

Relationship between Working Alliance and Client Outcomes:

The Role of Substance Use

by

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ABSTRACT

This study examined the role of substance use in the relationship between the working alliance and outcome symptomatology. In this study, two groups of participants were formed: the at risk for substance abuse (ARSA) group consisted of participants who indicated 'almost always,' 'frequently,' 'sometimes,' or 'rarely' on either of two items on the Outcome Questionnaire-45.2 (OQ-45.2) (i.e., the eye-opener item: "After heavy drinking, I need a drink the next morning to get going" and the annoyed item: "I feel annoyed by people who criticize my drinking (or drug use)"). The non-ARSA group consisted of participants who indicated 'never' on both of the eye-opener and annoyed screening items on the OQ-45.2. Data available from a counselor-training center for a client participant sample ($n = 68$) was used. As part of the usual counselor training center procedures, clients completed questionnaires after their weekly counseling session. The measures included the Working Alliance Inventory and the OQ-45.2. Results revealed no significant differences between the ARSA and non-ARSA groups in working alliance, total outcome symptomatology, or in any of the three subscales of symptomatology. Working alliance was not found to be significant in predicting outcome symptomatology in this sample and no moderation effect of substance use on the relationship between working alliance and outcome symptomatology was found. This study was a start into the exploration of the role of substance use in the relationship between working alliance and outcome symptomatology in individual psychotherapy. Further research should be conducted to better understand substance use populations in individual psychotherapy.

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Chapter 1

THE PROBLEM IN PERSPECTIVE

The 2010 National Household Survey on Drug Abuse (Substance Abuse and Mental Health Service Administration [SAMHSA], 2010) estimated that “22.1 million persons aged 12 or older were classified with substance dependence or abuse in the past year” (p.7). Despite the high incidence in new substance dependency or abuse classification, utilization of services to address these disorders remains low. According to SAMHSA, “in 2010, 4.1 million persons aged 12 or older (1.6 percent of the population) received treatment for a problem related to the use of alcohol or illicit drugs” (p.7). Of the 4.1 million persons receiving treatment,

2.3 million persons received treatment at a self-help group, and 1.7 million received treatment at a rehabilitation facility as an outpatient. There were 1.0 million persons who received treatment at a mental health center as an outpatient, 1.0 million persons who received treatment at a rehabilitation facility as an inpatient, 731,000 at a hospital as an inpatient, 653,000 at a private doctor's office, 467,000 at an emergency room, and 342,000 at a prison or jail (p.7).

These figures demonstrate that substance abuse is a problem in the United States, however; most of the individuals meeting criteria within the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR)* (American Psychiatric Association [APA], 2000), for substance abuse or dependency are not seeking formal services for treatment. For the individuals who do seek formal treatment, most of them are going to a self-help group or treatment at a rehabilitation facility where their substance abuse is the focus of their treatment. Research needs to be conducted to assess the role of substance use in the counseling process beyond substance abuse treatment

because most individuals with substance abuse or dependency diagnoses are not seeking formal substance abuse treatment (SAMHSA, 2010).

DSM-IV-TR defines substance abuse as, “a maladaptive pattern of substance use, leading to clinically significant impairment or distress” (APA, 2000, p. 199). The *DSM-IV-TR* criteria for substance abuse require the presence of at least one behavior within a 12-month period. The list of behaviors that meet criteria for substance abuse include, (1) recurrent substance use and thus neglecting to meet a major role obligation at work, school, or home, (2) recurrent substance use in the face of physically dangerous situations, (3) recurrent legal problems related to substance use, and (4) continued substance use notwithstanding the existence of persistent interpersonal or social problems associated with the substance use (APA, 2000). The *DSM-IV-TR* criteria for substance dependency entails the same “maladaptive pattern of substance use, leading to clinically significant impairment or distress” and requires at least three behaviors within a 12-month period (APA, 2000, p. 197). The list of behaviors that meet criteria for substance dependency include, (1) tolerance, (2) withdrawal, (3) increase in the quantity of the substance consumed or the time-span of consumption than intended, (4) constant desire but unsuccessful attempts to decrease substance use, (5) significant time spent in activities to obtain the substance or recover from consumption, (6) important social, work, or leisure activities are disregarded because of substance use, and (7) continued use of the substance despite awareness of having a repeated physical or psychological problem that is likely to have due to the substance (APA, 2000).

Current public health standards concerning identification and treatment of substance abuse are based on studies that focus on daily substance use (Fiore et al.,

2008); however, daily substance use is declining and intermittent use is increasing, as well as substance related problems (Center for Disease Control and Prevention, 2007; Pierce, White, Messer, 2009). The distinction between substance use and substance related problems (McLellan, Luborsky, Woody, O'Brien, & Kron, 1981) is important when considering help-seeking, because substance-related problems, but not substance use practices, have been consistently connected with help-seeking of formal services, in opiate, poly-drug, cocaine users and problem drinkers (Bannenberg, Raat, & Plomp, 1992; Castro et al., 1992; Chitwood & Morningstar, 1985; Hingson, Scotch, Day, & Culbert, 1980; Power, Hartnoll, & Chalmers, 1992; Timko, Finney, Moos, Moos, & Steinbaum, 1993; Tucker, 1995; Tucker & Gladsjo, 1993; Weisner, 1993). Based on the findings of previous research, clients seeking formal services are not coming into treatment because of their substance use practices but rather because of the substance-related problems they are encountering in their lives.

Working Alliance

Psychotherapy is comprised of numerous options for interventions and theoretical orientations; however, the essence of the practice involves a relationship between a client and a therapist. Understanding the client-therapist relationship is of interest to further the knowledge of effective psychotherapy. An explanation of the development of the conceptualization of the working alliance follows.

Psychodynamic perspective. The working alliance has origins in the psychodynamic perspective (Freud, 1913; Greenson, 1965). Originally, Freud insisted that through the therapist's supportive attitude positive transference occurred and allowed the client to unconsciously link the therapist to positive people within his or her life

(Freud, 1913). Even though this process was unconscious, it was facilitated through the therapist's support and relationship and this began the first consideration of the alliance between the therapist and the client (Horvath & Luborsky, 1993).

Within the psychodynamic perspective, theorists disagree on the distinction between the concepts of the alliance and transference. The underlying differentiation lies in the degree to which the alliance is reliant on the here-and-now motivation and bond between the client and therapist, as opposed to being reliant on the client's unconscious projections based on former experiences (Gelso & Carter, 1985; Gutfreund, 1992). Despite the history of disagreements on transference, psychodynamic theorists seem to be coming to an agreement that a thorough definition of the alliance needs to account for the influence of previous experiences, including transference, and also define the alliance as a distinct part of the current relationship (Gaston, 1990).

Client-centered perspective. Rogers (1951) posited three main therapist-offered conditions (TOC) of empathy, unconditional positive regard, and congruence, as sufficient and necessary for change in the client-centered representation of the working alliance. In research that has examined the relationship of the TOC of the working alliance to therapy outcome findings, therapists who provided high levels of the TOC had more successful outcomes than therapists who provided low levels of TOC (Barrett-Lennard, 1985; Rogers, Gendlin, Kiesler, & Truax, 1967). Additional research found inconsistencies in the relation between the TOC and outcome across different therapy modalities (Mitchell, Bozart, & Krauft, 1977; Orlinsky & Howard, 1986). Further importance has been placed on the client's perception of the TOC rather than the therapist's actual behavior (Horvath & Luborsky, 1993).

