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Staff Commitment to Providing Tobacco Dependence in Drug Treatment: Reliability, Validity, and Results Of a National Survey

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Abstract

Although most people in treatment for illicit drug use smoke cigarettes, few facilities offer any form of treatment for tobacco dependence. One reason for this may be that drug treatment staff have varying levels of commitment to treat tobacco. We developed and validated a 14-item Tobacco Treatment Commitment Scale (TTCS), using 405 participants in leadership positions in drug treatment facilities. We first conducted a confirmatory factor analysis to evaluate four *a priori* domains suggested by our original set of 38 items—this did not produce a good fit (CFI=0.782, RMSEA=0.067). We then conducted a series of exploratory factor analyses to produce a more precise and reliable scale. The final confirmatory factor analysis indicated a three-factor solution, produced a good fit (CFI=0.950, RMSEA=0.058), and had substantial unified reliability of 0.975. The final TTCS contained 14 items in 3 domains: *Tobacco is less harmful than other drugs*; *It's not our job to treat tobacco*; and *Tobacco treatment will harm clients*. These constructs account for most of the variance in the survey items and emerged as major sentiments driving staff commitment to providing tobacco services. The TTCS can be used to understand the role of staff attitudes in the adoption of tobacco services in this important treatment setting.

Keywords

tobacco; health services; substance abuse; attitudes; scale development

Introduction

Smoking prevalence among clients in treatment for drug problems ranges from 77- 93% (Best et al., 1998; Hughes, 1993; Kalman, 1998; Poirier et al., 2002; Richter & Ahluwalia, 2000). Even though cigarette smoking is widely acknowledged to be addictive and deadly, few facilities provide any form of formal treatment for tobacco dependence such as group/

individual counseling or pharmacotherapy (Currie, Nesbitt, Wood, & Lawson, 2003; Friedmann, Jiang, & Richter, 2008; Walsh, Bowman, Tzelepis, & Lecathelinais, 2005). Gwydish and colleagues conducted an extensive literature review to identify barriers that might account for this service gap; the most prevalent were 1) resource limitations for providing tobacco treatment such as lack of reimbursement, staff training or staff time; 2) staff attitudes and beliefs about treating tobacco dependence; 3) lack of client demand for tobacco treatment services; and 4) staff smoking (Gwydish, Passalacqua, Tajimi, and Turcotte Mansur, 2007). Other studies have identified systems and/or structural factors associated with tobacco treatment services provision, such as hospital affiliation, program size, and medical staffing (Friedmann et al., 2008; Richter, Choi, McCool, Harris, & Ahluwalia, 2004). A major concern within the field of drug treatment—that quitting smoking would harm abstinence from other drugs—has been refuted by multiple studies that find quitting or trying to quit seems to improve abstinence from other drugs (Hall & Prochaska, 2009; Tsoh, Chi, Mertens, & Weisner, 2011).

Of all the potential factors that might affect treatment provision, substance abuse treatment staff attitudes have been the most widely, but least systematically, studied. A number of investigations have assessed staff attitudes toward tobacco and tobacco treatment. These range from single-item measures assessing the degree to which staff agree that smoking cessation should be integrated into alcohol and substance abuse treatment (Fuller et al., 2007) to a 28-item scale assessing the degree to which staff agree with statements regarding the addictive properties of nicotine, whether smoking cessation should be treated along with substance abuse, and whether counselors should help smokers quit (Hahn, Warnick, & Plemmons, 1999). Two studies related attitudes to service provision. Fuller and colleagues (2007) found that agencies that offered some form of tobacco treatment had higher staff support for integrating cessation interventions into drug treatment. Knudsen and Studts found that counselors who believed that cessation interventions would probably or definitely have a positive impact on recovery were more likely to report implement brief interventions for smoking cessation; this was assessed via a single-item measure (Knudsen & Studts, 2010). They also found that counselors who perceived greater organizational barriers to cessation were less likely to implement cessation interventions.

