

Do Social Bonds Matter? Social Control Theory and Its Relationship to Desistance From Substance Abuse in China

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Abstract

This study examines the effects of social bonds on drug users' desistance from substance abuse, with a special focus on testing the applicability of social control theory in the context of China. Using data from a sample of 419 Chinese drug users, this study reveals salient influences of such bonding variables as familial attachment, involvement, belief, and parenthood on drug users' confidence and efforts in achieving abstinence, providing some support for the arguments of social control theory. Given the limitations of institutional response in dealing with substance abuse issues, these findings have important policy implications for the direction of efforts to encourage desistance-related behavior among substance abusers.

Keywords

social bonds, social control, substance abuse, desistance, China

Introduction

The use of illicit drugs has increasingly become a public concern in China in the last two decades (Liu et al., 2020; Liu et al., 2018). As revealed by the China National Narcotic Control Committee (CNNCC, 2018), the number of users has continued to increase, and there were approximately 2.4 million illicit drug users at the end of 2018 (p. 1). It should be noted that this is the number of drug users found and registered by the government. The real number of drug abusers in China was estimated to be over 14 million in 2014 (CNNCC, 2015, p. 1). Notwithstanding the increasing trend in all illicit drug use, scholars have noted that in comparison to the use of traditional drugs such as opium and heroin, there has been a more dramatic increase in the abuse of new/nontraditional drugs (polydrugs), including methamphetamine, ketamine, and ecstasy/3,4-methylenedioxymethamphetamine (MDMA; Liu et al., 2018). Recognizing the increasingly serious drug abuse issues, the Chinese

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government has made efforts to deal with substance abuse and fight drug crimes, reflected by the enactment of the Anti-Drug Law of China of 2007, as well as providing treatment programs for identified drug users.

Despite these efforts from the government, it is still unclear if these drug policies have been effective in reducing substance abuse in China, largely because of a lack of relevant evaluation studies. However, the increasing rates of illicit drug use in the past two decades may serve as opposing evidence suggesting the limits of government efforts, which represent formal social control, in addressing the drug abuse problem in China. To develop a more effective approach to tackle drug abuse, it is worthwhile to examine the role that informal social control plays in stopping illicit drug use, especially considering the chronic nature of drug addiction and the high rate of relapse.

Emphasizing the function of informal social control, Hirschi's (1969) social control theory proposes that the social bonds individuals form with conventional society prevent them from engaging in criminal or deviant behavior. This theory provides a theoretical framework for understanding the behavior of illicit drug users. Indeed, in recent years, there has been growing scholarly attention paid to the influence of different forms of social bonds on the likelihood of drug users' abstinence/relapse, although these studies remain limited (Liu et al., 2018; Yang & Xia, 2010; Yang & Yang, 2017). The results of these studies generally confirm the theoretical expectations of the social control theory. However, it is worth noting that most of these available studies were conducted in Western countries, whereas studies focusing on Chinese drug users are rare (Liu et al., 2018; Yang & Xia, 2010). The lack of research in this vein does not allow us to see the applicability of social control theory to the behavior of users of illicit drugs in China, a country with a culture distinct from Western countries (Wu et al., 2018).

As Winterdyk & Cao (2004) pointed out, the increasing global influence of China has made it strategically important in evaluating the generalizability of Western originated theories and in advancing the internationalization of sociological and criminological knowledge. In effect, as scholars have noted, criminological theories have been largely formulated within the Western context, especially the American context, and "often implicitly assumed to be valid elsewhere and universally applicable to human behavior in other contexts" (Liu, 2007, p. 4). However, the external validity of these theories is largely a question that needs to be investigated, as differential societal contexts may alter theoretical statements and policy considerations. It has been widely recognized that Chinese culture emphasizes collectivism, family, shame, informal codes of conduct, and respect for authority, which is different from that of the United States (Anderson & Gil, 1998; Cao & Hou, 2001; Troyer & Rojek, 1989). Arguably, these distinct sociocultural elements in China would influence the function of social bonds on deviant behavior including substance abuse. For instance, the Chinese culture that values family relationships is highly relevant to the function of such bonds as familial attachment and parenthood, in that it may increase the influence of these familial bonds on illicit drug users' desistance-related behavior. Therefore, extending theoretical inquiries to China helps develop criminological knowledge. Also, China provides an ideal research site for the purpose of this study given the increasing state of substance abuse problem and the limitations of formal social control in dealing with this issue.

Moreover, a review of literature suggests that certain forms of bonds were rarely examined regarding their relationship with drug users' likelihood of abstinence or relapse. For instance, for familial bond, previous research has predominantly focused on such variables as ties to parents and marriage, while little attention has been paid to how *parenthood* (having children) affects individuals' illicit drug use behavior, though having children to take care of is an important form of bond. In effect, prior research suggests that parenthood may affect substance abuse and desistance behavior. For example, Labouvie (1996) found that individuals who have children to take care of were more likely to stop illicit drug use than those who do not have children. Given the cultural context in China that values family relationships (Anderson & Gil, 1998), it becomes

even more important to consider the potential influence of parenthood in the examination of substance abuse and desistance-related behavior in China. Recognizing these gaps in the literature, this study tests social control theory using a sample of Chinese drug users and specifically explores the influences of social control factors, with the addition of parenthood, on Chinese drug users' confidence in successful abstinence and their efforts to stop using illicit drugs.