Social influence approach. The therapeutic relationship has also been explained through a social influence approach (Strong, 1986). LaCrosse (1980) and Strong (1968) examined the impact of client perceptions of therapist attributes. The social influence approach extended the work of Hovland (Hovland, Janis, & Kelley, 1953) and Cartwright (1965) and focuses on the client's perceptions of the therapist as expert, trustworthy, and attractive. These perceptions provide the therapists with the clout of social influence to promote change. The strength of the therapist's social influence is reliant on client perceptions and thus these beliefs are associated with the growth the client potentially could derive from therapy (Horvath & Luborsky, 1993).

Bordin's pantheoretical model. While the three previously stated perspectives of the therapeutic relationship have provided different rationales for the working alliance, research has found different therapies to produce similar effects in therapeutic improvement (Luborsky, Singer, & Luborsky, 1975; Smith & Glass, 1977; Stiles, Shapiro, & Elliott, 1986) and thus leads to an examination of variables common to all therapies. Bordin's pantheoretical model of the working alliance (1979) is based on three elements: the bond, goals, and tasks. Clients assess their perception of the bond they share with their therapist, the feeling that their therapist is in agreement with them concerning their goals of therapy, and the tasks within therapy to achieve their goals (Bordin, 1979). The *bond* contains the arrangement of positive attachments between client and therapist such as mutual trust, acceptance and confidence (Bordin, 1979). *Goals* refer to the need for the therapist and client to mutually endorse and value the outcomes of the intervention (Bordin, 1979). *Tasks* involve the in-session processes and activities (Bordin, 1979). In a strong relationship both the client and the therapist must

view these tasks as appropriate and efficacious. Furthermore, in an effective relationship both the therapist and the client must accept the responsibility to accomplish these tasks (Horvath & Luborsky, 1993).

Working Alliance as a Predictor for Client Outcome

The working alliance is a consistent predictor of treatment outcomes across many disorders and therapeutic modalities (Horvath & Symonds, 1991; Martin, Garske, & Davis, 2000). Meta-analyses have found overall effect sizes between working alliance and outcome of .26 (Horvath & Symonds, 1991) and .22 (Martin et al., 2000). Horvath and Bedi (2002) found a similar overall effect size of .21 in the most recent meta-analysis of the working alliance but found that the effect sizes within samples of this meta-analysis were not homogeneous (i.e., Q statistic; Hedges & Olkin, 1985). After examination of the studies included in the meta-analysis, Horvath and Bedi (2002) offered a potential explanation for the non-homogeneity within the dataset based on the subset of six substance abuse studies (Barber et al., 1999, Broome, 1996; Florsheim, Shotorbani, Guest-Warnick, Barratt, & Hwang, 2000; Gerstley et al., 1989; Luborsky, McLellan, Woody, O'Brien, & Auerbach, 1985; Tunis, Deluchi, Schwartz, Banys, & Sees, 1995). The six studies included participants with substance abuse and had an overall effect size for of .14 for working alliance. The lower effect size found in the substance abuse populations poses the idea that clients with substance abuse may be a distinct group when considering working alliance (Horvath & Bedi, 2002). Within the six substance abuse studies of the Horvath and Bedi (2002) meta analysis, the primary outcome measure assessed was drug use.

Working Alliance and Types of Outcome Measures

As a general concept, the working alliance has been explored in relation to many different outcome measures. Martin et al. (2000) categorized the outcome measures into five types: (1) mood scales, (2) symptom scales, (3) global scales, (4) specific outcome scales, and (5) termination status. The working alliance between the client and therapist has been empirically measured as a critical element in reducing alcohol use after treatment primarily focused on substance abuse (Belding, Iguchi, Morral, & McLellan, 1997; Connors, Carroll, DiClemente, Longabaugh, & Donovan, 1997; Barber et al., 1999) but little is known about the relationship between working alliance and outcome in substance-using clients not seeking primary substance abuse treatment. Substance-using clients who are not seeking primary substance abuse treatment are not focusing on the treatment outcome of reduced substance use but instead are seeking formal therapy services for other problems in their lives. Research regarding working alliance and treatment outcome (e.g., drug use and psychological functioning) has been limited to substance abuse treatment centers or individual psychotherapy settings focusing on substance abuse as the presenting problem (Meier, Barrowclough, Donmall, 2004). As stated previously, the majority of research on substance use, conducted to date, measures the working alliance in relation to specific outcome scales (e.g., drug use). In contrast, overall global scales (i.e., overall assessments of change during therapy) were the most common type of outcome measured in the Martin et al. (2000) meta-analysis of the working alliance. The lack of literature exploring the role of substance use in the relationship between working alliance and global outcome in clients not seeking primary treatment for substance abuse suggests a need for this type of examination. The practice

of using specific behavioral outcome scales (e.g., drug use), rather than a global outcome measure is representative of the predominance within the substance use field to view substance abuse in a medical or disease-model. The medical model of substance abuse assumes that substance abusers will not acknowledge their problem and be unmotivated to seek help until their disease reaches an escalated stage (Marlatt, Tucker, Donovan, Vuchinich, 1997). Seeking help at this point presumes that the substance use is of central focus for the client and therefore the urgent need for effective interventions for substance disorders has taken most of the research focus for several decades (Marlatt et al., 1997). In addition to the medical model of substance abuse, a more thorough understanding of the complexities of the client's substance use is important for the working alliance. Specifically, this study aims to address the following broad research question: What is the role of substance use in the relationship between working alliance and client outcome?

Chapter 2

REVIEW OF THE LITERATURE

This chapter will review the relevant literature involving working alliance and the targeted population of substance abuse. The six studies of the Horvath and Bedi (2002) meta-analysis of the working alliance were posited to be a distinct group when considering working alliance, as the effect sizes were not found to be homogeneous. Detailed explanation of each of these studies, with the exception of the Broome et al., 1996 study as it is an unpublished dissertation that is not accessible, will be presented to better understand the differences among these studies, as they relate to substance abuse and the working alliance. Specifically, the relation of working alliance and outcome in substance abuse, determinants of client outcome, stability and predictive ability of the working alliance in substance abuse populations, and working alliance among different stages of substance abuse will be discussed.

Working Alliance and Substance Abuse

The distinction between an alliance with a counselor and a therapist is important within the substance abuse population because in most treatment facilities, a Certified Drug and Alcohol Counselor rather than a Licensed Psychologist conducts drug counseling. Gerstley et al. (1989) conducted a study to examine the working alliance between therapists and clients with antisocial personality disorder and opiate dependence. Forty-eight male participants were randomly assigned to one of three therapy conditions: (1) cognitive behavioral and drug counseling, (2) supportive/expressive and drug counseling, or (3) drug counseling. The working alliance was measured with the Penn Helping Alliance Questionnaire (HAQ) (Alexander & Luborsky, 1986). The outcome

measure was the Addiction Severity Index (ASI) (McLellan, Luborsky, Woody, & O'Brien, 1980). Both the HAQ and the ASI were measured at baseline and 7-month post treatment follow-up. A therapist administered the individual psychotherapy (cognitive behavioral and supportive/expressive) and a drug and alcohol counselor administered the drug counseling. Thirty-one participants received both individual psychotherapy and drug counseling and therefore both the counselor and therapist alliance was assessed for these participants. Seventeen participants received only drug counseling and therefore only the counselor alliance could be assessed for these participants. Gerstley et al. (1989) did not find a significant relationship between counseling alliance and overall outcome but did find that a positive assessment of the therapist alliance by either client or therapist significantly related to improvements in overall outcome at a 7-month follow-up, post treatment completion. A positive assessment of the alliance was related specifically with reduced drug use and increased employment on the ASI, however; it was not found to be associated with reduced psychiatric symptoms on the ASI, such as depression, anxiety, and thought disturbance. The findings of the Gerstley et al. (1989) study highlight the importance and distinction of individual psychotherapy from drug counseling. A positive assessment of the working alliance seemed to be important for the concrete measures of reduction in drug use and increased employment but not associated with a change in psychological functioning. The lack of change in psychological functioning found in the Gerstley et al. (1989) study warrants further examination to evaluate the relationship between working alliance and client outcome in multiple domains.