In these and other existing surveys, information on how attitude items were identified or selected is not provided, the authors do not specify underlying factors or latent variables that were the object of individual scale items, and resultant data were not subjected to reliability or validity analyses. Hence it is not clear whether the full spectrum of possible attitudes related to tobacco treatment were identified, or whether the attitudes that were addressed were measured reliably. Just what attitudes relate to service provision, and how they interact with other important determinants of treatment (such as available resources or clinic structure) remains unclear.

The purpose of the present study was to develop a valid and reliable scale to assess staff commitment to provide tobacco treatment. In so doing, we hoped to identify attitudes important to adoption of tobacco treatment in drug treatment, and create a parsimonious scale that might be used to measure facility receptiveness to providing tobacco treatment services.

Methods

General Procedures

This study is part of a broader study to identify the prevalence of tobacco treatment in drug treatment facilities in the United States, funded by the National Institutes on Drug Abuse (R21DA020489). We followed recommendations for objective scale development proposed by Clark & Watson (1995). We developed a broad item pool based on reviews of the literature, our own qualitative research, and content expert review and feedback. We then interviewed staff from a heterogeneous sample of 405 facilities across the U.S., entered and cleaned data, and factor-analyzed survey responses to arrive at a brief and reliable scale.

Sample

Our analysis was based on a representative sample of 405 substance abuse treatment facilities selected from the adult, outpatient facilities selected from the Substance Abuse and Mental Health Services (SAMHSA) Inventory of Substance Abuse Treatment Services (I-SATTS). The I-SATTS is a comprehensive inventory of all U.S. drug treatment facilities. We aimed to collect surveys from 400 facilities in order to obtain a sample representative of all U.S. outpatient facilities serving primarily adults. There were 3,800 outpatient, adult facilities in the I-SATTS sample; collecting data from 400 facilities would permit us to be 95% confident that the true prevalence of survey findings would fall within 5% of our findings. Our sample size of 400 greatly exceeds the number needed conduct factor analyses on survey items. Kline (Kline, 2010) recommends close to five values for every free parameter in the model. There were 29 questions in our original survey of attitudes, corresponding to 4 free parameters respectively. To achieve a 5:1 ratio, this required a sample size of 155.

The survey was conducted from November 2009 to November 2010. Details on facility and respondent recruitment are provided elsewhere (Cupertino et al., 2013). Briefly, we recruited a stratified sample of facilities, proportional to the prevalence of these facilities in the overall population. We pre-determined the number of facilities required to fill each strata and continued recruitment until all strata were filled. We mailed letters to facilities, inviting them to participate in the survey, and notifying them that a researcher would call to answer questions, collect verbal consent, and conduct the survey. One person in a leadership position (clinic director, medical director, counseling supervisor, head nurse, or owner) was surveyed by phone, fax, email, or mail, according to responder preference. Participants were reimbursed \$20.00 for participating in the study. All procedures were approved by the University of Kansas Medical Center Ethics Committee (IRB# 10979).

Measures

We developed a draft list of items for the Tobacco Treatment Commitment Scale (TTCS) based on a literature review and qualitative research in 8 drug treatment facilities that included structured interviews, chart reviews, and direct observation of facility procedures and policies (Richter, Hunt, Cupertino, Garrett, & Friedmann, 2012). We used commitment as our guiding principle--we selected/developed items that were relevant to facility and staff levels of commitment to providing tobacco treatment. We did so in response to the emerging

research on commitment-making as an important predictor of long- and short- term behavior change (Amrhein, Miller, Yahne, Palmer, & Fulcher, 2003; Lokhorst, Werner, Staats, Dijk, & Gale, 2011; Pull, 2008).

The draft survey consisted of 38 items. We solicited critiques of these items from 10 experts in providing tobacco treatment in drug treatment facilities, recruited from the Association for the Treatment of Tobacco Use and Dependence (ATTUD; www.attud.org). We provided experts with a paper form on which they rated the relevance of each candidate scale item. Relevance was defined as the degree to which each attitude would affect staff commitment to providing tobacco treatment. We convened the experts in a conference call during which we asked them to discuss the merits and weakness of each item and nominate new candidate items that they believed might affect staff commitment. We also solicited input on the response format for the scale and the wording of particular items.