Explaining Substance Abuse and Abstinence: The Role of Social Control Theory

For several years now, criminological research has explored the validity of numerous theories in explaining deviant behavior of individuals who decide to break the law. While most of these theories have proved to be successful, others have been seriously criticized. Social control theory is an influential perspective on deviant behavior which has found much empirical support in the past few decades and as a result has become one of the dominant explanations of delinquency (Agnew, 1991; Cullen & Wilcox, 2010). Because of the theory's validation in understanding criminal and deviant behavior, the current study applies the assumptions of social control theory to understanding drug users' behavior in Chinese society. A major premise of social control theory is that every individual has the natural tendency to engage in criminal or deviant behavior, but when this is properly checked by their bonds to conventional institutions such as marriage, family, educational institutions, and religious and civic organizations, people will live a prosocial life (Coser, 1982; Gibbs, 1977; Hirschi, 1969, 1977; Horwitz, 1990; Nagasawa et al., 2000; Shoemaker, 1990). Accordingly, the theory assumes that, by nature, people are selfish and will commit crime to satisfy their interests and desires (Cullen & Wilcox, 2010).

In his classic book, *Causes of Delinquency* (Hirschi, 1969, p. 34), Travis Hirschi, as a prominent originator of the social control theories, asked a simple criminological question—why don't we do it? This question not only became the centerpiece of his theory but also sets the theory apart from other criminological theories. To address this unequivocal question, Hirschi (1969) applied the concept of social bonds in explaining why people conform to societal rules and norms and avoid committing crimes. According to Hirschi (1969), the strength of a person's bonds to conventional social institutions determines whether that person will behave prosocially or antisocially. It needs to be noted that the concept of social bond has been long used to reflect interpersonal connections and individuals' ties to conventional others, even before the emergence of Hirschi's social control theory. However, Hirschi has expanded this concept to that also includes one's investment in prosocial activities and goals and adherence of societal norms and values (Costello & Laub, 2020). As Hirschi noted, social bond was broadly defined as an individual's connectedness to society, and an individual's bond to society essentially had multiple dimensions (Hirschi, 2002). Here, the notion of society, as Costello and Laub (2020) pointed out, covered a wide range of persons, groups, and institutions. In essence, according to Hirschi's (1969) social control theory, people who are able to develop stronger connections with conventional society restrain themselves from violating laws because of the risk of losing their investment in society. It is noteworthy that although this theory was originally developed to explain the causes of juvenile delinquency, its central components were also found to be relevant in explaining adult criminality (Savolainen, 2009).

Hirschi's (1969) argument about the relationship between social bonds and deviance describes four elements of social bonds: attachment, commitment, involvement, and belief. Each of these elements has extensive scholarly attention regarding its efficacy in explaining antisocial behavior. The *attachment* component refers to the level of psychological affection and respect that one has for conventional others and institutions (Hirschi, 1969). It suggests that if an individual is emotionally invested in these conventional institutions such as family and schools, they will be

less likely to engage in deviant behavior because of the fear of losing the respect of others (Cullen & Wilcox, 2010; Hindelang, 1973; Liu & Liu, 2016; Wiatrowski et al., 1981). Therefore, strong attachment essentially increases the moral force of conventional institutions in dissuading individuals from engaging in deviant behavior (Stewart, 2003). The second component—*commitment*—refers to a person's willingness to pursue conventional goals, such as educational or occupational goals (Hirschi, 1969). According to Hirschi, the extent to which individuals are committed to the goals of society and to abiding by conventional rules and regulations in achieving these goals determines whether they will unleash their natural criminal capabilities. In fact, Hirschi (1969) pointed out that individuals' likelihood of engaging in criminal or deviant behaviors was reduced when they knew that such behaviors would nullify their prior investment and jeopardize their goals. For instance, people would refrain from committing criminal or deviant acts that may ruin their good reputation or a well-paying job which they have acquired through years of efforts.

Involvement is the third component of social bonds, and it refers to time and energy used on conventional activities. The logic is straightforward—if individuals spent more time on prosocial activities (e.g., school, work, volunteerism), they would have less time for delinquency. Also because of their focus on these conventional activities, they would have reduced likelihood to be exposed to opportunities for delinquency or subjected to the influence of antisocial peers (Hoeben & Weerman, 2016). The popular saying “Idleness is the devil's workshop” captures this element of social bonds. The fourth element of social bonds that Hirschi (1969) recognized is *belief*. This refers to the extent to which an individual believes in the moral validity of laws, rules, and regulations. If an individual has a strong belief that the conventional rules of the society are morally valid and should be obeyed, they are less likely to engage in criminal and deviant behavior. Thus, people's favorable perceptions of societal laws and norms translate into their law-abiding and prosocial behavior. It is noteworthy that these four elements of social bond (attachment, commitment, involvement, and belief), as Hirschi (1969) has argued, are interrelated but analytically separable. For example, individuals' strong attachment to conventional others may influence their commitment to long-term prosocial goals and may also promote their belief in the moral validity of the law. In fact, scholars have noted the necessity of including all these four components of social bond in the examination of the social control theory, given the interrelated nature of these components. As Costello & Laub (2020) pointed out, “A narrow focus on one element of the social bond to the exclusion of others cannot be viewed as a true test of social control theory” (p. 36).