Barber et al., (1999) examined the alliance as a predictor of outcome in treatment for cocaine dependent clients. Cocaine dependent clients ($n = 252$) were randomly

assigned to one of three individual therapy treatments: (1) cognitive, (2) dynamic therapy, or (3) drug counseling. Both clients and therapists took the Helping Alliance Questionnaire –II (HAQ-II) (Luborsky et al., 1996) and the California Alliance Scale (CALPAS) (Gaston & Marmar, 1994) at the second and fifth session. The outcome measures for clients were the Brief Symptom Inventory (BSI) (Derogatis, 1992), the Addiction Severity Index (ASI) (Fureman, Parikh, Bragg, & McLellan, 1990), Beck Depression Inventory (BDI) (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), and the Cocaine Inventory (Barber et al., 1999). All outcome measures were completed at intake and monthly for the rest of the treatment, which lasted 6 months. Notable is that a normal distribution was found on the ASI composite at all assessments, except at the later time points when there are proportionately increased scores of less drug use. Overall, Barber et al. (1999) found that therapist ratings of the alliance were less predictive of outcome than were client ratings of the alliance. Specifically, client ratings of the alliance predicted improvement of depressive symptoms at six months. In relation to drug use, client ratings of the alliance did not predict outcome at the six-month assessment but did at the one-month assessment. The findings of Barber et al. (1999) and Gerstley et al. (1989) are inconsistent regarding the importance of the working alliance to reduce drug use at an extended time point post treatment (i.e., 6 months and 7 months, respectively) and in the association of the working alliance with a reduction in psychological functioning. The participants of the Barber et al. (1999) and Gerstley et al. (1989) studies were different in regards to diagnosis (i.e., dependency on cocaine versus opiates and presence of antisocial personality disorder). The participants in Barber et al. (1999) also begin to impose an inquiry into differing levels of substance use, as indicated on the normal

distribution of ASI composite scores at all assessment time points. The participants in the Barber et al. (1999) study all met diagnosis criteria for cocaine dependency but had varying levels of use and symptomatology attributable to cocaine use. Further investigation into substance use as a client variable rather than a treatment type will allow for a better understanding of the role of that substance use has in the working alliance. Inconsistent findings between client outcomes provide a need to understand the differences among therapist success for clients with substance abuse.

Determinants of Client Outcome

Luborsky et al. (1985) studied nine therapists of drug dependent clients and found differences in the therapists' success regarding client outcome. Similar to Gerstley et al. (1989), the participants in this study were male, opiate dependent clients and randomly assigned to one of three therapy conditions: (1) drug counseling, (2) supportive/expressive and drug counseling, or (3) cognitive behavioral and drug counseling. The alliance was measured with the Helping Alliance Questionnaire (Alexander & Luborsky, 1984). Outcome measures consisted of the Beck Depression Inventory (Beck et al., 1961), Maudsley Personality Inventory (Eysenck, 1959), Hopkins Symptom Checklist-90 (Derogatis, Lipman, Rickels, Uhlenhuth, Covi, 1974), Shipley Institute of Living Scale (Shipley, 1940), and the ASI (McLellan et al., 1980). Participants took all measures at baseline and 7-months post treatment. Luborsky et al. (1985) postulated four potential determinants that could account for the variance in client outcome: (1) client factors (2) therapist factors, (3) client-therapist relationship factors, and (4) therapy factors. There was no support found for the relationship between client variables and outcome nor therapist variables and outcome. Luborsky et al. (1985) did

find support for the quality of the client-therapist relationship and client outcomes. There was a significant correlation between alliance and clients' 7-month outcome in drug use, employment, legal status, and psychological functioning. The Luborksy et al. (1985) study starts to explore the question regarding what accounts for the variance in therapist success in outcome for clients with substance abuse. For clients with substance abuse the quality of the working alliance was found to be an important factor for outcome (Luborksy et al., 1985).

Stability and Predictive Ability of the Working Alliance in Substance Abuse

Populations

Tunis et al. (1995) examined the relationship of counselor and peer alliance to drug use during methadone detoxification for opiate dependent clients. The study conducted by Tunis et al. (1995) looked at the latter stage of treatment for opiate dependent clients, the process of detoxification from methadone. Forty-one participants completed the California Psychotherapy Alliance Scales (CALPAS) (Gaston & Marmar, 1994) measures of the alliance (for both counselor and peer alliance) monthly, beginning at day 90 of a 180-day psychosocial treatment. Tunis et al. (1995) found an overall effect of stability and consistency for the alliance over time. In addition, higher levels of both counselor and peer alliance were related with lower levels of illicit opioid use (Tunis et al., 1995). The stability and consistency of the working alliance found in Tunis et al. (1995) is an important finding in understanding the predictive ability of the working alliance.

Florsheim et al. (2000) conducted a study to understand the role of the working alliance for delinquent boys in community-based treatment. Often adolescents come to

treatment at the demand of their parents or other external forces and therefore their commitment to the therapeutic process is often low at the start of therapy and as such, creating a strong working alliance is important for this demographic group (Florsheim, et al., 2000). Florsheim et al. (2000) designed a study to classify factors that predict short-term change in the psychological and behavioral functioning among delinquent male adolescents. Based on literature findings that delinquent boys who have a history of substance abuse, are involved with deviant peers, or have a past record of delinquent behavior are at an enhanced level of risk for unsuccessful treatment (Kazdin, Mazurick, & Bass, 1993; Benson et al., 1997), Florsheim et al. (2000) collected information from the participants in their study regarding these three predisposing factors. Participants' delinquent history was obtained through the youth corrections database. Participants' involvement with deviant peers was obtained through a self-report measure, the Self-Report of Delinquent Behavior (SRD) (Elliot, Huizinga, Menard, 1989). Participants' drug use was assessed via a 15-item questionnaire developed by Elliott et al. (1989) for the National Youth Survey. The SRD measures the level of drug and alcohol use for participants and has been found to be a moderately valid assessment of substance use (Elliot et al., 1989). The working alliance was assessed through the Working Alliance Inventory (WAI) (Horvath & Greenberg, 1989, 1994) to evaluate the relationship between the participant and staff person of primary treatment for that participant. Both participants of the study and program staff completed the WAI (the client version and the therapist version, respectively) after the third week of treatment and again after 90 to 100 days of treatment (Florsheim et al., 2000). Florsheim et al. (2000) combined the three subscales (i.e., goals, tasks, and bonds) to create a global measure of the working

alliance. Florsheim et al. (2000) found that participants who developed a strong working alliance in the beginning phase of treatment were more likely to achieve therapeutic gains and less likely to have recidivated in the year following treatment. The findings of Tunis et al., (1995) and Florsheim et al. (2000) provide empirical support for the consistency and importance of the working alliance in the initial sessions of treatment in outcome.