Following this call we discarded items that experts rated as irrelevant, revised poorly worded items, and added several new items. This reduced the list of candidate items to 29, which we grouped into 4 *a priori* conceptual domains: 1) Tobacco treatment is relevant in drug treatment, 2) General staff attitudes towards tobacco treatment, 3) Staff perception of clients' interest in tobacco treatment, 4) General attitudes about tobacco use.

Items included Likert-type response categories. The scale began with a global question on commitment to treat tobacco, "This facilities' commitment to providing treatment for tobacco dependence is", with response options ranging from 1–5 (1= very low; 5 = very high). Thereafter, survey participants were instructed to, "on a scale of 1 to 5, indicate the extent to which you agree with the following statements" with anchors of 1 = strongly agree, 3 = neither agree nor disagree, and 5 = strongly disagree. All 29 TTCS items that were administered to survey participants are listed in Table 2. To reduce the likelihood that respondents would fall into a response set, we removed domain headings and shuffled the order of the items in the final version of the survey that was administered.

Most items in the initial scale were negative—the higher the item rating, the less favorable the attitude toward treating tobacco. We considered reverse wording some of the items to prevent respondents from falling into a response set. We decided against doing so because the result of reverse wording items is unpredictable. The entire meaning can change—not simply to the reverse of the original sentiment. Most of the items in the scale were awkward or seemed to measure a slightly different sentiment when reversed. For this reason, we decided to keep items as close as possible to the language provided by our qualitative research participants, and in the same negative or positive valence.

We also considered reverse scoring some options. We opted against this strategy because we permitted respondents to complete the survey by phone or in writing. We could not ensure that participants opting for pen and paper surveys noticed changes in the order of response options when they occurred. We feared that flipping the order of the options for some items would introduce more error than it would prevent.

Completed surveys were reviewed for data entry errors, questionable responses, and missing data. Interviewers contacted survey participants to collect data on missing or questionable

items. Data were double data entered into the University's Comprehensive Research Information System (CRIS), a secure web-based clinical information management system. Databases were compared and discrepancies resolved by inspection of the source paper surveys. The study database manager also performed range, frequency checks and logic checks on the data and resolved data entry errors. The final cleaned dataset was imported into SPSS 18.0 and R for data analyses (Rosseel, 2011).

To describe facility representatives completing the survey, we collected gender, smoking status, and job title. We used I-SSATS data, imported into our final database by unique facility-level identification numbers, to describe facility characteristics.

Analyses

We summarize facility and participant characteristics using descriptive statistics. To identify the underlying scale structure and then refine the structure, we use a series of confirmatory and exploratory factor analyses. We began with an a priori set of factors, and concluded the analyses with a new set of factors that summarized the final scale. Confirmatory factor analyses were conducted to test the underlying structure of the scale (Brown, 2006). Exploratory factor analysis with promax rotation guided dropping items and supplied new factor structures (Pett, Lackley, & Sullivan, 2003). Once we achieved a pool of items that demonstrated acceptable reliability, we refined the scale further by reducing the number of items, examining the resultant reliability, and adding back in selected items to achieve a brief and reliable scale. This involved a trade off between brevity and reliability, as shorter scales reduce burden on respondents and longer scales are more reliable (DeVellis, 2003).

In order to obtain internal consistency reliabilities for the final TTCS, we calculated traditional Cronbach's alpha and reliability using a "unified approach" that was based on the final factor analysis (Alonso, Laenen, Molenberghs, Geys, & Vangeneugden, 2010). The unified reliability supplies individual items' reliability, and entire reliability for the total scale and subscales. We use Shrout's (1998) guidelines for interpreting reliability: 0.00-.10 is virtually none; 0.11-0.40 is slight; 0.41-0.60 is fair; 0.61-0.80 is moderate; and 0.81-1.0 is substantial (Shrout, 1998).

