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Effectiveness of The Seven Challenges® for adults: It's not just because of self-disclosure

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ABSTRACT

This study examined the longer-term effectiveness of The Seven Challenges® Program, a comprehensive counseling program that incorporates work on drug and co-occurring problems. This study also examined the role of self-disclosure in achieving positive outcomes for adult drug court clients. Results indicated that The Seven Challenges Program elicited more self-disclosure and was more effective than standard cognitive-behavioral treatment in sustained reduction of alcohol use, mental distress, emotional problems, and behavioral issues to 6 months post-intake. Additionally, The Seven Challenges Program was effective at reducing criminal activity. Greater self-disclosure among The Seven Challenges clients accounted for their greater perceived impact of treatment, but not for the effectiveness of The Seven Challenges relative to standard cognitive-behavioral treatment. These findings strengthen the existing evidence base of the effectiveness of The Seven Challenges.

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In the U.S.A., 25.6% of young adults aged 18–25 and 16.1% of adults aged 26 or older have at least one substance use disorder (SUD) based on criteria specified in the American Psychiatric Association's (2013) Diagnostic and Statistical Manual of Mental Disorders, 5th edition (Substance Abuse and Mental Health Services Administration [SAMHSA], 2022). In addition, 43.2% of adults aged 18 or older with a SUD in the past year also had a co-occurring mental illness (SAMHSA, 2022). To effectively address these issues, we need an understanding of not only which comprehensive treatment programs effectively treat SUD and ameliorate co-occurring mental health issues and associated negative consequences but also the process by which these programs are effective. Scholars and practitioners can utilize knowledge about the process to increase the effectiveness of existing treatment programs as well as to develop new programs likely to be effective.

While it is generally agreed that there is not one most effective substance abuse treatment (Mignon, 2014), within adult substance abuse treatment settings, cognitive behavioral therapy (CBT) is a dominant therapeutic approach (Epp & Dobson, 2010). Nearly all (94%) treatment facilities reported use of CBT in a recent National Survey of Substance Abuse Treatment Services (N-SSATS; Magill et al., 2023; SAMHSA, 2020). This pervasive use of CBT in adult substance abuse and co-occurring treatment settings may be due to its demonstrated effectiveness at reducing substance misuse (Drummond et al., 2015; Epp &

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Dobson, 2010; Korchmaros, 2018b; Magill & Ray, 2009; Windsor et al., 2015) and mental health issues (Beltman et al., 2010; Bomyea & Lang, 2012; Epp & Dobson, 2010; Korchmaros, 2018b).

In the U.S.A., most substance abuse treatment programs focus on abstinence from substance misuse as the main goal (Volkow, 2020). Yet for many individuals with SUDs, the goal is to control or reduce their substance misuse, not entirely eliminate it (Berglund et al., 2019; Falk et al., 2019; Mowbray et al., 2013). In U.S. treatment settings, those who do not achieve abstinence are often treated punitively and discharged from treatment due to their return to misuse (White et al., 2005). Despite the increased momentum of the global harm reduction movement and the strong theoretical and empirical support favoring harm reduction, most U.S. treatment providers still favor abstinence-based approaches (Paquette et al., 2022). While debate related to non-abstinence-based treatment approaches is still ongoing in the U.S., especially related to harm reduction, there has been growing acceptance. Some of this acceptance has been seen with the development and encouragement of non-abstinence outcomes in research to assess substance abuse treatment (Volkow, 2020). However, there remains a need for more empirical research to test the effectiveness of harm reduction and other non-abstinence-based approaches (Paquette et al., 2022).

Another important characteristic is the route to substance abuse treatment as some individuals are 'voluntary' clients, while others are mandated or otherwise directed to treatment by courts. Programs such as drug treatment courts and other mandated correctional treatment work to reduce recidivism related to offending behavior, typically with a demand for abstinence. A review of the research on the effectiveness of legal coercion in substance abuse treatment highlights inconclusive and inconsistent findings (Hachtel et al., 2019; Klag et al., 2005); some studies provide evidence that legal coercion is effective (Coviello et al., 2013; Snyder & Anderson, 2009), while others support that it is ineffective in reducing recidivism (Parhar et al., 2008).

The discussion related to the difference with these routes to treatment centers on the concepts of coercion, resistance, and motivation (Hachtel et al., 2019). Some literature supports that mandated treatment is coercive, spurs extrinsic motivation, and produces more resistant clients. However, studies have also identified coercion among samples of voluntary clients (e.g. informally coerced by family or employer), which would impact the intrinsic motivation often assumed among voluntary clients (Hachtel et al., 2019). Treatment outcomes seem to be connected to an individual's motivation for treatment (Parhar et al., 2008) and their feelings of being coerced into treatment.

