments scheduled during the three-month study were missed. Most clients had only one missed appointment, but 13% of the appointments that were missed were by clients who had four or more. They found that clients tend to miss scheduled appointments for one of four broad reasons: Clinical problems (physical or mental health, hospital admission, over-sleeping), Practical matters (work conflict, funeral, weather, schedule mix-ups, transportation issues), Motivational issues (low motivation for treatment,

difficulty prioritizing self and treatment), and Negative treatment reactions (getting back at clinician for a reschedule, reaction to something that happened in treatment, avoiding certain uncomfortable aspects of treatment). Although clearly limited, in that information about missed appointments was gleaned from the clinician's self-report and not from the clients themselves, this study demonstrates that inconsistent therapy attendance is not synonymous with attrition rates and that inconsistent therapy attendance deserves further investigation.

Indeed, it can be demonstrated that "no-show," "cancellation," and "rescheduled" appointments (this is referred to in the review and study as client inconsistency) warranted more study. Some of these studies use the word "no-show" while actually referring to client drop-out and even defining it as "client unilateral termination" (Owen, Imel, Adelson, & Rodolfo, 2012). This seems to be an inaccurate characterization in light of research demonstrating a clear difference in "no shows" versus "drop-outs" identified by Fenger et al. (2011). However, some researchers have begun to examine factors that contribute to inconsistent therapy attendance. The goal of the Miller-Matero, Clark, Brescacin, Dubaybo, and Willens (2015) study was to better understand what factors impact missed appointments and then to better control for those factors in order to increase utilization of therapy, which is a limited resource. Age, income, sleep disturbances, health literacy, and reading level were proposed as being potential predictors of missed appointments that are not generally controlled for in an outpatient setting. In this study, charts of clients were reviewed to identify these factors, note missed appointment, and calculate inconsistency rates (Miller-Matero et al., 2015). This particular clinic was found to have lower rates of no-show than have previously been found at other clinics, potentially owing to the fact that they were already implementing appointment reminders and various other techniques known to improve attendance rates (Kourany et al., 1990). The factors that were found to independently

relate to no-show appointments were a probable depression diagnosis and a lack of fluent literacy. Although a diagnosis of depression has been linked to missed appointments in other studies, literacy and its effect on therapy attendance is a relatively new idea presented in Miller-Matero et al.'s study (2015). The researchers propose that perhaps clients who cannot read well may not understand the scope of their problem or the importance of regular therapy attendance in order to help alleviate it (Miller-Matero et al., 2015).

Despite all the psychotherapy research on dropouts, attrition, missed appointments, and whatever other related constructs, the research to date has not examined inconsistent therapy attendance and its relationship to therapy outcomes. There are references in a few studies to increased drop-out rates for those who have inconsistent attendance patterns (Beckham, 1992). There is also some research devoted to the client characteristics of those who tend to attend therapy inconsistently and how they compare to those who drop-out as opposed to those who officially complete therapy (Fenger et al., 2011). However, none of these studies address the question of how a client's therapy outcome is impacted by inconsistent therapy attendance.

One relevant study sought to examine primarily what the effect on outcomes is when clients attend therapy at varying frequencies (Erekson et al., 2015). In this dissertation, a longitudinal model was used to examine what predictive power attendance frequency has on outcomes, while including factors such as session number, total number of sessions, and in some models, a "flakiness" (inconsistent therapy attendance) index of sessions attended over sessions scheduled. In this study, many different variations were run using different combinations of attendance variables. The model was examined both by day from intake and by session number. The index of "flakiness" was found to be significant when analyzed by session, but did not have a significant effect when examined by days from intake. This measure of inconsistency only

takes into account a client's inconsistency and not the overall pattern of missed therapy sessions, which might include counselor rescheduled or cancelled appointments. This study demonstrated that attending sessions consistently had a significant impact on outcomes, but examining it in such a peripheral way, as in this study, does not offer enough information to draw any useful conclusions.

