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Client Predictors of Therapeutic Alliance in Court-Mandated Substance Use Treatment

By

Yasmine Punceles

An Undergraduate Thesis Submitted in Partial Fulfillment

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East Tennessee State University

Yasmine Punceles

Date

Dr. Kelly Moore, Thesis Mentor

Date

Dr. Meredith Ginley, Reader

Date

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Abstract

The purpose of the current study was to investigate predictors of therapeutic alliance among a sample of 46 adults with substance misuse who were convicted of felony offenses and court-mandated to attend substance use treatment as part of their probation requirements. For this study, I purposed four hypotheses: (1) older participants will report a stronger therapeutic alliance with their therapist. (2) women will form a stronger therapeutic alliance with their therapist than men, (3) higher levels of distress will be associated with lower therapeutic alliance, and (4) people with more extensive criminal and substance use histories to have poorer therapeutic alliance. Data was collected quantitatively, utilizing a questionnaire method. Bivariate correlations were run on all study variables, as well as a multiple linear regression model. Results of this study found that older participants and number of months incarcerated predicted weaker therapeutic alliance. No statistically significant findings were found in relation to the DASS-21 or gender.

Keywords: therapeutic alliance, substance use treatment, court-mandated

Client predictors of therapeutic alliance in court-mandated substance use treatment

Therapeutic alliance, also known as working alliance, refers to the clinical interaction between a therapist and a client. There are three main components of therapeutic alliance: (1) agreement on treatment goals, (2) collaboration on treatment tasks to achieve those goals, and (3) quality bond development between therapist and client (Bordin, 1979). Establishing a strong therapeutic alliance is imperative during treatment as alliance is linked to decreases in client distress (Lebow et al., 2006), reduced symptomology (Falkenström, 2013, 2016), better retention in treatment (Barber et al., 2001), and overall positive treatment outcomes (Ardito & Rabellino, 2011). Developing a strong therapeutic alliance and understanding which factors predict a strong therapeutic alliance may help retain clients in treatment, especially when working with difficult-to-treat populations such as individuals who use substances, including those court-mandated to substance use treatment.

Therapeutic Alliance in Substance Use Treatment

People with substance use problems in particular are a difficult-to-treat population with exceptionally high treatment drop-out rates. It is estimated that anywhere between 17% and 57.7% of people with substance use disorders drop out of treatment, depending on the type of treatment they are enrolled in (Dakof et al., 2001; Deane et al., 2012; Lin et al., 2013; Gilchrist et al., 2012; McHugh et al., 2013; Samuel et al., 2011; Specka et al., 2011; Smyth et al., 2012; as cited in Brorson et al., 2013). Despite these alarming statistics, several studies have found therapeutic alliance to be a predictor of increased retention among individuals in substance use treatment (Campbell et al., 2015; Janeiro et al., 2018; Meier et al., 2005, 2006) as well as reduced psychological distress (Lebow et al., 2006; Urbanoski et al., 2012) and improved treatment engagement (Brorson et al., 2013; Conners et al., 1997; Kelly et al., 2016; Meier et al.,

2005, 2006). A strong therapeutic alliance has also been found to predict reduced substance use among individuals in treatment for cannabis use (Gibbons et al., 2010), alcohol use (Connors et al., 1997), and opioid use (Petry & Bickel, 1999). Given that a central component of therapeutic alliance is agreement on treatment goals (Bordin, 1979) and individuals often enter substance use treatment to stop using substances, it makes sense that a stronger therapeutic alliance would be associated with reduced substance use. Because positive treatment outcomes are associated with treatment retention (Hser et al., 2004), it is critical for individuals undergoing substance use treatment to remain in treatment.

The positive outcomes associated with a strong therapeutic alliance in substance use treatment are evident. However, certain substance-using populations, such as those who are involved with the criminal justice system and are court-mandated to receive treatment, may struggle to form a strong therapeutic alliance because they did not willingly enter treatment. This is problematic, as a weak therapeutic alliance has been associated with higher treatment drop-out (Brorson et al., 2013; Meier et al., 2005; Petry & Bickel, 1999), thus hindering therapeutic change. For court-mandated populations, substance use treatment drop-out also increases the risk for continued justice system involvement (Chamberlain et al., 2018). Therefore, it is important to understand who will struggle to form a strong therapeutic alliance among people in court-mandated substance use treatment.

