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Social pressure, coercion, and client engagement at treatment entry: A self-determination theory perspective

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Abstract

Research on coercion in addiction treatment typically investigates objective sources of social pressure among legally mandated clients. Little research has examined the impact of clients' *perceptions* of social pressures in generalist addiction services. Clients seeking substance abuse treatment ($N=300$; 221 males and 79 females; M age=36.6 years) rated the extent to which treatment was being sought because of coercive social pressures (*external motivation*; $\alpha=.89$), guilt about continued substance abuse (*introjected motivation*; $\alpha=.84$), or a personal choice and commitment to the goals of the program (*identified motivation*; $\alpha=.85$). External treatment motivation was positively correlated with legal referral, social network pressures to enter treatment, and was inversely related to problem severity. In contrast, identified treatment motivation was positively correlated with self-referral and problem severity, and was inversely related to perceived coercion ($ps<.05$). Hierarchical multiple regression analyses showed that referral source (i.e., mandated treatment status), legal history, and social network pressures did not predict any of 6 measures of client engagement at the time treatment was sought. However, treatment motivation variables accounted for unique variance in these outcomes when added to each model ($\Delta R^2s=.06-.23$, $ps<.05$). Specifically, identified treatment motivation predicted perceived benefits of reducing substance use, attempts to reduce drinking and drug use, as well as self (and therapist) ratings of interest in the upcoming treatment episode ($\beta s=.18-.31$, $ps<.05$). Results suggest that the presence of

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legal referral and/or social network pressures to quit, cut down, and/or enter treatment does not affect client engagement at treatment entry.

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1. Introduction

Entry into alcohol and other drug treatment programs often occurs in conjunction with *legal* mandates from the criminal justice system, *formal* mandates from employers and social assistance agencies, and *informal* mandates (e.g., threats, ultimatums, interventions) issued by family and friends (Gerdner & Holmberg, 2000; Gregoire & Burke, 2004; Joe, Simpson, & Broome, 1999; Polcin & Weisner, 1999; Rush & Wild, 2003; Weisner, 1990). Clinicians, researchers, and policy-makers alike increasingly recognize that these social control tactics are an integral part of the process of seeking treatment for alcohol and other drug problems.

A review of 170 English language articles on this topic revealed several trends and limitations in recent research (Wild, Roberts, & Cooper, 2002). First, there is a relatively weak empirical base to inform decision-makers about the use of social control tactics, since over half of published articles merely provide legal, ethical, and/or clinical arguments for or against the use of social pressure to facilitate treatment without reporting empirical data. Second, informal mandates occur more frequently than formal and legal social pressures (Polcin & Weisner, 1999) and may be more influential in facilitating treatment entry (Marlowe et al., 1996). But existing research overemphasizes legal mandates (e.g., court-ordered treatment, diversion to treatment from criminal justice systems). Third, few studies have used longitudinal and comparative designs to understand relationships between social pressures and treatment outcomes. Finally, research has rarely examined relationships between social pressures, client motivation for seeking help, and engagement in the treatment process. For example, Farabee, Prendergast, and Anglin (1998) reviewed 11 studies of coerced addiction treatment and found that none of them assessed motivational correlates of social pressure.

1.1. Assessing coercion in addiction treatment

Fully 78% of 71 empirical studies reviewed by Wild et al. (2002) used referral source (e.g., court referral versus self-referral) to operationally define whether treatment was “coerced” or not. When coercion is assessed independently of referral source, measurement strategies typically emphasize objective features of social pressure. For example, several studies used an ordinal measure assessing low, medium, and high levels of coercion with reference to legal status along with the presence or absence of legal referral and urine testing requirements at the time treatment was sought (Hser, Maglione, Polinsky, & Anglin, 1998; Joe, Simpson, & Broome, 1999; Joe, Simpson, Greener, & Rowan-Szal, 1999; Maglione, Chao, & Anglin, 2000). Marlowe et al. (1996), Marlowe, Merikle, Dirby, Festinger, and McLellan (2001) developed a behaviourist measure of coercion in which clients’ reasons for seeking addiction treatment were coded in relation to reinforcement schedule, social mediation, and psychosocial domain. Finally, Polcin and Weisner (1999) developed a coercion index by asking clients to indicate

whether any of 14 social control agents (spanning legal, formal, and informal mandates) had issued an ultimatum to enter treatment.

