

Correlation between Social Supports and Drug Abuse Screening Test-10 among Senior High School Students

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ABSTRACT

Drug abuse is common among adolescent, and its consequences pose important public health problem. Family, friend, school and other member of community should give support to adolescents so that they are emotionally and mentally ready to fight against drug. This cross sectional study was designed to investigate correlation between social support with Drug Abuse Screening Test-10 (DAST-10) and association of social support with treatment evaluation. Subjects included 210 senior high school students in Pekanbaru, Riau. Data obtained from Adolescents Social Support (ASS) questionnaire included social supports, and from DAST-10 included severity and treatment evaluation of drug abuse. This study showed family support, school environment and peer group support were significantly associated and significantly correlation to DAST-10 with strong correlation (0.718, 0.720 and 0.727, respectively) in negative direction. In conclusion, social supports could be a protective factor for adolescents related drug abuse.

Key words: social support, DAST-10, drug abuse, senior high school student

INTRODUCTION

Drug abuse is a global health and social problem which condition and problem vary locally. The use of psychoactive substance among adolescent and young adult has become a subject of public concern worldwide, partly because of its potential to contribute to both unintentional and intentional injury. Research indicates that, despite a recent leveling-off of substance use by adolescents, the current levels remain high. Studies suggest that the younger an individual at the onset of substance use, the greater the likelihood substance use disorders will develop and continue into adulthood. In fact, more than 90 percent of adults with current substance use disorders started using it before age 18; half of those began before age 15 (Oshikoya and Alli, 2006; Ljubotina *et al.*, 2004; Galea *et al.*, 2004; Soldera *et al.*, 2004).

From study in US, substance use prevalence rates among high school students, male and female who had used past-month marijuana/drug abuse, 23.9% and 18.6 %, respectively (Reddy *et al.*, 2007). Substance use is the first public health problem in US since it is the leading cause of preventable death and injury among collegians

ages (McCabe, 2006). Study in Indonesia showed 16.84% senior high school students used drug abuse (Raharni and Herman, 2005).

There were many influence and risk factors related drug abuse, parental factor, peer group, sex, perception of drug abuse, socioeconomic status, etc. But generally, we can categorize those factors into two categories: internal factor (type of personality, age, sex, genetic) and external factor (family, peer group, school environment) (Raharni and Herman, 2005). Because of the complexity of the problem, collaboration between several group must be implemented to prevent drug abuse among adolescent. Society should support these adolescents in preparing them for such situation. Family, friend, school and other member of community should give support to adolescents so that they are emotionally and mentally ready to fight against drug (Laoniramai *et al.*, 2005).

We must consider detecting early possible drug abuse (other than alcohol) among adolescent, one of useful and effective program to prevent adolescent from drug abuse. One screening test that could be considered for this population is the Drug Abuse Screening Test, short

form (DAST-10), a brief screening instrument that can be used in clinical and nonclinical setting to detect possible substance abuse problem associated with the use of a wide variety of drug other than alcohol (McCabe *et al.*, 2006).

There were many studies taken place in finding association between single factor to drug abuse. This study was designed to investigate correlation between social support (combined internal and external factors) with Drug Abuse Screening Test-10 and association of social support with treatment evaluation.

METHODS

Study design and Sampling Size

This study was cross sectional study which was conducted from May 2008 to June 2008, at Pekanbaru, Riau Province, Indonesia. The study population was Senior High School students. The participants were selected by simple random sampling. Sample size calculation was based on the independent for coefficient correlation analysis. From pre sampling we got *r* coefficient correlation, -0.516, -0.360, and 0.255 for correlation domain Family Support, School Environment, and Peer Group Support to DAST-10. Using *r* coefficient correlation 0.255 from preliminary study and significance level of 0.05 with at least 90% power with one tailed hypothesis analysis, 129 participants were required. In this study, we tried to cover all high school students in Pekanbaru, that's why we used Rapid Assessment Procedure (RAP) from WHO which is the 30 by 7 cluster sampling (210 respondent). The sampling is done by choosing 7 senior high schools randomly. Randomization was done using Microsoft excel® 2007. From every senior high schools we choose randomly 30 students with probability proportion to size (PPS) sampling technique.

Measurement

To measure social supports, we developed an instrument called Adolescents Social Support (ASS). In ASS, students were asked to answer 14 social support-related questions. The questions were score on a 4-point Likert scale ranging from 0 (very unsupported) to 3 (very supported). The total score ranged from 0 (lowest social supported) to 42 (highest supported). ASS consists of 3 domains: Family Support (S1-S5), School Environments (S6-10), and Peer Group Support (S11-S14). Pre sampling was done to get *r* (correlation coefficient) and to test this ASS reliability and validity with 30 respondents. The result of this pre sampling is *Cronbach alfa* = 0.767 with Corrected Item – Total Correlation between 0.502–0.762 for domain Family Support, *Cronbach alfa* = 0.733 with Corrected Item – Total Correlation between 0.443–0.585 for domain School Environments, and *Cronbach alfa* = 0.748 with Corrected Item – Total Correlation between 0.489–0.573 for domain Peer Group Support (table *r* : *df* = 28, *r* = 0,374, *p* < 0,05).