Working Alliance in Different Stages of Substance Abuse

The treatment of substance abuse typically involves different stages of intensity, starting with the most intense being inpatient treatment followed by outpatient treatment and then aftercare. The logistics of aftercare differ among treatment facilities, however; it usually occurs less frequently than outpatient treatment. Connors et al. (1997) examined the relationship between therapeutic alliance and outcome measures of treatment engagement and drinking outcomes in outpatient and aftercare (i.e., follow-up treatment after inpatient care) samples. Data was collected as a part of Project Matching Alcoholism Treatments to Client Heterogeneity (MATCH), a nationwide study of the matching of patients to alcoholism treatments (Project MATCH Research Group, 1993). As part of Project MATCH, two independent studies were conducted, one with outpatient samples ($n = 952$) and one with clients receiving aftercare treatment ($n = 774$). Participants in this study were randomly assigned to one of three different 12-week treatments, Cognitive Behavioral Treatment (CBT), Motivational Enhancement Therapy (MET), or 12-step facilitation. Participants and therapists complete the Working Alliance Inventory (WAI) (Horvath & Greenberg, 1986) after the second session to measure treatment alliance and engagement. Participants were assessed at 3-month markers for one-year post treatment and interviewed at the 12-month mark regarding their drinking

history and current drinking behaviors. Working alliance was found to be a significant predictor of treatment engagement and drinking behavior during treatment and 12-months post-treatment in outpatient samples, however; the working alliance was not found to be a significant predictor for the outcome measures in the aftercare samples (Connors et al., 1997). While the effect of working alliance on treatment outcomes was not found across samples, it was consistent across treatment sites and modalities within the outpatient samples (Connors et al., 1997). Connors et al.'s (1997) study provides a critical conceptualization of the importance of the working alliance within two populations of clients with substance-use disorders. The aftercare sample had previously completed intensive inpatient treatment for their substance abuse and perhaps the importance of the working alliance in this aftercare setting was of less importance than in the outpatient samples in which this study was their primary substance abuse treatment. The findings of the Connors et al. (1997) study suggest the notion that perhaps the working alliance functions differently in predicting outcome depending on the different developmental levels of substance abuse treatment. The Connors et al. (1997) research coupled with the Barber et al. (1999) study provide empirical support for the need to examine outcome of clients with varying levels and diagnoses of substance use.

A better understanding of the role of substance use within the working alliance has powerful clinical implications for individual psychotherapy. The research presented in this chapter (Gerstley et al., 1989; Barber et al., 1999; Luborsky et al., 1985; Tunis et al., 1995; Florsheim et al., 2000; Connors et al., 1997) is necessary and important for the populations of clients seeking therapy with substance use disorders; however, there is little research examining the working alliance in clients reporting substance use without it

being the sole focus of their therapy. In a strong working alliance, it is the role of the therapist to communicate to the client the important connection between therapy-specific tasks and the overall goals of therapy. The therapist must also maintain an awareness of the client's commitment to the connection between tasks and goals, and effectively mediate if resistance occurs (Horvath & Luborsky, 1993). The client's assessments of the tasks during therapy are grounded in a sense of agreement on what are accepted by the client as reasonable goals of the therapy. Often therapists and clients have some agreement on the long-term goals while the immediate and medium-term expectations of client and therapist may substantially differ (Horvath & Symonds, 1991). To form a strong alliance, it is important for the therapist to negotiate these immediate and medium-term expectations and connect these to the client's desire to achieve sustained relief from suffering. Through developing these linkages, the therapist can gain the client's accord to pursue these goals.

A strong alliance supports the clients to deal with the immediate discomforts that may come with the uncovering of distressing issues in therapy (Horvath & Luborsky, 1993). Fostering a safe and strong working alliance is often difficult with clients who have conflicting motives for seeking help (Meier, 2004). Clients with high substance use often feel conflicted within themselves and from outside sources (e.g., family, friends, work) about seeking therapy and about their own motivational stage of change (Connors, DiClemente, Dermen, Kadden, Carroll, & Frone, 2000; Prochaska & Norcross, 2001; Ilgen, McKeller, Moos, & Finney, 2006). Family, friends, and other significant individuals of clients with high substance use are often aware of the client's problematic substance use before the client's acknowledgement or awareness of the problem

(Prochaska & Norcross, 2001). Furthermore, in therapy, clients and therapists are often able to have some agreement on the long-term goals of therapy and use that alliance to get through tough material for long-term benefit (Horvath & Symonds, 1991). Substance-using clients may not have the level of awareness or acknowledgment of their long-term goal for therapy due to their current level of motivational readiness. Therefore the working alliance may be even more important for client outcome in this population, as a strong alliance is the ingredient that "...makes it possible for the patient to accept and follow treatment faithfully" (Bordin, 1980, p. 2). Substance use should be examined as a potential moderating variable for the relationship between working alliance and client outcome for clients of individual psychotherapy.

The Current Study

Within the realm of therapy clients, substance use is a common behavior and evaluating the working alliance for clients engaging in substance use but not seeking primary substance abuse treatment has sizeable clinical implications. The research questions are as follows:

Does the strength of the working alliance differ between substance users and non-substance users?

Do clients with substance use differ from clients without substance use in their outcome symptomatology?

Are there differences among different domains of outcome symptomatology between clients with substance use and clients without substance use?

Does substance use moderate the relationship between working alliance and outcome symptomatology?

The following hypotheses will be tested.

H1: The Working Alliance Inventory (WAI) scores will be lower for substance users than non-substance users.

H2: There will be less change in the domain of interpersonal relations for clients with substance use than for clients without substance use, however; there will be no statistical differences between groups on outcome in the domains of symptom distress or social roles.

H3: Substance use will moderate the relationship between working alliance and residual change in outcome symptomatology.

Chapter 3

METHODS

Participants

This study utilized archival data from the research database at Arizona State University's Counselor Training Center (ASU CTC). The ASU CTC is a reduced cost training clinic for graduate students in Counseling and Counseling Psychology. The ASU CTC serves community members and students of the University. The ASU CTC is not the primary counseling service offered by the University for students but instead is additional as it is a training clinic. The counselors who provided the counseling were graduate students in Counseling and Counseling Psychology and were supervised by licensed Psychologists. The data was drawn from records for clients who had previously signed informed consent forms, for their data to be collected and used for research purposes, prior to their intake session. Only records for clients who volunteered to participate and provided their informed consent, for their data to be collected and used for research purposes, were included in the research database.

Participant demographics. Initially, 142 client participants met inclusion criteria for this study out of the larger database of 311 client participants completing until termination. Inclusion criteria for this study consisted of a complete Outcome Questionnaire-45.2 (OQ-45.2) (Lambert et al., 1996) measure at intake and termination session and a Working Alliance Inventory (WAI-sh) (Tracey & Kokotovic, 1989) after the third session. Two participant groups were created from the intake OQ-45.2.

Substance use. For this study, substance users and non-users were defined in terms of their responses to specific items on the OQ-45.2. The OQ-45.2 contains risk

assessment screening items for substance abuse (i.e., “After heavy drinking, I need a drink the next morning to get going,” “I feel annoyed by people who criticize my drinking (or drug use),” and “I have trouble at work/school because of drinking or drug use”). Two of the risk assessment screening items for substance abuse are part of the CAGE screening assessment (Ewing & Rouse, 1970): (1) The eye-opener item states, “After heavy drinking, I need a drink the next morning to get going” and (2) the annoyed item states, “I feel annoyed by people who criticize my drinking (or drug use).” In a research study examining a group of patients in an alcoholic rehabilitation center, a positive response of ‘yes’ to the eye-opener item was given by 95% of patients who openly acknowledged alcoholism, 88% of patients who acknowledged heavy drinking, 61% of patients who denied alcoholism and 0% of a control pool of general hospital patients who were not alcoholics (Ewing, 1984). Additionally, a positive ‘yes’ response to the annoyed item was in 66% of patients who openly acknowledged alcoholism, 68% of patients who acknowledged heavy drinking, 58% of patients who denied alcoholism, and 0% of a control pool of general hospital patients who were not alcoholics (Ewing, 1984). The results of the Ewing (1984) study provide support for using the two items of the OQ-45.2 (i.e., the eye-opener item: “After heavy drinking, I need a drink the next morning to get going” and the annoyed item: “I feel annoyed by people who criticize my drinking (or drug use)”) to distinguish client participants who are at risk for substance abuse.