Each of these measures emphasizes *objective* aspects of social pressure, i.e., the extent to which legal, formal, and informal social pressures accompany addiction treatment. But none of them assess whether clients believe that social pressures are *influential in their decision to seek treatment*. This may be an important omission, because there is no one-to-one correspondence between objective social pressure (i.e., referral source) and client perceptions that they have been coerced to enter treatment (Wild, Newton-Taylor, & Alletto, 1998), perceived concerns about legal problems (Vickers-Lahti et al., 1995), perceived fairness of the treatment decision (Sallmen, Berglund, & Bokander, 1998), or client readiness to change behaviour (Marlowe et al., 2001; Wells-Parker, Kenne, Spratke, & Williams, 2000). Other studies confirm that objective legal status and perceived legal pressure exhibit independent effects on treatment retention (Maxwell, 2000; Young, 2002). These results, along with the general finding that referral source typically does not predict post-treatment outcomes such as substance use and criminal behaviour (Wild et al., 2002) suggest that a conceptual distinction should be drawn between objective and perceived aspects of social pressure. For example, two individuals who are exposed to the same controlling institutional or interpersonal events designed to facilitate addiction treatment may exhibit different reactions, depending on whether they believe that these events influenced their decision to enter treatment, whether they believe that these events are coercive impositions, and so on.

1.2. Social pressure and treatment motivation: A self-determination theory perspective

Self-determination theory (SDT; Deci & Ryan, 1985) provides a useful perspective on these issues because it addresses how social events are perceived and how those perceptions affect motivational processes (Wild & Enzle, 2002). SDT characterizes motivation to engage in activities on a continuum, ranging from activities that are completely initiated and controlled by external social forces, to activities that are fully self-determined. On this theory, people have fundamental psychological needs for autonomy, relatedness, and competence. When social events promote perceptions of being controlled or coerced, intrinsic motivation (i.e., interest and engagement in activities) is undermined. Conversely, when social events promote perceptions of autonomy support, intrinsic motivation toward activities is enhanced (Deci & Ryan, 2002). This general prediction has been supported by a large research literature, and across a variety of health behaviours that are often accompanied by social pressure (e.g., smoking cessation, weight control, adherence to medication; Westmaas, Wild, & Ferrence, 2002; Williams, 2002).

As applied to substance abuse treatment, SDT defines *external motivation* in relation to client beliefs that treatment is sought because social events have coerced, demanded, or pressured the client to seek help. *Introjected motivation* refers to internal conflicts (e.g., feelings of guilt and anxiety) associated with the treatment decision. *Identified motivation* occurs when clients personally identify with the goals of treatment, commit to these goals, and choose to seek help. Ryan, Plant, and O'Malley (1995) were the first investigators to study motivation for substance abuse treatment using SDT. Across two samples, analyses of items assessing reasons for entering alcohol treatment revealed: (1) an external motivation factor, representing beliefs that treatment was sought for external reasons (e.g., "I was referred for treatment by the legal system"), and (2) a mixed internalized motivation factor, combining "both a personal commitment to change and a desire to change based on guilt and anxiety concerning one's drinking" (Ryan et al., 1995, p. 284). Clients "high in both internalized and external motivation demonstrated the best attendance and treatment retention while those low in internalized motivation

showed the poorest treatment response, regardless of the level of external motivation” (Ryan et al., 1995, p. 279).

Although the results of Ryan et al. (1995) indicate that SDT is a useful framework for understanding treatment motivation, this study did not assess relationships between treatment motivation and the legal, formal, and informal sources of social pressure reviewed earlier, nor did it investigate treatment-seeking for illicit drug abuse. To address these issues, this study explored the utility of SDT to understand relationships between social pressure, treatment motivation, and client engagement in a sample of clients seeking addiction treatment. The first goal of the study was to describe the factor structure and internal consistency of items replicating and extending those used by Ryan et al. (1995) to assess external, introjected, and identified motivations for seeking treatment. The second goal of the study was to examine relationships between treatment motivation and independent measures of legal, formal, and informal social pressures to enter a program. On the assumption that the theoretical distinction between objective and perceived aspects of social pressure outlined earlier is tenable, our first hypothesis was that treatment motivation should account for unique variance in client engagement at treatment entry, after taking into account the influence of legal, formal, and informal social pressures to seek help. The final goal of the study was to test a second hypothesis, derived from SDT, that identified (i.e., self-determined) reasons for seeking treatment would be more positively associated with client engagement than other reasons for attending treatment.

