

Relating Therapist Characteristics to Client Engagement and the Therapeutic Alliance in an Adolescent Custodial Group Substance Misuse Treatment Program

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Relating therapist characteristics to client engagement and the therapeutic alliance in an adolescent custodial group substance misuse treatment program

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Abstract

Background: Client engagement in substance misuse treatment programs is directly associated with positive treatment outcomes. The nature of these programs means there are often difficulties engaging and retaining clients, but authors have consistently found a strong therapeutic alliance is associated with client engagement. While research has focused on the association between the alliance and engagement, the factors that influence the therapeutic alliance have received less attention.

Objective: To examine therapists' characteristics, namely therapists' stress and empathy levels, as potential predictors of client engagement and the therapeutic alliance, within an adolescent substance misuse group treatment program.

Method: The sample included 84 adolescent clients and 14 therapists from a Secure Training Centre in England. Client engagement in the treatment program was observed, while self-reporting measures assessed the therapeutic alliance (client and therapist-rated), and therapists' stress and empathy levels.

Results: Multiple regression analysis revealed that therapists' stress levels negatively influenced the therapeutic alliance and had a curvilinear relationship with client engagement, indicating that stress is not exclusively negatively related to engagement. Although stress was found to negatively impact both cognitive and affective empathy, neither cognitive nor affective empathy were significantly related to client engagement or the therapeutic alliance.

Conclusions: This study demonstrates the importance of therapist characteristics on client engagement and the TA. Within practice stress can have a positive impact on

clients' engagement. Nevertheless, therapists may need additional support to deal with stress effectively. Therapists' empathy may too be fundamental to client engagement, but only if it is perceived by clients.

Keywords: Client Engagement; Alliance; Substance Misuse Treatment; Adolescent

Introduction

Client engagement in treatment programs is directly associated with positive treatment outcomes across a variety of treatment modalities, including psychotherapy (Martin, Garske, & Davis, 2000), family therapy (Quinn, Dotson, & Jordan, 1997), and substance misuse (Rowan-Szal, Joe, Simpson, Greener, & Vance, 2009; Simpson & Joe, 2004). Although the term *engagement* is frequently used in the existing literature, Holdsworth, Bowen, Brown, and Howat (2014) found there have been inconsistent definitions and numerous approaches to measuring engagement. These include monitoring clients' attendance (Joe, Simpson, & Broome, 1999), participation (Boardman, Catley, Grobe, Little, & Ahluwalia, 2006), and efforts made between sessions (LeBeau, Davies, Culver, & Craske, 2013). Furthermore, there are limited tools for assessing engagement (Macgowan, 2000), and it has frequently been measured by self-reports, including the Client Evaluation of Self and Treatment (CEST; Joe, Broome, Rowan-Szal, & Simpson, 2002), and only occasionally by observational methods, i.e. the Groupwork Engagement Measure (GEM; Macgowan, 1997). As self-reports are reliant on the clients' perspective of their own engagement and therefore may not predict subsequent behavior (Hardeman, Kinmonth, Michie, & Sutton, 2011), behavioral-based assessments of participation in treatment, i.e. the GEM, may be more reliable (Holdsworth et al., 2014; Tetley, Jinks, Huband, & Howells, 2011). Although the reliability of measuring engagement has been questioned, authors have consistently argued that the effectiveness of treatment programs relies heavily upon client engagement (Simpson, Joe, Rowan-Szal, & Greener, 1995). Much of the engagement

research has been conducted within substance misuse treatment (SMT; Rowan-Szal et al., 2009), as client engagement is challenging to develop within this treatment modality.

Developing engagement in SMT can be difficult due to the routine use of mandates, clients refuting their problem or having previously been unsuccessful in treatment (Joe et al., 1999). Furthermore, the majority of clients initiated their substance use during adolescence (Stanis & Andersen, 2014). Engaging adolescents in treatment is substantially harder due to stigma concerns about negative labeling, embarrassment of receiving treatment and access issues (Substance Abuse and Mental Health Services Administration [SAMHSA], 2006). Consequently, adolescent substance misusers are possibly the most resistant to treatment, and the hardest client group to engage. In recognition of this, researchers have attempted to identify factors that improve engagement. One factor which has been recognized as critical is the therapeutic alliance (TA; Horvath, Del Re, Flückiger, & Symonds, 2011), which is conceptualized as an agreement between the client and therapist on the goals of therapy, the therapeutic tasks needed to attain those goals, and the bond between clients and therapist (Bordin, 1979).

