

RESEARCH ARTICLE

Family Support as Moderator of the relation between Coping Skills and Substance Use Dependence among Filipinos who use drugs

Tyrone Reden L. Sy* and Ma. Regina Hechanova
Ateneo de Manila University, Philippines
*sy.tyronereden@gmail.com

Abstract: Vulnerability to substance use disorders (SUD) vary across individuals; however, there is scant evidence examining how family support is associated with coping skills and substance abuse, especially among adults. This study described how family support moderated the relationship between coping skills and substance abuse among Filipino adults who used drugs. The social influence theory on drug use was used to guide the analysis of data from 340 participants from the *Katagan Kontra Droga sa Komunidad* program, a voluntary outpatient substance abuse treatment program held in two cities in the Philippines. Participants answered a survey questionnaire measuring substance use dependence (SUD) symptoms, drug recovery skills, life skills, and perceived family support. Most of the participants were males and mostly used methamphetamine or *shabu*. Among those with SUD symptoms, moderation analysis showed that life skills were inversely associated with SUD symptoms. Family support moderated the relationship between life skills and SUD symptoms, suggesting that family support is most critical for those with lower life skills. The study concludes that life skills and family support are important factors that contribute to the treatment success among mild-risk persons who use drugs (PWUDs) in the Philippines and therefore need to be prioritized in treatment programs and health promotion initiatives.

Keywords: family support, moderator, substance use dependence, adults, Filipinos, life skills

The United Nations Office on Drugs and Crime (UNODC, 2018) reported that approximately 5.6% or 275 million of the global population aged 15–64 years used drugs at least once in 2016. Of these, around 31 million needed treatment because of the severity with which they used drugs (UNODC, 2018). Globally, substance use disorders accounted for 2.3 deaths per 100,000 population (World Health Organization, 2015).

Substance use disorders are, therefore, considered public health problems that affect a significant number of the world's population.

Vulnerability to substance use disorders (SUD) varies across individuals. Evidence suggests that SUD has biological, psychological, and social influences that serve as risk and protective factors (Substance Abuse and Mental Health Services Administration (US),

2018). The interaction between these factors has been documented, but there is still a gap as to how individual risk factors interact with environmental factors, such as social relationships in predicting substance abuse (Bardo, Neisewander, & Kelly, 2013; Caspi & Moffitt, 2006). In particular, there is a scarcity of literature describing how individuals' coping skills interact with the perception of family support to predispose individuals to substance use disorders. It is important to understand this dynamic because addiction treatment is considered a dynamic process involving the drug user, his family, and treatment modalities (Shafiei, Hoseini, Bibak, & Azmal, 2014). Studies are also needed to explore the interaction between these factors among adults; most have been done among adolescents with the assumption that understanding of factors that lead to the initiation of substance use in early life will avert use in adulthood (Griffin & Botvin, 2010). This study, thus, aims to fill this gap in the literature describing the relationship between coping skills and drug use, and how the perception of family support moderates this relationship among adults with a history of drug use in a developing country.

Literature Review

Risk Factors for Drug Use

Biological risk factors such as sensitivity to drug reward (Haertzen, Kocher, & Miyasato, 1983) and differences in potency of drugs taken (Piazza, Deroche-Gamonet, Rouge-Pont, & Le Moal, 2000) affect whether an individual will be addicted to drugs. Likewise, individual psychological risk factors for drug use, such as differences in novelty-seeking or sensation seeking (Sargent, Tanski, Stoolmiller, & Hanewinkel, 2010), self-control mechanisms (Wills, Windle, & Cleary, 1998) and impulsivity (de Wit, 2009), have also been identified as predictors of SUD. There is also evidence for the interaction between biological and psychological risk factors in SUD; amphetamine produces the greatest dopamine release in the nucleus accumbens of high sensation seekers (Leyton et al., 2002).

Individual psychological factors, such as maladaptive coping strategies used in response to stressful life events, have also been identified as one of the factors predisposing substance use. For example, individuals who avoid or disengage from stressors (avoidant coping strategies) tend to have increased

substance abuse (Eftekhari, Turner, & Larimer, 2004). Negative mood regulation expectancies, or beliefs in one's ability to alleviate or terminate a negative mood state, were also found to moderate the relationship between drinking behavior to cope with stressors and drunkenness (Catanzaro & Laurent, 2004). Psychological distress was higher among adolescents who are polydrug users, and more polydrug users reported more psychological distress than alcohol users (Kelly, Chan, Mason, & Williams, 2015).

The lack of life skills also plays a role in the initiation to and use of illicit drugs. For example, adolescents enrolled in a school-based life skills program called IPSY (Information + Psychosocial Competence = Protection or IPSY) consumed less alcohol less frequently (Spaeth, Weichold, Silbereisen, & Wiesner, 2010). Four and a half years later, participants who were not part of the IPSY intervention group had increased proneness to illicit drug use over time (Weichold & Blumenthal, 2016). Life skills are, thus, considered as enablers for individuals to be able to accept their social responsibilities and to face the daily life demands and interpersonal expectations without hurting themselves or others (Aslinejhad, Alemi, & Tajaddodi, 2008).

Beyond psychological factors, an individual's family environment may also predispose, and even perpetuate, substance use disorder. Teenagers who had poor family environments (perceived lack of support and had a high degree of family problems) used higher levels of alcohol and marijuana (Rhodes & Jason, 1990). A family history of substance abuse, combined with low social support from friends, significantly predicted alcohol and drug abuse diagnoses (Ohannessian & Hesselbrock, 1999). Conversely, African American youth who had emotionally-supportive families that closely monitored them and openly communicated with them about substance use used less tobacco, alcohol, and other substances (Cleveland, Gibbons, Gerrard, Pomery, & Brody, 2005). A problematic family system has also been identified as a predictor of age of onset of substance use; those who had used substances younger than 17 years tend to have more psychosocial problems compared to those who had late onset (Poudel, Sharma, Gautam, & Poudel, 2016).

Despite the burden of substance use disorders, there is scant evidence on how family support affects the relationship between stressors and coping skills used in the development of substance use disorders,

much more so on how the perception of family support moderates this relationship.

It is known that family support (or the lack of it) plays a role in the development of other mental health conditions. For example, family support is known to mediate the relationship between suicidal ideation and cocaine use such that higher use of cocaine was less likely to choose family as a source of support (Tarantino, Kuperminc, Parrott, & Latzman, 2013). Among adolescents, family support also moderated the relationship between drinking behavior as coping mechanisms and drunkenness, such that those with low family support tend to use drinking to reduce tension (Catanzaro & Laurent, 2004). In a study of female African American juvenile offenders, the religious coping strategy used against stressors interacted with supportive kinship ties and were negatively associated with the frequency of marijuana, alcohol, and other drug use (Robertson, Xu, & Stripling, 2010). Lower family cohesion, mediated by emotional distress, is also known to lead to increased problematic alcohol use among adolescents (Soloski & Berryhill, 2015). Parental psychopathology, family conflict, relational distance, and parenting deficits are known to predict drug use initiation and abuse (Tobler & Komro, 2010).