A related consideration is the impact of being monitored by the justice system in relation to engagement in substance abuse treatment. Individuals who engage in treatment as a result of direction from the courts might hesitate to disclose their substance misuse and related issues because of expected sharing of this information between their treatment counselors and the courts (Gallagher et al., 2015) and perceived judgment by treatment counselors (Gallagher et al., 2017). Within the therapeutic context, self-disclosure refers to clients sharing personally sensitive information that may involve actions or behaviors, thoughts, or feelings, particularly those related to substance misuse. In general, client self-disclosure has been established as necessary for successful counseling (Farber, 2003; Jourard, 1959). Yet in the context of substance abuse treatment, it is not uncommon for clients to conceal behaviors, thoughts, or feelings as substance misuse and addiction are highly stigmatized, even within treatment environments (Goodrick et al., 2022). Because the

criminal justice system is a primary source of referral to substance abuse treatment (Smith & Strashny, 2016), research examining the effectiveness of treatment programs for adults who have been court mandated or directed to enroll in substance abuse treatment is informative to the field of substance abuse treatment.

The Seven Challenges® Program (http://www.sevenchallenges.com/) has been identified as a promising comprehensive counseling program (Schwebel, 2010, 2015, 2017). It has been effective at reducing substance misuse and mental health-related problems in adolescents through 6 months post-intake (Korchmaros, 2018a; Korchmaros & Stevens, 2013; Smith et al., 2006; Stevens et al., 2007). It has also outperformed standard cognitive behavioral therapy (CBT) with respect to treatment satisfaction and reduced substance misuse, mental health problems, and criminality at 3 months post-intake (Korchmaros, 2018b).

The Seven Challenges Program (Schwebel, 2010, 2015, 2017) is grounded in the cognitive/emotional public health model of decision-making (Janis & Mann, 1977). It encourages individuals to compare the costs and benefits of particular behaviors. Similar to CBT, The Seven Challenges Program emphasizes coping, decision-making processes, and self-empowerment. The program prioritizes client autonomy and a working alliance between client and counselor, supported by confidential client self-disclosure. The Seven Challenges Program asserts that it counsels without shame, blame, or stigma and supports clients in self-disclosure and claiming power over their own lives (Schwebel, 2010, 2015, 2017).

The program has three core components (Schwebel, 2010, 2015, 2017) not included in standard CBT. The first, Mastery Counseling, helps clients solve their situational and psychological issues of greatest concern. The second is The Seven Challenges Process for decision-making that helps clients make fully informed decisions about their substance misuse and other behaviors. The third core component is Individualized Support. This component helps clients succeed with their decisions to change their substance misuse behavior.

The Mastery Counseling component empowers clients to take control of their lives by identifying issues of concern and then taking action steps to resolve them. It is conceived as a holistic approach; recognizing that substance misuse cannot be separated from everything else in the lives of individuals (Schwebel, 2004). It helps normalize problems of living, including substance misuse and co-occurring mental health issues. In addition, it empowers individuals to self-direct and gain mastery of their own lives. With Mastery Counseling, clients discuss issues that concern them, define a session goal, and get practical help at every session. This work requires clients to disclose their issues of concern and, therefore, it is expected that treatment outcomes would be at least partially dependent on client self-disclosure. Because clients work on self-identified issues within a supportive, professional setting that empowers them to self-direct and gain mastery of their own lives, it is expected that outcomes would be positive and sustained with regard to functioning in various aspects of individuals' lives, such as substance misuse, mental health, criminal activity, and vocational engagement.

The Seven Challenges Process for decision-making is non-judgmental. The program developer recognized the undesirability and impossibility of imposing abstinence from substance misuse on clients. The program developer posited that the most effective way to help individuals overcome substance misuse problems is to engage them in a thinking process that leads to their own fully informed decisions

to change (Schwebel, 2004) focusing on seven different challenges (Schwebel, 2010, 2015, 2017). The Seven Challenges Program urges agencies that serve court-involved individuals to work with the courts to maximize confidentiality, which allows for more open and honest decision-making by clients informed by self-disclosing issues of concern.

The Individualized Support component creates a consistent pathway for clients who have chosen to change their substance misuse behavior to continue to self-disclose about their progress without judgment or penalty. Using support-based questions, counselors check in with clients about what they need to ensure or maintain success with their self-identified goals. In addition, a distinct feature of The Seven Challenges is that it involves the use of published materials, including *Leap of Powe*r (Schwebel, 2019) and a series of nine journals, used for Supportive Journaling. When engaging in Supportive Journaling, clients reflect about their issues in private and then benefit from a supportive exchange with a counselor (Schwebel, 2017). As a result, it is expected that The Seven Challenges would result in more client self-disclosure that can facilitate the counseling process as compared to standard CBT.

Purpose of study

The present study contributes to the literature in two ways. First, it examines the longer-term effectiveness, to 6 months post-program intake, of The Seven Challenges as an adult comprehensive treatment program. Because The Seven Challenges is a comprehensive counseling program giving equal priority to mental health, substance misuse, and situational problems, and has components supportive of recovery that standard CBT does not have, it is expected that The Seven Challenges for adults would outperform standard CBT, particularly in addressing mental health issues and criminality, through to 6 months post-intake.

The second contribution of the present study to the literature is that it examines the process by which The Seven Challenges impacts substance misuse, mental health, and criminality outcomes. Specifically, the present study examines the extent to which client self-disclosure during treatment accounts for treatment effects on substance misuse and related problems, mental health, and criminal activity. We hypothesize that The Seven Challenges program components would lead clients to greater self-disclosure compared to standard CBT, which would in turn lead to greater perceived impact of treatment and improved outcomes in the areas of substance misuse and related problems, mental health, as well as criminal and vocational activities. If client self-disclosure accounts completely for the differential effect of The Seven Challenges compared to standard CBT, then self-disclosure is the main process by which The Seven Challenges achieves its enhanced effectiveness. However, it is more likely that the longer-term impact of The Seven Challenges program components goes beyond self-disclosure in the counseling process, which would be indicated if self-disclosure only partially accounts for the differential effectiveness of The Seven Challenges.