The TA within SMT programs has received substantial empirical attention, with authors consistently finding a strong alliance is associated with greater client engagement and positive treatment outcomes (see review by Meier, Barrowclough, & Donmall, 2005). Various measures have been developed to assess the TA; each has distinct theoretical underpinnings and captures specific components of the alliance. A widely used measure is the Working Alliance Inventory (WAI; Horvath & Greenberg, 1986). Based on Bordin's (1979) academic work it assesses three aspects of the

alliance: tasks, bonds and goals. Three perspectives of the TA can be measured; client, therapist and observer. Research has consistently revealed a lack of agreement between these three ratings of alliance in SMT (Fenton, Cecero, Nich, Frankforter, & Carroll, 2001), indicating that measures from different perspectives are not interchangeable (Tichenor & Hill, 1989); therefore highlighting the importance of measuring different perspectives (Fenton et al., 2001). Despite this, research has revealed that client-rated (Connors et al., 2000; Fiorentine, Nakashima, & Anglin, 1999), therapist-rated (Connors et al., 2000; Simpson, Joe, Rowan-Szal, & Greener, 1997) and observer-rated alliance (Boardman et al., 2006) all predict client engagement.

The effectiveness of treatment revolves around the development of a strong TA (Joe, Simpson, & Broome, 1998). However, few studies have investigated what factors predict the alliance (Meier, Barrowclough, et al., 2005). The research that has been conducted has suggested that clients' positive psychosocial characteristics, i.e. self-esteem and motivation, can strengthen the alliance (Meier, Donmall, Barrowclough, McElduff, & Heller, 2005) and may explain differences in client engagement and ultimately treatment outcomes. Additionally, therapists vary significantly in their effectiveness, even when delivering standardized treatment (Rogers, 1957). Consequently, the therapist's manner (Heinonen et al., 2014) and characteristics are likely to be important influences on the TA and client engagement.

One characteristic of therapists, which is identified as a critical component for effective treatment (Rogers, 1957), and therapist effectiveness (Najavits & Weiss, 1994), is their level of empathy. Therapists' empathy is an interpersonal skill (Chung & Bemak, 2002), which is assessed by the Motivational Interviewing Skills Code (MISC;

Miller, Moyers, Ernst, & Amrhein, 2003), to enhance clients recovery in SMT (Miller & Rollnick, 2002). Previous research has found that therapists' empathy is positively related to client engagement (Boardman et al., 2006), and a facilitator of client-rated (Davis, Ancis, & Ashby, 2014), therapist-rated (Najavits et al., 1995), and observer-rated alliance (Boardman et al., 2006). However, these studies were completed with adults in smoking cessation (Boardman et al., 2006), cocaine (Najavits et al., 1995) and outpatient SMT (Davis et al., 2014). The impact of therapists' empathy on developing a TA with adolescent clients appears yet to have been investigated. Therapists' development of empathy may be more difficult for adolescents, due to their cognitive capacity, reluctance to engage, and infrequent agreement with therapists on therapeutic goals (Oetzel & Scherer, 2003). Additionally, there are other components, such as therapists' level of work-related stress, which are likely to diminish therapists' empathy (Dumitru & Cozman, 2012).

Work-related stress is a psychosocial characteristic which can alter psychological wellbeing, normal functioning (Schuler, 1980) and ultimately have a negative impact on most work environments (Cummins, 1990). For substance misuse therapists, work-related stress can often be a result of managing a large caseload, strict time restraints and extensive reporting requirements (Broome, Knight, Edwards, & Flynn, 2009). As developing an alliance with clients is a fundamental task for therapists, work-related stress is likely to negatively impact upon the TA, service to the clients (Lawson, 2007), and ultimately client engagement. Surprisingly, research into the influence of therapists' stress on client engagement in SMT, is limited and conflicting. While some authors found higher therapists' stress levels were negatively associated with client engagement

(Landrum, Knight, & Flynn, 2012; Simpson et al., 2009) among adults, others found therapists' stress was not a significant predictor of engagement (Greener, Joe, Simpson, Rowan-Szal, & Lehman, 2007; Simpson, Joe, & Rowan-Szal, 2007). Similarly, the research on the association between therapists' stress and the TA is both limited and conflicting. While Greener et al. (2007) found higher therapists' stress levels were negatively associated with *client*-rated alliance, others found therapists' stress was not a significant predictor of *client*-rated alliance (Crits-Christoph et al., 2011; Landrum et al., 2012; Simpson et al., 2007, 2009) among adults. The influence of therapists' stress levels on *therapist*-rated alliance appears yet to be researched. The limited research regarding the impact on engagement and the TA is surprising given the negative impact stress has upon most work environments (Cummins, 1990). However, what research has been conducted indicates that stress has either a negative influence or no influence on client engagement or the TA in SMT.