Drug Abuse Screening Test, short form (DAST-10) was using to detect possible drug abuse (other than alcohol). The DAST-10 is a 10-item, self-report instrument, and should take less than 8 minute to complete. The DAST-10 was designed to provide a brief instrument for assessment of severity and treatment evaluation. Scoring system for DAST-10 is score = 1, if their answer is “YES” and score = 0, if their answer is “NO”. The total score ranged from 0 to 10. Treatment evaluation scoring: 0 = no problem, none treatment; 1–2 = Low Level, monitor, reassess At a later date treatment; 3–5 = Moderate Level, further investigation treatment; 6–8 = High Level, and 9–10 = Very High Level, intensive assessment treatment (McCabe, 2006; Ceung, 2008). In this study, we categorize treatment evaluation to two categorizes which is none and need treatment.

Statistical Analysis

SPSS® for Windows version 14 (SPSS Inc, Chicago, Illinois) was used for inputting, processing, and analyzing the data used in the study. To determine correlation between family support, school environment, and peer group support to DAST-10, we analyzed using Pearson correlation test or Spearman's rho correlation test depend on the normality of the data distribution. Independent t-test or Mann Whitney U-test was using to determine association of social support with treatment evaluations.

RESULTS

Characteristics of the respondents are shown in Table 1. All respondents were adolescent, the mean for age was 16.49 (0.69) years with minimum age 15 and maximum age 18. More than half respondents were female (55.7%). Most of respondents are living with parents 86.70% and 91.4% respondents have intact family structure. Almost two thirds (62.9%) of the respondents have peer group.

Table 1. Characteristics of respondents (n=210)

Characteristics	mean (SD)	n (%)
Age, years	16,49 (0,69)	
Female		117 (55.7)
Residential		
With parents		182 (86.7)
Rent		15 (7.1)
Other family		13 (6.2)
Family structure		
Intact family		194 (91.4)
Single parents		15 (7.1)
Other		1 (0.5)
Peer group		
Yes		132 (62.9)
No		78 (37.1)

Correlation between social support and DAST-10 are presented in Table 2. As presented, family support, school

Table 2. Correlation between Social Support and DAST-10 (n=210)

Variable	mean ± SD	r*	p value**
Domain: family support	12.23 ± 2.44	-0.718	0.000
S1 Attention my parents about my activity, I feel	2.71 ± 0.52		
S2 The supply financial for I need, I feel	2.32 ± 0.64		
S3 Comfortable environment in home, I feel	2.40 ± 0.57		
S4 Attention my other family for me, I feel	2.30 ± 0.87		
S5 Harmonic family, I feel	2.50 ± 0.75		
Domain: school environment	12.26 ± 2.71	-0.720	0.000
S6 Infrastructure in my school, I feel	2.71 ± 0.70		
S7 The support from my teacher, I feel	2.26 ± 0.86		
S8 Activities in my school, I feel	2.52 ± 0.54		
S9 Learning atmosphere in my school, I feel	2.47 ± 0.73		
S10 Social intercourse in my school, I feel	2.29 ± 0.72		
Domain: peer group support	8.96 ± 2.44	-0.727	0.000
S11 The support from my friend, I feel	2.21 ± 0.62		
S12 My friend cheer me up if I sad, I feel	2.26 ± 0.71		
S13 My friend care about me, I feel	2.32 ± 0.93		
S14 The collaboration group, I feel	2.16 ± 0.85		
DAST-10	1.07 ± 1.53		

* Coefficient correlation to DAST-10

** Spearman's rho correlation test

Table 3. Associations of social support with treatment evaluation.

	DAST-10 Treatment evaluation		p value*
	Need Treatment	None	
	Mean ± SD	Mean ± SD	
Family support	10.49 ± 2.52	13.61 ± 1.18	0.000
School environment	10.55 ± 2.89	13.62 ± 1.64	0.000
Peer group support	7.36 ± 2.44	10.31 ± 1.36	0.000

* Mann Whitney test

environment, and peer group support were significantly correlation to DAST-10 with strong correlation (0.718, 0.720 and 0.727, respectively). All Coefficient correlations were shown negative direction.

For association between family support, school environment and peer group support were found to be significantly with the treatment evaluation ($p < 0.001$ for all variable). The associations of social support are presented in Table 3.

DISCUSSION

Adolescence is characterized by rapid biological and psychological changes, intensive readjustment to the family, school, work, and social life, and an unrelenting process of preparation for adulthood. Despite the fact that it is a turbulent and vulnerable period of growth and development, there has been little recognition of special health care requirements of adolescents, and they

continue to be neglected in comparison to other age groups (Malatestinic, 2005).

This is almost a 'must' given the many different ways in which family factors play a role in adolescent substance misuse. Family background and parenting styles, including parental divorce, parental discord, family disruption, negative communication, inconsistent parental discipline, and lack of closeness, have been identified as influential risk factors in adolescent drug use. It motivates families to compensate for one dysfunctional member and to avoid issues that threaten its integrity. It may involve all family members – siblings may conspire to keep parents in the dark or parents may avoid the subject. Bailing out, minimizing and avoiding are the most frequent enabling behaviors. The family assessment should focus on family dynamics, communication patterns, cohesion, affect and value transmission (Sim, 2005).