Method

Participants

Sixty-one of 91 participants in a drug treatment court program (67%) provided data at program intake and at 3 and 6 months post-intake. Consequently, they were included in the analytic sample. The analytic sample and the excluded participants (those who did not provide data at the three time points) appear to be similar; they did not differ on demographic characteristics – gender identity, ethnicity, racial minority status, and age – nor in terms of vocational engagement, substance misuse, mental health, and criminal activity (*p*s = .091 to .940). Additional statistics from these comparative tests are available upon request. Of the analytic sample, 37% were female identified, 18% identified as Hispanic, and 26% were of racial minority status. Their ages ranged from 18 to 55 years old ($M = 32.2$).

Measures

We measured participant characteristics and behaviors based on self-report interviews using the validated Global Appraisal of Individual Needs (GAIN; Dennis et al., 2003; GAIN Coordinating Center, 2011) supplemented with measures we created specifically for the present study. These measures are described in detail in another article (Korchmaros, 2018b). Unless otherwise noted, we averaged responses on single items of multiple-item scales to create composite scale scores. For all measures, larger values reflect more of what is being measured.

We assessed fidelity to The Seven Challenges at 3 and 6 months post-intake with a 12-item scale designed to assess the extent to which counselors acted in alignment with key components of The Seven Challenges on a scale ranging from 'not at all' (0) to 'a great extent' (4). Internal consistency was high (Cronbach's $\alpha = .91$).

We assessed self-disclosure during treatment at 3 months post-intake with the self-disclosure index (Miller et al., 1983) somewhat modified (Korchmaros, 2018b). For all items, participants reported extent of self-disclosure ranging from 'did not discuss it at all' (0) to 'discussed it fully and completely' (4). Internal consistency was high (Cronbach's $\alpha = .90$).

We assessed perceived impact of treatment at 6 months post-intake with a 16-item scale with items that measured the extent to which treatment impacted participants' lives on a scale from 'not at all' (0) to 'to a great extent' (4). For example, one item queried the extent participants felt that they 'have improved problem-solving skills since getting treatment' (see Korchmaros, 2018b for the complete scale). Internal consistency was high (Cronbach's $\alpha = .88$).

We assessed vocational engagement at intake and 6 months post-intake. GAIN items queried current employment and enrollment in school. Responses were coded to reflect current vocational engagement (1 = engaged versus 0 = not engaged).

Multiple GAIN variables assessed substance misuse and related problems at intake and 6 months post-intake. The variables included recent substance misuse, number days of relatively severe substance misuse, use of any alcohol, use of THC, and days of abstinence from substance misuse during the past 90 days. In addition, the multiple-item Substance Frequency Scale reflects substance misuse frequency during the past 90 days. Scale scores

ranged from no misuse (0) to high severity misuse (2). The multiple-item Substance Problem Scale reflects the amount of substance problems experienced during the past 30 days. Scale scores indicated severity of the problems where 0 suggests no substance problems, 1 suggests substance abuse, and 2 suggests substance dependence based on DSM IV criteria (American Psychiatric Association, 1994).

Three GAIN variables assessed mental health problems experienced during the past 90 days at intake and 6 months post-intake. The multiple-item Emotional Problem Scale reflects the severity of emotional problems with possible scores ranging from 0 to 100. The multiple-item Internal Mental Distress Scale reflects the amount of internal mental distress symptoms with possible scores ranging from 0 to 43. The Behavior Complexity Scale reflects the number of problems controlling external behavior with possible scores ranging from 0 to 33. On all scales, larger values indicate more problems or symptoms.

Two GAIN variables assessed criminal activity at intake and 6 months post-intake. The first queried activities that could get participants in trouble in the past 90 days. It is scored to reflect whether (1) or not (0) participants engaged in these activities in the past 90 days. The second was the Illegal Activities Scale with possible scores ranging from 0 to 100.

Procedure

Researchers recruited participants from all three sites of an outpatient substance misuse treatment agency located in the Intermountain West region of the U.S.A. Of the 95 adult clients at the three sites who were ordered to substance misuse treatment as a condition of drug court, 91 (95.8%) consented to participate. Participants received treatment at the particular agency site to which they were assigned based on proximity to where they lived. Participants at Site A received The Seven Challenges treatment program, identified here as The Seven Challenges group. Participants at the other two sites received commonly used CBT as their substance misuse treatment consisting of Dialectical Behavior Therapy (DBT; Dimeff & Linehan, 2001) and Moral Reconation Therapy® (MRT; Ferguson & Wormith, 2013). They are the Standard CBT group. Counselors at all sites were appropriately licensed and trained to provide substance abuse treatment, as well as the particular types of treatment they provided as per treatment program requirements – The Seven Challenges, DBT, and MRT.