At-risk for substance abuse. In the current study, two groups of participants were formed: the at risk for substance abuse (ARSA) group consisted of participants who indicated ‘almost always,’ ‘frequently,’ ‘sometimes,’ or ‘rarely’ on either the eye-opener

or annoyed screening item on the OQ-45.2. The non-ARSA group consisted of participants who indicated ‘never’ on both of the eye-opener or annoyed screening items on the OQ-45.2.

After creating the participant groups, the non-ARSA group ($n = 108$) and ARSA group ($n = 34$) were unequal. A random sample ($n = 34$) of the 108 client participants within the non-ARSA group was selected to create equal sample sizes for comparison of client participant groups. A total of 68 (35 female) client participants were included in the current study. Client participants in the ARSA group responded to item 11 (e.g. “After heavy drinking, I need a drink the next morning to get going”) of the OQ-45.2 with ‘never’ ($n = 19$), ‘rarely’ ($n = 13$), and ‘sometimes’ ($n = 2$). Client participants in the ARSA group responded to item 26 (e.g. “I feel annoyed by people who criticize my drinking or drug use) with ‘never’ ($n = 6$), ‘rarely’ ($n = 15$), ‘sometimes’ ($n = 8$), ‘frequently’ ($n = 4$), and ‘almost always’ ($n = 1$). The correlation estimate of items 11 and 26 for the ARSA group was $-.36$. See Tables 1 and 2 for response patterns of the ARSA group to items 11 and 26 on the intake OQ-45.2, by item separately and to both items together.

Table 1

ARSA group responses to OQ-45.2 at intake by ARSA screening item

	‘never’	‘rarely’	‘sometimes’	‘frequently’	‘almost always’
Item 11	19	13	2	0	0
Item 26	6	15	8	4	1

Table 2

ARSA group intake OQ-45.2 responses to both items 11 and 26

		OQ-45.2 Intake Item 11 Response		
OQ-45.2 Intake Item 26 Response		'never'	'rarely'	'sometimes'
'never'		0	6	6
'rarely'		10	4	1
'sometimes'		2	3	1
'frequently'		4	0	0
'almost always'		1	0	0

The research database includes participation from fall semester 2009 until spring semester 2013. Timespan of participation in the research database varied among client participants but required at least an intake session, two additional sessions, and a termination session. The difference in timespan of participation is a function of the ASU CTC's procedure for accepting new clients due to the availability and needs of the counselor rather than a specific number of sessions for each client.

The client participants ranged in age from 18 to 50. Client participant age was collected in age categories of: (a) 0-18, (b) 19-25, (c) 26-36, (d) 36-49, and (e) 50 and above. Due to the categorical form of age data a mean of client participant age is unable to be calculated; however, frequencies within each age category were calculated. The modal age category was 19-25 years ($n = 26$), followed by 26-35 years age range ($n = 22$), and then the 36-49 years age range ($n = 13$), and then the 50 years and above ($n = 4$), and finally the 0-18 years age range ($n = 3$). Four ethnicities were represented in this

study. The majority of client participants were Caucasian ($n = 47$), followed by Asian ($n = 10$), Latino ($n = 6$), Native American ($n = 3$), and ‘other’ ($n = 1$). The annual income of client participants ranged from \$0 to above \$40,000. The majority of client participants were community members ($n = 37$), followed by full-time University students ($n = 28$), and then full-time faculty or staff ($n = 2$), and then part-time University student ($n = 1$). The majority of client participants reported no disability ($n = 63$). The distribution of client demographics, in regards to sex, ethnicity, and marital status among Non-ARSA and ARSA groups was comparable. Client participants in the Non-ARSA and ARSA groups differed in demographics of age, family size, income, client type, and disability. See Table 3 for client demographics distribution for Non-ARSA and ARSA groups.

Table 3

Participant demographic information

Characteristics	Non-ARSA (n)	ARSA (n)	Non-ARSA (%)	ARSA (%)
Sex				
Male	16	16	47.1	47.1
Female	18	17	52.9	50.0
Missing	0	1	0.0	2.9
Age category				
0-18	1	2	2.9	5.9
19-25	14	12	41.2	35.3
26-35	10	12	29.4	35.3
36-49	6	7	17.6	20.6
50+	3	1	8.8	2.9

Table 3 (continued)

Participant demographic information

Characteristics	Non-ARSA (n)	ARSA (n)	Non-ARSA (%)	ARSA (%)
Ethnicity				
Caucasian	24	23	70.6	67.6
Asian	5	5	14.7	14.7
Latino	3	3	8.8	8.8
Native American	2	1	5.9	2.9
Other	0	1	0.0	2.9
Missing	0	1	0.0	2.9
Marital Status				
Single	20	18	58.8	52.9
Married	5	6	14.7	17.6
Divorced	5	5	14.7	14.7
Living with Significant Other	4	5	11.8	14.7
Family Size				
1	11	10	32.4	29.4
2	9	6	26.5	17.6
3	6	6	17.6	17.6
4	2	9	5.7	26.5
5+	6	3	17.6	8.8

Table 3 (continued)

Participant demographic information

Characteristics	Non-ARSA (n)	ARSA (n)	Non-ARSA (%)	ARSA (%)
Income				
\$0 - \$9,999	10	7	29.4	20.6
\$10,000 - \$19,999	7	8	20.6	23.5
\$20,000 - \$29,999	4	2	11.8	5.7
\$30,000 - \$39,999	3	7	8.8	20.6
\$40,000 +	9	9	26.5	26.5
Missing	1	1	2.9	2.9
Client Type				
Community member	18	19	52.9	54.4
Full-time University student	16	12	47.1	35.3
Full-time faculty/staff member	0	2	0.0	5.9
Part-time University student	0	1	0.0	2.9
Disability				
Not disabled	32	31	94.1	91.2
Physically disabled	2	0	5.9	0.0
Developmentally disabled	0	1	0.0	2.9
Missing	0	2	0.0	5.9

Instrumentation

Demographic information was collected at intake. Client participants were given the OQ-45.2 (Lambert et al., 1996) at intake and termination. Client participants were given the WAI-Sh (Tracey & Kokotovic, 1989) at the third session and at all subsequent sessions until termination.

OQ-45.2. The OQ-45.2 includes 45 self-report items of symptomology with three subscales: symptom distress, interpersonal relations, and social role. The OQ-45.2 requires responses on a 5-point Likert scale, ranging from 0 (never) to 4 (always). As previously stated, a considerable amount of research has been conducted on substance use with specific behavioral outcome scales (Martin et al., 2000) and therefore an important focus of this study was on global scales, overall assessment of change, as outcome measures. The total score, the summation of the three subscales, and each individual subscale were used in this study.

Outcome symptomatology. The symptomology experienced by client participants at the end of the counseling refers to the outcome symptomatology. The residual change score in the participants' OQ-45.2 total score between intake and termination was used to evaluate outcome symptomatology. The OQ-45.2 total score range is 0-180, with higher scores yielding greater disturbance. The OQ-45.2 has good internal consistency ($\alpha = .93$) and test-retest reliability ($\alpha = .82$) (Lambert et al., 1996). The general mean of the total score on the OQ-45.2 is 45 with a standard deviation of 19 and a cutoff for clinical levels of disturbance of 63 (Lambert et al., 1996). The reliable change index of the OQ-45.2 is 14 (Lambert et al., 1996). The internal consistency estimate for this sample of the OQ-45.2 at intake and at termination was .94 ($\alpha = .937$ and $\alpha = .942$, respectively).