Despite the abundance of evidence showing how (the lack of) coping skills and the family environment are associated with the use of illicit substances, the evidence is scarce on how these variables interact with each other. Evidence is also not clear as to how the perception of family support moderates the relationship between coping skills and substance abuse, especially among adults. The present study aims to address these gaps in the scientific literature, especially in the context of a developing country with a collectivist culture.

Substance Use Disorder in the Philippines: Burden and Treatment

In 2015, the Dangerous Drugs Board commissioned a nationwide survey on the nature and extent of drug abuse in the Philippines (Dangerous Drugs Board Philippines, 2015). The study found that the prevalence rate of current drug users in the country is currently at 2.3% (± 0.9) or equivalent to 1.8 million people of the population within the age range of 10–69 years, with most of these users being males and employed adults with at least a high school education. Lifetime users, or those who have used drugs at least once in their lifetime, comprise around 6.1% or 4.8M of the

population. The same study also found that marijuana (76.3%) is the most commonly used drugs for the first time, followed by methamphetamine or *shabu* (47.7%).

The 2016 UNODC World Drug Report, however, noted that not all people who use drugs would meet the severity criteria for intensive treatment modalities. It estimated that only 1–2% of drug dependents would require initial care in a residential drug treatment facility, 4–6% will need structured outpatient services, and the remaining 90–95% can be managed with community-based treatment and care services (UNODC, 2016).

Indeed, a needs analysis found that among Filipino adults, about 47% had no symptoms of drug dependence, with only 1 in 10 having scores indicative of severe drug dependency (Hechanova et al., 2018). Half of these participants attempted to quit, but around 59% had lapsed at least once. The study found that most recovering users lack adaptive coping skills, and some employed non-adaptive coping skills as well. Majority of the participants were in the precontemplation phase, and they felt that they did not need help to treat their substance use dependence or felt that drug use was not a problem. Hechanova, Alianan, Calleja, Acosta, and Yusay (2019) investigated the impact of a community-based voluntary drug rehabilitation program and found significant positive changes in SUD symptoms, drug recovery, problem-solving skills, and stress management skills.

Studies on Coping, Family Support, and Substance Use Among Filipinos

Only a few studies have been done on the coping skills among Filipinos. Rilveria (2018) found that Filipinos are least likely to cope through substance use (alcohol and cigarette use). Conversely, De Leon and Balila (2014) found that Filipino adolescents may have tendencies to use substances under difficult or stressful situations as a form of avoidant coping behaviors.

Studies have also documented how substance use influences coping behaviors and family dynamics among Filipino drug users. A qualitative study by Abulon and Pandan (2017) found that coping within families of drug users include both positive (e.g., taking active role in problem-solving, enriching their users' spirituality, asking for forgiveness) and negative patterns (e.g., upholding family reputation, fault finding, selecting problems that should be solved).

Among young urban poor children whose parents voluntarily admitted to drug use and completed a voluntary outpatient substance use dependence treatment and rehabilitation program, a qualitative study found narratives which indicate avoidance (e.g., distancing from drug-using parents) and emotion-focused methods (e.g., repetitive outbursts of anger) to cope with years of neglect resulting from parental substance abuse (Yusay & Canoy, 2018).

Taking these studies into account, it can be said that studies examining the dynamics of family support, coping, and substance use among Filipinos are lacking. Most local studies among Filipinos who have a history of substance abuse have either focused on the effectiveness of community-based treatment programs or descriptive studies that did not document how family support and coping interacted with each other to predispose individuals to a substance use disorder. Existing studies have also been qualitative in nature, although those that used quantitative methods have been in the context of psychometric scale development. The present study will, thus, address these gaps in the literature, describing the relationship between individual coping skills and SUD symptoms, and how perceived family support influences this relationship among Filipino adults who use drugs.

Conceptual Framework

The social influence theory on drug use (McGuire, 1968; Stacy, Newcomb, & Betler, 1992) was used as a guiding framework for this study. This theory states that a person's decision to engage in illicit drug use is a function of the relationship between an individual's susceptibility and the social influences surrounding him. Specifically, whether a person will engage in any (maladaptive) behavior is moderated by his susceptibility to social influences or pressures. It posits that each person has "susceptibility variables" or traits that act as buffers that either protect or make them vulnerable to engage in various behaviors (i.e., drug use).

Using this theory, the underlying premise of this study is that the presence of substance use dependence symptoms is related to the lack of drug recovery skills and life skills to cope with difficulties of daily living. The presence (or lack of) these skills, therefore, act as susceptibility variables to drug use. This study further hypothesizes that the relationship between skills and

substance use is moderated by social influences, such as (lack of) perceived family support.

Research Questions

This study aims to answer the research question: Among Filipinos who use drugs, how are individual coping skills and perceived family support related to the presence of substance use dependence symptoms?

Specifically, the study aims to answer the following questions:

1. What are the characteristics in terms of SUD symptoms scores, drug recovery skills, life skills, and perception of family support among Filipinos who use drugs who volunteered to undergo a community-based treatment program?
2. Among those with SUD symptoms, are drug recovery skills associated with SUD symptoms scores?
3. Among those with SUD symptoms, are life skills associated with SUD symptoms scores?
4. Among those with SUD symptoms, to what extent does family support moderate the relationship between drug recovery skills, and SUD symptoms scores among Filipino drug users? Does family support strengthen the association between drug recovery skills and SUD symptoms?
5. Among those with SUD symptoms, to what extent does family support moderate the relationship between life skills and SUD symptoms scores among Filipino drug users? Does family support strengthen the association between life skills and SUD symptoms?

Methods

Data from this study came from the *Katatagan Kontra Droga sa Komunidad* (KKDK or "Resilience Against Drugs: Intensive Outpatient Program") project, a voluntary rehabilitation and treatment program at the community level (Hechanova et al., 2019). Data from the pre-program surveys were used for the analysis.

Participants

The following were the inclusion criteria for the participants: Filipinos who use drugs aged 18 and

above and have participated in the KKDK Program; who were considered to have low to mild risk of drug use dependence as assessed using WHO-ASSIST Tool; completed the pretest evaluation and at least 80% of the sessions for the KKDK Program; and are psychologically and physically capable of providing informed consent.