1.1. Research question

~~Based on existing research, a pathway model was proposed, which illustrates the relationship between therapists' stress, empathy (cognitive and affective), the TA (client and therapist-rated) and client engagement (see Figure 1).~~ The purpose of the study was to examine ~~this model and verify these~~ relationships between therapists' stress, empathy (cognitive and affective), the TA (client and therapist rated) and client engagement in an adolescent group SMT program. Based on previous research, it was expected that therapists' stress would negatively influence therapists' empathy (cognitive and affective), the TA (client and therapist-rated), and client engagement,

while therapists' empathy (cognitive and affective) would positively influence the TA (client and therapist-rated) and client engagement. The hypotheses of this study were:

~~H1: The three predictor variables (cognitive empathy, affective empathy and stress) and two partial mediator variables (client and therapist-rated alliance) will significantly influence client engagement~~

~~H2: The three predictor variables (cognitive empathy, affective empathy and stress) will significantly influence client-rated alliance~~

~~H3: The three predictor variables (cognitive empathy, affective empathy and stress) will significantly influence therapist-rated alliance~~

H1: The predictor variables (cognitive empathy, affective empathy, stress and client and therapist-rated alliance) will significantly predict client engagement

H2: Cognitive empathy, affective empathy and stress will significantly predict client-rated alliance

H3: Cognitive empathy, affective empathy and stress will significantly predict therapist-rated alliance

H4: Therapists' stress will significantly and negatively influence empathy (cognitive and affective)

2. Method

2.1. Design

The current study was a correlational design utilizing cross-sectional survey and observational methodology. For the first regression analysis the predictor variables were therapists' cognitive empathy, affective empathy, stress and client and therapist-rated

alliance. The outcome variable was client engagement. For the second regression analysis the predictor variables were therapists' cognitive empathy, affective empathy and stress. The outcome variables were client and therapist-rated alliance. For the third regression analysis the predictor variable was therapist stress. The outcomes variable was therapist's empathy (cognitive and affective).

~~The predictor variables were therapists' cognitive empathy, affective empathy and stress levels. Therapists' stress levels were also examined as a predictor of both cognitive and affective empathy. The outcome variable was client engagement. Client and therapist-rated alliance were partial mediator variables between the predictors and outcome variable. The pathway model is shown in figure 1.~~

2.2. Participants

A total of 84 adolescents that resided at a Secure Training Centre (STC), and 14 staff members, who facilitated group SMT programs at the STC, participated in the study. All participants were involved in the SMT, as either a client or therapist, between January and April 2015. Participation was voluntary and not rewarded.

Of the 87 clients approached to participate in the study, one parental opt-out consent form was received and two clients refused to participate. Of the 84 clients that participated, 63 were male ($M = 15.9$ years, $SD = 0.86$) and 21 were female ($M = 16.7$ years, $SD = 0.75$). Ages ranged from 13 years to 18 years. The length of custodial sentence already served at the STC ranged from 4 weeks to 14 months ($M = 4.5$ months, $SD = 4.23$).

Of the 14 therapists who participated, six were male ($M = 27.5$ years, $SD = 6.60$) and eight were female ($M = 28.3$ years, $SD = 5.14$). Ages ranged from 23 years to 42 years. The length of service facilitating SMT within the STC ranged from 7 months to 11 years ($M = 3.3$ years, $SD = 2.62$).

2.3. SMT Program

As part of the STC routine, clients were mandated to participate in a group SMT program. The SMT program aimed to educate clients about risks of substance misuse, relapse prevention, harm reduction and stress management. Treatment sessions included educational material, psychosocial support, group discussions, node-mapping, and behavioral role-plays. The program runs weekly for 60 to 90 minutes for 10 weeks and is completed bi-annually.

2.4. Measures

2.4.1. Basic Empathy Scale (BES; Jolliffe & Farrington, 2006)

Therapists' empathy was measured using the BES, which is a 20-item self-rating measure, and assesses both cognitive empathy (9 items) and affective empathy (11 items). Questions are answered on a 5-point Likert scale with values ranging from 1, "Strongly Disagree" to 5, "Strongly Agree". Three empathy scores can be calculated from the BES, cognitive (Min = 9; Max = 45), affective (Min = 11; Max = 55) and total (Min = 20; Max = 100). A high score on the BES indicates a higher level of empathy. The reliability estimates are $\alpha = .85$ and $\alpha = .79$ for the affective and cognitive empathy

subscales, respectively (Jolliffe & Farrington, 2006), and validity of .87 (Albiero, Matricardi, Speltri, & Toso, 2009).

2.4.2. *Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983).*

Therapists' stress levels were measured using the PSS, which is a 10-item self-rating measure, and assesses perceived stress during the last month. Questions are answered on a 5-point Likert scale with values ranging from 0, "Never" to 4, "Very Often". A high score on the PSS (Min = 0; Max = 40) indicates a higher level of perceived stress. The PSS has demonstrated good reliability, $\alpha = .85$ and validity .82 (Morgan, Umberson, & Hertzog, 2014).