The OQ-45.2 Symptom Distress subscale score range is 0-100 with higher scores yielding greater disturbance. The OQ-45.2 Symptom Distress subscale has good internal consistency ($\alpha = .88$) and test-retest reliability ($\alpha = .78$) (Lambert et al., 1996). The internal consistency estimate for this sample of the OQ-45.2 at intake is .92 and .93 at termination. The general mean of the Symptom Distress subscale of the OQ-45.2 is 26

with a standard deviation of 10 and a cutoff for clinical levels of disturbance of 36 (Lambert et al., 1996). The reliable change index of the OQ-45.2 Symptom Distress subscale is 10 (Lambert et al., 1996).

The OQ-45.2 Interpersonal Relations subscale score range is 0-44 with higher scores yielding greater disturbance. The OQ-45.2 Symptom Distress subscale has adequate internal consistency ($\alpha = .77$) and test-retest reliability ($\alpha = .74$) (Lambert et al., 1996). The internal consistency estimate for this sample of the OQ-45.2 at intake is .80 and .84 at termination. The general mean of the Interpersonal Relations subscale of the OQ-45.2 is 11 with a standard deviation of 6 and a cutoff for clinical levels of disturbance of 15 (Lambert et al., 1996). The reliable change index of the OQ-45.2 Interpersonal Relations subscale is 8 (Lambert et al., 1996).

The OQ-45.2 Social Role subscale score range is 0-36 with higher scores yielding greater disturbance. The OQ-45.2 Social Role subscale has adequate internal consistency ($\alpha = .76$) and test-retest reliability ($\alpha = .76$) (Lambert et al., 1996). The internal consistency estimates for this sample on the OQ-45.2 at intake is .66 and .65 at termination. The general mean of the Social Role subscale of the OQ-45.2 is 10 with a standard deviation of 4 and a cutoff for clinical levels of disturbance of 12 (Lambert et al., 1996). The reliable change index of the OQ-45.2 Social Role subscale is 7 (Lambert et al., 1996).

WAI-Sh. The WAI-Sh is a 12 item self-report measure of the working alliance with three subscales - tasks, bonds, and goals. CTC clients were given the client version and provided a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). Internal consistency estimates of the WAI-Sh ranged from .90 to .92 for clients

(Tracey & Kokotovic, 1989). The internal consistency estimate for this sample was .93. The content validity of the WAI-Sh has been evaluated using rational and empirical methods (Tracey & Kokotovic, 1989).

The WAI-Sh was administered weekly in the CTC, starting after the third session, up to termination. The focus of this study is on the strength, and not the pattern, of the working alliance; therefore the third session WAI-Sh scores across all sessions were used in the analyses. The majority of studies on the working alliance have used single-session measures of the working alliance, and have identified the third session as the optimal time point to assess working alliance (Kiesler & Watkins, 1989; Mallinckrodt & Nelson, 1991; Reandeu & Wampold, 1991; Safran & Wallner, 1991; Tyron & Kane, 1993). The use of the third session WAI score was evident in the 24 working alliance studies of Horvath and Symond's (1991) meta-analysis and overall effect size of the working alliance relationship to treatment outcome was similar to that of Martin et al.'s (2000) and Horvath and Bedi's (2002) meta-analyses. Additionally, because the number of sessions varies as a function of the needs and availability clients and Counseling and Counseling Psychology graduate students, assessing the third session allowed for a larger number of participants without missing data.

Data Analysis

An independent samples *t*-test was conducted to compare the two groups of participants in the study on the WAI-Sh scores. As well, an independent samples *t*-tests was conducted to compare the two groups of participants in the study on the standardized residual change on the OQ-45.2 total score. Additional independent samples *t*-tests were conducted to compare the two groups of participants in the study on the standardized

residual change on the OQ-45.2 for each subscale: symptom distress, interpersonal relations, and social roles. A hierarchical regression was conducted to examine the ability of WAI to predict residual change score OQ-45.2 symptomatology with substance use as a moderator.

Chapter 4

RESULTS

This study was conducted to gain a deeper understanding of substance use within individual psychotherapy. The primary analyses of this study were to determine whether differences exist between groups of clients not at risk for substance abuse and clients at risk for substance abuse on measures of the working alliance and residual change in outcome symptomatology. In addition to assessing whether group differences exist, substance use was also analyzed as a moderating variable in the relationship between working alliance and client outcome. This chapter will explore the statistical analyses and procedures that were utilized to test the proposed hypotheses. Results from the statistical analyses are displayed within this chapter.

A preliminary examination of how many client participants were nested within a counselor was conducted to assess the amount of variance accounted for by each potential level of analysis. There were 81 counselors for 142 participants in the study and therefore the intraclass correlation coefficient (ICC) of the WAI scores for the counselor could not be conducted as the majority of counselors, 46, only had one participant. Nineteen counselors had two participants, ten counselors had three participants, three counselors had four participants, two counselors had five participants, and one counselor had six participants. Given the inability to produce an ICC and the limited degree of participant nesting within counselor, the data were assumed to be independent and therefore multi-level modeling was not needed to address different levels of analysis.

Initially, 142 participants met inclusion criteria for this study. Inclusion criteria for this study consisted of a complete OQ-45.2 measure at intake and termination and a

complete WAI-sh measure after the third session of counseling. Thirty-four participants were in the ARSA group and 108 participants were in the non-ARSA group. A random sample of 34 participants from the non-ARSA group was selected to create equal sample sizes for comparison.

An independent samples *t*-test was conducted to analyze the first hypothesis that participants in the ARSA group would have lower WAI total scores after the third session. Mean WAI total scores for the non-ARSA group was 71.85 with a standard deviation of 11.42 and a mean standard error of 1.96. Mean WAI total scores for the ARSA group was 67.53 with a standard deviation of 9.48 and a mean standard error of 1.63. Levine's test for equality of variances was not significant, $F(2,66) = .816, p = .37$, however; the *t*-test did not find significant differences between the groups regarding WAI total scores, $t(66) = 1.70, p = .09, 95\% \text{ CI } [-.75, 9.40], d = .41$ (see Table 4).

Outcome symptomatology change scores were standardized residual change scores obtained by regressing OQ-45.2 scores at the termination session on OQ-45.2 scores at the intake session. Positive change scores reflect reductions in outcome symptomatology. An independent samples *t*-test was conducted to analyze the second hypothesis that participants in the ARSA group would have less change in the total outcome symptomatology. Mean residual change score for the non-ARSA group was 0.10 with a standard deviation of .93 and a mean standard error of .17. Mean residual change score for the ARSA group was -.16 with a standard deviation of 1.06 and a mean standard error of .20. Levine's test for equality of variances was not significant, $F(2,57) = .134, p > .72$, however; the *t*-test was not significant, $t(57) = 1.01, p = .32, 95\% \text{ CI } [-.26, .78], d = .27$ (See Table 4).