There were 435 participants who consented to participate in the study. However, only 340 (78.16%) had completely accomplished the survey forms. In terms of demographic profiles, most of the respondents

are males (78.3%) who are, on average, aged 41.79 (± 10.64) years old, and first used drugs when they were 25.72 (± 9.86) years old. Most also finished high school, married, and are currently employed. Almost nine in 10 respondents used shabu, whereas almost two in 10 used marijuana. Except for a few who inhaled solvents (rugby) and used cocaine, none of the respondents reported ever using ecstasy, heroin, or LSD. On average, respondents first reported using illicit drugs at the age of 25.72 years old, with some starting illicit drug use at two years old (Table 1).

Table 1
Demographic Profile of Respondents (n=340)

Variable	n (%)
Sex	
Male	264 (78.3)
Female	72 (21.4)
Current Age	
Mean (SD)	41.79 (10.64)
Median	42
Range	18–69
Educational attainment	
Grade school	62 (18.6)
High School	187 (56.2)
College	51 (15.3)
Vocational	33 (9.9)
Occupational status	
Regular employee	101 (30.2)
Contractual employee	124 (37.1)
Unemployed	108 (32.3)
Civil status	
Single	112 (33.5)
Married	161 (48.2)
Separated / widowed	61 (18.3)
Illicit Substances used*	
Marijuana	59 (17.35)
Shabu	317 (93.24)
Rugby	2 (0.59)
Cocaine	1 (0.29)
Age at first use of illicit drugs	
Mean (SD)	25.72 (9.86)
Median	23.5
Range	2–55

* Multiple responses allowed

Measures

Participants were asked for demographic characteristics such as sex, age, civil status, occupation, and educational attainment. They were also asked to report their age at first drug use, and the types of substances they used. Tools underwent translation and back-translation processes (Appendix A). The questionnaire measured the following constructs:

Substance use dependence – these are symptoms of dependence based on the ICD-10 released by the World Health Organization, which asked participants whether they experienced cravings for illicit drug use, withdrawal symptoms, and so forth in the past month (answerable by a YES or NO). The 9-item scale has an internal consistency of .66

Drug recovery skills – these questions asked the participants as to the degree by which they used certain skills to prevent relapse. These were based on the effectiveness of coping behaviors inventory or ECBI (Litman, Stapleton, Oppenheim, Peleg, & Jackson, 1984). Respondents indicated the frequency by which they utilize these behaviors on a 4-point scale (3=always, 2=often, 1=sometimes, 0=never). The 17-item scale has an internal consistency of .94.

Life skills – these were based on Sharma's (2003) life skills model and asks the degree to which participants can use abilities to deal with typical problems. Domains measured include relational skills (i.e., "I can ask for forgiveness from people I have hurt"), problem-solving skills ("I know the steps to take in solving a problem"), and stress management skills ("I can ask for support and advice from others in a time of need"). Participants rated themselves using a 5-point scale (5=strongly agree, 4=agree, 3=undecided, 2=disagree, 1=strongly disagree). The 15-item scale has an internal consistency of .90.

Family support – based on Zimet, Dahlem, Zimet, and Farley's (1988) multidimensional scale of perceived social support. These questions asked the degree (1 – very strongly disagree and 7 - very strongly agree) to which participants perceived they received help and support from their family. This 4-item scale has an internal consistency of .88.

Data Collection and Analysis

Data collection was done prior to the beginning of the intervention program. Participants were given informed consent forms related to the research, and

participants who consented were asked to fill out the data collection tool before the start of the sessions.

Data entered into a paper-based data collection tool was double-checked by the principal investigator for missing data or incorrect entries. All paper-based data were encoded using Microsoft Excel 2010 for Windows. The said encoding sheet was shared only to the members of the study team, and only the principal investigator and his thesis supervisor were able to access the encoding sheet. After encoding, the principal investigator recoded a random sample of 10% of the total responses and checked for discrepancies. Once the database was deemed clear from discrepancies and encoding errors, the Excel database was exported to IBM SPSS version 23 for Mac for statistical analysis.

Descriptive statistics were used to analyze the participants' demographic data (sex, age, age at first drug use, occupation, types of drugs used, educational attainment). Respondents' "YES" answers to the nine questions under substance use dependence domain (Section A, Q1 to Q9, Appendix A) were added to become the "SUD Score" dependent variable. Means of participants' responses to the Likert scale questions in drug recovery skills, life skills, and family support were computed to arrive at a composite score for each respondent.

Respondents with SUD scores ≥ 1 were recategorized as 1 (with drug dependence symptoms), whereas those without were recategorized as 0. Independent *t*-tests were then used to test for differences in drug recovery skills, life skills, and family support between those who have SUD symptoms and those without.

Simple moderation analysis using PROCESS v 3.1 by Hayes (2018) was used to test whether (1) drug recovery skills are associated with SUD scores, (2) life skills are associated with SUD scores, and (3) whether family support moderates the relationship between drug recovery skills/life skills and SUD scores. Sex, age, and reported age of first drug use were controlled as covariates in the analysis.

Ethical Considerations

The following ethical considerations were observed throughout the study: (1) participants' informed consent were obtained freely and voluntarily and without coercion nor promises of incentives or benefits; (2) participants were informed of possible risks and benefits that entails their participation in the study; (3) in cases that the participants would be

Table 2

Overall Baseline Profile: Substance Use, Life Skills, Drug Recovery Skills and Family Support (n=340)

Variable	n (%) / M(SD)
Substance Use Dependence (SUD) Symptoms	
No SUD Symptoms	214 (62.9)
With SUD Symptoms	126 (37.1)
Life Skills	
Mean	4.30 (.49)
Median	4.25
Drug Recovery Skills	
Mean (SD)	2.11 (.72)
Median	2.28
Perceived Family Support	
Mean (SD)	6.31 (.95)
Median	6.50

physically or psychologically harmed, the researchers assured them that they would be given immediate and proper treatment and assistance; (4) participants were given the option to withdraw their participation in the research even after they have consented; (5) participants were informed that they are not obliged to answer any question in the interview; (6) participants were assured that all information obtained in this research will be treated with utmost confidentiality and will be used for academic purposes only; (7) the participants will be given a copy of the results of the entire research with corresponding explanations if they so wish; and (8) participants were informed that the researchers are available for contact through phone or email should they have questions or inquiries.