2.4.3. *Working Alliance Inventory-Short (WAI-S; Tracey & Kokotovic, 1989)*

The Working Alliance Inventory (WAI; Horvath & Greenberg, 1986) was based on Bordin's (1979) academic work and assesses three aspects of the alliance: tasks, bonds and goals. The WAI is theoretically based on the alliance with individuals; however there is currently no WAI specifically for use within group intervention (Robak, Kangos, Chiffriller, & Griffin, 2013). To increase the likelihood of [participation](#), [compliance](#) the WAI-S, which contains 12 items from the original 36, was used in this study. The WAI-S is a self-rating measure and questions are answered on a 7-point Likert scale with values ranging from 1, "Not at all true" to 7, "Very true". Four scores can be calculated from the WAI-S; task (Min = 4; Max = 28), bond (Min = 4; Max = 28), goal (Min = 4; Max = 28), and total alliance (Min = 12; Max = 84). A high score on the WAI-S indicates a stronger TA. Clients and therapists completed parallel versions of the

WAI-S independently, (Client; WAI-S-C, Therapist; WAI-S-T). The reliability estimate for the WAI-S-C is $\alpha = .98$, and $\alpha = .95$ for the WAI-S-T (Tracey & Kokotovic, 1989).

2.4.4. Groupwork Engagement Measure (GEM; Macgowan, 1997)

The GEM is a 37-item, observer-rated measure, which assesses seven dimensions of clients' engagement in treatment: attendance, contributing, relating (to worker and with members), contracting, and working (on own problems, with others' problem). The GEM was specifically developed for assessing client engagement within small groups (i.e., 3 to 12 members) in treatment programs (Macgowan, 2000). The GEM is answered on a 5-point Likert scale with values ranging from 1, "*None of the time*" to 5, "*Most of the time*". A high score on the GEM (Min = 37; Max = 185) indicates a greater level of engagement. The GEM has good reliability $\alpha = .97$ and validity .42 (Macgowan, 2000).

2.5. Procedure

Following ethical approval from Coventry University and permission from the STC Director to access the sample population, parental consent was requested through an opt-out form. Not returning the form within two weeks implied consent for client participation. Consent was obtained from parents and participants. Each group consisted of one therapist administering the program and between three and eight clients, in accordance with the program protocols. Due to the STC routine it was not possible to randomize the clients into groups. However, each group of clients had the same therapist throughout the whole treatment (weekly for 10 weeks). Prior to one mid-

program session (session four to six), therapists completed the BES, PSS, and a WAI-S-T for their alliance with each client in the group SMT program. Simultaneously clients completed the WAI-S-C for their alliance with the therapist administering the program. After the questionnaires were completed, each group SMT program was observed. A mid-program session (session four to six) was observed as engagement can alter in the initial and final sessions (Boardman et al., 2006). All participants were informed that the SMT program would be observed; however clients were not specifically informed that their engagement would be assessed, as this may have affected their level of engagement. Fourteen group SMT programs were observed by the lead author, using a formal non-participatory observational method (see review by Cotton, Stokes, & Cotton, 2010), and each client's engagement was assessed using the GEM. After the questionnaires were completed and the program was observed, all participants were debriefed and provided with withdrawal details.

3. Results

Multiple linear regression analysis was used to ~~develop a model for predicting~~ client engagement in a group SMT program, from the predictor variables (therapists' cognitive empathy, affective empathy and stress levels, and client and therapist-rated alliance). Means, standard deviations, minimum and maximum scores of these individual variables for the study sample are presented in Table 1.

3.1. Preliminary analysis

Preliminary analysis was performed to check on assumptions for regression (linearity, multicollinearity, presence of outliers and residuals, influential cases and

homoscedasticity). Analysis of the WAI-S subscale (i.e., task, goal, bond) correlations indicated that subscales were correlated above $r = .89$ and $r = .87$ for clients and therapists, respectively. Consequently, all analysis incorporating client or therapist-rated alliance variables utilized the WAI-S total alliance scores. Excluding the WAI-S subscales, analysis of tolerance and VIF statistics indicated that predictors were not multicollinear. Preliminary analysis identified two outliers; however a Cook's Distance value of 0.29 showed no evidence that these outlier scores influenced the line of best fit in the regression solution (Cook & Weisberg, 1982). The ZPRSID * ZPRED plot did not show a uniform spread of residuals along the range of the predicted values, indicating homoscedasticity. The same plot indicated that one predictor variable had a curvilinear relationship with client engagement. To model this curvilinear relationship the stress scores were centered and the centered stress variable was then multiplied by itself to form the squared stress term (Howell, 2002).

As clients were nested in 14 different treatment groups, intraclass correlation coefficients (ICC) and design effects (DEff) relating to client variables (client engagement and client-rated alliance) were computed to assess whether multilevel modeling was necessary. Authors have suggested that if ICCs were lower than .10 (Hox, 2010) and DEff values were lower than 2 (Muthen & Satorra, 1995) the effects of nesting may be considered trivial and the nested structure of the data can be disregarded. Results showed the ICCs were .074 for WAI-S-C and .106 for GEM and the DEffs were 1.37 for WAI-S-C and 1.53 for GEM. Consequently, confirming that the contextual effects of the 14 treatment groups was trivial, and therefore the nested structure of the data was not taken into consideration in the analysis.

Partial correlations were used to explore the relationship between both client engagement and the TA with each of the three predictor variables (cognitive empathy, affective empathy and stress), while controlling individually for clients' length of custodial sentence already served at the STC and therapists' length of service facilitating SMT programs within the STC. An inspection of the zero order correlations suggested that controlling for clients' length of custodial sentence already served at the STC and therapists' length of service facilitating SMT within the STC had no significant effect on the strength of the relationship between both client engagement and the TA with each of the predictor variables.