We developed a procedure for arriving at a summary score for the commitment of each respondent. Because most items in the initial scale were negative, we decided to invert the ratings of whatever positive items were left in the final scale, so that an average score could be calculated across all items for a given respondent. This would yield a final score between 1 and 5, with 1 representing strong commitment to providing tobacco treatment and 5 representing poor commitment to tobacco treatment. With the exception of golf, this type of inverse scoring system is difficult to interpret. To facilitate interpretation of scale scores, we decided to invert the final score. To do so, we subtracted each respondents' mean score from 6, to create a final score in which 5 represented a high commitment to providing tobacco treatment and 1 represented a poor commitment to tobacco treatment. Hence, the final scale is scored by a) inverting scores from items that represent positive attitudes about tobacco, b) calculating the mean score across all items, and c) subtracting this mean from 6.

Results

Facility and Participant Characteristics (not shown)

Just under half (48%) of the facilities were privately owned and not for profit. Few (10%) were located in a hospital. Two-thirds (66%) of the facilities had less than 100 clients. The average number of smokers among the facilities was 75% and almost a quarter (23%) stated that there was a state mandate for tobacco treatment. The final sample was comparable to all 3,800 U.S. outpatient, adult drug treatment facilities on 14 clinic characteristics; more details on survey development, methods, representativeness, and main findings are available elsewhere (Cupertino et al., 2013).

Over half (61%) of the respondents were female and a little over half (51%) were current or former smokers. Responders held various roles in the program; clinic directors (59%), owner (12%), head counselor (8%), and other (21%).

Construct Validity: Factor Analysis

Our confirmatory factor analyses are presented in Table 1. We first conducted a confirmatory factor analysis (CFA^I Initial) on all initial 29 items to evaluate our 4 *a priori* conceptual domains; this did not produce a good fit (CFI=0.782, RMSEA=0.067). We then conducted an exploratory factor analysis (EFA—not shown) using principal components extraction with promax rotation to the 29-items. Following guidelines for the factor analysis detailed by Pett, after the matrix was rotated, factors were retained whose eigenvalues were greater than 1.0 and on which there were three items, each of which had to have loadings greater than .50 (Pett et al., 2003). Three domains emerged (21 items), two of which were similar to two of our 4 original, *a priori* domains. We conducted a confirmatory factor analysis (CFA 1) to test the newly discovered structure and items (CFI=0.925, RMSEA=0.054).

To create a parsimonious scale, we conducted a confirmatory factor analysis (CFA 2) with the 4 highest loading factors in each of the three domains. This brief 12-item scale also produced a good fit (CFI=0.953, RMSEA=0.064).

The brief scale (CFA 2), however, excluded a number of items that had frequently been nominated for inclusion by staff and content experts during scale development. Because alpha can decrease when scales are administered to new samples (DeVellis, 2003) to add a “margin of safety” the team added back in 3 items that had been retained in the EFA, had demonstrated good reliability in CFA 1, but had not originally made the first “cut” in our attempt to create a reliable and brief scale (CFA 2, with 12 items). These items included: Domain 1—*Smoking does not have an immediate effect on clients’ lives but drugs do*; Domain 2—*Treating tobacco dependence should be a part of the mission of drug treatment programs*; and Domain 3—*Smoking helps clients cope with the stress in their lives*). In addition, we dropped one item from Domain 2—*Smoking cessation counseling is not effective*. This item did not logically fit with the other items in Domain 2—which all focused on what programs should and should not do. These types of considerations accord with DeVellis’ guidance for optimizing scale length (DeVellis, 2003). We conducted a final

confirmatory factory analysis (CFA 3) on the remaining 14 items, which produced a good fit (CFI=0.950, RMSEA=0.058).

Table 2 displays all of the standard estimates for the items included in the CFAs. We concluded that CFA 3 was the most parsimonious and theoretically coherent solution.