Results

Participants' SUD Symptoms, Skills, and Family Support

Overall, one-third of the respondents had SUD symptoms (i.e., answered at least one “yes” in the SUD symptoms scale). At the time of their participation in the study, it appears that respondents agreed that they are able to use various life skills. Most also found drug recovery skills to be often helpful in stopping them from using drugs. Based on their answers, participants

also perceive that their family is strongly supportive of them (Table 2).

Among those with SUD symptoms (n=126), almost nine in 10 (88.1%) had only one to three symptoms, but the rest (11.9%) have four symptoms indicative of moderate to high risk of substance use dependence. Results are similar to the baseline profile in terms of life skills, drug recovery skills, and perceived family support (Table 3).

Pearson’s *r* correlation was used to describe the associations between SUD symptoms, drug recovery skills, life skills, and perceived family support for all the respondents in the study. There is a weak association between SUD symptoms score and drug recovery skills ($r = -.164, p < 0.01$), life skills ($r = -.221, p < 0.01$), and family support ($r = -.145, p < 0.01$). The inverse association suggests that higher SUD symptoms are associated with low drug recovery skills, low life skills, and low family support. Drug recovery skills are also associated with life skills ($r = .444, p < 0.01$) and family support ($r = .219, p < 0.01$). Associations also exist between family support and life skills ($r = .238, p < 0.01$).

A separate correlation analysis was also done for those with SUD symptoms. Only life skills was negatively associated with SUD symptoms, whereas weak positive associations were observed between

Table 3*Baseline Profile of Those With at Least One SUD Symptom (n=126)*

Variable	n (%) / M(SD)
Substance Use Dependence (SUD) Symptoms	
1 – 3 symptoms	111 (88.1)
> 4 symptoms	15 (11.9)
Life Skills	
Mean	4.20 (.49)
Median	4.17
Drug Recovery Skills	
Mean (SD)	1.97 (.69)
Median	2.18
Perceived Family Support	
Mean (SD)	6.07 (1.07)
Median	6.25

Table 4*Correlations Between SUD Symptoms Score, Skills, and Family Support Among Those With SUD Symptoms (n=126)*

Measure	SUD Symptoms	Drug Recovery Skills	Life Skills	Family Support
SUD Symptoms	1			
Drug Recovery Skills	-.135	1		
Life Skills	-.257**	.318**	1	
Family Support	-.173	.175	.382**	1

** Significant at the 0.01 level (2-tailed).

drug recovery skills and family support, and between life skills and family support. Family support and drug recovery skills were not significantly associated with each other (Table 4).

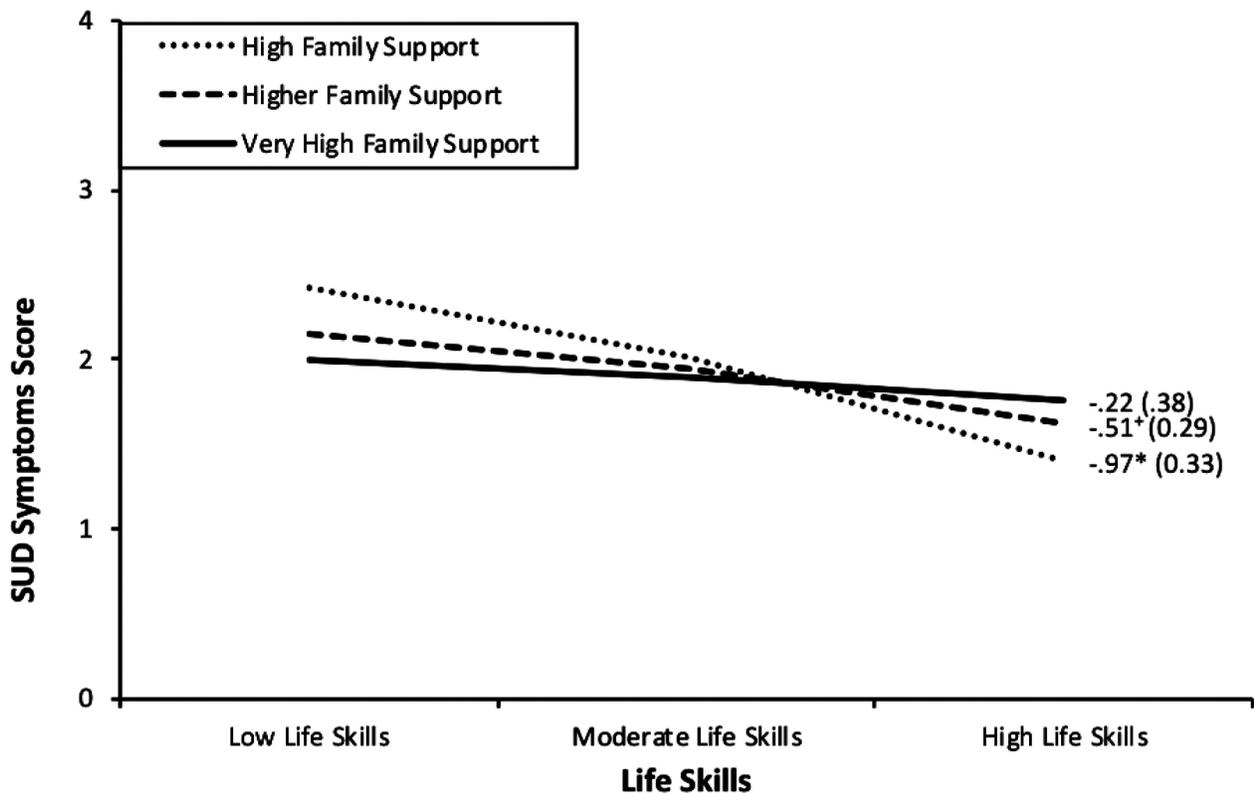
The simple moderation model of the PROCESS v3.1 macro package for SPSS was used to examine whether family support moderated the relationship between drug recovery skills and substance use dependency symptoms score among those who reported having at least one substance use dependence symptoms.

The overall model with drug recovery skills as the independent variable and perceived family support as moderator was not significant with $F(6,107) = 1.6063, p = .15$, and $R^2 = .08$. Drug recovery skills ($B = .42, SE = .87, p = .63$) and family support

($B = -.01, SE = .25, p = .97$) were also not significantly associated with SUD symptoms score. The drug recovery skills X family support interaction did not produce a significant change for SUD scores with $F(1,107) = .5595, p = .46$, and $\Delta R^2 = .0048$, indicating that perceived family support was not a significant moderator between drug recovery skills and SUD symptoms.

