

Conference Paper

Determinants of Student Participation in Drug Prevention Programs in Jakarta and Makassar

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Abstract

Drug-use among students is a significant public health problem around the world, but in Indonesia, its lifetime prevalence decreased from 9% in 2006 to nearly 5% in 2011. Interestingly, a study conducted in 16 Indonesian provinces showed prevalence in Jakarta reduced slowly from 10% to 8.7%, while in Makassar, the figure dropped dramatically from 8% to 3%. Theoretically, such declines can be attributed to improved knowledge and attitude changes, which are primarily achieved through drug-use prevention programs that students participate in. Therefore, this study aims to describe the determinants of student participation in drug-use prevention programs in Jakarta and Makassar. A secondary data analysis was conducted using the results of a 2011/2012 survey administered by the NNB and the CHRUI. The data of randomly sampled students (Jakarta = 1857 and Makassar = 1741) were collected via self-administered questionnaires and analysed by employing logistic regression with an adjusted odds ratio. Half of the respondents were female or senior high school students and two thirds had less knowledge on drugs. Student participation in prevention programs in Makassar was slightly lower (14%) than the corresponding rate in Jakarta (18%). Although there were some similarities in the respondents' socio-demographics, the results of the regression analysis showed different determinant patterns. Students with mothers who suffered from severe illness discouraged student participation in Makassar (OR of 4.9 with 95% CI = 1–18); other relevant determinants included being female (OR of 1.4) and having fathers with higher education levels (OR of 2.0). In Jakarta, having mothers with lower education levels (OR of 1.8 with 95% CI = 1–3) and having more knowledge about drug use (OR of 0.4 with 95% CI = 0.2–0.9) lead to decreased student participation. This study therefore concludes that in order to increase student participation rates, school-based programs in both cities may need to concern themselves with different issues. More specifically, increased attention to parents' circumstances in Makassar and improvement of students' knowledge and attitudes about drug-use programs in Jakarta must both be promoted.

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 OPEN ACCESS**Keywords:** drugs; student; program participation.

1. INTRODUCTION

Globally, drug use and misuse remain a great public health concern (APA 2013). In Indonesia, drug-use lifetime prevalence rates decreased from 9% in 2006 to nearly 5% in 2011 (National Narcotics Board – Center for Health Research Universitas Indonesia/ NNB-CHRUI 2011). Interestingly, a study conducted in 16 provinces shows that its prevalence in Jakarta reduced slowly from 10% to 8.7% during this period, while in Makassar, it dropped dramatically from 8% to 3%. Since most initial drug use occurs during one's teenage years (CHRUI, 2005), a focus on prevention aimed at adolescents in schools is one of the main strategies used to deter individuals from drug use, and as stated by the National Institute of Drug Abuse (NIDA), one of the central protective moves against drug use is the implementation of school anti-drug policies. Theoretically, a decline in drug use can be obtained by improving knowledge levels and attitudes, which are the aims primarily pursued by drug-use prevention programs that students are involved in (UNODC 2004). Therefore, this study aims to describe the determinants of student participation in drug-use prevention programs in Jakarta and Makassar.

2. METHODS

This study adopts a quantitative approach using NNB data from the Survey of Drug Abuse Among Students in 2011 conducted by the CHRUI. The chosen location was DKI Jakarta and South Sulawesi (Makassar) as representative of both western and eastern regions of Indonesia in order to effectively consider the development of adolescent problems that exist differently in these respective regions. Data consisted of self-administered questionnaires. The sample of schools was selected based on education levels (junior high and senior high), categories of management (public, private, religious), and academic qualifications (good, moderate, poor). Stratified random sampling was conducted to obtain samples from the schools, with two classes of 32–35 students being selected from each school. At each school level, sampling was performed proportionally [6]. Furthermore, logistic regression statistical tests were performed with values presented as adjusted odds ratio (OR) with a 95% confidence interval (CI).

TABLE 1: Ecological Perspective Factor (Intra Personal)

Variable	Category	DKI Jakarta		P Value	Makassar		P value
		N (%)	Not following prevention program (%)		N (%)	Not following prevention program (%)	
Gender	Female	1040 (49.93)	256 (24.62)	0.028	1008 (55.29)	181 (17.96)	0.751
	Male	1030 (49.83)	300 (28.87)		811 (44.49)	141 (17.39)	
	Missing	4 (0.19)	2 (50.00)		4 (0.22)	2 (50.00)	
Age	>15 years	993 (44.79)	282 (30.23)	0.001	903 (49.53)	147 (16.28)	0.098
	≤15 years	1150 (55.21)	276 (24.00)		920 (50.47)	177 (19.24)	
Education	Senior High	996 (47.82)	304 (30.52)	0.001	916 (50.25)	154 (16.81)	0.281
	Junior High	1087 (52.18)	254 (23.37)		907 (49.75)	170 (18.74)	
Knowledge	High	51 (2.45)	21 (41.18)	0.046	35 (1.92)	7 (20.00)	0.328
	Middle	120 (5.76)	28 (23.33)		42 (2.30)	11 (26.19)	
	Low	1912 (91.79)	509 (26.62)		1746 (95.78)	306 (17.53)	
Total		2083 (100.00)	558 (26.79)		1823 (100.00)	324 (17.77)	

3. Results

Ecological analysis is an interactive multilevel approach that explores the physical, social, political, economic, and cultural influences on individual behaviour. In addition, this approach also emphasizes the significance of interaction as well as the possibility of mutual dependence among these factors at all levels of health problem severity. As a result, it can be said that the individual influences/is influenced by their family, social networks, organizations where they interact with others (e.g., workplaces, schools, or religious organizations), and their broader community, including their neighbourhood ([1]: 102).

