

Risk Factors of Drug Abuse among Adolescence

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ABSTRACT

Yogyakarta City, which is known as the center of education is a potential place for drug abuser to distribute illegal substance to the youth. It is evident in the great number of drug users in Yogyakarta City, in which 50% of them are adolescents and university students. The research aimed to know the relationships predisposing, enabling, and reinforcing factors and the drug abuse among adolescents in Yogyakarta City. The research employed cross sectional design. The samples were taken using multistage random cluster sampling. The data were taken through questionnaire given to 481 youth, at the age of 15-19 years in 18 senior high school and the equals in Yogyakarta City. The data were then analyzed using Chi Square test. Attitude, self-confidence, family role, and peer's role are related to drug abuse. Knowledge, information sources, and teacher's role are not related to drug abuse.

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1. INTRODUCTION

Drug abuse means the use of one or more types of drugs periodically or regularly without medical indication. It may lead to physical and psychological health problem as well as disturbing social function [1]. Adolescence is the period of rapid physical, psychological, and intellectual growth and development. Adolescents have special characteristics, in that they are curious, love adventures and challenges, as well as having the tendency to take risk, or taking action without thinking [2].

In world drug report 2014, it is known that the estimation of drug users in 2012 was between 162 million and 324 million, or 3.5%-7%. The comparison of the prevalence in 2012 (3.5%-7%) and that of 2010 (3.5%-5.7%) show a relatively stable prevalence of drug abuse. The most common types to use were ganja, opioid, cocaine, or amphetamine and stimulant types [3].

It is estimated that one out of twenty adults, or a quarter million people, ranged from 15 to 64 years old, have ever used at least one type of drugs in 2014. The estimation of 207.400 drug-related death was in line with 43.5 death per million, with the age group of 15-64 years old [4].

The prevalence of drug abuse was in the range of 2.20%, or around 4.098.029 people of the total population of Indonesia (aged 10-59 years old). According to National Narcotics Board, no regency/city in Indonesia is free from drug problem [5]. The survey conducted by the Research Centre of Data and Information of National Narcotics Board stated that the prevalence of drug abuse in the city (1.9%) is higher than that of the regency (1.4%) [2].

As many as 50% users are students, at school and university level. In 2014, drug users in Yogyakarta City was in the fifth place in national level and in 2015 it went down to the eighth. In the same year, the users in Yogyakarta City reached 62.082 in number, while in 2015 the number decreased into

60.182 users. The worst case was in the level of senior high (SMA), which was 61.9% of the total case (189.294 suspects) [6].

Based on the data of Drug Addiction Treatment Centre, the highest number of drug users are in the level of senior high school. Within 2008-2012, the proportion of the number of drug suspects were in senior high school [7]. Therefore, the research is aimed to know the correlation between predisposing, enabling, and reinforcing factors and drug users by adolescents in Yogyakarta City.

2. RESEARCH METHOD

The research was observational type with quantitative approach using cross sectional design. The population is all students in 80 Senior High School, and the equals, in Yogyakarta City, as many as 36,360 students. The samples were taken using multistage random cluster sampling and were added as much as 10% based on the calculation of the samples to avoid a missing data. The samples were also taken based on particular criteria. Inclusion criteria: all students of 15 to 19 years old from the schools selected to be the location of the research based on sampling techniques and students who are willing to become the respondents. Exclusion criteria: number of students less than the minimum number required from each school and sub-district with less than three villages. The samples were 481 in number. The research used questionnaire as the instruments. The data were analyzed using Chi Square test.

3. RESULTS

The respondent characteristics are illustrated in the Table 1. The biggest number of the respondents are 16 years old, reaching 231 people (48%), and the smallest number is 19 years old, reaching 6 people (1.2%) of the samples. Based on gender, there are 245 male respondents. Even so, the results are not significant compared to the number of female respondents. The highest percentage of the level of education is Senior High School, as many as 216 respondents (44.9%), and the lowest is elementary school level, reaching 26 respondents (5.4%) shown in Table 2.