Predictors of Therapeutic Alliance

Mental Health Treatment

Several studies have examined predictors of therapeutic alliance among people receiving mental health treatment. Renner and colleagues (2012) found that higher levels of general distress were associated with worse alliance among individuals receiving cognitive therapy for

major depressive disorder. Similarly, another study found that helplessness, anxiety, and depression symptoms were associated with worse therapeutic alliance throughout treatment among individuals with borderline personality disorder (Richardson-Vejlgaard et al., 2013). Further, Zilcha-Mano & Errázuriz (2015) found that individuals with less severe depressive symptoms reported a higher therapeutic alliance. Individuals with mental health problems like depression may feel uncomfortable in social situations, making it difficult to form quality relationships with others. This difficulty may explain why more psychological distress predicts lower therapeutic alliance during mental health treatment.

Some studies have found gender to play a role in the development of a strong therapeutic alliance. In a sample of individuals receiving cognitive behavioral therapy for psychosis, Evans-Jones and colleagues (2009) found that women tended to report a stronger therapeutic alliance than men. Similarly, Browne and colleagues (2019) found the same result among individuals receiving resiliency training for first-time psychosis. A study assessing alliance among individuals with psychotic and bipolar disorders also found that women reported a stronger therapeutic alliance than men (Ruchlewska et al., 2016).

Substance Use Treatment

One of the strongest predictors of therapeutic alliance among individuals in substance use treatment is readiness to change (Brorson et al., 2013; Connors et al., 2000; Cook et al., 2015; Garner et al., 2008; Urbanoski et al., 2012). Individuals who are more ready to change are more likely to collaborate and agree with their therapist on treatment-related tasks to achieve those goals, two of the main components of therapeutic alliance (Bordin, 1979). In addition to readiness to change, studies have found strong social support to be predictive of therapeutic alliance among individuals in treatment for substance use (Connors et al., 2000; Garner et al.,

2008; Meier et al., 2005). Individuals with a strong support system in their personal lives may be more driven to engage in treatment and thus form a stronger alliance with a therapist, or they may have better interpersonal skills that make relating to a therapist easier. Further, a study by Urbanoski and colleagues (2012) also found greater self-efficacy, coping skills, and commitment to Alcoholics Anonymous (AA)/Narcotics Anonymous (NA) to be predictors of therapeutic alliance in a sample of 303 young adults enrolled in private residential substance use treatment.

With regard to client demographics, several studies have found client age to be a predictor of therapeutic alliance, with older age associated with a stronger alliance among individuals being treated for substance use (Brorson et al., 2013; Connors et al., 2000; Cook et al., 2015; Garner et al., 2008; Urbanoski et al., 2012). This finding may be due to the development of maturity that comes with age. Another explanation is that older clients have been struggling with substance use longer and are therefore more ready to engage in treatment. However, there is much divide in the literature as to whether age predicts therapeutic alliance, with older studies failing to find a relationship (Meier et al., 2005).

Despite the studies exploring the predictors of therapeutic alliance in substance use treatment, court-mandated substance treatment has received little attention. Previously examined factors like gender, age, or level of distress may predict therapeutic alliance, and there may be other unique predictors of therapeutic alliance among justice-involved populations who are court-mandated to complete substance use treatment, such as one's history of substance use and crime. The lack of research in this population highlights the importance of conducting more studies to better understand what predicts therapeutic alliance in this population so that positive treatment outcomes can be increased and recidivism can be decreased.