Family Support as Moderator Between Life Skills and SUD

PROCESS v3.1 was also used to test whether family support moderated the relationship between life skills and substance use dependency symptoms score (Figure 1). The over-all model with life skills as



* Significant at $\alpha = 0.05$
 + Significant at $\alpha = 0.10$

Figure 1. Family support as a moderator of SUD and life skills.

independent variable and perceived family support as moderator was significant at $F(6,107) = 1.8163, p = .01$, and $R^2 = .13$. The drug recovery skills X family support interaction produce a change for SUD scores, which was approaching statistical significance with $F(1,107) = 3.01, p = 0.08$, and $\Delta R^2 = .02$. Life skills was also inversely associated with SUD scores ($B = -2.98, SE = 1.37, p = .03$). Similarly, family support is also associated with SUD scores, although this relationship was only approaching statistical significance ($B = -1.70, SE = 1.37, p = .07$). As illustrated in Figure 1, having low life skills was significantly associated with lower SUD symptoms at high levels of family support ($B = -.97, SE = .33, p = .004$). The association between life skills and SUD symptoms was approaching statistical significance at higher levels of family support ($B = -.52, SE = .30, p = .08$), but was not significant at very high levels of family support ($B = -.22, SE = .38, p = .56$).

Discussion

The present study addressed the gap in the scientific literature in terms of the relationship between coping skills and substance use dependence and how this relationship is moderated by perceived family support. Likewise, it aimed to describe the baseline psychological profiles of Filipino drug users who participated in a voluntary outpatient treatment program.

The study found that most participants of a voluntary outpatient substance use dependence treatment program were males who had no SUD symptoms at the time of the study. Nine in 10 participants reported using shabu in the past, with around two in 10 used marijuana. Despite this, almost two out of three participants reported no SUD symptoms at the time of the survey, and among those

who have SUD symptoms, almost nine out of 10 only had mild SUD symptoms. These proportions echo those reported by the 2016 UNODC World Drug Report and thereby imply that while there may be a large proportion of people who use drugs, the majority no longer have SUD symptoms, reinforcing the call to provide community-based drug rehabilitation services in the Philippines.

On average, participants agreed they are able to use various life skills, most also found the drug recovery skills often helpful in stopping them from using drugs, and perceived their family supportive of them. Despite this, further analysis shows that participants who had no SUD symptoms at the time of assessment scored higher on these variables compared to those who have SUD symptoms. This suggests that participants without SUD symptoms were more able to cope with stressors in life, and, therefore, did not have to resort to (extreme) use of illicit substances to continue daily functioning. They might also have been able to use their life skills to resist the temptation from negative social influences resulting in lower SUD scores (Spaeth et al., 2010; Weichold & Blumenthal, 2016).

The study also found that drug recovery skills were not significantly related to SUD symptoms, and family support also did not significantly moderate their relationship. These findings are expected because these variables are not correlated with each other in the first place among those with SUD symptoms, and these skills are only expected to be learned after participation in a voluntary outpatient substance use dependence treatment program. As mentioned, it is the lack of life skills, and not necessarily drug recovery skills, that have been identified as factors that predispose illicit substance use.

Indeed, life skills were found to be inversely associated with SUD scores, such that those with lower life skills tend to have higher SUD scores controlling for sex, current age, and age at first illicit substance use. People who have minimal life skills to cope with life difficulties they encountered may be more likely to rely on illicit substances, confirming findings of existing literature that the lack of coping skills plays an important role in substance use (Catanzaro & Laurent, 2004; Eftekhari et al., 2004).

Family support was inversely associated with SUD symptoms score, such that those with lower family support tend to have higher SUD scores. It was observed that a point increase in life skills would

lead to a three-point reduction in SUD symptoms score. This implies that the improvement of life skills may have a significant effect in preventing substance use. However, this relationship is only approaching statistical significance ($p = 0.08$), suggesting that this effect of the family on substance use may not be as strong among Filipino adults as compared to adolescents (Cleveland et al., 2005; Ohannessian & Hesselbrock, 1999; Poudel et al., 2016; Rhodes & Jason, 1990). This adds to the findings of existing studies that identify poor family support as predictors of substance use (Soloski & Berryhill, 2015; Tobler & Komro, 2010).

The inverse relationship between life skills and SUD is even more prominent among PWUDs with high levels of family support (vs. those with higher and very high). It may be that for PWUDs who have high family support, their life skills to cope and meet societal demands were more critical in determining SUD. In a sense, family support may have motivated some PWUDs to cope on their own using the life skills they already possessed to meet societal demands. In Yusay and Canoy's (2018) study, participants developed coping skills such as outbursts of anger as a form of agency to cope with parental neglect. Perhaps it is also the participants' adverse experiences with their parents who used drugs that made them averse to using illicit drugs themselves.

The findings of this study seem to support the applicability of social influence theory on drug use among Filipino adults who use drugs. This study found that coping skills of Filipino PWUDs are associated with substance abuse dependency, and is also influenced by social support factors, such as those coming from the family. Although it was initially hypothesized that higher levels of family support would strengthen the association between coping skills and SUD symptoms, this was statistically insignificant in the analysis. Perhaps family support is not as important for adults as they are for adolescents juvenile offenders as observed by other researches (Catanzaro & Laurent, 2004; Robertson et al., 2010). Instead, the role of family support as a protective factor operates differently among Filipino adults who use drugs; in the context of a collectivist society, family support did influence them but in such a way that the lack of support motivated them to tap their internal resources, and cope on their own without resorting to substance use. It may also be that they drew on their inner

strength from religiosity and faith as a form of coping (Hechanova et al., 2015; Hechanova & Waelde, 2017).

Conclusion

The study aimed to describe how individual coping skills (drug recovery skills and life skills) and perceived family support are related to the presence of substance use dependence symptoms among Filipinos who use drugs. Among 126 (37%) Filipino adults with substance use dependence symptoms, it was found that drug recovery skills were not related to SUD symptoms, and family support also did not moderate their relationship. However, life skills were found to be inversely associated with SUD scores, such that those with lower life skills tend to have higher SUD scores. Family support also moderated the relationship between life skills and SUD symptoms, such that those with high family support (vs. higher and very high family support) had higher life skills and lower SUD symptoms score.

The findings of this study provide evidence of the importance of life skills and family support as contributors to treatment success among mild-risk persons who use drugs (PWUDs). Thus, it may be necessary to assess protective factors, including life skills and family support on PWUDs seeking treatment. When developing treatment plans, it may be critical to emphasize life skills, especially for those with minimal family support. In addition, the results also suggest that substance use intervention should aim to strengthen family support, especially for clients who possess minimal life skills. In addition, life skills and parenting programs may be important prevention programs, especially for youth-at-risk.

Although the study provided some valuable insights, it should be noted that the sample is limited to Filipino PWUDs who voluntarily joined outpatient programs and had minimal substance use dependence symptoms. Future studies may wish to broaden this sample to include those with a higher level of risk.