Since Travis Hirschi offered his groundbreaking theory in 1969, scholars across various disciplines, including criminology, have empirically tested the theory's key propositions in explaining deviance and criminal behavior among both juveniles and adults (Gilmore et al., 2005; Hindelang, 1973; Horney et al., 1995; Laub & Sampson, 2001; Morris et al., 2011; Savolainen, 2009; Stack et al., 2004) and have constantly argued about the theory's efficacy in elucidating the pattern of crime and deviance for all people (Alarid et al., 2000; Laub & Sampson, 1993). In essence, these scholars have observed an inverse relationship between stronger social bonds and one's propensity to commit or continue committing deviant acts. For instance, in an effort to understand why people patronized online pornography, Stack et al. (2004) observed a high patronage level among adults who had weak ties to social institutions such as churches/religion and marriage. Unhappy people, according to these authors, were more likely to use internet pornography. Similarly, employment and family bonds have been found to predict criminal desistance among adults (Laub & Sampson, 2001; Savolainen, 2009; Uggen, 2000).

In addition to the studies that have broadly examined social control theory's contribution to understanding criminal behavior in one's life-course, several other studies have narrowed their foci to the relationship between social bond variables and substance use and desistance among both the older and younger populations (Akers & Lee, 1999; Bryant et al., 2003; Ford, 2009;

Green et al., 2012; Seydlitz & Jenkins, 1998; Yang & Xia, 2010; Yang & Yang, 2017). These studies have observed the importance of social bonds in reducing the risk of substance use. More specifically, past research has documented the effects of family-related bonds on substance use and desistance by arguing that strong attachment to family insulates an individual from using drugs and drinking excessive alcohol (Friedman et al., 2000; Mounts, 2002; Seydlitz & Jenkins, 1998; Yang & Yang, 2017). For instance, Yang & Yang (2017) analyzed longitudinal data to identify predictors of nonmedical prescription drug (NPD) use among adults and found that high familial and marital bonds reduced the risk of using NPD. Similarly, based on a national survey of drug use, Dollar and Ray (2013) found that marital bonds were negatively associated with illicit drug use, and this finding was consistent across different types of NPD. This observation is supported by studies that have argued that effective parental monitoring and supervision reduce a person's likelihood of using drugs (Mounts, 2002; Steinberg et al., 1994). Conversely, substance use will be higher among individuals with a weak attachment to their parents and those exposed to weak and ineffective parental supervision.

Apart from these studies suggesting social bonds reduce individuals' likelihood of engaging in substance abuse, there exist some studies demonstrating a positive relationship between certain forms of social bonds and individuals' desistance from illicit drug use. For instance, using data based on the National Youth Survey, Chu (2007) found that people's religious involvement, as a form of social bond, has a significant positive effect on their desistance from marijuana and hard-drug use. Similarly, in a later study, Chu & Sung (2009) detected a positive association between religious involvement and recovery from substance abuse for African American clients, although no such significant relationship was observed for White clients. In the examination of the relationship between marital attachment and marijuana desistance using data from two waves of the National Youth Survey, Maume et al. (2005) found a significant "marriage effect," in that higher marital attachment significantly increases individuals' likelihood of quitting marijuana use, even after controlling for changes in the number of delinquent associates. Although these studies have typically considered only one or two elements of the social bond (e.g., attachment and/or belief), their findings seem to suggest that social bonds matter for not only preventing people from engaging in substance abuse in the first place, but also increasing the chances of illicit drug users to desist from substance abuse. These findings also appear to support a conclusion made by Laub & Sampson (2001, p. 38) based on a comprehensive review of the literature that the desistance process for drug use may be similar to that for predatory crime.

Related to the familial bond, parenthood (having children) is an important factor to consider, though this effect has not been well established. Past research has shown that people with children to take care of were more likely to mature out of substance use (Labouvie, 1996). These people have special bonds with their children that may stop them from engaging in risky behavior. However, using a sample of Chinese drug users, Liu et al. (2018) detected no significant influence of the variable related to the number of children on drug users' abstinence intentions. The mixed results on the effects of having children on drug abuse suggest the need for more studies to further examine this issue.

In addition to the effect of the family-related measures, studies have examined the effects of school- and peer-related measures on substance use. With regard to school-related variables, studies have concluded that strong school bonds reduce drug use among both youth and adults (Bryant & Zimmerman, 2002; Ford, 2009; McCluskey et al., 2002; Nagasawa et al., 2000). These studies suggest that the stronger one's attachment to school teachers, administrators, and other authorities, the less likely the person is to use drugs. Moreover, scholars have also argued that students who perform well in school tend to protect their investment by staying away from engaging in all forms of deviant behavior. Such students will not use drugs because of the fear of losing their investment and tarnishing their future prospects. This argument is consistent with studies that identified school failure as a predictor of substance use (Bryant et al., 2003; Eccles

et al., 1997). Contrary to the above observations, Yang & Yang (2017) did not find any effect of educational bonds on NPD use. Previous studies examining the influence of peer-related measures on substance use have found that contact with peers matters in explaining differential patterns of drug use among people (Cattarello, 2000; Garnier & Stein, 2002).

Scholars have also examined the influence of belief bonds (beliefs in social norms and rules) on illicit drug use and have generally found that belief bonds reduce drug abuse. For instance, using a sample of 2,626 adolescents from the southwestern United States, Marcos et al. (1986) found that belief in conventional values was a salient factor that reduced illicit drug use. In a more recent study using a sample of Chinese drug users, Liu et al. (2018) found that drug users with religious beliefs were more likely to pursue abstinence than their counterparts who had no religious beliefs. It needs to be noted that in the above-mentioned studies, belief showed a drug-abuse-reducing effect even when it was measured in a broad sense (not specifically related to beliefs about drug use).