Current Study

The purpose of the current study is to investigate predictors of therapeutic alliance among people who are court-mandated to attend substance use treatment. As mentioned, little therapeutic alliance research has been conducted involving court-mandated individuals in substance use treatment. This study was limited to predictors of therapeutic alliance that were available in our dataset. Although some of the strongest predictors of therapeutic alliance among substance users have been found to be readiness to change (Brorson et al., 2013; Conners et al., 2000; Cook et al., 2015; Garner et al., 2008; Urbanoski et al., 2012) and strong social support (Conners et al., 2000; Garner et al., 2008; Meier et al., 2005), these may be less relevant among a court-mandated sample. Because court-mandated individuals are required to attend treatment, they may be less motivated to engage in treatment and develop a relationship with their therapist. Further, it is not uncommon for justice-involved populations to lack social support in their lives, especially after being released from incarceration (Spohr et al., 2016). Learning what client characteristics predict therapeutic alliance among people in court-mandated treatment can substantially help justice-involved populations have positive outcomes both within and outside the criminal justice system.

For this study, I proposed four hypotheses. First, I expect older participants will report a stronger therapeutic alliance with their therapist. This hypothesis is based on prior research that found has found older age to be a predictor of therapeutic alliance (Cook et al., 2015; Conners et al., 2000; Draine & Solomon, 1996; Johansen et al., 2013; Urbanoski et al., 2012). Second, I expect that women will form a stronger therapeutic alliance with their therapist than men. This hypothesis is supported by prior research that found gender to be a predictor of therapeutic alliance (Browne et al., 2019; Evans-Jones et al., 2009; Ruchlewska et al., 2016). Third, I expect that higher levels of distress, such as depression, anxiety, and stress will be associated with lower

therapeutic alliance. This hypothesis is based on prior research by Connors et al. (2000) and Renner et al. (2012) which found that distress predicted poor alliance. Fourth, I expect people with more extensive criminal and substance use histories to have poorer therapeutic alliance, as these individuals might be more antisocial (and thus struggle more to connect with a therapist) and less engaged with treatment.

Method

Participants and Procedures

The participants in this study were 46 adults with substance misuse who were convicted of felony offenses and court-mandated to attend substance use treatment as part of their probation requirements. The substance use treatment involved a two-year intensive outpatient program in which participants received individual therapy, group therapy, and skills-based classes (e.g., computer literacy), and were also monitored by a probation officer. All participants were Caucasian, representing the broader racial/ethnic makeup of East Tennessee where the study took place, and primarily male (67.4%).

When new clients enrolled at the treatment facility, staff explained the opportunity to participate in a research study and interested clients signed a recruitment waiver so that their contact information could be passed along to study staff. Research assistants met with interested participants at the treatment facility in an empty classroom to complete informed consent and the baseline interview. Research assistants read the consent form aloud, explained the study procedures, risks, and benefits, and obtained permission to access participants' treatment records maintained by the facility. Baseline interviews were also read aloud with responses recorded on paper protocols to accommodate low literacy. Participants completed in-person follow-up assessments at 6 and 12 weeks into treatment following a similar procedure. Participants were

compensated with a \$5 fast food gift card for the baseline and 12-week assessment. Treatment records were accessed by a social worker at the treatment site, who completed the research coding sheet to extract information, such as the number of sessions attended and urine drug screen results. For the current study, therapeutic alliance data were drawn from the 6-week timepoint, and predictors of therapeutic alliance were drawn from the baseline assessment.

Measures

Demographics

To gain more information about the sample, participants were asked a variety of demographic questions. Demographics included questions asking about age, gender, race/ethnicity, employment status, education level, and marital status.

Criminal History

Criminal history was measured by asking participants how many months they had been incarcerated in their lifetime.

Depression, Anxiety, and Stress Scale-21

The *Depression, Anxiety, and Stress Scale-21* (DASS-21), developed by Lovibond and Lovibond (1995) was used for measuring a participant's level of distress in three areas: depression, anxiety, and stress. This measure consists of 21 statements, with questions such as "I found it hard to wind down" and "I felt that life was meaningless." Participants rated their responses to these statements using the following responses: 0 ("Did not apply to me at all"), 1 ("Applied to me to some degree, or some of the time"), 2 ("Applied to me to a considerable degree or a good part of the time"), or 3 ("Applied to me very much or most of the time"). Appropriate items were reverse-coded, and each subscales' items were summed, with higher scores indicating greater participant distress. This measure has been shown to have good validity

and reliability (Ng et al., 2007; Zanon et al., 2020). The DASS-21 has also been found to be valid and reliable in studies with justice-involved populations (Sánchez & Wolff, 2020; Pratt & Foster, 2020).