2. Methods

2.1. Overview

The study was designed to investigate relationships between social pressures, coercion, and client engagement prior to the commencement of outpatient addiction treatment, during the process of program intake and initial clinical assessment. Participants completed a 2-phased research protocol during clinical assessment procedures, prior to the start of formal treatment activities. The study procedures received ethical approval from the joint University of Toronto/Addiction Research Foundation Institutional Review Board.

2.2. Participants

Adults seeking treatment at the Behaviour Change Unit (BCU) of the Addiction Research Foundation, (ARF) in Toronto, Ontario, participated in the study. Out of 500 consecutive clients who sought treatment in an eight-month data collection period and who were approached to participate in the study, 300 consented to participate.

2.3. Measures

2.3.1. Sociodemographics and problem severity

We assessed sex, age, marital status, educational attainment, and current employment status of clients. Participants were asked to identify their primary and secondary drugs of abuse, and among clients identifying alcohol as their primary substance of abuse, the Alcohol Dependence Scale (ADS; Skinner & Horn, 1984) was administered. For clients identifying illicit drugs as their primary substance of abuse, the

Drug Abuse Screening Test (DAST-20; Skinner, 1982) was administered to assess other drug dependence. The number of lifetime alcohol and other drug-related convictions was also recorded for each client.

2.3.2. Social pressures

A single item assessed referral source (“Is treatment or assessment a requirement imposed by the courts, your employer, or other legal mandates?”). In addition, clients rated the extent to which their social networks pressured them using two modified versions of Polcin and Weisner’s (1999) social pressure index. The first item asked clients to rate the extent to which 12 social network targets (i.e., spouse/partner, mother, father, other relative, girlfriend/boyfriend, friends, sponsors, employers, officer of the court, children’s aid worker, physician) had exerted pressure on them in the previous 2 months to cut down or reduce their substance use behaviour, using a 5-point Likert scale item for each target ranging from 1 (= no pressure) to 5 (= extreme pressure). The second item asked clients to rate the extent to which these 12 social network targets had exerted pressure on them in the previous 2 months to enter a treatment program, using the same Likert scales. For both measures, we created a social pressure index consisting of the sum of the scale ratings over all of the social network targets (cf. Polcin & Weisner, 1999).

2.3.3. Treatment motivation and perceived coercion

To assess *treatment motivation*, the study protocol included a Treatment Entry Questionnaire (TEQ) containing 30 items assessing external, introjected, and identified reasons for seeking treatment. Ten of these items were previously used by Ryan et al. (1995) to assess these constructs. However, because Ryan et al. found that their treatment motivation items loaded on a mixed “internalized motivation” factor reflecting both introjected and identified motivation, 20 additional items were written for this study to determine whether an expanded item pool could more clearly discriminate between identified, introjected, and external motives for treatment. To assess convergent and discriminant validity of the TEQ motivational items, a modified version of the MacArthur Perceived Coercion Scale was also used, consisting of 5 true–false items assessing whether clients believed that they had influence, control, choice, freedom, and initiation over their decision to seek treatment (e.g., “I felt free to do what I wanted about coming to the ARF for treatment”; Gardner, Hoge, Bennett, Roth, Lidz, Monahan et al., 1993). Internal consistency for this measure was adequate (KR-20 = .82).

2.3.4. Outcome measures

Retention is frequently used as an outcome measure in studies of coerced addiction treatment (Wild et al., 2002). However, “. . . the assumption that the individual is truly involved in treatment because they are physically present remains problematic” (Hiller, Knight, Leukefeld, & Simpson, 2002, p. 58). Moreover, research suggests that retention is strongly influenced by quality of client engagement and commitment to treatment goals early in the process of recovery (Belding, Iguchi, & Lamb, 1997; Belding, Iguchi, Lamb, Lakin, & Terry, 1995; Gainey, Catalano, Haggerty, & Hoppe, 1995; Joe, Simpson, & Broome, 1999; Joe, Simpson, Greener et al., 1999). The present study therefore used 6 measures to assess client engagement prior to the start of formal treatment activities. To measure *motivation for behaviour change*, we assessed perceived costs and benefits associated with reducing alcohol and other drug use (Cunningham, Sobell, Gavin, Sobell, & Breslin, 1997). Internal consistency of the two subscales comprising this measure was excellent ($\alpha_s = .89$ and $.87$ for the perceived costs and benefits scales, respectively). To measure *attempts to change substance use behaviour*, two substance use measures were used. The first was a two item scale ($\alpha = .78$) assessing self-reported attempts to reduce substance use at the time treatment was being sought