Research Question

A review of the literature indicates that while the social control theory is one of the most prominent theoretical perspective in criminology, its applicability to behavior concerning desistance from illicit drug use has not been well established. Given the limitations of formal social control in addressing issues of substance abuse, it seems both relevant and timely to examine the influence of informal social control, as manifested through Hirschi's (1969) four elements of social bonds (attachment, involvement, commitment, and belief), on substance use and desistance among drug users. In addition, given the increasingly serious substance abuse problem in China, this study is in line with the efforts to provide insight to help develop more effective drug control policies.

Drawing on the extant research, the current study aimed to answer the following two questions: First, do social bonds, as reflected by attachment, involvement, commitment, and belief, influence drug users' confidence in successful desistance and/or their desistance efforts? Second, does parenthood (having children), as a special form of bonding, increase drug users' confidence in successful desistance and/or their desistance efforts?

Participants

Data for this study were collected from a Chinese drug treatment center in a province in South China in 2019. The drug users in the sample were those who were receiving mandatory drug treatment¹ that included the components of detoxification treatment, psychological intervention, and physical training provided by the center. Prior to conducting the survey, permission was obtained from the center. At the time of the study, the center had seven groups of illicit drug users receiving mandatory drug addiction treatment. Paper questionnaires were administered to the drug users in two of these groups, consisting of 450 people. Participants were strictly assured that participation was voluntary, and they could refuse to answer any questions in the survey. Confidentiality was also assured by asking participants not to write their names or other contact details anywhere in the questionnaires. In total, 419 copies of the survey were returned, yielding a response rate of 93%. While such a high response rate may be indicative of pressure to participate, high response rates on the survey questionnaires are common among criminological studies conducted in China (Wu & Makin, 2019; Sun et al., 2010), and a wide body of research supports that in-person survey research yields higher response rates (Baruch & Holtom, 2008). With respect to the types of drugs used for the sample, approximately 70% of the illicit drug users in the sample used heroin before they were sent to the treatment center; about one-third of sample

(33%) used methamphetamine; and approximately 12% of the sample used Ketamine.² The demographic characteristics of the sample are presented in Table 1.

Measures

The dependent variable (DV) includes two dimensions of desistance: drug users' desistance efforts and their confidence in successful desistance. Seven items were used to measure desistance efforts. Specifically, respondents were asked about the extent to which they agreed with these statements: "Rather than just thinking about quitting illicit drug use, I have already taken actions to desist from illicit drug use," "To quit illicit drug use, I have begun to make a change," "I have recognized the negative consequences of illicit drug use on my life," "I am making efforts to stop using illicit drugs," and "I am actively cooperating with the staff in the treatment center to address my substance abuse problem." The answers fall on a 4-point Likert-type scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). These items showed good internal consistency, with an alpha coefficient of .84. Thus, they were combined (loadings ranging from .66 to .78) to form a composite index of *desistance efforts*. For the dimension of *confidence in successful desistance*, it was measured by a single question: "Are you now confident in successful quitting illicit drug use?" The responses ranged from 1 (very unconfident) to 4 (very confident).

The independent variable reflected four dimensions of social bonds—*attachment*, *commitment*, *involvement*, and *belief*, and an additional family-related bond—*parenthood* (having children). *Attachment* was measured by 3 items tapping individuals' social bonding to family, including such statements as "I have a feeling of closeness to my family," "My family cares about me," and "I like spending time with my family." Following each item, respondents were asked about the extent to which they agreed with the statement, and the responses ranged from 1 (*strongly disagree*) to 4 (*strongly agree*). With an alpha coefficient of .66, responses to these items were summed (loadings ranging from .58 to .86) to form the *attachment* scale.

Commitment was measured by three items: "I work hard at my job before I joined the treatment center," "I take my job performance seriously," and "I always complete my work assignment in time." Each item was rated on a 4-point Likert-type scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). The alpha coefficient for these three items was .79. Given the high internal consistency, these items were combined (loadings ranging from .77 to .86) to create a composite index of *commitment*.

Four items were used to measure *involvement*. Specifically, respondents were asked about how frequently they attended the following activities within the center: religion activities, collective activities that need voluntary participation, sports activities, and reading/cultural activities. The response options ranged from *never* (coded as 1) to *at least once per week* (coded as 5). With an alpha coefficient of .77, these four items showed high internal consistency, and were summed (loadings ranging from .75 to .78) to form a composite index of *involvement*.

Belief was assessed by six items, each corresponding to a specific antisocial/criminal behavior, including vandalism, theft, burglary, assault, and robbery. Respondents were asked about their views on the seriousness of these behaviors, and the answers fell on a 4-point Likert-type scale ranging from 1 (not at all serious) to 4 (very serious). The scale had good internal consistency, with an alpha coefficient of .83. Accordingly, the responses to these questions are summed (loadings ranging from .55 to .81) to create a measure of *belief*.

Finally, *parenthood* was measured by a single-choice question: "Do you have a child (children)?" with the answers "yes" (coded as 1) or "no" (coded as 0). As aforementioned, the inclusion of the variable of *parenthood* in the study is out of the consideration that China has a cultural emphasis on family relationships, which creates the need to include variables related to family obligations to reflect the potential influence of this cultural context. Although the variable *parenthood* is a family-related bond which may cause the concern of overlapping issues

between *parenthood* and *attachment*, our data suggest that these two variables are analytically separable, as demonstrated by the insignificant correlation coefficient between them from the bivariate analysis. In addition, the inclusion of the variable of *parenthood* allows us to directly examine the effect of having children to take care of on illicit drug users' intentions and efforts to stop substance abuse.