Substance Use Severity

Substance use severity was assessed using the Drug Abuse Screening Test (DAST; Skinner et al., 1982), a 10-item measure that asks about common symptoms of substance use disorder such as tolerance, withdrawal, and failure to meet responsibilities because of substance use. An additional item was added to ask whether participants had ever injected drugs. Responses were rated on a scale where 0 (“Never”), 1 (“Yes, in the 30 days prior to incarceration only”), 2 (“Yes, earlier than the 30 days prior to incarceration only”), and 3 (“Both time periods”). The DAST-10 has been shown to be reliable and valid in multiple studies (Yudko et al., 2007).

Working Alliance Inventory Short-Revised

The *Working Alliance Inventory Short-Revised* (WAI-SR) patient-rated version, developed by Hatcher and Gillaspay (2006), was used to measure therapeutic alliance in three areas: goals, tasks, and bond. This measure consists of 12 statements, such as “As a result of the sessions I am clear as to how I might be able to change” and “I believe the way we are working with my problem is correct.” Participants are able to respond to these statements using the following responses 1 (“Seldom”), 2 (“Sometimes”), 3 (“Fairly Often”), 4 (“Very Often”), and 5 (“Always”). Participants were instructed to think of their current individual therapist when answering the questions. Items were summed to create a composite score, with higher scores indicating stronger therapeutic alliance. This measure has been shown to have adequate test-

retest reliability and compares well with other therapeutic alliance measures (Paap & Dijkstra, 2017).

Data Analysis Plan

All study variables were investigated to determine whether they met normality and other assumptions prior to running the primary analyses. Bivariate correlations were run on all study variables. A multiple linear regression model, including all predictors and therapeutic alliance as the outcome, was run. The cutoff for statistical significance was $p < 0.10$, which was chosen to increase our power to detect a statistically significant effect.

Results

Participants in this study were aged between 21 and 49 ($M_{\text{age}} = 33$; $SD = 7.8$). Participants reported having been incarcerated for an average of 51.7 months (range: 3 to 228 months, $SD = 49.1$). On the DAST, participant responses ranged from 9 to 33 ($M = 25.5$; $SD = 6.5$). Responses on the DASS-21 ranged from 3 to 59, ($M = 23.8$; $SD = 14.5$). Moreover, responses on the WAI-SR ranged from 21 to 60, ($M = 50.5$; $SD = 10.8$). All variables were normally distributed.

Bivariate correlations revealed that older participants ($r = -0.36$, $p = 0.073$) and those with more time incarcerated ($r = -0.43$, $p = 0.029$) had weaker therapeutic alliance at the 6-week timepoint. Gender ($r = 0.28$, $p = 0.16$), DASS-21 ($r = -0.22$, $p = 0.29$), and substance use severity ($r = 0.26$, $p = 0.20$) were unrelated to therapeutic alliance.

Primary analyses with all predictors entered into the linear regression model showed that our model explained 40.6% of the variance in working alliance and this variance was statistically significant, $F(5, 20) = 2.74$, $p = 0.048$. Number of months incarcerated significantly predicted weaker therapeutic alliance ($b = -0.10$, $p = 0.029$), whereas drug use severity significantly

predicted stronger therapeutic alliance ($b = 0.51, p = 0.08$). Age ($b = -0.03, p = 0.91$), gender ($b = 5.53, p = 2.31$), and the DASS-21 total score ($b = -0.14, p = 0.37$) were not found to be significant predictors of therapeutic alliance. Examination of the variance inflation factor indicated no problems with multicollinearity.