Table 1. Respondent Characteristics Based on Age

No	Year	Frequency	Percentage (%)	Mean	Min	Max
1	15	85	17.7			
2	16	231	48.0	16.28	15	19
3	17	118	24.5			
4	18	41	8.5			
5	19	6	1.2			
	Total	481	100.0			

Source: Primary Data, 2017

Table 2. Distribution of Respondent Characteristics Based on Gender and Parents' Education Level

No	Characteristics	Frequency	Percentage (%)
1.	Gender		
	Male	236	49.1
	Female	245	50.9
2.	Parents' Education Level		
	Unknown	62	12.9
	Elementary	26	5.4
	Junior High	36	7.5
	Senior High	216	44.9
	Higher Education	141	29.3
	Total	481	100.0

Source: Primary Data, 2017

Univariate results of the research is shown in Table 3. The students in the senior high schools and the equals in Yogyakarta City, as many as 361 respondents (75.1%), have higher level of knowledge. The univariate analysis on attitude is categorized into two: negative and positive. Two hundred and fifty four respondents, or 52.8%, have positive attitude. However the results are not significantly different between negative and positive attitude. It is known that 375 respondents (78%) are confident. From the three categories of information sources, the greatest number is the one with the lowest information sources, as many as 240 respondents (49.9%).

Family role is categorized into two: participating and less participating. It is known that 323

respondents (67.2%) states that family is involved in shaping adolescent's behavior, particularly in preventing them from using drugs. Similarly, teacher's role is categorized into two: participating and less participating. Four hundreds and ten respondents (85.2%) stated that teachers contribute to shape the attitude of the students. As for peer's role, it is known that peers influence the youth in using drugs. From all the respondents, 267 people (55.5%) states that their peers did not influence them in using drugs. Thirty-one (6.4%) respondents have ever used drugs without medical indication and 450 respondents have never used drugs. There are 24 male users and 7 female users, while the average age is 17 years old.

Table 3. Distribution of Univariate Results

No	Variables	Frequency	Percentage (%)
1.	Knowledge		
	Low	120	24.9
	High	361	75.1
2.	Attitude		
	Negative	227	47.2
	Positive	254	52.8
3.	Self-Confidence		
	Less confident	106	22.0
	Confident	375	78.0
4.	Information Sources		
	Low	240	49.9
	High	241	50.1
5.	Family Role		
	Less participating	158	32.8
	Participating	323	67.2
6.	Teacher's role		
	Less participating	71	14.8
	Participating	410	85.2
7.	Peer's role		
	Participating	214	44.5
	Less Participating	267	55.5
8.	Drug Abuse		
	User	31	6.4
	Non-user	450	93.6
	Total	481	100.0

Source: Primary Data, 2017

Bivariate analysis results are presented in Table 4. Chi Square analysis resulted that four of seven variables are statistically and biologically significant. They are attitude, self-confidence, family role, and peer's role. Based on bivariate analysis, it is known that four variables have p-value < 0.05.

Table 4. Recapitulation of Bivariate Analysis Results (Chi Square)

Variable	Ratio Prevalence (RP)	Confident Interval 95%	P value
Knowledge	1.433	0.694-2.955	0.499
Attitude	3.836	1.685-8.734	0.001
Self Confidence	2.234	1.121-4.454	0.036
Information Sources	2.482	1.256-4.906	0.306
Family Role	2.482	1.256-4.906	0.013
Teacher's Role	1.386	0.590-3.258	*0.435
Peer's Role	3.587	1.638-7.857	0.100

Notes: * p-value is based on Fisher's exact test

Sources: Primary Data, 2017

4. DISCUSSION

Most respondents are 16 years old. They are in the highest age group category, which is 231 in number (48%), while the least is 19 years old, where there were only 6 respondents (1.2%). The average age of the research subject is 16.28 years old. It is known that 31 respondents (6.4%) have once used drugs without medical indication and 450 respondents (93.6%) have never used drugs. The average age is 17 years old. Previous research showed that older adolescents have higher tendency to use drugs, of which they may double the risks [8]. In early adolescence (14-16 years old) and middle (17-18 years), adolescents are usually in the process of questioning their identity. At the end of the period of adolescence, which is above 18 years old, they think they are mature and able to stand on their own. However, they do not have the capability of

taking the responsibility of their actions. The condition allows them to take non-anticipative behaviors upon the use of drugs [9].