The medical field has often been engaged in similar branches of research in regard to dropout and no-show clients. They have a vested interest in determining what causes clients to miss appointments, and to be better able to control that, both for medical and clerical reasons. A recent study attempted to discover a risk-factor model that would better allow doctors to predict those who would be inconsistent appointment attenders. A retrospective study was performed using the cases of clients in a four-year span in a specific clinic. These files were examined for client characteristics, appointment type, client history, time of day/year, and were coded to determine when missed appointments occurred and the specific factors for each individual. The missed appointment rate was 45%, which fits within the broad range that psychotherapy has typically found. The researchers determined that the best predictive factors were a history of previously missed appointments and the wait time from when an appointment was booked until the actual date of the appointment. They also discovered that age and a lack of English proficiency were relatively good predictors of missed appointments (Torres et al., 2015). Other than the practical reasons, Torres et al. (2015) establish the importance of questions regarding no-shows in general. Inconsistent attendance is significant issue in the medical field as well as the mental health field.

The medical field has placed more focus on determining what happens when a client misses their appointment. A relatively recent study on this topic was performed to determine

whether or not a pattern of a patient having "no-show" appointments, which are defined in much the same way as inconsistent therapy attenders, is an independent predictor of whether or not a client will receive a lower quality of care and be more likely to utilize the healthcare resources available to them. Hwang et al. (2015) calculated a no-show propensity rate to determine which patients were most likely to miss appointments without canceling and which were not. They determined that those who were less likely to attend sessions were also more likely to not have cancer screenings and also more likely to use acute care, like urgent care visits, more often than those who attended their regular and preventive appointments (Hwang et al., 2015). The general belief that those who don't attend sessions don't improve as quickly seems rather intuitive and is generally operated on as if it is true, despite the minimal research backing for it in psychotherapy. It seems likely that we may see similar results in a study of the outcomes of psychotherapy clients in regard to more maintenance and, although it is not the focus of this study, perhaps there would also be fewer instances of acute mental health services such as emergency appointments or walk-in crisis utilization.

References

American Psychological Association (2014, November 6). Practitioner pointer: How to handle late and missed appointments. *Retrieved from* https://www.apaservices.org/practice/update/2014/11-06/late-missed-appoitments

Baekeland, F., & Lundwall, L. (1975). Dropping out of treatment: A critical review. Psychological Bulletin, 82(5), 738–783. https://doi-org.erl.lib.byu.edu/10.1037/h0077132

Beckham, E. E. (1992). Predicting patient dropout in psychotherapy. *Psychotherapy: Theory, Research, Practice, Training*, *29*(2), 177-182.

Defife, J. A., Conklin, C. Z., Smith, J. M., & Poole, J. (2010). Psychotherapy appointment no-shows: Rates and reasons. *Psychotherapy: Theory, Research, Practice, Training*, *47*(3), 413-417.

Dervin, J. V., Stone, D. L., & Beck, C. H. (1978). The no-show patient in the model family practice unit. *The Journal of family practice*, *7*(6), 1177-1180.

Deykin, E., Weissman, M., Tanner, J., & Peusoff, B. (1975). Participation in therapy: A study of attendance patterns in depressed outpatients. *The Journal of Nervous and Mental Disease*, *160*(1), 42-48.

Draper, M. R., Jennings, J., Baron, A., Erdur, O., & Shankar, L. (2002). Time-Limited Counseling Outcome in a Nationwide College Counseling Center Sample. Journal of College Counseling, 5(1), 26–38. https://doi-org.erl.lib.byu.edu/10.1002/j.2161-1882.2002.tb00204.x

Erekson, D. M., Lambert, M. J., & Eggett, D. L. (2015). The relationship between session frequency and psychotherapy outcome in a naturalistic setting. Journal of Consulting and Clinical Psychology, 83(6), 1097–1107. https://doi-org.erl.lib.byu.edu/10.1037/a0039774

Fenger, M., Mortensen, E. L., Poulsen, S., & Lau, M. (2011). No-shows, drop-outs and completers in psychotherapeutic treatment: Demographic and clinical predictors in a large sample of non-psychotic patients. *Nordic Journal of Psychiatry*, *65*(3), 183-191.