Analytical Strategy

Given the continuous nature of *desistance efforts* as one dimension of the DV, we used ordinary least square (OLS) regression to examine the influence of social bond variables on illicit drug users' efforts in desistance. The other dimension of the DV, *confidence in successful desistance*, was an ordinal categorical variable that originally has four response categories, namely "very unconfident," "somewhat unconfident," "somewhat confident," and "very confident." Given the cell size issue caused by the small percentage (4%) of respondents who selected "very unconfident," these four response categories were further collapsed into three ordinal categories, in which "1" represents the responses of "very unconfident" and "somewhat unconfident," "2" represents "somewhat confident," and "3" represents "very confident." Because the DV—confidence in successful desistance—was an ordered categorical variable, we used ordinal logistic regression (OLR) to examine the extent to which drug users' confidence in successful desistance was influenced by social bond variables. As Wu & Sun (2009) noted, in the case of having an ordinal outcome variable that contained several discrete categories, OLR was a better analysis tool than the Linear regression model, because it was implausible to assume the normality and homogeneity of variance for such ordered categorical outcome. OLR was also more suitable for use for this purpose than the multinomial logistic regression "because the information contained in the ordering would not be lost" (Wu & Sun, 2009, p. 181). We have tested the assumption of parallel line assumption for the OLR model and found the assumption was met, as reflected by the fact that there were no significant variations in the proportional odds across all levels of the outcome variable. Moreover, in developing models, we detected multicollinearity issues between the variables of *marital status* and *parenthood*. Therefore, we removed *marital status* from the final models.

Findings

Tables 2 and 3 provide Pearson's r coefficients for the variables used in the study. Specifically, Table 2 presents the correlation matrix for confidence in successful desistance, and Table 3 presents the correlation matrix for desistance-related efforts. As shown in Table 2, all the five social bonding variables including *attachment* ($r = .17, p < .01$), *commitment* ($r = .23, p < .01$), *involvement* ($r = .13, p < .05$), *belief* ($r = .20, p < .01$), and *parenthood* ($r = .15, p < .01$), were positively correlated with drug users' *confidence in successful desistance*. It means that an increase in these forms of bonds was associated with an increase in individuals' *confidence in successful desistance*. Among other variable, *drug use frequency* ($r = -.13, p < .05$) and *times experiencing drug addiction treatment* ($r = -.22, p < .01$) had a negative correlation with *confidence in successful desistance*, suggesting that drug users who have used illicit drugs more frequently and have experienced more times of drug addiction treatment tend to be less confident in successful desistance. Regarding the outcome variable of *desistance-related efforts*, Table 2 shows that three bonding variables, namely *attachment* ($r = .19, p < .01$), *commitment* ($r = .13, p < .05$), and *belief* ($r = .17, p < .01$), were positively correlated with drug users' efforts to stop illicit drug use, indicating that an increase in these three forms of bonds were associated with an increase in drug users' efforts in desisting from illicit drug use. Overall, all values of correlation coefficient in these two tables were below .70, the threshold that was commonly used by researchers to determine possible multicollinearity issues (Tabachnick et al., 2007), suggesting these

Table 1. Univariate Descriptive Statistics ($N = 419$).

Items	%/M (SD)	Min.	Max.	α
Dependent Variables				
Confidence in Successful Desistance	3.29 (0.9)	0.0	4.0	—
Very Unconfident	4.0	—	—	
Somewhat Unconfident	14.7	—	—	
Somewhat Confident	29.6	—	—	
Very Confident	51.7	—	—	
Efforts to Stop Using Drugs	23.0 (3.9)	7.0	28.0	.84
Explanatory Variables				
Attachment	10.0 (1.7)	4.0	12.0	.66
Commitment	9.2 (1.9)	3.0	12.0	.79
Involvement	11.0 (4.7)	4.0	20.0	.77
Belief	21.5 (3.4)	8.0	24.0	.83
Parenthood (Having Children)	51.8	0.0	1.0	—
Age	36.2 (6.9)	20.0	52.0	—
Marital Status				
Married	40.5	—	—	
Unmarried	46.5	—	—	
Divorced	12.9	—	—	
Education				
Elementary School or below	36.5	—	—	
Middle School	49.4	—	—	
High School or above	14.1	—	—	
Registered Rural Resident	68.3	0.0	1.0	—
Employment				
Well-Paid Stable Job	6.9	—	—	
Hourly Paid Job	35.3	—	—	
Peasants	26.7	—	—	
Unemployment	31.1	—	—	
Drug Use Frequency				
<1 Time per Week	29.4	—	—	
2–6 Times per Week	16.3	—	—	
1–2 Time(s) per Day	40.1	—	—	
>3 Times per Day	14.1	—	—	
Times Experiencing Addiction Treatment				
First Time	39.9	—	—	
Second Time	26.1	—	—	
Third Time	21.9	—	—	
Fourth Time	5.5	—	—	
Fifth Time or More	6.5	—	—	

variable were not over-correlated and were good to be included in the multivariate analysis. It should be noted that bivariate analysis has their limitations, in that the observed significant relationship may be spurious because it does not account for the effects of other theoretically relevant factors. To address this issue, we present the results of multiple regression as follows in which all variables were included in the models.