The questionnaires found 24 male users and 7 female users. Based on the pattern of drug abuse in 2006, 2009, and 2011, it is known that the highest number of abuse was by male users and that the higher the age, the higher the number of drug abuse [6]. The results are in line with a research conducted in Sleman, in that male adolescent are 20 times more likely to misuse drugs, compared to female [10]. Another research also found that male are likely to misuse drugs [11]. In social construction, female are demanded to be obedient, passive, patient, and loyal. Meanwhile, male are dominant, aggressive, and initiative in a relationship [10].

The highest percentage of parents' educational level is Senior High, which is as many as 44.9% (216 respondents), while the lowest is elementary, 5.4% or 26 respondents. The higher the level of education, the higher is the pride [12]. Different from a research conducted in Pekanbaru on the correlation between level of education and drug abuse, it is known that the OR value=1.51. It means that people with low education level have 1.51 chances of misusing drugs. Based on the value, it can be concluded that education level is the risk factor of drug abuse, although the correlation is low. Statistic test using Chi Square of alpha (5%) shows the value of 0.225. Hence, p value is higher than the alpha. This way, H_0 is refused. Then, it concludes that there is no significant difference between those with low level of education and those with the higher level [13].

4.1. The correlation between knowledge and drug abuse by adolescent in Yogyakarta city

It is known that knowledge is not related to drug abuse in Yogyakarta City. Although it is not significant statistically, the RP (Ratio Prevalence) reached 1.433. In other words, adolescents with low knowledge have 1.433 chances to misuse drug.

Inadequate learning materials about drugs in schools create a situation where adolescents/students do not understand about the types, dangers, and effects of drugs. However, it is possible that those in higher education level to misuse drugs. Individuals' knowledge on particular ideas has different intensity [14].

The results are in line with previous research, stating that knowledge is not related to drug abuse (p-value=0.073) because of the existence of other factors, such as environment, family, peers, and the society [15]. The results are inversely proportional with a research conducted in Jepara. It found that there is positive correlation between students' knowledge about drugs and prevention of drug abuse (p-value 0.0001; $r=0.378$). The latter shows that the higher the education, the higher the possibility to prevent them from misusing drugs [16].

Human develop their knowledge because they use the language to communicate the information they obtained¹⁷. Individuals who understand about drug abuse may have the curiosity to try to consume it because of the environment or because they imitate certain figures. This way, these individuals may develop attitude and behavior, which are against the knowledge [18].

4.2. The correlation between attitude and drug abuse by adolescent in Yogyakarta city

Chi Square test shows that there is correlation between attitude and drug abuse. Attitude is the risk factor of drug abuse. It is known from the score of Ratio Prevalence (RP), which is more than one: 3.836. The prevalence of using drug is 3.836 times higher in adolescent having negative attitude compared to those with positive attitude. Behavior manifests in knowledge and attitude. Attitude is the results of an individual's way of thinking on particular object. It is not always in the form of action/activity. Instead, it is a predisposition of an action or a behavior [14]. It is in line with previous research, stating that attitude is correlated with behavior in terms drug abuse (p value 0.03) [19]. The manifestation of attitude in an action needs supporting factor or a condition, such as facilities or supports from family, school environment, and peers [17].

Attitude can also depend on gender; in that male adolescents tend to be more rebellious compared to female. It is supported by a research conducted in Gorontalo, showing that there is different attitude between female and male respondents. However, it is not only because of gender, but also because of their different way of thinking [20]. Theoretically, attitude is formed within an individual based on their belief, point of view, thought, personal experience, emotional needs, information from others, and perception on particular objects that they see or know.

4.3. The correlation between self-confidence and drug abuse by adolescents in Yogyakarta city

Chi Square test show a correlation between self-confidence and drug abuse. Self-confidence is the risk factor of drug abuse. The RP value was 2.234, meaning that adolescents who feel less confident are more likely to misuse the drugs. The chance is 2.234 times higher than those who feel confident. Self-confidence is closely related to motivation. Individuals' relatively stable assessment on themselves avoid the temptation of any misconducts. Theoretically, self-assessment is positive. It raises their motivation to respect

themselves [21].

