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Assessing Relational Depth and Motivation to Change in Substance Use Disorder Treatment

Woehler Elliott*
Clinical Assistant Professor, University of North Texas, USA

Abstract

The present study investigated the relationship between relational depth and motivation to change substance use in Substance Use Disorder Treatment. In the study, 78 participants completed the Relational Depth Frequency Scale, the Stages of Change Readiness and Treatment Eagerness Scale, and the Alcoholics Anonymous Involvement Scale. Participants in the current study were recruited from three SUD treatment facilities in publicly or privately funded SUD treatment facilities in the southeastern United States. Linear multiple regression analyses revealed that participant perceived relational depth and participant involvement in substance abuse community support groups statistically significantly predicted participant recognition of a substance use problem. Additionally, number of individual sessions did not statistically significantly predict participant perceived relational depth with an individual counselor. The findings suggest that personal development training of Substance Use Disorder Treatment counselors may be important in client motivation to change substance use.

Keywords: Relational depth; Substance use disorder treatment; Humanistic counseling; Substance abuse; Community support groups.

Introduction

Relational Depth (RD) is a relatively new construct in the counseling and psychotherapy literature. The term RD was first coined by Dave Mearns [1] as an extension of more contemporary conceptualizations of person-centered therapy with a blending of elements of existential theory. More specifically, RD is "a state of profound contact and engagement between two people, in which each person is fully real with the Other and able to understand and value the Other's experiences at a high level" [2]. This definition of RD seemingly captures its most fundamental aspects: the encounter, the high level of realness or genuineness between the client and the counselor, and the understanding and valuing of one another.

RD theorists described this phenomenon as occurring in both discrete moments in therapy, as well as being a general quality of a counseling relationship [3]. Whereas, much of the contemporary research into RD appears to have focused on the distinct moments of contact between the client and counselor, one can also refer to a therapeutic relationship and its general quality of RD. Mearns and Cooper [2,3] described that such moments contain a blending of a high degree of the counselor's attitudinal or facilitative conditions of person-centered counseling including genuineness, unconditional positive regard, and empathic understanding. Additionally, a counselor who develops RD demonstrates an intention to offer something more than a therapeutic alliance and supportive conditions, she intends to bring her own perceptions and experiences related to the therapeutic encounter into the therapeutic relationship [2-4].

In his conclusion of the RD research literature, Cooper [5] concluded that most therapists and clients can identify having experienced RD. Furthermore, it seems that researchers have discovered some factors associated with RD such as presence, genuineness, intimacy, mutuality, and a sense of losing track of time [2,5-8]. Whereas researchers have identified some helpful therapist characteristics for facilitating moments of RD such as trustworthiness; realness; and intent to understand beyond a typical professional level, the client appears to exert some control over whether they decide to enter into moments of depth. Experiencing these moments of depth has been described across studies in generally positive and encouraging ways [5], and the experience of RD may be associated with client-reported significant events in therapy and therapeutic outcomes [9]. Clients and counselors have reported positive benefits from experiences of RD in numerous qualitative studies [10], and initial findings suggested that RD and mutual experiences of UPR, empathic understanding, and congruence may be associated with therapeutic outcomes [5].

Despite its person-centered and existential underpinnings, Mearns and Cooper [2,3] described RD as a pantheoretical construct not limited to humanistic therapies. Moreover, therapists from a variety of theoretical orientations have identified experiences of RD. RD has been explored in clients and counselors from experiences of the self, experiences of the other person in moments of depth, and of the therapeutic relationship in general psychotherapy. However, the RD literature appears to lack studies of client experiences of RD in special clinical populations. One such population includes clients receiving treatment for substance use disorders (SUDS).

SUD Treatment

Various models exist which explain the development of SUDs. More specifically, people with SUDs may have genetic and biological dispositions which can predispose them to mental health disorders and attachment-related problems [11]. Those facing such predispositions may face challenges when seeking to make changes in their substance use. Authors in the addictions treatment literature have proposed that clients make change in their substance use when they are in touch with their own intrinsic motivation to change.