Reliability and Descriptive Statistics

Unified reliability for the final TTCS (CFA 3, Table 1) is substantial (0.975). The reliability of the three final domains of the scale (F1, F2, and F3 subscales) were 0.778, 0.836, and 0.792 respectively, all substantial or very close to it. Table 3 presents correlations between the final scale domains and the total scale. These were generally moderate to substantial.

Table 4 depicts the items included in the final scale, the item means and standard deviations. The mean score, across all responding sites, on the TTCS was 50.4 (SD=8.7). The Figure displays the descriptive statistics and distribution of TTCS scores, which ranged from 20 (N=1) to 70 (N=6).

Discussion

The TTCS is a brief and reliable scale of staff commitment to providing tobacco treatment. We conducted extensive qualitative data collection and solicited expert input in order to design initial items with high content validity. The final TTCS contains 14 items in 3 domains: *Tobacco is less harmful than other drugs*; *It's not our job to treat tobacco*; and *Tobacco treatment will harm clients*. These three core constructs together account for most of the variance in the survey items, which suggests they are the major sentiments driving commitment, or lack of commitment, to providing tobacco treatment services.

It is important to note that we worded the majority of items, and the resultant domains, in a negative sense – that is, respondents who strongly endorsed the items exhibit less commitment to providing tobacco treatment. We did so because this was the way these items were provided to us by clinic staff in our qualitative interviews. This approach, however, makes it difficult to compare our findings to other studies that, in general, phrased attitude items to assess positive attitudes toward tobacco treatment. For example, Hahn et al. (1999) found that most Kentucky counselors believed that substance abuse counselors should treat clients' tobacco dependence. Staff who smoked, however, were less likely to endorse treating clients tobacco dependence. This suggests that Hahn's study found differences between staff regarding whether they felt tobacco treatment should be a part of their job—the positively-phrased version of the TTCS domain *it's not our job to treat tobacco*. Similarly, Knudsen and Studts (2010) found that counselors who believed that cessation interventions would help recovery were more likely to provide tobacco treatment. This could be interpreted as a positively-phrased measure of a the TTCS construct *tobacco treatment will harm clients*. Hence, our domains echo some items explored by other investigators, which they found were related to the likelihood facilities provided tobacco treatment services.

As displayed in the Figure, the distribution of scores on the TTCS suggest that it is sensitive to attitudes toward tobacco treatment that the entire range of options—from *very favorable* to *very unfavorable*. Because no facilities recorded the lowest possible score, and very few (6) reported the maximum, the score might be sensitive to changes in attitudes as well.

The correlations of the scale scores (Table 3) are lower than the factor scores' correlations in Table 1. This occurs because the factor scores weigh the more reliable items higher in the scoring of that factor score. For example, in Domain 2 (Table 2), the first item in that domain has the highest standard estimate (0.826) and the seventh item the lowest (0.332), so that most reliable item has more weight in the score, resulting in a more reliable measure of the factor score. Conversely, for the scale scores in Table 3 all the items have equal weight but a less reliable score. The more reliable factor scores resulted in better precision for calculating the correlations. We should also note that while these correlations are large (up to .824) their squares are still less than “substantially” reliable ($<.8$), which suggests that the items are not measuring the same underlying phenomena.

The study has a number of limitations. The sample included only outpatient drug treatment facilities—findings may not apply to inpatient facilities. Our surveys were self-report and hence subject to social desirability bias. Since most of the items were phrased in the same direction – stating a negative attitude toward tobacco or tobacco treatment, it is possible that survey participants fell into a response set when answering questions. We did not include other forms of reliability testing, such as test-retest or tests of construct validation.

Last, there is a slight mismatch between our validation sample and the ultimate target population of this scale. This study was part of a larger study, which collected data on tobacco treatment practices and also resources for providing tobacco treatment (for these results, see Cupertino et al., 2013 and Hunt, Gajewski, Jiang, Cupertino, & Richter, In Press). Because study funds precluded interviewing multiple staff at each site, we selected a staff member who might know the most about treatments received by all clients. Hence, we focused on clinic administrators such as clinic directors, owners, or counseling supervisors. Ideally, we would have validated the TTCS with a sample that included a mix of administrators and frontline staff. Such a mixed sample might result in a different structure, with different items. Moreover, responses might vary by organizational position (such as receptionist versus treatment staff) and by discipline (such as counselor versus physician).