Discussion

The purpose of this study was to examine predictors of therapeutic alliance among individuals court-mandated to complete substance use treatment. As previously mentioned, prior therapeutic alliance studies have found variables such as readiness to change and social support to be strong predictors of alliance, yet these variables are less relevant among court-mandated samples. A gap in the literature exists as very little therapeutic alliance research has been conducted involving court-mandated individuals in substance use treatment. This study hoped to address some of those gaps. For this study, I purposed four hypotheses: (1) older participants will report a stronger therapeutic alliance with their therapist, (2) women will form a stronger therapeutic alliance with their therapist than men, (3) higher levels of distress will be associated with lower therapeutic alliance, and (4) people with more extensive criminal and substance use histories to have poorer therapeutic alliance. Age, gender, and distress have been found to be predictors of therapeutic alliance in mental health and substance use treatment, but this had yet to be examined among court-mandated individuals.

Results

At the bivariate level, number of months incarcerated and age were significantly associated with weaker therapeutic alliance. The age finding is in contrast to prior research, which has shown that older participants report a stronger therapeutic alliance (Cook et al., 2015; Connors et al., 2000; Draine & Solomon, 1996; Johansen et al., 2013; Urbanoski et al., 2012). It

may be that age was confounded with criminal history (i.e., the older participants were, the more months they had been incarcerated in their life) because age was no longer significantly associated with therapeutic alliance in the multivariate model. The number of months incarcerated continued to predict weaker therapeutic alliance in the multivariate model, supporting the hypothesis. This means that participants who had a more extensive criminal history reported more difficulty connecting with their provider 6 weeks into court-mandated substance use treatment. Criminal involvement has rarely been examined in relation to therapeutic alliance. However, it makes sense that people who have a more extensive criminal history may have weaker therapeutic alliance. One possible explanation for this is that the people with a more extensive criminal history had more difficulty connecting with a treatment provider, perhaps due to antisocial traits such as a lack of interest in forming connections with others. Another possible explanation is that people with a more extensive criminal history have a higher mistrust of others, especially providers; trust is imperative in forming a strong therapeutic alliance. Finally, it is possible that people with a more extensive criminal history had less confidence that a provider would be interested in helping them or worried that the provider was judging them. People with a criminal history often report perceiving and anticipating stigma, and this has been shown to interfere with the development of a therapeutic alliance (Kvrgic et al., 2013).

In our multivariate model, substance use severity unexpectedly predicted a stronger therapeutic alliance 6 weeks into treatment. This finding is inconsistent with prior research by Barrowclough and colleagues (2010) which found no relationship between therapeutic alliance and substance use severity. People with more severe substance use problems may have been more motivated to get help and ready to change, which has been associated with a stronger

therapeutic alliance in other studies. No statistically significant findings were found in relation to the DASS-21 or gender.

Limitations

Although this study is one of the first to examine predictors of therapeutic alliance among people in court-mandated treatment and utilizes a longitudinal design, there are several limitations. Firstly, this study contained a small sample size of 46 participants. Secondly, this study had a drop-out rate of 43.5% at the 6-week follow up, further limiting our sample size. Despite the small sample size, we found evidence of significant relationships in a multivariate model. Additionally, the participants in this study were from one court-mandated treatment facility and were not racially diverse, thus limiting the generalizability of our findings to other samples.

Future Directions for Research

As previously mentioned, little literature exists on the predictors of therapeutic alliance among court-mandated and justice-involved populations. Overall, future studies should focus on expanding the literature by conducting alliance studies using this population and utilizing a larger, more diverse sample. Further, those future studies should examine additional variables that might be related to therapeutic alliance in this population, such as treatment motivation, level of social support, feelings of coercion, and self-stigma.