***Corresponding author:** Woehler Elliott, Clinical Assistant Professor, University of North Texas, USA, E-mail: ellittwehler@coe.ufl.edu

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Miller and Tonigan [12] attributed motivation to change to Janis and Mann's [13] psychological analysis of decision-making. In this process of analysis, Janis and Mann described motivation to change as a decisional balance between the pros and cons of a behavior: which can be in a constant state of fluctuation. Within the context of substance use, researchers have referred to the negative consequences and positive effects of substance use, whereby the person is in a state of deciding whether to use based on an appraisal of this balance [14]. A person's values and goals for life inform this decisional balance, such that a person wanting to change her alcohol use evaluates the pros and cons of her behaviors-related to substance use-in the context of their congruence with the values and goals that drive that person's intrinsic motivation [14]. Miller and Rollnick theorized that as a person moves through stages of change, the person becomes more connected to her intrinsic motivation to change problematic substance use.

Research into motivation to change supports this construct as helpful in predicting behavior change. Webb and Sheeran [15] conducted a meta-analysis of 47 studies of interventions designed to affect behavior change through one's motivation or intent to change problematic behaviors. Webb and Sheeran calculated a sample-weighted effect size of Cohen's d =.66 across a broad range of behaviors: which they deemed to be a medium to large effect in overall increase in intent to change behavior. Webb and Sheeran explored intent to change as a mediator in these studies to explore the subsequent change in behavior. Webb and Sheeran observed that researchers conceptualized intent or motivation to change through various theories of change. The authors noted that studies varied on how much interventions were designed to increase intent or motivation to change, but they determined that the greater the intervention targeted intent or motivation, the greater the behavior change (r =.57). They concluded that motivation to change appears to effect behavior change, particularly when measured at multiple intervals.

Miller and Tonigan [12] developed a measure to assess motivation to change substance use as a construct with three continuous underlying processes including ambivalence about a problem, recognition of a problem, and taking steps to change the problem. More specifically, as a person gains more recognition of a substance use problem, she resolves ambivalence about the problem, and takes steps to change the problem. From a motivational perspective, this process is guided by the client's self-actualizing tendency [14]. Theoretically, RD relies on the client's self-actualizing tendency in the client's change process such that, in moments of depth, the client becomes connected to deeper parts of herself, including important feelings, thoughts, and behaviors in need of evaluation in order to begin to change. The experience of RD in individual counseling in SUD treatment may increase one's safety to explore these deeper parts of self as related to substance use.

Additionally, other treatment process variables such as community support involvement and length of treatment appear to be influential variables in SUD treatment outcomes. For instance, 12-step participation predicts use outcomes [16] and treatment duration and intensity, such as length of treatment or the number of sessions in treatment have been discussed in the SUD treatment literature as demonstrating positive effects on treatment outcomes. However, Schmidt and colleagues argued that whereas the majority of studies observed treatment length by measuring weeks of planned therapy, the measurement of actual attended sessions may be more associated with positive SUD treatment outcomes. Indeed, in their systematic review of 23 randomized controlled trials, Gates et al. found improved treatment outcomes for psychosocial interventions (including those designed to enhance motivation change for change) delivered for more than four sessions on cannabis use and level of dependence. Additionally, the frequency of individual counseling sessions has been discussed as an enhancement to drug treatment programs contributing to increased abstinence at 30-days and 6 months in outpatient drug treatment. Conceptually, treatment components such as Alcoholics Anonymous meetings and individual counseling sessions may be seen as complementary treatment process variables to group therapy: the standard modality of SUD treatment.

SUD and Relational Depth in Therapeutic Relationships

Active addictions can cause changes in the brain that impair social cognition and alter normal patterns of behavior. Taking such changes into context with elevated rates of stigma in interpersonal relationships, those with SUDs appear to be more likely to experience social isolation and impaired social support. Furthermore, those with SUDs may have experienced isolation from disingenuous, maladaptive, and disempowering relationships one commonly forms with others who share a common high priority goal of using and obtaining substances.

In observation of modest outcomes in the SUD treatment literature, researchers have supported studying relational factors in treatment for clients with SUDs to improve outcomes such as the client's motivation to change substance use. SUD treatment research historically indicates a strong association between relational common factors and positive treatment outcome across retention, engagement, and even use in some studies. Of these factors, researchers firmly supported the therapeutic alliance and the counselor's expression of empathy as important factors influencing treatment outcomes in the SUD treatment literature. Moreover, relational evidence-based approaches emphasize the importance of the therapeutic relationship and the counselor's empathic understanding to positively impact a client's motivation to change, and the therapeutic relationship appears to mediate the association between motivation to change and substance use outcomes.

In light of research findings supporting the counselor's influence on motivation to change as impacting the client's behavior change, the present study is intended to utilize this construct to address a gap in the RD literature regarding varied clinical outcomes pertinent to special populations in counseling such as clients who present with SUDs. The present study was intended to address the role of RD in the prediction of client motivation to change in SUD treatment in the context of other influential treatment process variables including: community support involvement and length of individual counseling treatment as defined by the frequency of weekly individual counseling sessions.