Future studies could address a number of these limitations. Additional validation studies could include frontline staff only, or a sample stratified by role and/or discipline. Examining differences based on staff roles and disciplines might lead to insights regarding gaps that might exist between treatment policies and treatment implementation. Further testing of reliability (e.g., test-retest) and construct validation (e.g., convergent, divergent, discriminant) should be performed.

The study has several strengths. We conducted extensive qualitative research to collect a wide range of attitudes in the language of treatment staff. Moreover, items were judged to have good content validity by our team of experts. Our sample size was robust. By using a

sampling frame linked to facility characteristics supplied by SAMHSA, we were able to compare our sample with non-participating facilities.

Future studies could explore other uses for the TTCS. Test-retest should be evaluated, and its reliability in other samples, such as front-line staff, inpatient treatment staff, and perhaps even mental health facilities, should be assessed. Importantly, it would be useful to evaluate associations between TTCS scores and actual provision of tobacco treatment services, and determine whether provision changes with changes in attitudes. Staff attitudes and beliefs are frequently cited as key determinants of whether or not organizations successfully adopt new changes (Guydish, Passalacqua, Tajima, & Manser, 2007; Knudsen & Studts, 2010). Because it is brief and reliable, the TTCS could be used widely to enhance understanding of how attitudes help or hinder dissemination of tobacco treatment in drug treatment.

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Figure.
Distribution of Tobacco Treatment Commitment Scale Scores in 405 U.S. Substance Abuse Treatment Facilities.

Table 1

Factor Analysis of the Tobacco Treatment Commitment Scale (TTCS)

Fit Index	CFA 1 (Initial)	CFA 1	CFA 2	CFA 3 (Final Scale)
Comparative Fit Index	0.782	0.925	0.953	0.950
Root Mean Square Error of approximation (RMSEA)	0.067	0.054	0.064	0.058
Correlation among factors				
	F1~F2	0.804	0.800	0.796
	F1~F3	0.709	0.830	0.830
	F1~F4	0.906	n/a	n/a
	F2~F3	0.61	0.775	0.774
	F2~F4	0.575	n/a	n/a
	F3~F4	0.631	n/a	n/a
Subscale Entire Reliability				
	F1			0.778
	F2			0.836
	F3			0.792
Unified Reliability				
				0.975
Cronbach's Alpha				
	F1	0.801	0.768	0.752
	F2	0.245	0.805	0.806
	F3	0.563	0.780	0.744
	F4	0.768	n/a	n/a

Table 2

Standard Estimates For All Items Included in Confirmatory Factor Analyses 1–3

	CFA 1			CFA 2			CFA 3 (Final Scale)		
	Standard Estimate	Cronbach's Alpha if Item Deleted	Standard Estimate	Cronbach's Alpha if Item Deleted	Standard Estimate	Cronbach's Alpha if Item Deleted	Standard Estimate	Cronbach's Alpha if Item Deleted	Standard Estimate
Domain 1: 'Tobacco is less harmful than other drugs'									
Tobacco is less harmful than other addictive drugs	0.631	0.715	0.657	0.667	0.640	0.718			
It is better for clients to smoke than use other drugs	0.63	0.725	0.644	0.695	0.641	0.729			
Tobacco dependence does not affect clients ability to function in society	0.664	0.720	0.664	0.704	0.662	0.730			
Tobacco dependence causes few, if any, problems for our clients	0.653	0.728	0.667	0.710	0.655	0.739			
Smoking does not have an immediate effect on clients lives but drugs do	0.603	0.741			0.607	0.752			
All addictions should be treated equal	−0.481	0.775							
Domain 2: 'It's not our job'									
Program should not treat tobacco dependence because it is not what clients are in treatment for	0.826	0.777	0.841	0.762	0.846	0.705			
Drug treatment programs should focus on fulfilling court-mandated treatment, not treating tobacco	0.729	0.781	0.728	0.713	0.736	0.735			
Tobacco dependence should not be treated in drug treatment programs	0.692	0.785	0.696	0.750	0.695	0.738			
Treating tobacco dependence should be a part of the mission of drug treatment programs	−0.573	0.796			−0.556	0.797			
Smoking cessation counseling is not effective	0.632	0.793	0.613	0.796					
This facilities commitment to providing treatment for tobacco dependence is...	0.495	0.805							
Drug treatment staff, in general, are not interested in help clients quit smoking	0.332	0.815							