References

- Ardito, R. B., & Rabellino, D. (2011). Therapeutic alliance and outcome of psychotherapy: historical excursus, measurements, and prospects for research. *Frontiers in psychology*, 2, 270.
- Barber, J. P., Luborsky, L., Gallop, R., Crits-Christoph, P., Frank, A., Weiss, R. D., ... & Siqueland, L. (2001). Therapeutic alliance as a predictor of outcome and retention in the National Institute on Drug Abuse Collaborative Cocaine Treatment Study. *Journal of consulting and clinical psychology*, 69(1), 119.
- Barrowclough, C., Meier, P., Beardmore, R., & Emsley, R. (2010). Predicting therapeutic alliance in clients with psychosis and substance misuse. *The Journal of nervous and mental disease*, 198(5), 373-377.
- Bordin, E. S. (1979). The generalizability of the psychoanalytic concept of the working alliance. *Psychotherapy: Theory, research & practice*, 16(3), 252.
- Brorson, H. H., Arnevik, E. A., Rand-Hendriksen, K., & Duckert, F. (2013). Drop-out from addiction treatment: a systematic review of risk factors. *Clinical psychology review*, 33(8), 1010-1024.
- Campbell, B. K., Guydish, J., Le, T., Wells, E. A., & McCarty, D. (2015). The relationship of therapeutic alliance and treatment delivery fidelity with treatment retention in a multisite trial of twelve-step facilitation. *Psychology of Addictive Behaviors*, 29(1), 106.
- Caravaca Sánchez, F., & Wolff, N. (2020). The association between substance use and mental health symptoms among incarcerated males in Spain. *Journal of Offender Rehabilitation*, 59(3), 138-155.
- Chamberlain, A. W., Gricius, M., Wallace, D. M., Borjas, D., & Ware, V. M. (2018). Parolee–parole officer rapport: Does it impact recidivism?. *International Journal of Offender Therapy and Comparative Criminology*, 62(11), 3581-3602.
- Connors, G. J., Carroll, K. M., DiClemente, C. C., Longabaugh, R., & Donovan, D. M. (1997). The therapeutic alliance and its relationship to alcoholism treatment participation and outcome. *Journal of consulting and clinical psychology*, 65(4), 588.

- Connors, G. J., DiClemente, C. C., Dermen, K. H., Kadden, R., Carroll, K. M., & Frone, M. R. (2000). Predicting the therapeutic alliance in alcoholism treatment. *Journal of Studies on Alcohol*, *61*(1), 139-149.
- Cook, S., Heather, N., & McCambridge, J. (2015). The role of the working alliance in treatment for alcohol problems. *Psychology of Addictive Behaviors*, *29*(2), 371.
- Evans-Jones, C., Peters, E., & Barker, C. (2009). The therapeutic relationship in CBT for psychosis: client, therapist and therapy factors. *Behavioural and cognitive psychotherapy*, *37*(5), 527.
- Falkenström, F., Granström, F., & Holmqvist, R. (2013). Therapeutic alliance predicts symptomatic improvement session by session. *Journal of counseling psychology*, *60*(3), 317.
- Falkenström, F., Ekeblad, A., & Holmqvist, R. (2016). Improvement of the working alliance in one treatment session predicts improvement of depressive symptoms by the next session. *Journal of Consulting and Clinical Psychology*, *84*(8), 738.
- Garner, B. R., Godley, S. H., & Funk, R. R. (2008). Predictors of early therapeutic alliance among adolescents in substance abuse treatment. *Journal of Psychoactive Drugs*, *40*(1), 55-65.
- Gibbons, C. J., Nich, C., Steinberg, K., Roffman, R. A., Corvino, J., Babor, T. F., & Carroll, K. M. (2010). Treatment process, alliance and outcome in brief versus extended treatments for marijuana dependence. *Addiction*, *105*(10), 1799-1808.
- Hatcher, R. L., & Gillaspay, J. A. (2006). Development and validation of a revised short version of the Working Alliance Inventory. *Psychotherapy research*, *16*(1), 12-25.
- Hser, Y. I., Evans, E., Huang, D., & Anglin, D. M. (2004). Relationship between drug treatment services, retention, and outcomes. *Psychiatric Services*, *55*(7), 767-774.
- Janeiro, L., Ribeiro, E., Faísca, L., & Miguel, M. J. L. (2018). Therapeutic alliance dimensions and dropout in a therapeutic community: “Bond with me and I will stay”. *Therapeutic Communities: The International Journal of Therapeutic Communities*.
- Kelly, J. F., Greene, M. C., & Bergman, B. G. (2016). Recovery benefits of the “therapeutic alliance” among 12-step mutual-help organization attendees and their sponsors. *Drug and alcohol dependence*, *162*, 64-71.