Table 4 presents the results of the multivariate analyses on confidence in successful desistance. Among the five social bonding variables, only with the exception of *commitment*, *attachment* (odds ratio [OR] = 1.20, $p < .05$), *involvement* (OR = 1.07, $p < .05$), *belief* (OR = 1.10,

Table 2. Correlation Matrix for Confidence in Successful Desistance ($N = 419$).

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Confidence in Successful Desistance	1.00										
2. Attachment	.17**	1.00									
3. Commitment	.23**	.36**	1.00								
4. Involvement	.13*	.03	.10	1.00							
5. Belief	.20**	.05**	.14**	-.02	1.00						
6. Parenthood	.15**	-.02	.02	-.02	.04	1.00					
7. Age	.03	-.03	.05	.01	.07	.34**	1.00				
8. Education	.07	.07	-.01	-.11	.20**	.10*	.06	1.00			
9. Registered Rural Residents	-.05	.06	.02	.10	-.09	-.10	-.30**	-.29**	1.00		
10. Drug Use Frequency	-.13*	-.12*	-.11*	-.14*	-.16**	.06	-.04	-.14**	.03	1.00	
11. Times Experiencing Addiction Treatment	-.22**	-.03	-.06	-.06	-.10	-.05	.17**	-.11*	-.03	.15**	1.00

* $p < .05$. ** $p < .01$.**Table 3.** Correlation Matrix for Efforts to Stop Illicit Drug Use/Desistance Efforts ($N = 419$).

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Desistance Efforts	1.00										
2. Attachment	.19**	1.00									
3. Commitment	.13*	.36**	1.00								
4. Involvement	.01	.03	.10	1.00							
5. Belief	.17**	.15**	.14**	-.02	1.00						
6. Parenthood	.05	-.02	.02	-.02	.04	1.00					
7. Age	.12*	-.03	.05	.01	.07	.34**	1.00				
8. Education	.23**	.07	-.01	-.11	.20**	.10*	.06	1.00			
9. Registered Rural Residents	-.22**	.06	.02	.10	-.09	-.10	-.30**	-.29**	1.00		
10. Drug Use Frequency	-.10*	-.12*	-.11*	-.14*	-.16**	.06	-.04	-.14**	.03	1.00	
11. Times Experiencing Addiction Treatment	-.11*	-.03	-.06	-.06	-.10	-.05	.17**	-.11*	-.03	.15**	1.00

* $p < .05$. ** $p < .01$.

$p < .05$), and *parenthood* ($OR = 2.07$, $p < .01$) were found to be significant predictors of drug users' *confidence in successful desistance*, in controlling for the effects of other covariates. The positive relationship between these social bond predictors and the DV suggests that drug users who had stronger familial attachment were more involved in prosocial activities (e.g., reading/cultural activities, sports activities, collective activities based on voluntary participation) in the treatment center, held a stronger belief in social rules and norms, and were being parents, were more likely to show higher levels of *confidence in successful desistance*. Regarding control variables, only *times experiencing drug addiction treatment* was found to significantly influence drug users' *confidence in desistance* ($OR = .73$, $p < .01$). The negative relationship suggests that drug users who have experienced more times of drug addiction treatment show less confidence in successful desistance. Overall, the explanatory variables all together explained 20% of the variation in confidence in successful desistance.

Table 5 shows the results of the multivariate analyses of desistance efforts. As the results suggest, *attachment* was the only social bonding variable that had a positive influence on drug users' efforts to stop using illicit drugs ($p < .001$), whereas no significant effects were detected for the other three social bonding factors (involvement, belief, and parenthood) that were found to be significant predictors of drug users' confidence in desistance. For the effect of *attachment*, it

Table 4. Ordinal Logistic Regression Model Predicting Confidence in Successful Desistance.

Predictors	<i>b</i>	SE	Odds	Wald
Independent Variables				
Attachment	.18	.08	1.20*	4.60
Commitment	.10	.07	1.11	2.14
Involvement	.07	.03	1.07*	5.48
Belief	.09	.04	1.10*	5.83
Parenthood	.73	.29	2.07**	6.29
Control Variables				
Age	-.01	.02	0.99	0.03
Registered Rural Resident	-.39	.32	0.68	1.51
Education				
Middle School	.31	.29	1.37	1.09
High School or Above	-.53	.44	0.59	1.49
Employment				
Well-Paid Stable Job	.42	.60	1.51	0.48
Hourly Paid Job	-.38	.32	0.68	1.41
Peasants	.13	.38	1.14	0.13
Drug Use Frequency	-.00	.14	0.99	0.00
Times Experiencing Treatment	-.32	.12	0.73**	7.27
Chi-Square		44.70***		
Pseudo <i>R</i> ² (Nagelkerke)		.20		

Note. For education, the reference category is “elementary school or below”; for employment, the reference category is “unemployment.”

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

suggests that an increase in drug users’ familial attachment was associated with an increase in their efforts in desisting from illicit drug use. Interestingly, several control variables were found to be significant predictors of desistance-related efforts, namely, *age*, *registered rural/urban resident*, *educational attainment*, *employment status*, and *times experiencing drug addiction treatment*. Specifically, older drug users tended to put more efforts to stop illicit drug use than their younger counterparts ($p < .05$); drug users who were registered as rural residents tended to make less efforts in desisting from illicit drug use than their registered urban counterparts ($p < .05$); and those who were middle school or high school/above graduates tended to put more efforts to stop using illicit drugs than their counterparts of less than middle school completion ($p < .05$). Concerning the influence of *employment status*, the results suggest that drug users who were peasants reported lower levels of efforts in desisting from illicit drug use than those unemployed ($p < .05$). Finally, consistent with the result in Table 4, *times of drug addiction treatment* was also negatively associated with drug users’ desistance-related efforts ($p < .05$). Overall, the predicting variables included in the model explained 21% of the variation in desistance-related efforts.