3.2. H1: Prediction of client engagement

The hypothesis (1) that client engagement would be predicted by ~~the three predictor variables (cognitive empathy, affective empathy and stress) and two partial mediator variables (client and therapist-rated alliance)~~ the predictor variables (cognitive empathy, affective empathy, stress and client and therapist-rated alliance) was supported by the results, with a strong association (Multiple $R = .78$). Together, the five variables accounted for 62% of the variation in client engagement (R^2), $F(6, 77) = 20.94$, $p < .001$, indicating the model was significant, with a large effect size $f^2 = 1.63$.

Table 2 shows that the squared term for therapists' stress ($t = 2.79$; BCa 95% CI [0.04, 0.22]; $p < .01$), and client-rated alliance ($t = 5.61$; BCa 95% CI [0.84, 1.77]; $p < .001$) were positively, and significantly related to client engagement as the 95% confidence interval limits did not encompass zero or a negative value. Results indicated that as the squared term for therapists' stress increased by 1 SD, client engagement increased by 0.27 SD. This indicated that therapists' stress and client engagement had

a curvilinear, U-shaped relationship, i.e. stress and engagement were negatively correlated up to a certain point, but beyond this stress positively influenced client engagement. Results showed that as client-rated alliance increased by 1 SD, client engagement increased by 0.69 SD, indicating a positive relationship. These interpretations were true only if the effects of the other variables were held constant. The standardized regression coefficient showed that therapists' stress levels and client-rated alliance were significant predictors of client engagement.

Table 2 shows that cognitive empathy ($t = 0.34$; BCa 95% CI [-2.17, 3.05], $p = .737$), affective empathy ($t = 0.72$; BCa 95% CI [-0.55, 1.17], $p = .473$) and therapist-rated alliance ($t = 0.63$; BCa 95% CI [-0.39, 0.76], $p = .531$) were positively, but not significantly related to client engagement. However, as the 95% confidence interval limits encompassed zero, it cannot be ruled out that there was a zero or weak negative correlation. The standardized regression coefficient showed that cognitive empathy, affective empathy and therapist-rated alliance were not significant predictors of client engagement.

3.3. H2: Prediction of client-rated alliance

The hypothesis (2) that client-rated alliance would be predicted by the three predictor variables (cognitive empathy, affective empathy and stress) was supported by the results, with a moderate association (Multiple $R = .35$). Together, the three predictor variables accounted for 12% of the variation in client-rated alliance (R^2), $F(4, 79) = 2.71$, $p = .036$, indicating the model was significant, with a small effect size, $f^2 = 0.14$.

Table 3 shows that therapists' stress ($t = -2.28$; BCa 95% CI [-0.99, -0.07]; $p = .025$) was negatively, and significantly, related to client-rated alliance as the 95% confidence interval limits did not encompass zero or a positive value. Results indicated that if the effects of the other variables were held constant, as stress levels increased by 1 SD client-rated alliance decreased by 0.25 SD. The standardized regression coefficient showed that therapists' stress was a significant predictor of client-rated alliance.

Table 3 also shows that cognitive empathy ($t = 1.36$; BCa 95% CI [-0.64, 3.41], $p = .178$) was positively but not significantly, and affective empathy ($t = -0.91$; BCa 95% CI [-0.79, 0.29], $p = .364$) was negatively but not significantly, related to client-rated alliance. However, as the 95% confidence interval limits encompassed zero, it cannot be ruled out that there was a zero or weak negative (cognitive empathy) or weak positive (affective empathy) correlation. The standardized regression coefficient showed that cognitive and affective empathy were not significant predictors of client-rated alliance.

3.4. H3: Prediction of therapist-rated alliance

The hypothesis (3) that therapist-rated alliance would be predicted by the three predictor variable (cognitive empathy, affective empathy and stress) was supported by the results, with a reasonable association (Multiple $R = .41$). Together, the three predictor variables accounted for 16% of the variation in therapist-rated alliance (R^2), $F(4, 79) = 4.00$, $p = .005$, indicating the model was significant, with a moderate effect size, $f^2 = 0.20$.

Table 4 shows that therapists' stress ($t = -3.25$; BCa 95% CI [-1.00, -0.24]; $p = .002$) was negatively, and significantly related to therapist-rated alliance as the 95%

confidence interval limits did not encompass zero or a positive value. Results indicated that if the effects of the other variables were held constant, as stress levels increased by 1 SD, therapist-rated alliance decreased by 0.38 SD. The standardized regression coefficient showed that therapists' stress was a significant predictor of therapist-rated alliance.