(e.g., “In the last week, I have really tried to control my alcohol/drug use”). The second was a 90-day timeline follow-back measure of alcohol use in the 3 months prior to treatment entry (Sobell & Sobell, 1992, 1995). Finally, to measure *client interest in treatment*, a five-item scale written for this study ($\alpha = .85$) assessed client interest in treatment (e.g., “The assessment process has been fair”; “I am looking forward to getting involved in treatment”). In addition, a four-item scale ($\alpha = .95$) assessed case therapists’ perceptions of client engagement during their initial assessment (i.e., “The client has shown an interest in changing her/his behaviours”; “The client has demonstrated genuine interest in the assessment process”).

2.4. Procedure

Intake and assessment procedures were conducted by clinical staff of the BCU, who informed potential participants of an opportunity to participate in a research study prior to the start of their treatment episode. A standardized BCU intake schedule collected background and substance use information. At the conclusion of intake, clinical staff gave each client (1) an Information Sheet explaining the purpose of the study (i.e., “to better understand why people come for substance abuse treatment”), and (2) a consent form outlining confidentiality and privacy procedures, as well as procedures to link BCU intake data to primary data collected during the study. If the client agreed to participate, BCU staff directed the client to a research assistant, who reviewed the consent form and associated conditions of confidentiality and anonymity, and paid the client for participating in the first research session. During the first research session, the research assistant administered a battery of items including those assessing perceived coercion, treatment motivation, the ADS, and client engagement. At the conclusion of the next scheduled assessment appointment (approximately 1 week later), each client was asked if she or he was willing to continue in the research protocol in exchange for a second \$5 payment (two research sessions were used because pilot testing indicated that a single research session would create undue response burden due to the number of instruments administered in the study). After reviewing the consent procedures again and paying the client, a second battery of questionnaires was administered, including the DAST-20 and the motivation for behaviour change scales. Therapist ratings of client engagement were independently collected after their initial assessment meeting with each client, and prior to commencement of treatment activities. The 5 therapists involved in the study were unaware of the scores of their clients on any measures included in the research protocol.

3. Analyses and results

The sample consisted of 300 clients seeking addiction treatment (221 men, 79 women; M age=36.6). Almost half (44%) were single, while the remaining clients were either married or cohabiting (29%), or separated, divorced, or widowed (27%). Fifty-one percent of the clients lived in rental accommodations, while a further 14% lived with their parents. On average, clients had completed 11.7 years of formal education. Over half (58%) reported being currently unemployed. Some 132 (44%) participants reported alcohol as their primary substance of abuse, 127 (42%) reported cocaine, and 39 (13%) reported other drugs (i.e., marijuana, opiates, prescription drugs, and other substances). Some 68% of the sample had received substance abuse treatment prior to this episode, and 29% were currently receiving treatment for other health problems in addition to substance abuse. About half (43%) had experienced at least one alcohol or other drug-related conviction.

Table 1
Factor loadings of treatment entry questionnaire motivation items ($N=300$)