	CFA 1		CFA 2		CFA 3 (Final Scale)	
	Standard Estimate	Cronbach's Alpha if Item Deleted	Standard Estimate	Cronbach's Alpha if Item Deleted	Standard Estimate	Cronbach's Alpha if Item Deleted
Cutting down or quitting smoking builds confidence for quitting other drugs	-0.427	0.810				
Most clients will leave programs that try to treat tobacco dependence	0.521	0.802				
Domain 3: 'Tobacco treatment will harm clients'						
Quitting all drugs at the same time is too much for clients	0.754	0.721	0.748	0.640	0.754	0.702
Quitting smoking makes anxiety and depression worse for our clients	0.551	0.746	0.519	0.718	0.545	0.739
Smoking helps clients cope with the stress in their lives.	0.535	0.755			0.542	0.744
It's unfair to take clients tobacco away from them	0.652	0.746	0.643	0.700	0.650	0.736
Treating tobacco dependence will hinder clients recovery	0.694	0.743	0.702	0.681	0.694	0.730
Clients are not ready to quit smoking	0.473	0.772				

Table 3

Correlations Between Domains and the Total TTCS

	Total Scale	Domain 1	Domain 2	Domain 3
Total Scale (Mean ; SD)	(50.4;8.7)	0.88	0.83	0.86
Domain 1 'Tobacco is less harmful than other drugs' (Mean ; SD)	0.88	(18.5; 3.5)	0.62	0.62
Domain 2 'It's not our job' (Mean ; SD)	0.83	0.62	(15.3, 3.0)	0.57
Domain 3 'Tobacco treatment will harm our clients' (Mean ; SD)	0.86	0.62	0.57	(16.6; 3.6)

Table 4

Final TTCS Scale Items and Descriptive Statistics

Item	Mean (SD)
Tobacco Treatment Commitment Scale (all domains)	
Factor 1: 'Tobacco is less harmful than other drugs'	50.4 (8.7)
Tobacco is less harmful than other addictive drugs	4.01 (0.94)
Smoking does not have an immediate effect on clients lives but drugs do	3.68 (0.99)
Tobacco dependence causes few, if any, problems for our clients	3.94 (0.92)
It is better for clients to smoke than use other drugs	3.46 (1.03)
Tobacco dependence does not affect clients ability to function in society	3.47 (0.99)
Factor 2: 'It's not our job'	
Treating tobacco dependence should be a part of the mission of drug treatment programs	2.41 (1.02)
Drug treatment programs should focus on fulfilling court-mandated treatment, not treating tobacco	3.74 (0.93)
Program should not treat tobacco dependence because it is not what clients are in treatment for	3.91 (0.84)
Tobacco dependence should not be treated in drug treatment programs	4.04 (1.02)
Factor 3: 'Tobacco treatment will harm clients'	
Quitting smoking makes anxiety and depression worse for our clients	2.84 (0.94)
Smoking helps clients cope with the stress in their lives.	2.94 (1.04)
Treating tobacco dependence will hinder clients recovery	4.06 (0.81)
vIts unfair to take clients tobacco away from them	3.49 (1.09)
Quitting all drugs at the same time is too much for clients	3.31 (1.03)