Table 4 shows that cognitive empathy ($t = 0.49$; BCa 95% CI [-1.25, 2.07], $p = .626$) and affective empathy ($t = 0.15$; BCa 95% CI [-0.41, 0.48], $p = .881$) were positively, but not significantly related to therapist-rated alliance. However, as the 95% confidence interval limits encompassed zero, it cannot be ruled out that there was a zero or weak positive correlation. The standardized regression coefficient showed that cognitive and affective empathy were not significant predictors of therapist-rated alliance.

3.5. H4: Prediction of therapists' empathy

The hypothesis (4) that therapist's cognitive and affective empathy would be predicted by therapists' stress scores was supported by the results. Therapists' stress negatively and significantly predicted both cognitive ($\beta = -.37$; $t = -3.66$; BCa 95% CI [-0.02, -0.01]; $p < .001$) and affective empathy ($\beta = -.60$; $t = -6.92$; BCa 95% CI [-0.09, -0.05]; $p < .001$), as the 95% confidence interval limits did not encompass zero or a positive value. Stress accounted for 16% of the variation in cognitive empathy scores (R^2 , $F(2, 81) = 7.89$, $p < .001$, with a small effect size, $f^2 = 0.19$, and 40% of the variation in affective empathy (R^2 , $F(2, 81) = 26.58$, $p < .001$, with a large effect size, $f^2 = 0.66$).

The multiple linear regression analysis results partially supported hypothesis 1 as together the five variables influenced client engagement. However, individually only therapists' stress and client-rated alliance predicted client engagement. The results partially supported hypothesis 2 and 3 as together the three variables influenced both client-rated and therapist-rated alliance. However, individually only therapists' stress predicted client-rated and therapist-rated alliance. The results supported hypothesis 4, as therapists' stress significantly and negatively influence cognitive and affective empathy.

4. Discussion

This study is one of the first to examine therapists' characteristics, namely therapists' empathy and stress levels, as potential predictors of client engagement and the TA, within an adolescent group SMT program. Overall, the findings revealed strong client and therapist-rated alliances, and high levels of client engagement in SMT. Therapists demonstrated high levels of empathy (cognitive and affective), and relatively low levels of stress. As predicted in hypothesis 1, ~~the three therapist characteristics (cognitive empathy, affective empathy and stress) and two partial mediator variables (client and therapist-rated alliance)~~ the predictor variables (cognitive empathy, affective empathy, stress and client and therapist-rated alliance) together demonstrated a significant relationship with client engagement, explaining 62% of the variance in engagement scores. Although this suggests that other therapist and client characteristics, and perhaps program characteristics, may have an important effect on client engagement, the variables measured accounted for over half of the variance in

engagement scores, and thereby reveal an important insight into the influence these therapist characteristics have on client engagement. Furthermore, this research indicates that therapist characteristics and program delivery appear to be more influential on engagement than client characteristics. It is therefore neglectful to focus only on client characteristics when investigating the determinants of client engagement. This provides optimism as the manner in which a program is delivered is a dynamic characteristic, which can be adapted in order to improve engagement, unlike static client characteristics.

While the model was significant, further analysis revealed that only therapists' stress levels and client-rated alliance predicted client engagement. Therapists' stress levels were expected to have a negative influence on client engagement. However, the findings revealed a curvilinear, U-shaped relationship such that therapists' stress levels and client engagement were negatively correlated up to a certain point, but beyond this stress positively influenced client engagement. Low and high levels of stress positively influenced engagement, whereas mid-levels of stress negatively influenced engagement. These findings suggest a more complex relationship than indicated in previous findings, that revealed work-related stress had a negative influence (Landrum et al., 2012; Simpson et al., 2009), or no influence at all on client engagement (Greener et al., 2007; Simpson et al., 2007). Conversely the findings support suggestions that some therapists may be able to perceive highly stressful situation as a challenge (Boswell, Olson-Buchanan, & LePine, 2004). The current findings suggest that when therapists have low levels of stress they are unhindered by their concerns, and consequently clients are likely to engage. However, as therapists' stress levels increase

to a moderate level, this impacts on their work to the extent that clients become less engaged. It is plausible that moderate levels of stress may reflect a lack of concentration, motivation or positive affect towards their role as treatment facilitators, possibly because of the challenges associated with working with adolescent substance misusers. Moderate levels of stress require cognitive resources that are then not available for investing in developing a TA or engaging clients to the same degree as when there are low levels of stress. Paradoxically, according to the current findings, when therapists have high levels of stress, clients are more likely to be engaged. It is plausible that when therapists are intensely stressed, particularly if the stress is not work-related, they may unknowingly use the alliance with clients to distract themselves from their own concerns and regain a sense of therapeutic competency, which would consequently enhance the TA and client engagement. However, as the sample of therapists exhibited relatively low levels of stress in comparison to the normative PSS scores (Cohen & Williamson, 1988), it is possible that if therapists exhibited extreme stress, beyond that captured in the current study, it may negatively impact on work-related tasks. In addition, the PSS does not specifically measure either work-related or personal stress, and therefore the perceived stress is dependent on the therapists' interpretation. Although the findings of the current study indicate that high levels of stress are good for engagement, it is plausible this would only be for a limited period. If therapists are using their alliance with clients to distract themselves from their own concerns, this could be harmful for the client in the long term if the therapist reaches a point where they cannot cope with the stress or sustain their investment in clients' engagement. The current research identifies the value of supervisors identifying and

supporting therapists with sources of stress, to avoid a detrimental effect on client engagement. Future research should use a larger sample of therapists, where more extreme stress scores may be captured, to establish whether the relationship between therapists' stress and client engagement is cubic. Future research should consider examining the source of stress, to establish which has a greater influence on client engagement.