Method

Participants

Participants in the present study were recruited from three SUD treatment facilities in publicly or privately funded SUD treatment facilities in the southeastern United States. As a part of admission requirements, clients in these facilities met criteria for a *Diagnostic and Statistical Manual of Mental Disorders-fifth edition* SUD. Furthermore, participants in the present study were enrolled in some type of accredited inpatient or outpatient SUD treatment, had participated in at least three weekly individual sessions, and were 18 years or older. The sample included 78 participants in total with a mean age of 35.97 (SD = 10.48; n = 78) with a range of 18 to 77 years old. Regarding gender, 57.7% of the sample identified as male, and 42.3% identified as female. Of 78 participants, 9 (11.5%) identified as Black, 3 (3.8%) as Latina/o,

1 (1.3%) as Native American, 1 (1.3%) as multiracial, 63 (80.1%) as White, and 1 (1.3%) as other. Participants in the study had attended an average number of 5.12 sessions with a range of 3 to 23 sessions.

Instruments

Relational depth frequency scale (RDFS)

The Relational Depth Frequency Scale-Client Version (RDFS; Di Malta, 2016) is a 20-item self-report assessment measuring the client's perception of RD as an enduring characteristic of the therapeutic relationship, as well as experienced moments of RD. Di Malta found the RDFS to have excellent reliability, reporting a Cronbach's alpha of .963. Di Malta (2016) reported Spearman's Rho correlations of .68 for between the RDFS and the Relational Depth Inventory (RDI), and .17 with the SCS-SF demonstrating strong convergent and divergent validity, respectively. In the present study, the RDFS average score was used as a predictor variable. The Cronbach's alpha for the RDFS in the present study was .89.

Stage of change readiness and treatment eagerness scale (SOCRATES)

The SOCRATES scale was originally developed by William R. Miller in 1987 (Miller & Tonigan, 1996) to assess an individual's motivation to change problematic drinking. The most recent version (8D) contains 19-items to produce three subscale scores: Ambivalence, Recognition, and Taking Steps. Miller and Tonigan reported Cronbach alphas of .83 for Taking Steps, .85 for Recognition, and .60 for Ambivalence for the 19-item version. In the present study, Cronbach's alphas were calculated at .943 for the Recognition subscale, .69 for the Ambivalence subscale, and .873 for the Taking Steps subscale.

Alcoholics anonymous involvement scale (AAI)

The AAI scale was originally developed by Tonigan, Connors, and Miller (1996) and contains 10 items that assess AA involvement and three items which assess AA attendance to produce an overall AA involvement index. Tonigan and colleagues reported a Cronbach's alpha of .85 for the total AAI scale. In the present study, the total scale demonstrated a Cronbach's alpha of .83.

Procedures

In group counseling sessions at approved treatment center sites, clients were informed of the purpose of the research and given informed consent notices. The principal investigator offered participants a 10-dollar gift card to a local grocery chain as compensation for participation in the study. Clients were recruited on a weekly basis for two months until the required sample was exceeded.

Results

Predictors of motivation to change substance use

In order to address the primary focus of the study regarding the role of RD in the prediction of client motivation to change, three linear multiple regression analyses were conducted using the criterion variables SOCRATES Recognition score, Ambivalence score, and Taking Steps to Change. The predictors analyzed included number of individual sessions, AAI total score, and RDFS average score. Means and standard deviations of all variables are listed in table 1 (Table 1).

Recognition of a drug use problem

A linear multiple regression analysis was conducted to determine the extent to which the predictor variables (i.e., number of individual sessions, AAI total score, and RDFS score) predicted participant recognition of a drug use problem. Although data violated the assumption of homoscedasticity, Tabachnick and Fidell suggested that heteroscedasticity weakens but does not invalidate the results. The strongest statistically significant correlation was the relationship between participant involvement in substance abuse community support groups and participant recognition of a drug use problem (r = .615). Those who reported being more involved in community support were more likely to report higher recognition of a drug use problem. The second strongest statistically significant correlation was between the participants' average RD score and the participants' recognition score (r = .272, p =.016). The higher the participant's RD score, the more likely the client was to report recognition of a drug use problem. All other correlations were small and not statistically significant. All correlations are listed in table 2 (Table 2).