During the present study, all participants received Phase 1 and Phase 2 of their drug treatment court ordered 4 phase step-down program. Phase 1 occurs during the first 3 months of treatment. It consists of one 1-hr individual session per week plus two 2-hr group therapy sessions per week. Phase 2 occurs during months 4 to 6 of treatment and consists of one 1-hr individual session 2 to 3 times per month plus two 2-hr group therapy sessions per week.

In drug courts, standard practice requires treatment providers to report any rules broken by clients, including substance misuse, to the drug treatment court team. The Standard CBT study group operated under this requirement and had a focus on abstinence; all rules broken by clients were reported to their drug treatment court teams. In contrast, the counselors providing The Seven Challenges to study participants, limited their report of substance misuse to the drug treatment court teams. This change in practice compared to the Standard CBT group resulted from negotiations between agency staff and the court.

Agency staff who were not involved in providing substance misuse treatment to the study participants were trained in ethical conduct of human subjects research and served as research assistants (RAs). The RAs followed study protocols that were approved by the University of Arizona Institutional Review Board. The RAs collected data from study participants at three time points: 1) program intake, which occurred pre-treatment, 2) 3 months post-intake, which occurred immediately post-Phase 1 treatment, and 3) 6 months post-intake, which occurred immediately post-Phase 2 treatment. During data collection sessions, the RAs conducted individual, private interviews with study participants during which they read the survey questions aloud in order to decrease challenges related to literacy. At the start of each session, RAs informed participants of their rights and that their study participation and responses were confidential and would not impact the services they receive nor their court status.

Analysis

We used two-tailed independent-samples t tests to examine differences between the analytic sample and excluded participants. We used mixed-model analysis of variance to examine study group differences (The Seven Challenges group versus Standard CBT group) and change over time from 3 to 6 months post-intake in fidelity. Because client self-disclosure during treatment and perceived impact of treatment were assessed during only one time point (i.e. 3 months post-intake and 6 months post-intake, respectively), we used independent samples t tests to examine study group differences in, or type of treatment effect on, self-disclosure and perceived impact.

We used mixed-model analyses of variance to examine study group differences (The Seven Challenges group versus Standard CBT group) in change over time in outcomes (e.g. days of abstinence) from program intake to 3 and 6 months post-intake. The main effect of type of treatment assesses the impact of type treatment on outcomes, regardless of time of assessment. In other words, it examines study group differences on average across time points. The main effect of time assesses the impact of treatment on outcomes, regardless of type of treatment. In other words, it examines change over time from program intake to 6 months post-intake on average for all participants. The time by type of treatment interaction effect assesses whether the two types of treatment – The Seven Challenges and the Standard CBT – had differential impacts on outcomes. In other words, it examines the difference in change over time in the outcomes from program intake to 3 and 6 months post-intake between The Seven Challenges and Standard CBT groups. If results indicated that The Seven Challenges had a differential impact on outcomes compared to Standard CBT, we conducted mediational analyses to determine if the differential effect of The Seven Challenges was accounted for by differential self-disclosure by participants in The Seven Challenges group.

Mediational analyses were conducted as per Baron and Kenny's (1986) guidelines, illustrated in Figure 1. We estimated the total effect of type of treatment on the outcome, path c. We then estimated the effect of type of treatment on the mediator, self-disclosure, path a, and the effect of the mediator on the outcome, path b. Finally, we estimated the effect of type of treatment on the outcome while controlling for the mediator, path c'. We estimated all paths in the mediational model using regression and change scores in the outcome variables to reflect change from program intake to 6 months post-intake.

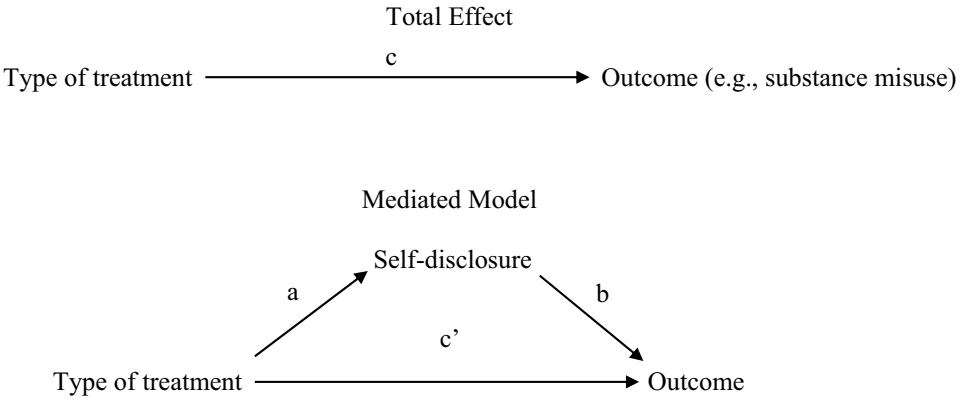

Figure 1. Unmediated and mediated models.

Complete mediation is indicated if type of treatment affects the outcome (c), type of treatment affects self-disclosure (a), self-disclosure affects the outcome (b), and the total type of treatment effect on the outcome is eliminated when the mediator is included in the model (c'). Partial mediation is indicated if the total effect of type of treatment on the outcome is reduced but not eliminated when the mediator is included in the model. The Sobel (1982) test was used to test the statistical significance of any indicated mediation.