Item	Factor		
	I	II	III
	External motivation	Identified motivation	Introjected motivation
The reason I am in treatment is because other people have pressured me to be here	.81		
I have agreed to follow a treatment program because my I will get into trouble with my family and friends if I don't follow all the guidelines	.78		
I have agreed to follow a treatment program because I was pressured to come	.77		
If I remain in treatment it will probably be because others will be angry with me if I don't	.73		
My family made sure that I entered a program	.72		
I was basically forced into a treatment program	.72		
I plan to go through with a treatment program because my friends and family won't approve of me unless I do	.66		
My friends strongly pressured me to come into a program	.58		
If I remain in treatment it will probably be because people will think I'm a weak person if I don't	.55		
I have agreed to follow a program because I want others to see that I am really trying to deal with my habit	.54		
I had no choice about coming into a treatment program	.52		
Being in a program is a way for me to avoid getting punished for my behaviours	.52		
I plan to go through with treatment because I'll get into trouble with the law if I don't remain in treatment	.39		
I have agreed to follow a treatment program because I was referred to treatment from the legal system	.32		
I decided to enter a program because I really want to make some changes in my life		.77	
I decided to enter a program because I was interested in getting help		.77	
I decided to enter a program because it feels important for me to personally deal with my substance abuse problem		.72	
I plan to go through with a treatment program because not abusing alcohol and drugs is a choice I really want to make		.66	
I plan to go through with a treatment program because I have freely chosen to be here		.61	
I decided to enter a program because no one other than myself can change the way I am		.61	
I decided to go through with a treatment program because having an alcohol or drug problem makes it hard for me to do the things I want to do		.61	
If I remain in treatment it will be because I feel that it's the best way to help myself		.57	
I have agreed to follow a treatment program because it is a personal challenge for me to deal with my problems		.55	
I have agreed to follow a treatment program because it is a challenge for me to learn to live without abusing alcohol or drugs		.51	.49
I plan to go through with treatment because I'll feel ashamed of myself if I don't			.78
If I remain in treatment it will probably be because I'll feel very bad about myself if I don't			.74
If I remain in treatment it will probably be because I'll feel like a failure if I don't			.74

Table 1 (continued)

Item	Factor		
	I	II	III
	External motivation	Identified motivation	Introjected motivation
I decided to enter a treatment program because I won't like myself very well unless my substance abuse problem is under control			.72
I plan to go through with a treatment program because I'll hate myself if I don't get my habit under control			.61
I decided to enter a program because people will like me better when I've dealt with my habit			.51
Eigenvalue	7.22	6.32	1.47
Percentage of common variance	24.1	21.1	4.9
Internal consistency (Cronbach's alpha)	0.89	0.84	0.85

3.1. Treatment motivation: Factor structure and internal consistency

Principal-components analysis (unities placed in the diagonals), followed by the scree test (Cattell, 1966), revealed three factors underlying the treatment motivation items, accounting for 50.1% of the item variance. Two criteria were used to identify items representing each factor: (1) item loadings of $|\geq .50|$ or greater on each factor, and (2) no cross loadings on other factors.

Table 1 presents varimax-rotated factor loadings for the treatment motivation items meeting the inclusion criteria. The first factor assessed *external motivation* (e.g., “I was basically forced into a treatment program”; “My family made sure that I entered a program”). The 12 items meeting the inclusion criteria for this factor exhibited very good internal consistency when summed as a composite scale ($\alpha = .89$). The second factor assessed *identified motivation* (9 items, e.g., “I decided to enter a program because I really want to make some changes in my life”; “I plan to go through with a treatment program because I have freely chosen to be here”; $\alpha = .84$). Finally, the third factor assessed *introjected motivation* (6 items, e.g., “I plan to go through with a treatment program because I'll hate myself if I don't get my habit under control”; “If I remain in treatment it will probably be because I'll feel like a failure if I don't”; $\alpha = .85$).

3.2. Referral source, social pressures, problem severity, and treatment motivation

Responses to the question “Is treatment or assessment a requirement imposed by the courts, your employer, or other legal mandates?” were tabulated. Some 237 clients answered ‘no’ to the question, and were classified as *non-mandated clients*. The remaining 59 clients were classified as *mandated* (four clients did not respond to the question). Mandated clients were divided into *legally mandated* clients ($n = 25$) because they reported a legal mandate as their referral source and also indicated that they had current legal involvements (e.g., awaiting trial, released on bail, suspended sentence, probation or parole), and *formally mandated* clients ($n = 34$) because their referral source included employers and other health and social service agencies.

ANOVAs were performed on each of the TEQ subscales, using the three referral source groups as a between-subjects factor. Table 2 shows that legally mandated clients endorsed external reasons for

Table 2
Relationship between referral source and treatment motivation

TEQ subscale	Type of mandate			<i>F</i>
	Legal	Formal	No mandate	
External motivation	38.7 _a	32.5	29.8 _b	3.44*
Introjected motivation	25.3	24.6	28.0	2.50
Identified motivation	49.8 _a	53.8 _b	57.2 _c	12.8***

Note. Means in each row not sharing the same subscript differ from each other at $p < .05$ using Student Neuman–Keuls Comparisons. *** $p < .001$. * $p < .05$.

seeking treatment more than non-mandated clients. In contrast, non-mandated clients endorsed identified reasons for seeking treatment more than either mandated treatment group ($ps < .05$). Next, correlations were computed between the treatment motivation subscales and perceived coercion, social network pressures to quit and to enter treatment, and problem severity (i.e., alcohol and other drug dependence).