Previous research shows that self-esteem correlates with drugs abuse (p value (0.000), where the higher the self-esteem, the lower the possibility of drug abuse [22]. Another research shows there is negative correlation between self-esteem and social anxiety of drug users in Balai Kasih Sayang Parmadi Siwi, East Jakarta. The negative results of coefficient correlation means that the higher the self-esteem, the lower the social anxiety. Conversely, the lower the self-confidence, the higher the social anxiety (r -.429) [23].

In fact, experimental use may lead to severe damage. Immature emotion of adolescents carry them away and lead them to think only about enjoyment and always try something new [24]. Another research proves that adolescents have great curiosity and are eager to try new things, thereby making them prone to negative or deviant behavior, one of them is drug abuse.

4.4. The correlation between information sources and drug abuse by adolescents in Yogyakarta city

Chi Square test shows that information sources do not correlate with drug abuse. Although it is statistically insignificant, the RP value reached 2.482. It means that adolescents with little information about drugs are 2.482 times likely to misuse drugs. Environment greatly influences individuals' behavior. Adolescents try to use drugs for experimental reason and because they do not have adequate knowledge on the substance. The condition is worse since the surroundings ignore the fact and, indeed, they do not complain about the adolescents using drugs. It is thus potential situation to bring adolescents to drug abuse. Previous research shows a correlation between affordability and drug abuse. In other words, the easier the respondents reach the drugs, the more the chance they misuse them. Affordability is not always related to distance, but areas and also easiness in getting something [25].

Another research also found that the statistics test show significant correlation between the access to reproduction health information and drug abuse by adolescents (OR 1.28). Proportionally, the research indicates a positive pattern where adolescents who have the access to reproduction health information have 1.28 chances to misuse drugs [26]. Another research shows that information sources, either printed or electronic are not correlated with risky behavior (drug abuse) [27].

Easy access to obtain drugs increases the number of drug abuse from year to year. Social media becomes one of their tools to do the transaction. Indeed, they do not need to meet each other to purchase the drugs. They use specific code to arrange the meetings. The governments have taken several efforts to demolish drug syndicates. In fact, Indonesian National Narcotic Board with the cooperation with other parties have informed the society through several activities, such as insemination to many schools and anti-drug advertising [2]. These results support the present research, in that information does not influence individuals to use drugs.

4.5. The correlation between family role and drug abuse by adolescents in Yogyakarta city

Chi Square test show that family role correlates with drug abuse. It is the risk factor of drug abuse as well. It is known from the value of Ratio Prevalence (RP), which is 2.482. Adolescents whose family do not concern much about their behavior have 2.482 chances to misuse drugs. This number indicates significant influence of family role on adolescents' behavior. However, the number of drug users whose family concern much about their condition is not significantly different from that whose family are less participating. It is possible when parents do not pay attention to their children, freeing them from anxiety. The theory suggests that family is the protective or risk factor of drug abuse [28].

Parents' busyness triggers the increase of drug abuse by adolescents in Yogyakarta City. It is in line with a research conducted in Mental Health Hospital of Prof. Hb. Sa'anin, indicating that family role is correlated with drug abuse (p value 0.009; OR 4.2). The research found that more than a half (70%) of the respondents stated that drug users come from family who concerned less about preventing drug abuse [29].

In general, adolescents' deviant behaviors are caused by parents' carelessness, incomplete family members, bad examples presented by parents, and bad environment. Besides, other factors, such as economy and parents' education, provide the adolescents inadequate insemination and information about drugs [25].

4.6. The correlation between teachers' role and drug abuse by adolescents in Yogyakarta city

The research finds no correlation between teacher's role and drug abuse. The RP (Ratio Prevalence) score was 1.386, meaning that 1.386 chances indicate that teacher does not correlate with adolescents who are likely to misuse drugs. Teachers who involve themselves in shaping adolescents' behavior cannot guarantee that they will not use drugs. The results were inversely proportional, where more than half (80.6%) adolescents use drugs even if their teachers have taken good care of them. It is likely that students only observe their teachers' attendance during school hours. Meanwhile, when they are outside the school, peers have greater influence on their behavior.