One of the most striking findings is that although clients and therapists completed parallel versions of the WAI-S, only client-rated alliance significantly predicted client engagement. Firstly, this supports previous research that different perspective ratings of the alliance are not interchangeable (Tichenor & Hill, 1989), and further demonstrates the importance of measuring both client and therapist-rated alliance (Fenton et al., 2001). Secondly, although the findings support research that found client-rated alliance predicted client engagement (Connors et al., 2000; Fiorentine et al., 1999), they contradict research which found therapist-rated alliance predicted client engagement in SMT (Connors et al., 2000; Simpson et al., 1997). It is plausible that therapist-rated alliance did not significantly predict engagement in the current study due to investigating the TA within a group program. Although therapists completed a WAI-S-T for their alliance with each client, it is possible that there could have been an element of group level response, whereby therapists rated the alliance on how they related to the group in general, rather than the individual client. In addition, the WAI-S is theoretically based on the alliance with individuals and does not examine the impact of group cohesion (sense of belonging in a group) or group climate (group member's perceptions of the group's therapeutic environment) on the TA. It is possible that group effects (cohesion and

climate) could have impacted on the TA (Kivligham & Tarrant, 2001). These limitations, together with the lack of interchangeability of alliance ratings, suggests that future research should also assess observer-rated alliance, to provide an objective third person perspective of the TA, as well as assess the effects of the group (cohesion and climate) on the TA. Despite these limitations, the current study revealed the importance of the TA in relation to client engagement, therefore emphasizing the need to establish factors that predict the alliance.

It was originally expected, based on previous literature (e.g. Miller et al., 2003; Rogers, 1957), that therapists' cognitive and affective empathy would have a positive influence on client engagement. Contrary to this hypothesis, cognitive and affective empathy were found to be unrelated to client engagement. This finding contradicts previous research which suggested empathy is positively associated with therapist effectiveness (Najavits & Weiss, 1994) and client engagement (Boardman et al., 2006). One way of explaining these findings is the use of the self-reporting BES, which examines therapists' perceptions of their empathy. Consequently, it does not necessarily reveal whether the therapist demonstrated empathy towards the client. This supports previous research which suggested that clients perceiving their therapist as empathic may be more important than therapists' empathy itself (Barrett-Lennard, 1962; Kirschenbaum, & Jourdan, 2005). Future research should therefore measure clients' perception of therapists' empathy, as this appears to be more important to client engagement. If further research confirms this, for treatment to be effective it should be delivered from a person-centred approach (Murphy, Thompson, Murray, Rainey, &

Uddo, 2009) which fosters therapists' empathy, and therapists should be trained in how to demonstrate high levels of empathy (Patterson, 1984).

The second aim of this study was to examine whether the three evaluated therapist characteristics (cognitive empathy, affective empathy and stress) influenced the TA (client and therapist-rated). As predicted in hypothesis 2 and 3, cognitive empathy, affective empathy and stress together demonstrated a significant relationship with both client and therapist-rated alliance, explaining 12% and 16% of the variance respectively. Firstly, this suggests that other therapist and client characteristics, not included in this study, may have an important effect on the alliance. Secondly, although this suggests that the three evaluated therapist characteristics have a higher influence on therapist-rated alliance; this is potentially due to the caveat of therapist-the three evaluated characteristics and therapist-rated alliance being assessed by self-reporting measures.

While the model was significant, further analysis revealed that only therapists' stress levels predicted client and therapist-rated alliance. As expected, therapists' stress levels negatively influenced both client and therapist-rated alliance. This supported research that found higher therapists' stress levels were negatively associated with client-rated alliance (Greener et al., 2007), but contradicts research which found therapists' stress was not a significant predictor of client-rated alliance (Crits-Christoph et al., 2011; Landrum et al., 2012; Simpson et al., 2007, 2009). Furthermore a unique focus of this study, not previously investigated, was the examination of the influence of therapists' stress levels on *therapist*-rated alliance; with results showing that therapists' stress levels had a significant influence on therapist-rated alliance. It is plausible that

higher levels of stress caused therapists to lack concentration and motivation, and required cognitive resources which were therefore not available to invest in building a TA.