As shown in Table 3, both external and introjected treatment motivation were positively correlated with both measures of social network pressure ($rs = .24$ – $.39$, $ps < .001$), while identified treatment motivation was uncorrelated with social network pressures. Perceived coercion scores were positively correlated with external treatment motivation ($r = .30$, $p < .001$), uncorrelated with introjected treatment motivation ($r = -.07$, ns), and inversely correlated with identified treatment motivation ($r = -.34$, $p < .001$). External treatment motivation was negatively correlated with alcohol dependence ($r = -.22$, $p < .01$) and was uncorrelated with drug dependence. Conversely, identified treatment motivation was positively correlated with both alcohol dependence ($r = .22$, $p < .01$) and other drug dependence ($r = .25$, $p < .001$).

3.3. Predicting client engagement from treatment motivation

A series of 6 hierarchical setwise multiple regression analyses were conducted, one for each measure of client engagement. In Step 1 of each model, we regressed a client engagement measure on demographic and background variables (age, sex, education, employment, lifetime drug convictions) and social pressure variables (mandated treatment status, social network pressures to quit or cut down, social network pressures to enter treatment). In Step 2, we added the 3 treatment motivation subscales derived from SDT to the model. This conservative approach adjusted for any effects of client background and objective measures of social pressure on client engagement *prior* to testing for the impact of treatment motivation on each outcome.

Table 3
Correlates of treatment motivation

Measure	TEQ motivational subscale		
	External	Introjected	Identified
Social network pressure to seek help	.39***	.25***	.04
Social network pressure to quit or cut down	.41***	.24***	.02
McArthur Perceived Coercion Scale	.30***	-.07	-.34***
Alcohol Dependence Scale (ADS)	-.21**	.05	.22**
Drug Abuse Screening Test (DAST-20)	-.07	.15*	.25***

Note. *** $p < .001$. ** $p < .01$. * $p < .05$.

Table 4
Treatment motivation and perceived costs and benefits of behaviour change

Predictor	Costs of reducing use			Benefits of reducing use		
	ΔR^2	<i>F</i>	β	ΔR^2	<i>F</i>	β
Background variables (Step 1)	.10	2.05*		.13	2.95**	
Age			-.07			-.05
Sex			.29**			.11
Education			.06			.09
Employment			.08			-.20*
Lifetime alcohol/drug convictions			.03			-.01
Referral source (mandated treatment)			.06			.04
Social network pressures to enter treatment			.06			.12
Social network pressures to quit/cut down			-.17			.12
Treatment motivation (Step 2)	.07	2.77**		.17	12.08***	
External motivation			-.19 ^a			.05
Introjected motivation			.37***			.20*
Identified motivation			-.16			.31**

Note. Sex coded as 1 = male; 2 = female. Employment coded as 1 = any employment; 2 = unemployed.

*** $p < .001$. ** $p < .01$. * $p < .05$. ^a $p < .08$.

3.3.1. Perceived costs and benefits of behaviour change

None of the social pressure variables predicted perceived costs and benefits of behaviour change at the time treatment was sought. However, as shown in Table 4, adding treatment motivation variables accounted for unique variance when added to each regression model ($\Delta R^2 = .07$ and $.17$ for these outcomes, respectively; $ps < .01$). Beta weights presented in Table 4 show, as predicted, that identified treatment motivation was positively associated with perceived benefits of reducing substance use ($\beta = .31$, $p < .01$). Interestingly, introjected treatment motivation was positively related to *both* perceived benefits of reducing alcohol or drug use ($\beta = .20$, $p < .05$) and to perceived costs of reducing alcohol or drug use ($\beta = .37$, $p < .001$).