The reported effect sizes are partial η^2, Cohen's d (Cohen, 1988), and beta coefficients. Partial η^2 and beta coefficients indicate the proportion of the variance in the outcome (e.g. any use of alcohol in past 90 days) that is accounted for by the independent variable. Cohen's d indicates the standardized difference between the two groups. A partial η^2 or beta of .01 reflects a small-sized effect, .06 reflects a moderately sized effect, and .14 reflects a large-sized effect, and a Cohen's d of 0.20 reflects a small-sized effect, 0.50 reflects a moderately sized effect, and 0.80 reflects a large-sized effect.

Results

As expected, at 3 and 6 months post-intake, The Seven Challenges group reported, on average, greater fidelity to The Seven Challenges Program ($M = 3.74$ and 3.70) than the

Table 1. Program fidelity, disclosure, and perceived treatment impact by type of treatment.

	The Seven Challenges® Group ($n = 25$)		Standard CBT[a] Group ($n = 36$)		Main Effect of Type of Treatment			Time by Type of Treatment Interaction Effect		
	3 Months Post-Intake Mean	6 Months Post-Intake Mean	3 Months Post-Intake Mean	6 Months Post-Intake Mean	*F/t (df)*	*p*	Partial η^2/d	*F (df)*	*p*	Partial η^2
Fidelity to The Seven Challenges®	3.74	3.70	3.32	3.37	14.83 (1,59)	<.001	.20	0.86 (1,59)	.357	.01
Self-disclosure during treatment	3.26	-	2.57	-	3.94 (59)	<.001	1.03	-	-	-
Perceived impact of treatment	-	3.15	-	2.85	2.07 (59)	.022	.55	-	-	-

[a]CBT = Cognitive Behavioral Therapy.

Standard CBT group ($M = 3.32$ and 3.37), a large sized effect (Table 1). Fidelity did not change over time and was not impacted by a time by type of treatment interaction effect.

At 3 months post-intake, participants in both treatment groups reported self-disclosing during treatment. However, as expected, The Seven Challenges group reported greater self-disclosure ($M = 3.26$) than the Standard CBT group ($M = 2.57$), a large-sized effect (Table 1).

Participants in both treatment groups perceived a positive impact of treatment at 6 months post-intake ($M_{The\ Seven\ Challenges} = 3.15$; $M_{Standard\ CBT} = 2.85$). However, as expected, The Seven Challenges group perceived a greater positive impact of treatment than the Standard CBT group, a medium-sized effect (Table 1).

Change from pre-treatment to 6 months post-treatment

Statistics for the main effect of time and the time by treatment interaction effects are listed in Table 2. These tests test hypotheses regarding the overall effectiveness of receiving treatment – either The Seven Challenges or Standard CBT – and the differential effect of The Seven Challenges compared to Standard CBT.[1]

Table 2. Comparison of 6-month outcomes by treatment controlling for outcomes variables at intake.

	The Seven Challenges Group ($n = 25$)		Standard CBT[a] Group ($n = 36$)		Main Effect of Time (2,118)			Time by Type of Treatment Interaction Effect (2,118)		
	Intake %/Mean	6 Months Post-Intake %/Mean	Intake %/Mean	6 Months Post-Intake %/Mean	F	p	Partial η^2	F	p	Partial η^2
Vocational Engagement										
Currently employed or in school	56.0%	92.0%	52.8%	86.1%	30.41	<.001	.34	0.05	.833	<.01
Substance Use & Related Problems										
Substance use in past 90 days	60.0%	16.0%	55.6%	33.3%	18.73	<.001	.24	2.03	.160	.03
Days drunk or high most of the day in past 90 days	12.48	.12	8.50	1.83	22.49	<.001	.28	2.01	.161	.03
Any use of alcohol in past 90 days	48.0%	4.0%	22.2%	13.9%	14.10	<.001	.19	6.55	.013	.10
Any use of THC in past 90 days	28.0%	.0%	16.7%	8.3%	11.74	.001	.17	3.44	.069	.06
Days of abstinence from using substances in past 90 days	75.28	85.80	79.08	85.56	5.86	.019	.09	0.33	.567	.01
Substance Frequency Scale	9.13	.69	5.86	1.14	19.87	<.001	.25	1.58	.214	.03
Substance Problem Scale	1.36	.20	0.63	.16	5.70	.020	.09	1.01	.320	.02
Mental Health										
Emotional Problem Scale	42.32	27.91	43.35	43.18	8.88	.004	.13	8.49	.005	.13
Internal Mental Distress Scale	17.44	7.64	10.69	8.14	27.01	<.001	.31	9.28	.003	.14
Behavior Complexity Scale	6.88	2.52	5.61	5.39	5.22	.026	.08	4.25	.044	.07
Criminal Activity										
Engaged in activities that could get you in trouble in past 90 days	52.0%	24.0%	47.2%	58.3%	1.34	.253	.02	7.16	.010	.11
Illegal Activities Scale	12.76	6.57	13.32	16.14	0.93	.340	.02	6.59	.013	.10

[a]CBT = Cognitive Behavioral Therapy.

[1]For brevity, statistics for the main effect of treatment, which do not test the hypotheses, are available upon request.