The regression, R, was statistically significantly different from zero, F (3, 74) =17.547, p< .001. Additionally, R^2 = .416 indicating that all 3 independent variables (number of individual sessions, AAI total score, and RDFS score) accounted for approximately 42% of variance in the recognition composite score. This finding indicates that the theory and model of this study appear to explain a substantial amount of the variance in predicted recognition scores. Table 3 presents the regression analysis summary for variables predicting recognition (Table 3). Additionally, table 4 displays the beta weights, structure coefficients, and squared structure coefficients for each of the predictors (Table 4). The examination of beta weights and associated squared structure coefficients indicated that AAI (β = .598 r_s^2 = .908, p< .001) was the most dominant predictor, explaining 91% of the variance accounted for in the effect. Additionally, RDFS average score was statistically significant (β = .184 r_s^2 = .178, p=.045), explaining approximately 18% of the variance in the model. Number of sessions was not a statistically significant contributor to the model, accounting for less than 1% of variance in the effect.

Ambivalence about a drug use problem

A second linear multiple regression analysis using the predictor variables (number of individual sessions, AAI total score, and RDFS average score) to predict participant ambivalence about a drug use problem was not statistically significant, $F(3, 74)$ =.351, p = .789.

Taking steps to change a drug use problem

Although the present study was designed to conduct a third multiple regression analysis using predictor variables to predict participant taking steps to change a drug use problem, violations in normality of residuals and homoscedasticity prohibited further analysis.

Discussion

This study revealed several findings relevant to motivation to change

Table 1: Descriptive Statistics for all Tested Variables (N=78).

	AAI	Recognition	Ambivalence	RDFS_AVG	Taking_steps	Sessions
Mean	5.521	30.739	12.077	3.662	36.385	5.115
Std. Deviation	2.713	7.054	4.521	.914	5.751	3.844

Table 2: Correlations between Predictor Variables and Recognition.

		Recognition	AAI	RDFS_AVG	sessions
Recognition	Pearson Correlation	1	.615**	.272*	.043
	Sig. (2-tailed)		< .001	.016	.709
	N	78	78	78	78
AAI	Pearson Correlation	.615**	1	.140	.178
	Sig. (2-tailed)	<.001		.272	.119
	N	78	78	78	78
RDFS_AVG	Pearson Correlation	.272*	.140	1	-.086
	Sig. (2-tailed)	.016	.221		.453
	N	78	78	78	78
sessions	Pearson Correlation	.043	.178	-.086	1
	Sig. (2-tailed)	.709	.119	.453	
	N	78	78	78	78

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 3: Regression Analysis Summary for Variables Predicting Recognition.

	Sum of Squares	df	Mean Square	F	Sig.	R	R^2	Adj. R^2
Regression	1592.685	3	530.895	17.547	<.001	.645	.416	.392
Residual	2238.921	74	30.256					
Total	3831.607	77						

Table 4: Beta Weights and Structure Coefficients for Variables Predicting Recognition.

Predictor	*B*	*SE B*	*β*	*t*	*p*	r_s^2
RDFS_AV	1.420	.697	.184	2.037	.045	.178
Sessions	-.088	.167	-.048	-.525	.601	.000
AAI	1.554	.238	.598	6.536	<.001	.908

in SUD treatment, in particular with regard to one's recognition of an SUD. As expected, one's involvement in substance abuse community support strongly predicted one's recognition of a substance use problem. Additionally, the participant's perception of relational depth with an individual counselor statistically significantly (p = .045) predicted the participant's recognition of a substance use problem, and there was an approximate medium correlation between these factors (r = .27). Regarding ambivalence about a substance use problem, none of the predictors in the study predicted participant ambivalence. Moreover, the study's findings regarding participant takings steps to change a substance use problem could not be interpreted due to the gross violations observed in statistical assumptions. Additionally, while not a part of the original study's intended purpose, an interesting finding included that the number of individual sessions was not related to the participant's reported average relational depth with the participant's individual counselor.

Recognition of a substance use problem

From a motivational perspective, Miller and Rollnick [14] have described that recognition of an SUD is an indicator of *change talk*, whereby a person engages in change talk when one considers making change. Prochaska, Norcross, and DiClemente delineated *stages of change* wherein one in an early stage exhibits high denial and low recognition of a problem. From this perspective, as a person moves through stages, one exhibits less denial, greater recognition of a problem, and will take more steps to change a problem. Accordingly, one should experience less severity of the problem with time. The authors supported this theory in their finding of reduced alcohol use severity in adults with severe and persistent mental illness, such that as participants experienced greater recognition of a problem, they gradually took more steps to change the problem, and subsequently experienced lower alcohol use severity. Additionally, participant endorsement of items on the recognition subscale has been found to be positively correlated with participant taking steps to change a problem.