Table 5
Treatment motivation and substance use

Predictor	Reduction in alcohol/drug use			Alcohol use (90 day average)		
	ΔR^2	<i>F</i>	β	ΔR^2	<i>F</i>	β
Background variables (Step 1)	.06	1.70		.09	1.30	
Age						
Sex						
Education						
Employment						
Lifetime alcohol/drug convictions						
Referral source (mandated treatment)						
Social network pressures to enter treatment						
Social network pressures to quit/cut down						
Treatment motivation (Step 2)	.06	4.58**		.06	2.39 ^a	
External motivation			.14			-.24 ^a
Introjected motivation			-.04			.23 ^a
Identified motivation			.26***			-.28*

Note. *** $p < .001$. ** $p < .01$. * $p < .05$. ^a $p < .07$.

Table 6
Treatment motivation and client interest in treatment

Predictor	Client rating			Therapist rating		
	ΔR^2	F	β	ΔR^2	F	β
Background variables (Step 1)	.05	1.53		.06	1.63	
Age						
Sex						
Education						
Employment						
Lifetime alcohol/drug convictions						
Referral source (mandated treatment)						
Social network pressures to enter treatment						
Social network pressures to quit/cut down						
Treatment motivation (Step 2)	.23	3.67*		.09	7.99***	
External motivation			.07			-.25**
Introjected motivation			-.11			.09
Identified motivation			.55***			.18*

Note. *** $p < .001$. * $p < .05$.

3.3.2. Substance use prior to entering treatment

None of the demographic or social pressure variables predicted client-rated attempts to reduce substance use or past 90-day alcohol consumption at the time treatment was sought. However, as shown in Table 5, adding treatment motivation variables accounted for unique variance in these outcomes when added to each regression model ($\Delta R^2 = .06$ and $.06$ for these outcomes, respectively; $ps < .07$). Beta weights presented in Table 5 show, as predicted, that identified treatment motivation was positively associated with client attempts to reduce substance use ($\beta = .26$, $p < .001$) and was inversely related to past 90 alcohol consumption ($\beta = -.28$, $p < .05$), as were external treatment motivation scores ($\beta = -.24$, $p < .07$). Conversely, introjected treatment motivation was positively related to past 90-day alcohol consumption ($\beta = .23$, $p < .07$).

3.3.3. Client interest in treatment

Finally, measures of social pressure did not predict client or therapist ratings of interest in the upcoming treatment episode. However, as shown in Table 6, adding treatment motivation variables accounted for unique variance in these outcomes when added to each regression model ($\Delta R^2 = .23$ and $.09$ for these outcomes, respectively; $ps < .05$). Beta weights presented in Table 6 show, as predicted, that identified treatment motivation was positively associated with client- and therapist-rated interest in upcoming treatment ($\beta_s = .55$ and $.18$, respectively, $p < .05$). External motivation was inversely related to therapist ratings of client interest in treatment, ($\beta = -.25$, $p < .01$).

4. Discussion

The present results confirmed that the TEQ motivation items formed factorially distinct and internally consistent dimensions reflecting the extent to which clients sought treatment because of coercive social pressures (*external motivation*), guilt about continued substance abuse (*introjected motivation*), or

because of a personal choice and commitment to the goals of the treatment program (*identified motivation*). These findings replicate and extend the study of Ryan et al. (1995), which demonstrated that treatment motivation constructs derived from SDT can be reliably determined from client ratings (cf. Simoneau & Bergeron, 2003).

Treatment motivation subscales derived from SDT exhibited also convergent and discriminant validity. Specifically, external treatment motivation was (1) higher among legal referrals to treatment, (2) positively correlated with perceptions that treatment was coerced and with social network pressures to quit, cut down, and/or enter treatment, and (3) either inversely related or uncorrelated with problem severity. This pattern of results suggests that external treatment motivation is more likely to occur when substance users who do not exhibit alcohol dependence or substance dependence experience social network pressures to cut down, quit, and/or seek help. In contrast, identified treatment motivation was (1) higher among self-referrals to treatment, (2) inversely related to perceptions that treatment was coerced, (3) unrelated to social network pressures to seek help or to cut down, and (4) positively correlated with problem severity. This pattern of results suggests that alcohol and other drug dependence facilitate identified motivation for addiction treatment. Finally, introjected treatment motivation was positively correlated with both social network pressures to seek help and cut down, and with substance dependence.