Independent samples *t*-tests were conducted to evaluate the hypotheses regarding the differences in outcome symptomatology between the non-ARSA and ARSA groups on the three difference subscales of the OQ-45.2. On the Symptom Distress subscale of the OQ-45.2, the *t*-test was not significant, $t(55) = .66, p = .51, 95\% \text{ CI } [-.36, .715], d = .18$. The *t*-test was also not significant on the Interpersonal Roles subscale of the OQ-45.2, $t(57) = -.60, p = .55, 95\% \text{ CI } [-.55, .30], d = -.16$. The negative Cohen's *d* statistic for effect size is indicative of a larger mean in the ARSA group than the mean in the non-ARSA group. Finally, the *t*-test was not significant on the Social Roles subscale of the OQ-45.2, $t(57) = .46, p = .65, 95\% \text{ CI } [-.39, .63], d = .06$ (See Table 2).

Table 4

Comparisons of Non-ARSA and ARSA Groups on WAI and OQ-45.2

Variables	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>	<i>d</i>
WAI			1.70	.09	0.41
Non-ARSA	71.85	11.42			
ARSA	67.53	9.48			
Standardized residual Δ OQ-45.2					
Total Score			1.01	.32	0.27
Non-ARSA	.10	.93			
ARSA	-.16	1.06			
Symptom Distress			.66	.51	0.18
Non ARSA	.08	.10			
ARSA	-.10	1.03			
Interpersonal Relations			-.60	.55	-0.16
Non-ARSA	-.09	.80			
ARSA	.04	.84			
Social Roles			.46	.65	0.06
Non-ARSA	.08	1.11			
ARSA	-.04	.82			

An initial linear regression analysis was conducted to evaluate the ability of working alliance to predict outcome symptomatology. WAI score after week three was

not related to outcome symptomatology, $R^2 = .02$, $F(1, 57) = 1.13$, $p = .29$. A hierarchical regression analysis was conducted to evaluate the moderation effect of ARSA on the relationship between working alliance and outcome symptomatology (see Table 5). In the first step, the dummy-coded continuous variable of ARSA and the centered WAI score at the end of week three were entered as predictors (Frazier, Tix, Barron, 2004). The cluster variable of ARSA and centered WAI scores at week three were not significant in predicting outcome symptomatology, $R^2 = .05$, $F(2, 56) = 1.45$, $p = .24$. In the second step, moderation was examined through the creation of a interaction term (e.g. ARSA and centered WAI) to determine if classification of being at-risk for substance abuse moderated the relationship between working alliance and substance abuse. The moderator variable did not significantly predict outcome symptomatology, $R^2 = .06$, $F(3, 55) = 1.15$, $p = .34$.

Table 5

Hierarchical Regression Analysis Predicting Outcome Symptomatology From Working Alliance Inventory and Substance Use.

Predictor	β	R^2	Adj R^2	ΔR^2	ΔF	p
Step 1		.05	.02	.05	1.45	.24
ARSA	-.18					
WAI	-.19					
Step 2		.06	.01	.01	.57	.34
ARSA	-.18					
WAI	-.10					
ARSA x WAI	-.13					

Chapter 5

DISCUSSION

This research examined the relationship between the working alliance and symptomatology at the end of counseling between clients at risk for substance abuse and clients not at risk for substance abuse. Comparisons of the two client participant groups were examined. The creation of two groups, at risk for substance abuse (ARSA) and not at risk for substance abuse (non-ARSA), was based on the client participants' responses on two substance abuse screening items on the OQ-45.2. Specifically, inclusion criteria for the ARSA client participant group was a response of 'almost always,' 'frequently,' 'sometimes,' or 'rarely' on either of the eye-opener or annoyed items (i.e., "After heavy drinking, I need a drink the next morning to get going," "I feel annoyed by people who criticize my drinking (or drug use)") on the OQ-45.2. The non-ARSA group consisted of participants who indicated 'never' on both of the eye-opener or annoyed screening items on the OQ-45.2.

The first hypothesis of this study proposed that participants in the ARSA group would have lower WAI scores than participants in the non-ARSA group. The *t*-test comparing mean WAI scores after the third session between ARSA and non-ARSA participants was not significant. The ARSA group did have a lower mean and smaller standard deviation than the non-ARSA group but was not found to be a significant difference. Research to date has not examined differences in clients' assessment of working alliance based on level of substance use; however, previous research in substance abuse populations has found reluctance in forming an alliance (Meier et al., 2004). Perhaps the findings of the current study were unable to find significant

differences between the two groups because the ARSA group may actual be more similar to the non-ARSA group than with substance abuse population groups in terms of alliance formation. Specifically, reluctance to form an alliance and thus lower WAI scores may be more indicative of substance abuse treatment rather than individual psychotherapy not primarily focused on client substance use.

The results of this study did not support the second hypothesis, which posited that participants in the ARSA group would have significantly less change in their outcome symptomology than the non-ARSA group. This result could be explained through the research concerning determinants of client outcome (Luborsky et al., 1985). For example, when examining variance in client outcome among therapists' caseloads, Luborksy et al. (1985) found no support for the relationship between client variables and outcome (Luborksy et al., 1985). Age, race, education, occupation, and employment were included as client demographic information. Client drug use was measured in years by drug type (i.e., years of heroin use, years of methadone use, years of depressant use, and years of stimulant use). Luborksy et al., (1985) found no significant differences among the clients' background characteristics of demographic information or drug use in client outcomes. Limited research has been conducted to compare clients in therapy differing on the potential risk for substance abuse and instead primarily focused on the treatment of substance abuse. It is possible that the client variable at risk for substance abuse does not relate differently to outcome than not having that variable.

In addition to no significant differences between the ARSA and non-ARSA groups in the total score of residual change in outcome symptomatology, the results of this study did not find significant differences on any of the three subscales of outcome

symptomology. The lack of significant differences between the ARSA and non-ARSA groups may continue to support the findings of Luborsky et al. (1985), such that client variables had no relationship to outcome on a variety of scales measuring domains of symptom distress, interpersonal relations, and social roles (i.e., ASI, BDI, SCL-90, and Maudsley N Scale).

Lastly, there was no support found in this study for substance use as a moderator for the relationship between working alliance and outcome symptomatology. The lack of support in the first step of the hierarchical regression with WAI scores as the predictor and outcome symptomatology as the criterion is not supported by the literature. For example, meta-analyses have shown that working alliance has been found to be a consistent predictor of treatment outcomes across many disorders and therapeutic modalities (Horvath & Symonds, 1991; Martin et al., 2000). It is possible that in the current study the working alliance is not being measured accurately as clients are coming to a counselor training center and thus have a different gauge for assessment of the working alliance than if seeing a licensed and experienced therapist. Moreover, third session WAI scores were used and counselors in training may still be working on the fundamental counseling skills (i.e., what to say, non-verbal communication) at this point and not focusing on building or fostering the alliance. Without a relationship between WAI scores and outcome symptomatology, a moderating effect would not exist.

Limitations

This study was an attempt to better understand clients at risk for substance abuse in individual psychotherapy. Limited previous research has been conducted regarding substance use rather than substance abuse in formal therapy services and due to the

novelty of this client group there were several limitations that future research should consider. First, only WAI scores after one session (the third session) were utilized in the analysis of this study. While previous research has documented well the third session WAI scores as the optimal time point to predict outcome (Kiesler & Watkins, 1989; Mallinckrodt & Nelson, 1991; Reandeu & Wampold, 1991; Safran & Wallner, 1991; Tyron & Kane, 1993), examination of the growth and pattern of the alliance may be beneficial in examining group differences between ARSA and non-ARSA type clients.