The strong correlational relationship between substance abuse community support involvement and recognition of a SUD is expected and consistent with literature supporting the positive effects of involvement in alcoholics anonymous on substance use. Studies have demonstrated that participation in AA and other groups predicts short-term and long term abstinence. Clients who become involved in working steps with a sponsor may be more likely to recognize a substance use disorder. Indeed, the first step according to AA is, "We admitted we were powerless over alcohol- that our lives had become unmanageable. The suggesting that recognition of a problem is a feature of involvement in AA. Indeed, the author incorporated working steps into scoring the AA involvement index.

The second meaningful finding from this study suggests that the participant's experience of RD appeared to play a role in the participant's recognition of an SUD in treatment. This finding is consistent with studies of other therapeutic relationship factors, namely: the counselor's unconditional positive regard (UPR), empathic understanding of the client, and congruence or genuineness, key constructs in RD. In meta-analyses of the counselor's UPR, empathic understanding, and congruence, average correlations ranged between r =.2-.3 suggesting small-medium, but consistent positive correlations across various counseling outcomes, similar to the medium correlation found in the present study between RD and recognition of an SUD (r = .27). At a minimum, RD may contribute positively to therapeutic outcomes at a magnitude that is consistent with other theoretically grounded factors of the therapeutic relationship.

This finding is also consistent with research more specifically related to SUD treatment outcomes. For example, the counselor's expression of empathy appears to be robustly related to drinking outcomes. More

recently, the authors found that empathic resonance and therapeutic bond predicted 7.5% of the variance explained in drinking. Another key construct in RD, the counselor's unconditional positive regard for the client was modestly related to psychosocial problems and negative consequences of drinking in another study. Finally, the therapeutic alliance, which is significantly related to RD predicts treatment retention, as well as treatment engagement and use. These findings are substantively relevant to the current study because recognition of a problem is related to treatment retention, treatment readiness, and treatment engagement, as well as alcohol use and relapse.

Participants who perceive greater RD with their individual counselors may be more likely to experience opportunities to have genuine discussions about the consequences and impact of their substance use. Mearns and Cooper [2,3] have noted that in moments of depth, clients have discussions about deeply personal matters and questions of existence. When facilitating RD, a strong therapeutic relationship characterized by genuineness, empathic understanding, and unconditional acceptance increasingly creates the safety for the client to become vulnerable. Higher participant endorsement of RD may indicate that the client not only perceives a strong therapeutic alliance with the counselor, but also feels that the counselor respected their own choice and direction in recognition of a substance use problem. Additionally, Mearns and Cooper described that clients will feel *seen* beneath superficial levels of relating, and there will be *mutuality* in the relationship. It may be that in counseling relationships characterized by greater RD, participants felt more equality in the relationship, less pressure to respond in socially desirable ways, and enhanced freedom to recognize the severity of a substance use problem.

Overall, the present study demonstrates the most meaningful findings with regard to a participant's recognition of a substance use problem. Findings concerning the other underlying factors of motivation to change as conceptualized by Miller and Tonigan [12] were difficult to interpret in light of the greater construct of motivation to change. None of the predictors in the model meaningfully predicted variance accounted for in the participant's ambivalence about a substance use problem. Miller and Tonigan [12] defined ambivalence as a substance user's *uncertainty* about having a substance use problem. In the present study, RD was more related to the participant's recognition of an SUD as opposed to the participant's *ambivalence* about an SUD. RD may be more associated with moments of client discovery and connection to personal struggles as opposed to unresolved thoughts and feelings as described by change theorists.

Length of treatment and rd

Another notable finding in the study was that the number of individual sessions was not related to relational depth scores (r = -.089). This finding is consistent with a prior RD study by Wiggins. Namely, Wiggins and colleagues found that the client's number of weeks in counseling was not related to the presence of relational depth in client-identified significant events in counseling. Taken together, these findings suggest that the development of RD may be more associated with the quality of contact as opposed to amount of exposure to individual counseling.