In addition, the outcomes and measures used in this study were all self-reported and may, therefore, be subject to desirability bias. To address these limitations, the triangulation of outcome measures may be done in the future to ensure the reliability and validity of the findings further.

The study also only focused on drug recovery, life skills, and family support in relation to SUD symptoms.

Future studies may examine other sources of recovery capital, such as the extent to which education and religion may serve as protective factors against drug and alcohol use (Robertson et al., 2010). To address biases inherent in the cross-sectional design of the study, researches using experimental designs to examine whether improvements in recovery and life skills will improve SUD symptoms are also suggested.

Acknowledgments

The first author is deeply grateful for the inspirational guidance and generosity of Dr. Ma. Regina Hechanova that made this manuscript possible. This study would also not have been able to come to fruition without the invaluable comments of Dr. Rosanne Jocson, Dr. Arsenio Alianan, and Dr. Nico Canoy on the technical aspects of the manuscript. Ad Majorem Dei Gloriam.

Declaration of Funding Source

The Commission on Higher Education of the Philippines provided funding to the *Katatagan Kontra Droga sa Komunidad* project.

Declaration of Ownership:

This report is our original work.

Declaration of Conflict of Interest

The authors declare no conflict of interest.

Declaration of Ethical Clearance

The data collection procedures, informed consent forms, and data collection instruments were given ethical approval by the University Research Ethics Office of Ateneo de Manila University.

References

- Abulon, E. L., & Pandan, W. A. (2017). Examining the family dynamics in addiction: Inputs for treatment intervention in the Philippine setting. *International Journal of Research Studies in Psychology*, 6(1), 99–112. Retrieved from <http://consortiacademia.org/10-5861ijrsp-2017-1710/>

- Aslinejhad, M., Alemi, A., & Tajaddodi, M. (2008). *Life skills*. Mashhad: Ney Negar Publication.
- Bardo, M. T., Neisewander, J. L., & Kelly, T. H. (2013). Individual differences and social influences on the neurobehavioral pharmacology of abused drugs. *Pharmacological Reviews*, *65*(1), 255–290. <https://doi.org/10.1124/pr.111.005124>
- Caspi, A., & Moffitt, T. E. (2006). Gene-environment interactions in psychiatry: Joining forces with neuroscience. *Nature Reviews Neuroscience*, *7*(7), 583–590. <https://doi.org/10.1038/nrn1925>
- Catanzaro, S. J., & Laurent, J. (2004). Perceived family support, negative mood regulation expectancies, coping, and adolescent alcohol use: Evidence of mediation and moderation effects. *Addictive Behaviors*, *29*(9), 1779–1797. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/15530721>
- Cleveland, M. J., Gibbons, F. X., Gerrard, M., Pomery, E. A., & Brody, G. H. (2005). The impact of parenting on risk cognitions and risk behavior: A study of mediation and moderation in a panel of African American adolescents. *Child Development*, *76*(4), 900–916. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/16026504>
- Dangerous Drugs Board Philippines. (2015). *Nationwide survey on the nature and extent of drug abuse in the Philippines*. Retrieved from <http://pcij.org/wp-content/uploads/2017/06/DDB-2015-Nationwide-Survey-Final-Reportc.pdf>
- De Leon, J., & Balila, E. (2014). Filipino adolescents' coping strategies: A confirmatory factor analysis. *Adventist University of the Philippines Research Journal*, *18*(2), 73–81. Retrieved from <http://web1.aup.edu.ph/alumni/index.php/2016/10/04/filipino-adolescents-coping-strategies-a-confirmatory-factor-analysis-byjezaminde-leon-and-edwin-balila/>
- de Wit, H. (2009). Impulsivity as a determinant and consequence of drug use: A review of underlying processes. *Addiction Biology*, *14*(1), 22–31. <https://doi.org/10.1111/j.1369-1600.2008.00129.x>
- Eftekhari, A., Turner, A. P., & Larimer, M. E. (2004). Anger expression, coping, and substance use in adolescent offenders. *Addictive Behaviors*, *29*(5), 1001–1008. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/15219349>
- Griffin, K. W., & Botvin, G. J. (2010). Evidence-based interventions for preventing substance use disorders in adolescents. *Child and Adolescent Psychiatric Clinics of North America*, *19*, 505–526. <https://doi.org/10.1016/j.chc.2010.03.005>
- Haertzen, C. A., Kocher, T. R., & Miyasato, K. (1983). Reinforcements from the first drug experience can predict later drug habits and/or addiction: Results with coffee, cigarettes, alcohol, barbiturates, minor and major tranquilizers, stimulants, marijuana, hallucinogens, heroin, opiates and cocaine. *Drug and Alcohol Dependence*, *11*(2), 147–165. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/6134605>
- Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY, US: Guilford Press.
- Hechanova, M., Alianan, A., Calleja, M., Acosta, A., & Yusay, C. (2019). Evaluation of the training and pilot implementation of Katatagan Kontra Droga sa Komunidad. *Philippine Journal of Psychology* *52*(1), 65–101.
- Hechanova, M., Alianan, A. S., Calleja, M. T., Melgar, I. E., Acosta, A., Villasanta, A., ... Cue, M. P. (2018). The development of a community-based drug intervention for Filipino drug users. *Journal of Pacific Rim Psychology*, *12*(e12), 1–10. Retrieved from <https://www.cambridge.org/core/journals/journal-of-pacific-rim-psychology/article/development-of-a-communitybased-drug-intervention-for-filipino-drug-users/751C6DDC4CA4E0255E2439B1AF3C09A0>
- Hechanova, R., & Waelde, L. (2017). The influence of culture on disaster mental health and psychosocial support interventions in Southeast Asia. *Mental Health, Religion & Culture*, *20*(1), 31–44. <https://doi.org/10.1080/13674676.2017.1322048>
- Kelly, A. B., Chan, G. C. K., Mason, W. A., & Williams, J. W. (2015). The relationship between psychological distress and adolescent polydrug use. *Psychology of Addictive Behaviors*, *29*(3), 787–793. <https://doi.org/10.1037/adb0000068>
- Leyton, M., Boileau, I., Benkelfat, C., Diksic, M., Baker, G., & Dagher, A. (2002). Amphetamine-induced increases in extracellular dopamine, drug wanting, and novelty seeking: A PET/[¹¹C]raclopride study in healthy men. *Neuropsychopharmacology*, *27*(6), 1027–1035. [https://doi.org/10.1016/S0893-133X\(02\)00366-4](https://doi.org/10.1016/S0893-133X(02)00366-4)
- Litman, G. K., Stapleton, J., Oppenheim, A. N., Peleg, M., & Jackson, P. (1984). The relationship between coping behaviors, their effectiveness and alcoholism. *British Journal of Addiction*, *79*, 283–291. Retrieved from <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1360-0443.1984.tb03869.x>
- McGuire, W. J. (1968). Personality and susceptibility to social influence. In E. F. Borgatta & W. W. Lambert (Eds.), *Handbook of personality theory and research* (pp. 1130–1187). Chicago: Rand McNally.
- Ohannessian, C. M., & Hesselbrock, V. M. (1999). Predictors of substance abuse and affective diagnoses: Does having a family history of alcoholism make a difference. *Applied Developmental Science*, *3*(4), 239–247. Retrieved from https://doi.org/10.1207/s1532480xads0304_9
- Piazza, P. V., Deroche-Gamonet, V., Rouge-Pont, F., & Le Moal, M. (2000). Vertical shifts in self-administration dose-response functions predict a drug-vulnerable