Another limitation of this study is the sample. Sample sizes were not large enough to produce adequate power to examine differences between groups. In addition to the limited number of participants in this study, the type of participants is also a limitation that should be addressed in future studies. This study used participants who freely volunteered to participate in a research database and thus are a specific subset of the larger population seen at the site. It is unclear whether clients who choose to participate in the research database differ from clients who declined. It may be possible that lack of differences found between the ARSA and non-ARSA groups are not necessarily representative of the two groups in the whole population but instead a phenomenon of voluntary participation similarities between groups. Another limitation related to the sample of this study is that the ARSA and non-ARSA groups were not similar in terms of client demographics in regard to age, family size, income, client type, and disability. Specifically, the non-ARSA group was created through random selection from the larger non-ARSA group meeting criteria for inclusion in the study. This random sample of 34 participants, in comparison with the ARSA group, had three more participants over the age of 50, seven less participants with a family size of 4, four less participants reporting a

household income of \$30,000-\$39,999, four more full-time University students and no representation of full time University faculty or staff or part-time University students, and two participants reporting physical disability. It is possible that some of the differences in client demographics could account for the findings of this study. Future research may benefit from identifying salient participant demographics for the two groups in order to use participant matching rather than random selection.

An instrumentation limitation of this study could be in the validity of measure of ARSA. A positive endorsement of either of two screening questions on the OQ-45.2 (i.e., “After heavy drinking, I need a drink the next morning to get going” and “I feel annoyed by people who criticize my drinking (or drug use)”) could be an inaccurate screening label for at risk for substance abuse. Perhaps more representative to understanding the role of substance use and its implications in individual psychotherapy would involve a more encompassing substance use interview (i.e., to cover use, frequency, type of substance, implications, etc.) such as the Addiction Severity Index. Future research should address the limitations of this study in order to advance the knowledge of the client group.

Directions for Future Research

Assessing a client’s motivational readiness for change is critical in clients with substance use. According to the transtheoretical model of personal change (Prochaska & DiClemente, 1982) there are six different stages of change clients engaging in substance use progress through to accomplish a change in their behavior. The six stages include: (1) precontemplation, (2) contemplation, (3) preparation, (4) action, (5) maintenance, and (6) termination. *Precontemplation* involves no intention to change one’s substance use

behavior and most clients in this stage are unaware of their substance use problem (Prochaska & Norcross, 2001). In the stage of *contemplation* individuals are aware that there is a problem associated with their substance use and consider changing it but have yet to take action (Prochaska & Norcross, 2001). The stage of *preparation* requires individuals to have an intention to take action in the next month but no action has been taken in the past year and, therefore; clients in preparation often engage in initial small steps toward taking action, regarding their substance use (Prochaska & Norcross, 2001). *Action* involves individuals changing their behavior and environment to overcome their substance use problem and therefore involves a high commitment of time and energy (Prochaska & Norcross, 2001). *Maintenance* is the stage following *Action* and is focused on preventing relapse (Prochaska & Norcross, 2001). *Termination* refers to the stage at which individual have completed the behavior change and no longer have to work to prevent relapse (Prochaska & Norcross, 2001). The six stages can be differentiated into two categories of stages: (1) insight stages and (2) action stages. It is often assumed that clients engaging in substance use but not seeking primary substance abuse treatment are operating in the insight stages, meaning that they are not actively aware of the implications of their substance use and therefore not seeking the latter three action stages to change the behavior (Prochaska & Norcross, 2001). To gain a deeper understanding of the ARSA client, future research could measure the client's motivation for therapy. Assessing the participant's stage of change in which he or she is operating could be a beneficial piece to understanding the relationship between working alliance and outcome symptomology for the ARSA group.

Porter and Ketring (2011) conducted a study to assess factors contributing to the working alliance. Based on previous research exploring client factors related to the working alliance, this study examined two specific factors, client stage of change (i.e., acknowledgement of a need for change through therapy, not alcohol-use change) and symptom distress (Porter & Ketring, 2011). This study hypothesized that the relationship between symptom distress and the alliance would be mediated by client stage of change (Porter & Ketring, 2011) but did not find support for mediation effects. Porter and Ketring (2011) found a significant negative relationship between symptom distress and the working alliance, for males. No relationship between symptom distress and the working alliance was found for females. Interestingly, the researchers found a negative relationship between precontemplation and the therapeutic alliance for males, after controlling for all other variables in the model. Furthermore, no significant relationship between male motivation (measured as contemplation, action, and maintenance combined) and therapeutic alliance was found. The findings from this study highlight an important client factor of motivational stage of change, and in particular, precontemplation. While Porter and Ketring (2011) only found support for the negative relation between precontemplation and the alliance for males, the study was conducted in a couples therapy setting and therefore unique gender differences may have contributed to one person being in precontemplation regarding therapy and the other not (Porter & Ketring, 2011). Additionally of interest, is the lack of support for the relationship between motivation and alliance as this provides support for the unique qualities of precontemplation rather than the positive effects of motivation on alliance. This study begins to highlight the importance of precontemplation in a negative relationship with

working alliance. Central focus of the current study is the role of substance use in the relationship between working alliance and client outcome. Many substance-using clients are functioning at the precontemplation stage of change (Prochaska & Norcross, 2001) and thus a better understanding of the impact it has on the working alliance and client outcome is necessary.

Clinical Implications

Increased awareness of unique factors within clients presenting with substance usage and behaviors at risk for substance abuse can lead to better therapeutic interventions. A more thorough understanding of the working alliance for clients at risk for substance abuse can help guide the counselor to employ effective strategies for change for these clients. Substance using clients often have cognitive distortions or inflated or illogical thought patterns that often maintain the effects of substance misuse (Doweiko, 2012). Addressing the cognitive distortions clients may have about their drug use is an important aspect of understanding the motivation underlying use (Doweiko, 2012). Clients hold cognitive distortions about what they expect to gain from engaging in drug consumption and these could be critical in addressing underlying problem areas. Substance-using clients often have problems in other areas of their life (Doweiko, 2012). The drug expectancies may be masking or exacerbating the distress in other areas of functioning. For example, a client engaging in social use of alcohol may expect alcohol to decrease inhibitions to allow for better social interactions. Exploration of the social and interpersonal functioning of the client during sober experiences may be extremely beneficial for the client to evaluate the potentially false belief that s/he does need alcohol to engage in social interaction. Perhaps the client does not need the drug to function

appropriately in social situations but cannot see past his or her expectancy that alcohol will make him or her more fun. On the other hand, perhaps the client does have interpersonal deficits that inhibit him or her from engaging appropriately in social interactions. Exploring this area can provide meaningful awareness, insight, and change into the interpersonal skills of the client. Understanding the cognitive distortions a client has about substance use may highlight the areas within his or her life that need focused attention. However, challenging these beliefs can be hard for the therapist to successfully accomplish and thus the working alliance is particularly important.

Conclusion

This study set out to better understand the role of substance use in clients of individual psychotherapy with respect to the relationship between working alliance and outcome symptomatology. Previous research has focused on substance abuse treatment and the relationship between working alliance and treatment outcome in that particular setting with that specific diagnosis. Clients with substance abuse have been identified as a potentially distinct group when assessing and utilizing the working alliance in psychotherapy. The aim of this study was to begin to explore comparisons between clients at risk for substance abuse and clients not at risk for substance abuse in individual psychotherapy as a first step in understanding the role of substance use in the relationship between working alliance and outcome symptomatology. The current study did not find any statistical differences between a group of clients not at risk for substance abuse and a group of clients screened as at risk for substance abuse on measures of client-reported working alliance or outcome symptomatology. Furthermore, the current study did not find support for substance use as a moderating variable in the relationship between

working alliance and outcome symptomology. Due to the prevalence of substance use and the high comorbidity between substance use and other mental health disorders (SAMSHA, 2010) future research should be conducted to examine implications of client substance use in psychotherapy.

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