Hollingshead, A. B. & Redlich, F. C. (1958). *Social class and mental illness.* New York, NY: J. Wiley & Sons.

Howard, K. I., Kopta, S. M., Krause, M. S., & Orlinsky, D. E. (1986). The dose–effect relationship in psychotherapy. *American Psychologist*, *41*(2), 159-164.

Hwang, A. S., Atlas, S. J., Cronin, P., Ashburner, J. M., Shah, S. J., He, W., & Hong, C. S. (2015). Appointment 'no-shows' are an independent predictor of subsequent quality of care and resource utilization outcomes. *Journal of General Internal Medicine*, *30*(10), 1426-1433. doi:10.1007/s11606-015-3252-3

Kourany, R. F., Garber, J., & Tornusciolo, G. (1990). Improving first appointment attendance rates in child psychiatry outpatient clinics. *Journal of the American Academy of Child & Adolescent Psychiatry*, *29*(4), 657-660.

Lambert, M. J., Lunnen, K., Umphress, V., Hansen, N., & Burlingame, G. M. (1994). Outcome Questionnaire 45.2. [Measurement Instrument]. Retrieved from Psyctests, doi:10.1037/t00830-000

Limb, G. E., Baker, C. L., Wood, D. S., & Hooley, C. (2017). Therapeutic OQ-45 outcome differences: A Native American and Caucasian comparison. *Research on Social Work Practice*, *27*(6), 726–733. https://doi-org.erl.lib.byu.edu/10.1177/1049731515610637

Masi, M. V., Miller, R. B., & Olson, M. M. (2003). Differences in Dropout Rates among

    Individual, Couple, and Family Therapy Clients. Contemporary Family Therapy: An

    International Journal, 25(1), 63-75. https://doi-

    org.erl.lib.byu.edu/10.1023/A:1022558021512

Miller-Matero, L. R., Clark, K. B., Brescacin, C., Dubaybo, H., & Willens, D. E. (2016).

    Depression and literacy are important factors for missed appointments. *Psychology,*

    Health & Medicine, *21*(6), 686–695. https://doi-

    org.erl.lib.byu.edu/10.1080/13548506.2015.1120329

Owen, J., Imel, Z., Adelson, J., & Rodolfa, E. (2012). 'No-show': Therapist racial/ethnic

    disparities in client unilateral termination. *Journal of Counseling Psychology*, *59*(2), 314-

    320. https://doi-org.erl.lib.byu.edu/10.1037/a0027091

Pekarik, G. (1985). Coping with dropouts. *Professional Psychology: Research and*

    Practice, *16*(1), 114-123.

Richmond, R. (1992). Discriminating variables among psychotherapy dropouts from a

    psychological training clinic. *Professional Psychology: Research and Practice*, *23*(2),

    123-130.

Slaikeu, K., Lester, D., & Tulkin, S. R. (1973). Show versus no show: a comparison of referral

    calls to a suicide prevention and crisis service. *Journal of Consulting and Clinical*

    Psychology, *40*(3), 481-486.

Torres, O., Rothberg, M. B., Garb, J., Ogunneye, O., Onyema, J., & Higgins, T. (2015). Risk

    factor model to predict a missed clinic appointment in an urban, academic, and

    underserved setting. *Population Health Management*, *18*(2), 131-136.

Walfish, S., Tapp, J. T., Tulkin, S. R., Slaikeu, K., & Russell, M. (1975). The prediction of

    "shows" and "no-shows" to a crisis center: A replication. *American Journal of*

    Community Psychology, 3(4), 367-370. Retrieved from

    http://search.proquest.com/docview/1295855120?accountid=4488