This finding is surprising because it is inconsistent with the treatment-dosage literature. In their systematic review of the literature, Hansen and colleagues determined that in randomized controlled trials comparing non-directive forms of therapy with cognitive-behavioral interventions, moderate treatment gains in mental health symptoms including panic, anxiety, and depressive symptoms occurred at a range of 9-15 sessions across studies. This finding is consistent with a recent meta-analysis of Humanistic-Experiential Psychotherapies (HEPs), such that large treatment effects in mental health symptoms occurred at an average of 20 sessions across studies. Dose-response (therapeutic session to improvement) researchers suggested that clients need to attend between 13-18 sessions to achieve at least a moderate improvement of mental health symptoms in therapy. Whereas such findings regard outcomes in mental health counseling, other findings suggest similar patterns in SUD treatment. For example, empathic resonance and therapeutic bond predict drinking outcomes after eight sessions in treatment. Additionally, when counselors utilize spirit of motivational interviewing only (SOMI) interventions, which rely only on the therapeutic relationship without the technical aspects of MI, statistically significant changes in drinking outcomes occur at eight sessions. Taken together, these findings suggest that a linear relationship exists between the delivery of humanistic psychotherapies (reliant upon the therapeutic relationship as the central component for change) and constructs consistent with client improvement from humanistic therapies across outcomes in general psychotherapy and SUD treatment. Comparison of the present finding that participants developed RD regardless of treatment-dosage with this literature suggests that RD may be unique to other humanistic constructs.

Limitations

The present study presents a promising initial investigation into RD in SUD treatment, yet results should be considered within the context of several limitations. The greatest limitations in the current study concern the sample of the study. The relatively low sample size in the study appears to have limited the potential for more extensive statistical analyses of the present study. The present study may have been able to explore a greater number of predictors of the underlying factors of motivation to change as measured by SOCRATES [12]. Additionally, a majority of participants in the study comprised a higher proportion of individuals in inpatient treatment. Participants in inpatient treatment may have been more likely to recognize a substance use problem than those in outpatient treatment.

Another limitation observed in the study's sample concerns the lack of a diverse sample: approximately 81% of the sample identified as White/Caucasian, limiting the external validity of the study findings. RD may be experienced or perceived differently by members of other races. Therefore, future studies should involve intentional sampling from treatment centers in regions with more diverse populations.

Implications for clinical practice

The first clinical implication concerns the finding regarding substance abuse community support involvement and recognition of a substance use problem. This finding reaffirms prior research indicating that involvement in substance abuse community support is related to enhanced clinical outcomes. More specifically, it may be that clients become more aware of a problem with substance use when they are also involved in substance abuse community support groups of some type. SUD treatment programs may want to consider how they can integrate substance abuse community support groups into client treatment. In a greater sense, SUD treatment counselors may focus on how they can enhance client engagement in substance abuse community support groups for clients identified as having low recognition of a substance use problem.

With regard to program structure, the number of individual client sessions may not be related to RD in the therapeutic relationship in

SUD treatment. For SUD treatment programs with limited counselor availability and resources, facilitation of RD may have more to do with the quality of contact within the therapeutic hour, and this quality of contact may hinge on the counselor's ability to provide the conditions necessary for relational depth. Mearns and Cooper [2,3] described several considerations for facilitating relational depth with clients to increase mutuality in the therapeutic relationship. For clinicians who work with clients exhibiting low recognition of a substance use problem and a lack of progress in counseling, supervisors may incorporate supervisee self-assessment to spark discussions about the therapeutic relationship or the quality of contact with clients in session. In the interest of program evaluation and enhancement of clinical outcomes, treatment programs might utilize measures such as the RDFS or the Relational Depth Inventory (RDI) to assess the extent to which clients experience RD with counselors.

Conclusion

Despite the limitations identified in the present study, it would seem that RD is, at minimum, a variable worth further investigation in addictions research. Miller and Moyers [18] called for the additional study of treatment process variables, as well as relational factors in addictions research. In response to this challenge, the present study has revealed that client experiences of RD may have a meaningful relationship with the client's recognition of an SUD. It remains unclear, however, how RD might contribute to this relationship, and more research is needed to this end. Additionally, the present study's findings appear to support that client participation in substance abuse community support groups may be a helpful adjunct to SUD treatment, particularly with regard to recognition of a substance use problem. Whether these additional treatment processes work in conjunction in their relationship with recognition of a substance use problem, is also unknown. Taken together, one might conclude that client experiences of RD in individual counseling and client involvement in substance abuse community support groups seem to be beneficial to a holistic SUD treatment approach.

Statement of informed consent

All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2000 (5). Informed consent was obtained from all patients for being included in the study.

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