Discussion

This study examined the influences of social bond factors on drug users’ confidence and efforts in achieving abstinence. The results provide some support for the application of social control theory to drug users’ desistance behavior, as the social bonds of familial attachment, involvement, and belief did influence drug users’ desistance confidence and/or their efforts toward abstinence. Given parenthood was also a significant predictor of drug users’ desistance confidence, the results overall suggest a salient influence of familial ties on drug users’ intentions and efforts to stop illicit drug use.

Table 5. Linear Regression Model Predicting Efforts to Stop Using Illicit Drugs.

Predictors	<i>b</i>	<i>SE</i>	<i>T</i>	Tolerance	VIF
Independent Variables					
Attachment	0.44	.12	3.57***	.85	1.17
Commitment	0.05	.11	0.48	.85	1.18
Involvement	0.06	.04	1.41	.91	1.10
Belief	0.05	.06	0.82	.92	1.10
Parenthood	0.03	.43	0.07	.78	1.29
Control Variables					
Age	0.06	.03	1.98*	.69	1.43
Registered Rural Resident	-1.12	.47	-2.40*	.74	1.35
Education					
Middle School	0.91	.45	2.03*	.74	1.36
High School or Above	1.28	.66	1.95*	.69	1.46
Employment					
Well-Paid Stable Job	0.77	.88	0.88	.83	1.21
Hourly Paid Job	-0.73	.48	-1.54	.68	1.47
Peasants	-1.12	.56	-1.99*	.64	1.55
Drug Use Frequency	-0.11	.19	-0.56	.87	1.15
Times of Treatment	-0.36	.17	-2.05*	.86	1.17
Model Fit					
<i>F</i>		4.06***			
<i>R</i> ²		.21			

Note. For education, the reference category is "elementary school or below"; for employment, the reference category is "unemployment." VIF = variance inflation factor.

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

The finding concerning the influence of familial attachment and parenthood is consistent with prior studies generally suggesting that strong familial ties increased the chance of successful drug treatment (Lewandowski & Hill, 2009; Trulsson & Hedin, 2004) and reduced the likelihood of substance abuse (Yang & Yang, 2017). As Hirschi (1969) argued, people refrain from misbehaving if they know they will jeopardize something they value. Specifically for drug users, strong ties with spouses and other family members would encourage them to desist from illicit drug use, as substance abuse would not only make them "look bad" in front of their family members but also jeopardize their marriages. This consideration would be more true in the context of China, a country having a traditional culture that values family relationship (Anderson & Gil, 1998; Cao & Hou, 2001). In effect, this finding highlights the importance of familial support for drug users to quit. As Liu et al. (2018) noted, drug use is a relapse-prone behavior and users need continuous social support to achieve desistance. Strong support from family members would arguably increase drug users' ability to deal with unfavorable life events and accordingly reduce their need to use illicit drugs when encountering these situations. Therefore, it is not surprising that drug users with strong familial ties tend to make more efforts to quit illicit drug use and be more confident in achieving abstinence.

It is worth noting that, as a special form of social bond whose influence on criminal/deviant behavior has been less examined in previous research, parenthood had a positive relationship with drug users' confidence in successful abstinence. This finding highlights the influence of adult social bonds (e.g., employment, marriage, and being a parent) on drug abstinence (Laub et al., 1998; Laub & Sampson, 1993). As Savolainen (2009) reasoned, being a parent "is likely to entail responsibilities and priority shifts that reduce situational inducements to offend" (p. 286). Concerning China, scholars have noted that Chinese drug users face many negative consequences

associated with illicit drug use such as social discrimination, stigma, and unemployment (Luo et al., 2014; Zhang et al., 2017), all of which are at odds with developing a favorable image in the eyes of their children and effective parenting. Therefore, it is not beyond expectation that Chinese drug users who have children are more confident in their ability to quit illicit drug use than their counterparts who do not. It needs to be noted that this finding challenges a prior study that found no significant effect of being a parent on abstinence (Liu et al., 2018). This divergence in findings may reflect differences in samples used in these studies. Given the very limited research on this issue, there is a need for more studies to further examine how the role of parent influences drug users' behavior associated with relapse and abstinence.

This study also suggests that involvement (in prosocial activities) and belief (unfavorable to criminal/deviant behavior) substantially influenced drug users' confidence in achieving abstinence. Given that involvement is a social bond that has been rarely examined in prior research as to its influence on substance abuse and desistance behavior, this study offers new insights about how involvement in prosocial activities affects drug users' desistance-related behavior. In line with theoretical expectations, this study reveals that the involvement bond does matter in shaping substance abusers' confidence in achieving abstinence. Regarding the effect of the belief bond, the finding of this study echoes the results from prior studies of substance abuse and criminal/deviant behavior in general that have revealed a positive association between beliefs in conventional norms/rules and law-abiding behavior, including reduced drug use (Hadaway et al., 1984; Marcos et al., 1986; Shen & Zhong, 2018). However, it is worth noting that despite its substantial influence on drug users' confidence in achieving abstinence, belief as a dimension of social bonds was not found to be a significant predictor of desistance efforts in this study. This result might reflect the potential differences in attitude and behavior that individuals show toward long-term goals and actual efforts. That is, drug users who have high identification with social norms/rules would naturally think that they should be law-abiding people (even if they are not now, they would be in the future) and accordingly have a high expectation for their future successful desistance from illicit drug use. However, this identification with social norms and rules may not be enough to promote actual desisting actions on their part, especially given the addictive nature of substance abuse.