Therapists' empathy was expected to positively influence both client and therapist-rated alliance. However, it was found to be unrelated to the TA, and therefore contradicts previous research which found therapists' empathy was important in the development of client (Davis et al., 2014), and therapist-rated alliance (Najavits et al., 1995). It is plausible that therapists' empathy was not a significant predictor of the TA in the current study due to the use of the BES in examining the therapists' perception of their empathy. The current findings were consistent with previous research which suggested that empathy is a more complex concept than Rogers (1957) recognized, and argued that further research is needed to understand therapeutic empathy and its effective application within treatment (Duan & Hill, 1996; Sexton & Whiston, 1994). Future research should focus on clients' perception of therapists' empathy, as this is possibly more important than therapists' self-reported perception of their empathy.

~~The moderator effect of the TA (client and therapist-rated) was not assessed in the current study. However, as the relationship between therapists' stress and client-rated alliance was significant, as was the relationship between client-rated alliance and client engagement, client-rated alliance appears to partially mediate the relationship between therapists' stress and client engagement. Client-rated alliance appears to enhance the negative influence of therapists' stress by partially mediating the curvilinear relationship between therapists' stress and client engagement into a negative association. It is plausible that if clients detect therapists' high level of stress, it may~~

~~affect their ability to form a positive TA with the therapist, which may consequently affect their level of engagement in SMT programs. Future research should examine whether the TA (client and therapist-rated) moderates the relationship between therapist characteristics and client engagement, to gain further understanding of the importance of therapist characteristics and the TA on client engagement within SMT programs.~~

Finally, as predicted in hypothesis 4, therapists' stress levels negatively influenced cognitive and affective empathy. Although this appears to support previous research which suggested that therapists' level of work-related stress is likely to diminish therapists' ability to be empathic (Dumitru & Cozman, 2012), the caveat that the PSS does not specifically measure either work-related or personal stress means it is unclear which type of stress negatively influences empathy. Despite this, the current research suggests that when therapists have high level of stress their empathy levels significantly decrease. However, as therapists' empathy does not directly influence the TA or client engagement, therapists' level of empathy does not mitigate the negative influence that therapists' stress levels have on the TA and client engagement. Consequently, therapists' empathy levels appear inconsequential compared to their stress levels. Although authors should consider identifying the source of stress in future research, the current study has important implications within practice, as to improve client engagement, therapists' level of stress must be controlled, irrespective of their empathy levels.

This study demonstrates the importance of therapist characteristics on both client engagement and the TA. Nevertheless the current study does have some limitations. Firstly, therapists' empathy and stress levels were assessed through self-reporting

measures, and therefore examined the therapists' perception of these evaluated characteristics. This does not necessarily indicate whether the client was aware of the therapists' stress level or if the therapist demonstrated empathy toward the client. Future research should therefore focus on examining the clients' perception of therapist characteristics. Additionally, it is important to acknowledge that there are numerous other therapist characteristics, i.e. positive regard, and client characteristics, i.e. motivation, which were not included in this study and may affect client engagement.

Secondly, the data is cross-sectional in nature, as measures were assessed at only one time point. This limits the ability to make conclusions about directionality. Follow-up studies should consider completing repeat assessments, which could examine how therapists' characteristics fluctuate and impact upon client engagement.

Thirdly, due to the nature of the STC, the participant sample was not able to be randomized. Consequently, clients completed the SMT program with peers from the same residential unit. The pre-established group dynamics could have affected the TA and engagement in treatment. Additionally, although the SMT program was a group intervention, the WAI-S specifically measures the individual client-therapist alliance. Consequently, the effect of group cohesion and climate on the TA was not assessed. Further research should examine the effects of the group on the TA, by assessing group cohesion, climate and environment. In addition, although the current study intended to focus on an adolescent prisoner sample, it was conducted with a relatively small sample within one SMT clinic, which questions the generalizability and confidence that can be placed on the findings. As the current study contradicts previous research on the influence of therapists' characteristics on the TA and client engagement in adult

populations, future research should examine whether the findings are replicable across larger populations and SMT settings, as well as with other treatment modalities. This would improve confidence in the findings and consequently the implications for practice.

Finally, separate multiple regression analysis was used in the current study, and therefore the mediator effect of variables was not analyzed. Future research should examine whether the TA (client and therapist-rated) moderates the relationship between therapist characteristics and client engagement, to gain further understanding of the importance of therapist characteristics and the TA on client engagement within SMT programs.

5. Conclusions

Despite this study's limitations, it extends upon research into the predictors of client engagement and the TA and demonstrates the importance of therapist characteristics. According to this study, stress is not always detrimental to engagement and within practice stress can have a positive impact on clients' engagement. Nevertheless, therapists may need additional support to deal with stress effectively, to ensure it does not affect their motivation or positive regard for their work as facilitators. Therapists' empathy may too be fundamental to client engagement, but only if it is perceived by clients, as genuine empathy may not be essential to either client engagement or the TA. Future research needs to further verify this as it may be essential for therapists to recognize the importance of demonstrating empathy to heighten client engagement, and for providers to recognize the impact therapists' stress has on client engagement and provide support accordingly.

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Declaration of Interest

The authors alone were responsible for the content and writing of the paper.