Vocational engagement

Participants, regardless of type of treatment, experienced an improvement in vocational engagement with 54% engaged at program intake (pre-treatment) and 89% engaged at 6 months post-intake (post treatment). This improvement, which was a large-sized effect, did not vary by type of treatment as evidenced by the lack of a time by type of treatment interaction effect.

Substance misuse and related problems

Participants reduced their substance misuse and related problems from intake to 6 months post-intake across numerous outcome measures. For five of the seven outcomes examined, participants experienced a reduction in substance misuse and related problems, which did not vary by type of treatment as evidenced by the lack of time by type of treatment interaction effects. The percent of participants who misused substances during the past 90 days decreased from 57.8% at intake to 24.7% at 6 months post-intake, a large-sized effect. Participants, overall, experienced an average reduction in the number of the past 90 days that they were drunk or high most of the day from 10.49 days at intake to 0.98 days at 6 months post-intake, a large-sized effect. Relatedly, the mean number of the past 90 days participants abstained from using any substances increased, on average, from 77.18 at intake to 82.68 at 6 months post-intake, a moderate to large-sized effect. Furthermore, participants experienced a decrease in the frequency of misusing substances, on average, from 7.50 at intake to 0.92 at 6 months post-intake, a large-sized effect. For substance problems, participants, regardless of type of treatment, experienced a decrease in problems, on average, from 1.00 at intake to 0.18 at 6 months post-intake, a moderate- to large-sized effect.

For one of the substance misuse outcomes, participants experienced a reduction in substance misuse, with a suggestion that the reduction varied by type of treatment. The percent of participants who used marijuana, hashish, blunts, or THC in the past 90 days decreased from 22.3% at intake to 4.2% at 6 months post-intake, a large-sized effect. However, although not statistically significant, the moderate effect size suggests a reduction of 28.0% for The Seven Challenges group compared to a reduction of 8.4% for the Standard CBT group.

For another one of the substance misuse outcomes, participants experienced a reduction in substance misuse that varied by type of treatment. The Seven Challenges group experienced a greater reduction in the percentage of participants using alcohol over time from intake to 6 months post-intake of 44.0% compared to a reduction of 8.3% for the Standard CBT group. This is a moderate to large-sized effect.

Mental health

Participants showed improvement in mental health from intake to 6 months post-intake across numerous related outcome measures. However, the improvement was more pronounced for The Seven Challenges group. The Seven Challenges group experienced a greater reduction over time from intake to 6 months post-intake in emotional problems (14.41) compared to virtually no reduction (0.17) for the Standard CBT group, a moderate to large-sized effect. The Seven Challenges group experienced a greater reduction over time from intake to 6 months post-intake in internal mental distress of 9.80 compared to

a reduction of 2.55 for the Standard CBT group, a large-sized effect. The Seven Challenges group experienced a greater reduction over time from intake to 6 months post-intake in behavior complexity of 4.36 compared to virtually no reduction (0.22) for the Standard CBT group, a moderate-sized effect.

Criminal activity

Participants in The Seven Challenges group exhibited greater reductions in criminal activity from intake to 6 months post-intake compared to the participants in the Standard CBT group. The Seven Challenges group experienced a reduction over time from 52.0% of participants at intake engaging in activities that could get them into trouble in the past 90 days to 24.0% of these participants doing so at 6 months post-intake. In contrast, a larger percentage of participants in the Standard CBT group engaged in activities that could get them into trouble in the past 90 days at 6 months post-intake (58.3%) compared to at intake (47.2%). This interaction effect was of moderate to large size. Similarly, The Seven Challenges group engaged in fewer illegal activities in the past 90 days at 6 months post-intake ($M = 6.57$) than at intake ($M = 12.76$). In contrast, the Standard CBT group engaged in slightly more illegal activities in the past 90 days at 6 months post-intake ($M = 16.14$) than at intake ($M = 13.32$). This interaction effect was of moderate to large size.

Mediational analyses of the role of self-disclosure in achieving outcomes

Mediational analyses examined the mediational role of client self-disclosure in accounting for the differential effect of The Seven Challenges on recent use of alcohol, mental health outcomes, and criminal activity outcomes. Results of these regression analyses (Table 3) indicate that self-disclosure mediated only the effect of type of treatment on perceived impact of treatment. Type of treatment had a large total effect on perceived impact (path c). Type of treatment affected self-disclosure (path a), which in turn had an effect on perceived impact (path b). The effect of type of treatment on perceived impact was eliminated when self-disclosure was controlled for (path c'). The results of the Sobel (1982) test indicate a statistically significant mediation effect, $Z = 2.67$, $p = .007$. These results indicate that self-disclosure completely accounted for the differential effect of The Seven Challenges on the perceived impact of treatment compared to Standard CBT. The Seven Challenges encouraged greater self-disclosure, which led to greater perceived impact of treatment.

Self-disclosure did not account for the differential effect of The Seven Challenges on recent use of alcohol, mental health outcomes, or criminal activity outcomes. As shown in Table 3, self-disclosure did not have an effect on these outcomes (path b).