Regarding sociodemographic variables, this study reveals significant influences of age, registered rural/urban resident, and educational attainment on drug users' desistance-related efforts. In addition, this study also shows the substantial negative effect of times experiencing drug addiction treatment on drug users' desistance confidence and efforts. These findings are generally consistent with the results of prior research examining substance abuse and desistance behaviors. For instance, two earlier studies also found that older drug users are more likely to pursue abstinence than their younger counterparts (Liu et al., 2018; Melnick et al., 1997). As Melnick et al. (1997) reasoned, the increased motivation among older drug users to quit could be attributed to age-related life factors such as changes in "health, lifestyle, and psychological, legal, family, and other circumstances" (p. 502). Also, the finding related to the status of rural/urban resident needs to be noted, as that may reflect the large rural–urban divide in China. As scholars have noted, China is among the countries with the largest rural–urban income gap in the world (Binkai & Yifu Lin, 2014). In addition to the income gap, rural residents in China were also observed to face disadvantages in many social and economic dimensions, including education, welfare levels, health care, consumption, and housing, among others (Knight et al., 2006). All these unfavorable aspects associated with the status of rural residents may serve as barriers preventing them from desisting from illicit drug use, rather than the opposite.

Limitations

This study advanced our understanding of the applicability of social control theory to drug users' intentions to engage in desistance from illicit drug use. However, it is not without limitations. First, as a first attempt in testing social control theory with a sample of Chinese drug

users, this study used a convenient sampling approach. Although this approach was necessary given the difficulty of collecting drug user data in China, we caution generalizing from these results. Second, this study used cross-sectional data, which did not allow us to make causal inferences. Future research is suggested to use longitudinal data to further examine the potential causal relationship between social control variables and drug users' behavior concerning abstinence. Third, the variable of belief in this study was measured by asking respondents' opinions about different forms of deviant acts, which did not align well with Hirschi's (1969) original definition of belief that suggested a direct measure of individuals' views about if societal laws and norms were morally correct and binding on their behavior. Although the way that belief was measured in this study may not prevent us from identifying the effect of belief on the outcome variable, future research is suggested to use alternative measurement that involves questions directly asking respondents' agreement with conventional values and norms in the examination of the influence of belief on illicit drug use and desistance behavior. Fourth, as the data for this study were collected from a drug treatment center only for male substance abusers, we were not able to consider the potential gender effect on the outcome variables. Given that gender has been found to be an important correlate of drug use and desistance (Tuchman, 2010), future research needs to use a more diverse sample and account for the potential influence of gender on desistance-related behavior.

Conclusion

This study offers a significant contribution to the literature on the relationship between social control theory and substance abuse, as well as providing insights into improving the chance of abstinence on the part of drug users. As previously discussed, institutional response to illicit drug use in China, reflecting the efforts of formal social control, has shown its limitations in addressing this issue, which has created a need for developing an alternative approach. The finding that family bonds, involvement, and belief do influence Chinese drug users' confidence in successful abstinence and/or their desistance-related efforts reveals the importance of informal social control to achieving abstinence. It suggests that to encourage drug users to quit, drug abuse control/treatment agencies should make more efforts to mobilize drug users' families and involve continued family support in the process of drug abuse treatment. Family support may take the form of family help in dealing with difficulties, trust, and understanding from family members, more family visits during treatment programs, and good family relationships. This continued family support would help create strong bonds between drug users and their families and in turn encourage their efforts to desist from illicit drug use.

In addition, given the influence of the belief bond on drug users' confidence in desistance, more efforts are needed to change the antisocial attitudes of drug users, especially their favorable attitudes toward drug abuse. Indeed, this is in line with Andrew & Bonta's (2010) psychological theory of criminal conduct, which identifies antisocial cognition as one of the most salient risk factors associated with criminal/deviant behavior. To foster prosocial change in the attitudes of drug users, cognitive behavioral therapy is suggested, as its effectiveness in turning around dysfunctional thoughts and reducing deviant behavior has been well documented (Lipsey & Cullen, 2007).

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Notes

1. The mandatory drug treatment centers in China are divided into two categories: one for male drug abusers and the other for female drug abusers. The data for this study were collected from a drug treatment center providing mandatory drug addiction treatment to male drug users. According to China's Anti-Drug Law of 2007, Chinese substance abusers would be sent by the public security police agencies to these mandatory drug treatment centers if they do one of the following: refuse drug addiction treatment in the community; use illicit drugs during the period of drug addiction treatment in the community; seriously violate the agreement on drug addiction treatment in the community; or use illicit drugs after drug addiction treatment in the community or after mandatory drug treatment. A public security police agency may also decide to send a substance abuser to a mandatory drug treatment center if they determine the individual is seriously addicted and is unlikely to be cured through treatment in the community. The mandatory treatment may last up to 2 years. After their completion of the mandatory drug treatment, the (ex-)drug users would either be simply released from the center or be ordered by the police agency to continue their drug treatment in the community for no more than 3 years.
2. Some of the drug users in the sample have reported using two or more types of drugs before they were sent to the treatment center.

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