Previous research indicates that there are different signs of drug abuse found by homeroom teachers

and counseling and guidance teachers from six students before and after their treatment. P value was 0.000 and the RATER consistency of the teachers show correlation coefficient of 0.995 [30]. Theoretically, teachers have central roles: planners, caretaker, or learning evaluator. It means that teacher's capability in creating quality learning greatly influences the success of education in general. Learning quality relies much on teachers' capability, particularly in providing effective and efficient learning activities [31].

4.7. The correlation between peers' role and drug abuse by adolescents in Yogyakarta city

Peers' role is correlated with drug abuse, it becomes the risk factor as well. The results is seen from the Ratio Prevalence value, which was 3.587. It means that peers have 3.587 greater influence on drug abuse by adolescents. Labile ways of thinking allows adolescents to follow the trends in the society, particularly their peers.

Peers have greater influence, for adolescents spending more of their time with their peers. Most people offer drugs to their friends: colleagues, friends inside and outside their neighborhood. The higher the attitude and supports of their peers to use drugs, the easier individuals to misuse drugs. Minimum school activities and facilities at school increase students' boredom during school hours and encourage them to skip classes. The condition triggers deviant behaviors; one of them is drug abuse.

The result is in accordance with a research conducted in North Semarang sub-district, showing that peers are correlated with drug abuse (p value=0.000) [25]. Similarly, a research conducted in Prof. Hb. Sa'anin Mental Hospital [9] found that there is a correlation between peers and drug abuse (p value 0.000, OR=9). Another research also shows positive and highly significant correlation between peers interaction within the school and the risk of drug abuse by adolescents (p value=0.005) [32].

Peers greatly influence the occurrence of drug abuse. Individuals feel anxious when they are rejected by the society. Therefore, they try to get the approval of their groups. Conflict between parents and adolescents are related to loyalty, whether these adolescents are loyal to their parents or loyal to their peers. Adolescents are susceptible to the values of their peers, such as appearance, behavior, and attitude. Not all adolescents has a strong ego and has the willingness to separate themselves from the values/rules/norms of the peer group [32].

5. CONCLUSION

Based on the findings and discussion, it can be concluded that four out of seven independent variables significantly correlated with drug abuse by adolescents in Yogyakarta City. They are attitude, self-confidence, family role, and peers' role. Knowledge, information sources, and teachers' role are the risk factors of drug abuse by adolescents in Yogyakarta City. However, they are not significant statistically.

6. SUGGESTIONS

Knowledge, attitude, self-confidence, information sources, family role, teacher's role, and peers are the risk factors of drug abuse in Yogyakarta City. Yogyakarta City Education Board needs to include the materials of drugs in the curriculum or school subjects as well as promoting P4GN (*Pencegahan dan Pemberantasan Penyalahgunaan dan Peredaran Gelap Narkoba*-Prevention and Eradication of Drug Abuse and Illegal Distribution). In addition it can provide the advocacy to educational institutions for adolescent counseling programs.

Every school should have PIK (Information and counseling center for creative youth), life skills, and counseling services. Besides, schools need to organize counseling and guidance program for drug-related problems, led by expert, such as doctors, in order to increase the students' awareness of the dangers of drugs. They can also establish a counseling program for parents, particularly about how to build effective communication to their adolescent children.

Building good characters of children can start by maintaining strong personalities, manners, optimism, capability to communicate and interact with children, and spending more times with children while discussing their everyday activities. In addition, parents can improve the children's characters through several aspects, such as social aspects (caring for other beings, respecting the elders, developing discipline attitude and habit, and maintaining good friendship).

Adolescents at risk of abusing drugs are those with low self-esteem, negative attitude, low interaction with the surroundings, less harmonious family, and negative social environment. With these conditions, adolescents need to consult their teachers or Information and Counseling Center for Creative Adolescents at schools. Those who are not at risk should take care of themselves by joining positive activities inside and outside schools to prevent themselves from the dangers of drug abuse.

The next research is expected to expand the risk factors of drug abuse. It may be in terms of social

aspects, economic status, and social status. In addition, the research can be conducted to different age groups of other cities or regencies in the Special Region of Yogyakarta City as well using different methods, such as qualitative to obtain in-depth information on drug abuse.

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