Discussion

Findings from the present study contribute to the evidence-base of The Seven Challenges as a comprehensive counseling program for individuals who have substance misuse issues. Results indicated that The Seven Challenges clients disclosed more and perceived greater positive impact compared to clients of standard CBT. Results also indicated that The Seven Challenges Program was more effective than the standard CBT in sustained reduction of alcohol use and mental distress. In addition, The Seven Challenges Program was more effective at sustained reduction of emotional problems and externalizing behavioral

Table 3. Mediational analyses.

	Type of Treatment Direct Effect on Outcome (Path c)			Type of Treatment Effect on Self-disclosure (Path a)			Self-disclosure Effect on Outcome (Path b)			Type of Treatment Indirect Effect on Outcome (Path c′)		
	B, beta	*t*	*p*	B, beta	*t*	*p*	B, beta	*t*	*p*	B, beta	*t*	*p*
Perceived Impact of Treatment	0.30, .26	2.07	.043	.69, .46	3.94	<.001	.35, .47	3.65	.001	.05, .05	0.36	.721
Substance Use & Related Problems												
Any use of alcohol in past 90 days	−.36, −.32	−2.66	.010	.69, .46	3.94	<.001	.09, .12	0.86	.392	−.42, −.37	−2.67	.010
Mental Health												
Emotional Problem Scale	−14.60, −.36	−3.04	.003	.69, .46	3.94	<.001	−3.70, −.14	−1.03	.309	−11.67, −.29	−2.13	.038
Internal Mental Distress Scale	−7.72, −.39	−3.26	.002	.69, .46	3.94	<.001	−2.51, −.19	−1.44	.155	−5.50, −.28	−2.08	.042
Behavior Complexity Scale	−3.99, −.25	−2.04	.046	.69, .46	3.94	<.001	.05, .01	0.04	.972	−4.17, −.26	−1.84	.071
Criminal Activity												
Engaged in activities that could get you in trouble in past 90 days	−.44, −.36	−2.96	.004	.69, .46	3.94	<.001	−.03, −.04	−.25	.805	−.37, −.31	−2.25	.028
Illegal Activities Scale	−9.79, −.34	−2.82	.007	.69, .46	3.94	<.001	−.12, −.01	−0.05	.964	−8.92, −.31	−2.25	.029

problems. Moreover, The Seven Challenges Program was effective at reducing criminal activity, whereas clients who received the standard CBT appeared to increase their criminal activity.

Findings from the present study also provide some insight into the process by which The Seven Challenges achieves positive impact. The Seven Challenges fosters self-disclosure through its core components. The resulting self-disclosure leads to clients perceiving greater positive impact of the treatment. Perceptions of the positive impact of treatment are valuable in that they might spur sustained engagement in treatment and increased use of the techniques learned in treatment. Adults with SUDs are disinclined to seek treatment (Ali et al., 2015; Paquette et al., 2022) and often disengage from treatment (Fernandez et al., 2015; Lappan et al., 2020). Perceptions of positive impact of treatment might address these issues by increasing The Seven Challenges clients' motivation to actively engage in counseling as well as to continue to utilize the skills gained from The Seven Challenges Program, which could lead to better treatment outcomes.

Self-disclosure did not account for the differential impact of The Seven Challenges on substance misuse, mental health, and criminal activity-related outcomes. This finding suggests that The Seven Challenges' advantage over standard CBT is not simply due to its encouragement of self-disclosure. There is more to The Seven Challenges with its three core components.

Additional insight into the process by which The Seven Challenges achieves positive impact could be gained by examining its Mastery Counseling component. Mastery Counseling is a core component of the program. It supports clients in solving their situational and psychological issues of greatest concern. It is meant to empower clients to take control of their lives by identifying key issues and then planning and taking action steps to resolve them. This approach might at least partially account for the effectiveness of The Seven Challenges across behavioral outcomes. Knowing what clients gain from Mastery Counseling might contribute to a more complete understanding of what leads to the effectiveness of The Seven Challenges Program that exceeds the effectiveness of standard CBT.

It might be possible, as well, that The Seven Challenges Process for decision-making partially explains the better outcomes with regard to substance misuse compared to standard CBT. Clients who make their own decisions to change their substance misuse behavior as a result of The Seven Challenges Process of decision-making may be more committed to these decisions than those who feel that the decisions were imposed upon them by both the court and their treatment program. Once such decisions to change are made, The Seven Challenges Individualized Support might partially explain the outcomes with regard to substance misuse.

It is important to note that The Seven Challenges Program, which accepts client decisions and does not insist upon abstinence, actually achieved greater overall effectiveness with regard to substance misuse problems, including days of abstinence, than the abstinence-based standard CBT program. This finding replicates previous findings (Korchmaros, 2018b) and indicates that a focus on abstinence even when it is paired with the threat of legal sanction for substance misuse does not necessarily result in the best treatment outcomes possible.