- phenotype predisposed to addiction. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 20(11), 4226–4232. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/10818158>
- Poudel, A., Sharma, C., Gautam, S., & Poudel, A. (2016). Psychosocial problems among individuals with substance use disorders in drug rehabilitation centers, Nepal. *Substance Abuse Treatment, Prevention, and Policy*, 11(28). Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4986270/>
- Rhodes, J. E., & Jason, L. A. (1990). A social stress model of substance abuse. *Journal of Consulting and Clinical Psychology*, 58, 395–401. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/2212175>
- Rilveria, J. R. C. (2018). The development of the Filipino coping strategies scale. *Asia Pacific Social Science Review*, 18(1), 111–126. Retrieved from <http://apssr.com/wp-content/uploads/2018/06/RA-8.pdf>
- Robertson, A. A., Xu, X., & Stripling, A. (2010). Adverse events and substance use among female adolescent offenders: Effects of coping and family support. *Substance Use & Misuse*, 45, 451–472. <https://doi.org/10.3109/10826080903452512>
- Sargent, J. D., Tanski, S., Stoolmiller, M., & Hanewinkel, R. (2010). Using sensation seeking to target adolescents for substance use interventions. *Addiction*, 105(3), 506–514. <https://doi.org/10.1111/j.1360-0443.2009.02782.x>
- Shafiei, E., Hoseini, A. F., Bibak, A., & Azmal, M. (2014). High risk situations predicting relapse in self-referred addicts to Bushehr province substance abuse treatment centers. *International Journal of High Risk Behaviors & Addiction*, 3(2), e16381–e16381. <https://doi.org/10.5812/ijhrba.16381>
- Sharma, S. (2003). Measuring life skills of adolescents in a secondary school of Kathmandu: An experience. *Kathmandu University Medical Journal*, 1(3), 170–176. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/16388225>
- Soloski, K. L., & Berryhill, M. B. (2015). Gender differences: Emotional distress as an indirect effect between family cohesion and adolescent alcohol use. *Journal of Child and Family Studies*, 25(4), 1269–1283. <https://doi.org/10.1007/s10826-015-0311-7>
- Spaeth, M., Weichold, K., Silbereisen, R. K., & Wiesner, M. (2010). Examining the differential effectiveness of a life skills program (IPSY) on alcohol use trajectories in early adolescence. *Journal of Consulting and Clinical Psychology*, 78(3), 334–348. <https://doi.org/10.1037/a0019550>
- Stacy, A. W., Newcomb, M. D., & Betler, P. M. (1992). Interactive and higher-order effects of social influences on drug use. *Journal of Health and Social Behavior*, 33, 226–241. Retrieved from <https://www.jstor.org/stable/2137353>
- Substance Abuse and Mental Health Services Administration (US). (2018). Risk and protective factors. Retrieved March 25, 2019, from https://webcache.googleusercontent.com/search?q=cache:PbHI9NIX2ZkJ:https://www.samhsa.gov/sites/default/files/ebp_prevention_guidance_document_241.pdf+&cd=2&hl=en&ct=clnk&gl=dk
- Tarantino, N., Kuperminc, G. P., Parrott, D. J., & Latzman, R. D. (2013). Family support mediates the association between substance use severity and suicidal ideation in early adult emergency department patients. *International Journal of Mental Health and Addiction*, 11(6), 672–681. <https://doi.org/10.1007/s11469-013-9444-3>
- Tobler, A. L., & Komro, K. A. (2010). Trajectories or parental monitoring and communication and effects on drug use among urban young adolescents. *The Journal of Adolescent Health*, 46(6), 560–568. <https://doi.org/10.1016/j.jadohealth.2009.12.008>
- United Nations Office on Drugs and Crime. (2016). *World drug report 2016*. New York. Retrieved from http://www.unodc.org/doc/wdr2016/WORLD_DRUG_REPORT_2016_web.pdf
- United Nations Office on Drugs and Crime. (2018). *World drug report 2018*. Retrieved from <https://www.unodc.org/wdr2018/>
- Weichold, K., & Blumenthal, A. (2016). Long-term effects of the life skills program IPSY on substance use: Results of a 4.5-year longitudinal study. *Prevention Science*, 17(1), 13–23. <https://doi.org/10.1007/s11121-015-0576-5>
- Wills, T. A., Windle, M., & Cleary, S. D. (1998). Temperament and novelty seeking in adolescent substance use: Convergence of dimensions of temperament with constructs from Cloninger's theory. *Journal of Personality and Social Psychology*, 74(2), 387–406. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/9491584>
- World Health Organization. (2015). *Global health estimates*. Retrieved from https://www.who.int/substance_abuse/activities/fadab/msb_adab_2017_GHE_23June2017.pdf?ua=1
- Yusay, C. T. C., & Canoy, N. A. (2018). Healing the hurt amid the drug war: Narratives of young urban poor Filipinos in recovering families with parental drug use. *The International Journal on Drug Policy*, 68, 124–131. <https://doi.org/10.1016/j.drugpo.2018.10.009>
- Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment*, 52(1), 30–41. https://doi.org/http://dx.doi.org/10.1207/s15327752jpa5201_2

APPENDIX A

INFORMED CONSENT FORMS AND DATA COLLECTION TOOLS

We are psychologists and researchers from Ateneo de Manila University led by Dr. Regina Hechanova (+632 4266001 local 5260-5262). Thank you for your interest to join Katatagan Kontra Droga sa Komunidad (KKDK). The goal of KKDK is to provide participants with skills to be resilient against drug use. As part of our program improvement, we are conducting a study to understand how effective KKDK is in helping you. We are conducting a survey and interview that aims to understand your current life skills, and your relationship with your family and your environment. We also want to know your experiences during the program and how it helped / did not help you in your journey towards a life without drugs.