- Kvrgic, S., Cavelti, M., Beck, E. M., Rüsçh, N., & Vauth, R. (2013). Therapeutic alliance in schizophrenia: the role of recovery orientation, self-stigma, and insight. *Psychiatry Research, 209*(1), 15-20.
- Lebow, J., Kelly, J., Knobloch-Fedders, L., & Moos, R. (2006). Relationship factors in treating substance use disorders. *Principles of therapeutic change that work, 293*, 317.
- Lovibond, S. H., & Lovibond, P. F. (1995). *Manual for the depression anxiety stress scales*. Psychology Foundation of Australia.
- Meier, P. S., Barrowclough, C., & Donmall, M. C. (2005). The role of the therapeutic alliance in the treatment of substance misuse: a critical review of the literature. *Addiction, 100*(3), 304-316.
- Meier, P. S., Donmall, M. C., McElduff, P., Barrowclough, C., & Heller, R. F. (2006). The role of the early therapeutic alliance in predicting drug treatment dropout. *Drug and Alcohol Dependence, 83*(1), 57-64.
- Ng, F., Trauer, T., Dodd, S., Callaly, T., Campbell, S., & Berk, M. (2007). The validity of the 21-item version of the Depression Anxiety Stress Scales as a routine clinical outcome measure. *Acta neuropsychiatrica, 19*(5), 304-310.
- Paap, D., & Dijkstra, P. U. (2017). Working Alliance Inventory-Short Form Revised. *Journal of Physiotherapy, 63*(2), 118. <https://doi.org/10.1016/j.jphys.2017.01.001>
- Petry, N. M., & Bickel, W. K. (1999). Therapeutic alliance and psychiatric severity as predictors of completion of treatment for opioid dependence. *Psychiatric Services, 50*(2), 219-227.
- Pratt, D., & Foster, E. (2020). Feeling hopeful: can hope and social support protect prisoners from suicide ideation?. *The Journal of Forensic Psychiatry & Psychology, 31*(2), 311-330.
- Renner, F., Jarrett, R. B., Vittengl, J. R., Barrett, M. S., Clark, L. A., & Thase, M. E. (2012). Interpersonal problems as predictors of therapeutic alliance and symptom improvement in cognitive therapy for depression. *Journal of affective disorders, 138*(3), 458-467.
- Richardson-Vejlgaard, R., Broudy, C., Brodsky, B., Fertuck, E., & Stanley, B. (2013). Predictors of psychotherapy alliance in borderline personality disorder. *Psychotherapy Research, 23*(5), 539-546.

- Skinner, H.A. (1982). The Drug Abuse Screening Test. *Addictive Behaviors*, 7(4):363-371.
- Spohr, S. A., Suzuki, S., Marshall, B., Taxman, F. S., & Walters, S. T. (2016). Social support quality and availability affects risk behaviors in offenders. *Health & justice*, 4(1), 1-10.
- Urbanoski, K. A., Kelly, J. F., Hoepner, B. B., & Slaymaker, V. (2012). The role of therapeutic alliance in substance use disorder treatment for young adults. *Journal of substance abuse treatment*, 43(3), 344-351.
- Yudko, E., Lozhkina, O., & Fouts, A. (2007). A comprehensive review of the psychometric properties of the Drug Abuse Screening Test. *Journal of substance abuse treatment*, 32(2), 189-198.
- Zanon, C., Brenner, R. E., Baptista, M. N., Vogel, D. L., Rubin, M., Al-Darmaki, F. R., ... & Topkaya, N. (2020). Examining the dimensionality, reliability, and invariance of the Depression, Anxiety, and Stress Scale–21 (DASS-21) across eight countries. *Assessment*, 1073191119887449.
- Zilcha-Mano, S., & Errázuriz, P. (2015). One size does not fit all: Examining heterogeneity and identifying moderators of the alliance–outcome association. *Journal of counseling psychology*, 62(4), 579.