Legal coercion, the use of mandated treatment as an alternative to legal sanction such as incarceration (Klag et al., 2005), is a commonly used method to prompt individuals to enter

substance misuse treatment (Rivera et al., 2021; Smith & Strashny, 2016). There is debate over whether legal coercion is effective at achieving positive treatment impact. Some studies have found legal coercion to be associated with greater treatment retention (Lucabeche & Quinn, 2022; Pickard et al., 2020; Rivera et al., 2021), with outcomes comparable to voluntarily sought treatment (Burke & Gregoire, 2007; Werb et al., 2016). Other studies indicate that some clients may be externally motivated to enter treatment to avoid incarceration but not internally motivated to make substantive changes in their behaviors (Bulut & Bozkurt, 2019; Opsal et al., 2019) or may be less therapeutically involved (Hachtel et al., 2019). Additionally, client perception of legal coercion has been associated with decreased treatment motivation (Jones et al., 2017). Relatedly, the use of punitive tactics to compel abstinence, such as oversharing related to client substance misuse between treatment providers and drug court staff, has been shown to compromise client perception of trustworthy therapeutic relationships with treatment providers (Gallagher et al., 2015, 2017). This mistrust and the related perception of culturally incompetent labeling within treatment were correlated with less satisfaction with the treatment program, particularly for African American clients (Gallagher & Nordberg, 2016).

Although this debate continues, law enforcement agencies across the nation are recognizing the limited effectiveness of traditional approaches to addressing SUD and additional problems created by arresting people for substance misuse. In response, a number of jurisdictions have started to implement different pre-arrest deflection models by which officers connect individuals to substance misuse treatment providers in lieu of arresting them (Police Assisted Addiction & Recovery Initiative PAARI, 2018a, 2018b; TASC, Center for Health & Justice, 2017). PAARI, which was created to support police agencies in designing and implementing deflection programs, is a national network of 'nearly 600 police departments in 34 states' (https://paariusa.org/about-us/). This shift in law enforcement approach could lead to increased opportunities to implement effective comprehensive counseling programs such as The Seven Challenges that support clients in thinking through their decisions related to misusing substances, rather than insisting upon abstinence. A barrier to implementing The Seven Challenges in substance abuse treatment agencies has been that many of these agencies serve clients of drug treatment courts. It is standard for drug treatment courts to require that treatment providers insist upon abstinence and report all substance misuse to the court, negating any confidential client disclosure of such misuse, an important component of The Seven Challenges. The Seven Challenges' departure from mandated reporting through explicit negotiation between agency staff and court staff may, thus, represent a more effective alternative to standard information sharing protocol. In order to increase effectiveness, drug treatment courts might consider modifying what they require related to treatment provider reporting to the courts as well as related to recovery pathways other than immediate abstinence that they deem as acceptable goals of drug treatment court participation.

Strengths and limitations

The strengths of the present study include utilization of a comparison group and longitudinal outcome data as well as assessment of program fidelity. Longitudinal and comparison data increase the rigor of the research and, thus, confidence in the

finding that the detected differential effects of The Seven Challenges compared to standard CBT are due to The Seven Challenges Program itself. Similarly, the fact that fidelity was found to be high also supports the conclusion that the positive outcomes experienced by The Seven Challenges group were due to having received The Seven Challenges Program.

The present study, however, has a few limitations. First, the findings are based on the 67% of study participants who provided 6 months post-intake data. Second, the present study is quasi-experimental. To address this limitation, we utilized the longitudinal data in analyses that considered pre-treatment outcome-related characteristics and behavior and focused on differential change over time. As a result, findings support the conclusion that the detected differences in effectiveness between The Seven Challenges and the Standard CBT groups were due to type of treatment and not due to preexisting group differences. Similar findings from experimental research with a higher retention rate would, however, strengthen the evidence-base of The Seven Challenges Program.

Another limitation relates to the interpretation of scores on the Substance Problem Scale. As per the validated GAIN (Dennis et al., 2003; GAIN Coordinating Center, 2011) and based on DSM IV criteria (American Psychiatric Association, 1994), scale scores indicated severity of the problems where 0 suggests no substance problems, 1 suggests substance abuse, and 2 suggests substance dependence. Because of meaningful differences between current, DSM 5 (American Psychiatric Association, 2013), diagnostic criteria and DSM IV criteria and severity categorization, the categorization of Substance Problem Scale scores in the present study do not reflect nor correspond exactly with current DSM 5 categorization of risk for SUD, mild SUD, moderate SUD, and severe SUD. However, because we utilized scores on the Substance Problem Scale to indicate severity of problems and examined change over time of the severity of problems within individuals, the limitation related to the interpretation of scores related to specific diagnoses does not negate study findings – higher value scores on the Substance Problem Scale reflect more severe problems regardless of whether a specific value is interpreted as indicating substance dependence or moderate SUD. It is important, though, to refrain from interpreting the Substance Problem Scale scores in the present study as reflecting a particular diagnosis of addiction.

Conclusion

The study findings add to the existing literature strengthening the current evidence base of The Seven Challenges Program's effectiveness. They demonstrate the longer-term effectiveness of The Seven Challenges in reducing substance misuse and related problems, mental health problems, and criminal behavior among adults, which is not accounted for by The Seven Challenges' positive impact on self-disclosure during treatment. Future research should consider other explanations for the success of The Seven Challenges Program, such as the specific effects of Mastery Counseling, The Seven Challenges Process for decision-making, and Individualized Support on treatment outcomes.

Disclaimer

The views expressed here are the authors' and do not necessarily represent the views of D7 Treatment. Although D7 Treatment had input into the design of the study and its staff played a role in the collection of the data, it did not have any input or play any role in the data analysis, interpretation of the data, the writing of the article, and the submittal of this article for publication. These were solely the efforts and decisions of the authors.

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