Our study showed that there were strong correlations between family supports with DAST-10. The role of family support is very important for adolescent, study

conducted by Sim (2005) in China, reported 36% adolescent drug user relapsed at 6-Month post treatment, more higher than adolescent with family support (11%). Our study also showed there was significantly association between family supports with treatment evaluations for adolescent.

Opinion of the adolescent about drug user, most of drug users are unfavorable toward social and family acceptance. They believed social factor is very important influence adolescent's motivation to consume drug. Family cohesion is an important aspect for the family to accept a young consumer, considering its ability to work in an integrated and coherent way, as one articulated whole, benefiting individual development and favoring the feeling of belonging, in order to generate a protective effect. Another study found low levels of family cohesion in the Netherlands, in families whose children were drug dependents. Those parents who were more involved in the life of their adolescent children were always able to reduce the probability of drug consumption or at least prevent their children from moving towards consumption of more abusive drugs behaviors (Gil *et al.*, 2008).

In Argentina, the recent consumption of any illicit drug increases from 4.9% for students whose parents are more involved to 16.3% when parents are not involved at all. In Chile, there is the prevalence of 10.8% for students whose parents are more involved to 36.6% for those who consider their parents are not involved in their lives. In Ecuador, prevalence increases from 2.6% to 12%, for students whose parents are more involved and not involved, respectively. In students from Paraguay, prevalence ranges from 2.1% for students whose parents are involved to 12.1% for parents who are not involved. In Peru, the prevalence identified was from 2% to 8.4% for students whose parents are more involved and not involved, respectively. Among students from Uruguay, recent consumption rates increase from 5.8% for students whose parents are more involved to 26.7% for parents who are not involved (Gil *et al.*, 2008).

Another factor studied was the relationship between adolescent and parents. Most subjects reported a good or excellent relationship with their parents, although the proportion of regular, poor, or very poor relationships with the father was higher than with their mother. Less than 2% of subjects reported no contact with their mothers, whereas lack of contact with the father was as high as 10%. More frequent drug use occurs both among youths with poor or very poor relationships with mother and with father, being roughly threefold higher among those with poor or very poor relationships with their mothers. Studies conducted in other countries found an association between drug use and a low level of satisfaction with the support received from parents¹³ and with a greater emotional (Tavares *et al.*, 2005; Piko, 2003).

Study in India showed that it is important to keep in mind that social support may be influenced by a number of factors (Malhotra *et al.*, 2002). The study also indicates the need to address the issue of social support in substance

users, as also emphasized by previous studies from the West. It is important to note that the support/perceived social support from family, friends and other recovering drug users can play a vital role in preventing/delaying relapse. Social support approach focuses on the subject's need for emotional support from family and friends and it lays emphasis on the specific help these people can provide in reducing interpersonal conflict and stress. It is also required that the individual should assume and active role in structuring beneficial social support for him/herself by adopting certain ways like leaving the company of drug using friends and learning to say 'no' to drugs. Adequate appraisal of the issue of social support and incorporating social support approach in treatment may help in removing friction and improving the interpersonal interaction between the drug user and the society. This may help the drug user to maintain abstinence and a new social role and respect in society.

Our study showed, there was strong correlation between school environment and DAST-10. It means, school environment is very important as protective factor for adolescent to be drug user. So many programs can apply in school to reduce drug abuse among students. Study in US reported school type (regular high school and continuing high school) was influence factor drug abuse among students (Pokhrel *et al.*, 2007).

A study in Japan used "Drug Abuse Prevention Program Focusing on Social Influences" among High School student. These program measure the predisposing factor for knowledge about drug abuse, the predisposing factor for attitudes toward drug abuse problem, the enabling factor for self-efficacy regarding drug abuse prevention, and the reinforcing factor for perception of social support for preventing drug abuse. After 15- Month follow up study, the result showed this program effectiveness to decrease drug abuse among high school student (Nozu, 2006). Our study showed significant association of school environment with treatment evaluation. Role of school is very important in making drug abuse preventing program. Study in Iceland showed preventing program can significantly decrease substance abuse in adolescent.

Our study showed significant association between peer group supports with treatment evaluation. Many study reported, peer group is one factor that can alter adolescent perception to drug abuse. Role of peer group for adolescent can be both a risk factor and a protective factor to adolescent. Study in Peru and Croatia reported negative peer influence that showed peer group as a risk factor. This study showed different result which is social peer group support can be a protective factor (Strong negative correlation coefficient).

CONCLUSION

In conclusion, social supports were associated and correlated with DAST-10 and could be protective factor

for adolescents related drug abuse. The DAST is brief and inexpensive to administer. It provides a quantitative index of the extent of problems related to drug abuse. Thus, one may move beyond the identification of a drug problem and obtain a reliable estimate of the degree of problem severity.

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