Our first hypothesis was that treatment motivation would account for unique variance in client engagement prior to treatment entry, after taking into account the influence of legal, formal, and informal social pressures to seek help. Results were consistent with this prediction. Specifically, legal referral and social network pressures to quit, cut down, and/or enter treatment did not predict perceived benefits and costs of changing behaviour, substance use prior to treatment, or interest in the upcoming treatment episode. These outcomes were only predictable when treatment motivation variables were added to each regression model. These findings support the view, derived from SDT, that clients' *reasons* for seeking treatment are more influential in predicting engagement than controlling social events per se (i.e., treatment mandates, social network pressures; Wild & Enzle, 2002).

Our second hypothesis was that identified treatment motivation would be associated with greater client engagement than other reasons for seeking help. Results from the study were also consistent with this prediction. Specifically, the more clients reported that help was being sought because of a personal choice to commit to the goals of treatment, the more likely they were to report benefits of reducing substance use, efforts to reduce alcohol and other drug consumption, interest in treatment, and the more likely therapists were to view them as showing interest in the upcoming treatment program. These findings support a broad literature showing that identified motivation is positively related to engagement in health behaviour change (Deci & Ryan, 2002). That identified treatment motivation was positively correlated with alcohol dependence and substance dependence while *also* predicting attempts to reduce alcohol and other drug use suggests that alcohol- and substance-dependent clients who internalize the goals of treatment and choose to seek help take proactive steps to reduce alcohol and other drug use prior to the start of formal treatment activities.

Beyond these encouraging results for identified treatment motivation, we found that external motivation for addiction treatment was generally unrelated to measures of client engagement at the start of the treatment process. In fact, we observed an inverse relationship between external treatment motivation and therapist ratings of interest in the upcoming treatment episode (the only exception to this pattern was a marginal inverse relationship between external treatment motivation and past 90-day alcohol consumption). These results are noteworthy because therapists were unaware of clients' TEQ scores. Evidently,

clients with high levels of external treatment motivation are perceived by therapists as having lower levels of interest in treatment. These intriguing findings require replication. Finally, the present results indicate that introjected treatment motivation predicted ambivalence with respect to client engagement prior to the treatment episode. Specifically, we found that introjected motives for treatment were positively associated with both perceived costs as well as perceived benefits of changing substance use, as well as past 90-day alcohol use. These findings are consistent with SDT's emphasis on introjection as involving conflict and guilt over continued substance use in the context of treatment decisions (Ryan et al., 1995).

Several limitations of the study should be mentioned. First, we did not examine measures of external, introjected, and identified treatment motivation in relation to other treatment motivation variables (see Carey, Prunine, Maisto, & Carey, 1999, for a review of measures). Consequently, it is unknown how the treatment motivation subscales derived from SDT relate to other constructs such as treatment readiness or desire for help (Joe, Simpson, & Broome, 1999; Joe, Simpson, Greener et al., 1999; Simpson, 2004). Second, the present study only examined concurrent relationships among the variables and did not examine relationships between treatment motivation and objective measures of client engagement, such as treatment retention and post-treatment substance use outcomes. Future work using the treatment motivation scales used in this study should examine their predictive validity using prospective methods. Finally, because our study only examined individuals seeking addiction treatment, no conclusions can be drawn about issues such as barriers to care.

4.1. Conclusion

Research on coercion in addiction treatment typically adopts a behaviourist perspective by studying objective *sources* of social pressure rather than how clients interpret and respond to those pressures (Wild, 2006; Wild et al., 1998, 2002). Our previous study (Wild et al., 1998) demonstrated that there is no one-to-one correspondence between referral source and client perceptions of coercion at the time addiction treatment is sought. The present study extends this line of research further, showing that social pressure variables per se (referral source, social network influences to quit and/or enter treatment) are unrelated to client engagement at the time treatment was sought. Instead, client engagement is predicted by client perceptions that they sought help because they identified with the goals of treatment and made a personal choice to attend. Further research on social pressure and coercion in addiction treatment may benefit from considering how policies and programs can facilitate such identified motivation among clients. Self-determination theory proposes that identified motivation is facilitated when social contexts support clients' need for autonomy by taking their perspective, minimizing external controls, and providing opportunities for exercising choice (Deci & Ryan, 2002; Markland, Ryan, Tobin, & Rollnick, 2005). These possibilities should be investigated in future research.

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