The potential benefits of joining the program and research are as follows:

- ✓ Learn skills that can help you avoid drug use
- ✓ Learn skills that can help you solve problems in daily life
- ✓ May help you and your family to have better relationships.

The potential stress that joining the program will entail:

- Time required: the program will have 15 sessions. Each session will last from 1 ½ to 2 hours. You are requested to allocate 1 ½ to 2 hours each week to join the sessions. There will be homework for each session where you need to spend some time as well.
- Sharing of experiences: Your experience of using drugs will be discussed during the sessions. There will be times that this will remind you of your unpleasant experiences in using drugs. If any participants need professional help, there will be a psychologist who will be ready to assist you.
- Answering the survey and interview: You may experience stress that are usually experienced while being interviewed or answering the survey. The interview will be done after 15 sessions. The survey will be done 3 times. One at the start, one in the middle of the program, and one after. Answering the survey will take 30 to 45 minutes. There are no right or wrong answers in the survey. If you have any questions or if there are items that you do not understand, do not hesitate to ask your facilitators.

Your participation in this study is voluntary. You can choose to withdraw at any point and there will be no punishment for doing so. Your answers will be kept confidential, and will only be accessible to the psychology researchers. The police or the *barangay* will not be able to see your responses. If you have any questions or complaints regarding your participation in this research, you may call the University Research Ethics Office, Ateneo de Manila University at telephone (+632) 426-4001 local 5049.

CONSENT

My name and signature signify that:

- ✓ I have a clear understanding of what I will be doing;
- ✓ I have been given a chance to ask questions;
- ✓ I gave my consent to be part of this research;
- ✓ I fully understand that there are no right or wrong answers in this survey;
- ✓ I understand that my answers will be kept confidential and my name will not come out in any report; and
- ✓ I am voluntarily participating in this program and in this study.

Check the box as to whether you grant additional permissions to the following:

May we please request for copies of your worksheets during the sessions as part of research?

May we please request permission to record the module sessions for family. We assure you that this recording will be kept confidential, and your name or any other information that will identify you will not be revealed at any point in any of the reports or presentations that we will make.

Name of participant: _____

Signature of Participant: _____

Date: _____

KATATAGAN KONTRA SA DROGA SA KOMUNIDAD SURVEY

A. The following questions are about your experience in using drugs **IN THE LAST MONTH**. Please check the column that corresponds to your answer.

	Yes	No
Did you have a strong urge or desire to use drugs?		
Did you find it difficult or impossible to control your drug use?		
Did you experience withdrawal symptoms (uncontrollable shaking, body aches, sadness) after going without drugs for a while?		
Did you use drugs to relieve or avoid withdrawal symptoms?		
Did you notice that you required more drugs to achieve the same physical and mental effects as before?		
Over time, did you tend not to vary your pattern of drug use?		
Did you increasingly neglect other pleasures or interests in favor of using drugs?		
Did you experience psychological or physical harm because of your drug use?		
Did you persist with using drugs, despite clear evidence of harmful consequences?		

B. Below are things done by other people to stop themselves from using drugs. How often do you use them to stop yourself from using drugs? Encircle your answer.

	Never	Sometimes	Often	Always
1. Thinking about how much better off I am without drugs	0	1	2	3
2. Calling a friend or family member	0	1	2	3
3. Thinking of the mess I've gotten myself into because of drug use	0	1	2	3
4. Joining groups that help drug users to stop	0	1	2	3
5. Facing up to my bad feelings instead of trying to escape them	0	1	2	3
6. Thinking that using drugs will not help me	0	1	2	3
7. Waiting it out until the cravings subside	0	1	2	3
8. Keeping away from people who use drugs	0	1	2	3
9. Exercising	0	1	2	3
10. Realizing that it negatively affects my health	0	1	2	3
11. Distracting myself	0	1	2	3
12. Considering the effect it will have on my family	0	1	2	3
13. Reminding myself of the good life I can have without drugs	0	1	2	3
14. Avoiding places where I used drugs before	0	1	2	3
15. Remembering how it has affected my family	0	1	2	3
16. Relaxing	0	1	2	3
17. Praying	0	1	2	3

C. Below are statements about your life **NOW**. Encircle the number that corresponds to the degree which you feel you can do the following:

	Strongly Disagree	Disagree	50-50	Agree	Strongly Agree
1. I can ask for forgiveness from people that I have hurt.	1	2	3	4	5
2. I can forgive those who hurt me.	1	2	3	4	5
3. I can ask for support and advice from others in a time of need.	1	2	3	4	5
4. I can be assertive in the face of peer pressure.	1	2	3	4	5
5. I can know the basic steps for decision-making.	1	2	3	4	5
6. I can make decisions about my important life plans.	1	2	3	4	5
7. I know the basic steps in solving my problems.	1	2	3	4	5
8. I can generate solutions to difficult problems and dilemmas I encounter.	1	2	3	4	5
9. I can identify the sources of my stress.	1	2	3	4	5
10. I know ways that can help me cope with stress.	1	2	3	4	5
11. I understand how my emotions affect the way I behave.	1	2	3	4	5
12. I can cope with emotional distress.	1	2	3	4	5
13. I can refuse people who tempt me to use drugs.	1	2	3	4	5
14. I can avoid the triggers in my environment that tempt me to use.	1	2	3	4	5
15. I know how to manage my cravings.	1	2	3	4	5

D. We are interested to understand how much you agree to the following statements. Read each statement carefully and encircle your answer.

	Very Strongly Disagree	Strongly Disagree	Mildly Disagree	50-50	Mildly Agree	Strongly Agree	Very Strongly Agree
1. My family really tries to help me.	1	2	3	4	5	6	7
2. I get the emotional help and support I need from my family.	1	2	3	4	5	6	7
3. I can talk about my problems with my family.	1	2	3	4	5	6	7
4. My family is willing to help me make decisions.	1	2	3	4	5	6	7

When did you last use drugs? _____

What drugs did you use the last time? (check all that applies.)

Marijuana _____ Shabu _____ Rugby _____ Ecstasy _____ Cocaine _____ Heroin _____ LSD _____ Others _____

Cell/Phone No: _____

Sex: _____ Age: _____ Age when you first used drugs: _____

Please indicate your answers by writing a check mark:

Civil status: Single _____ Married _____ Separated / widow _____

Work: Has permanent work _____ Contractual / casual _____ No work _____

Highest educational attainment: Grade school _____ High _____