Table 1 indicates the differences in the levels of knowledge ($p < 0.05$) in Jakarta between both participating and non-participating students. It was shown that students who participated in prevention programs tended to have lower levels of knowledge (73.38%). In contrast, students who did not participate in prevention programs had higher levels of knowledge (41.18%). Another result in Makassar indicated that there are differences in the levels of knowledge that students had (0.3%), but descriptively, the percentage of respondents with higher degrees of knowledge who participated in prevention programs was 80.0% and a low 82.47%.

TABLE 2: Ecological Perspective Factor (Inter Personal)

Variable	Category	DKI Jakarta		P Value	Makassar		P value
		N (%)	Not following prevention program (%)		N (%)	Not following prevention program (%)	
fathers Education	High	631 (30.29)	181 (28.68)	0.436	293 (16.07)	62 (21.16)	0.099
	Middle	1109 (53.24)	288 (25.97)		894 (49.04)	143 (16.00)	
	Low	343 (16.47)	89 (25.95)		636 (34.89)	119 (18.71)	
Mother Education	High	455 (21.84)	136 (29.89)	0.201	216 (11.85)	43 (19.91)	0.537
	Middle	1201 (57.66)	316 (26.31)		888 (48.71)	150 (16.89)	
	Low	427 (20.50)	106 (24.82)		719 (39.44)	131 (18.22)	
Fathers Health	Healthy	1729 (83.01)	447 (25.85)	0.065	1372 (75.26)	235 (17.13)	0.134
	Sick	181 (8.69)	62 (34.25)		234 (12.84)	54 (23.08)	
	Died	117 (5.62)	36 (30.77)		121 (6.64)	21 (17.36)	
	Dont Know	56 (2.69)	13 (23.21)		96 (5.27)	14 (14.58)	
Mothers Health	Healthy	1809 (86.85)	478 (26.42)	0.666	1457 (79.92)	254 (17.43)	0.17
	Sick	165 (7.92)	51 (30.91)		222 (12.18)	49 (22.07)	
	Died	44 (2.11)	12 (27.27)		50 (2.74)	5 (10.00)	
	Dont Know	65 (3.12)	17 (26.15)		94 (5.16)	16 (17.02)	
Total		2.083 (100)	558 (26.79)		1823 (100.00)	324 (17.77)	

In Principles of Health Promotion and Education (1988), McLeroy, Bibeau, Steckler and Glanz identified five levels of influence on changing behaviour via interventions, namely: (1) intrapersonal or individual factors, (2) interpersonal factors, (3) establishment or organizational factors, (4) community factors and (5) public policy factors. An individual is very much influenced by the presence of people around him, whether it be family, the broader community, or more specific situations in which a person is located.

Table 2 shows the interpersonal factors affecting student participation in drug-abuse prevention programs. In both regions, interpersonal factors did not have a significant effect on the levels of participation in the prevention programs. However, descriptively, parental education levels had the most significant influence on students not following

TABLE 3: Logistic Regression Final Model of Causative Factor of Not Involved in Prevention Programme

Variable	Category	DKI Jakarta		Makasar	
		OR	OR (95% CI)	OR	OR (95% CI)
Gender	Female	Ref	Ref		
	Male	1.25*	1.03 – 1.53		
Education	Senior High	Ref	Ref		
	Junior High	0.69*	0.57 – 0.84		
Knowledge	High	Ref	Ref		
	Middle	0.39*	0.19 – 0.81		
	Low	0.52*	0.29 – 0.94		
Fathers Health	Healthy	Ref	Ref	Ref	Ref
	Sick	1.51*	1.09 – 2.10	1.44*	1.03 – 2.01
	Died	1.26	0.84 – 1.91	1.02	0.62 – 1.66
	Do not know	0.95	0.50 – 1.79	0.83	0.46 – 1.49
Fathers Education	High			Ref	Ref
	Middle			0.72*	0.51 – 0.99
	Low			0.86	0.61 – 1.21

prevention activities. Meanwhile, the condition of having a sick father or mother also had a significant influence on not participating in prevention activities.

The final model of the logistic regression test (Table 3) showed that a father's health is a variable that influences participation levels in both regions. In Jakarta, students with a sick father were 1.51 times more likely not to participate in preventive activities (OR CI 95% = 1.03–2.10). A similar result was observed in Makassar with OR = 1.44.

4. Discussion

Drug prevention programs in Jakarta and Makassar had high participation rates among the students in the region. However, it seems that the information provided was no longer appropriate given the trend of drug use among them, and so attempts to explore the social situations of peer-groups may be needed. The widespread use of drugs sold over the counter in pharmacies as sedatives, for beautification or for boosting the masculinity of a person's physical appearance is another problem that leads to substance abuse issues. Similar findings have also been reported in studies on the use

of chemical substances among adolescents in Indonesia, more specifically showing that the implementation of programs for harm reduction may not pay adequate attention to the hazards of chemical substance use for cosmetic purposes because such substances are not considered as “drugs” and are not related to the transmission of diseases through sexual contact [3].

Parental education levels become an important factor when examining participation in prevention programs. Parents with high education levels are assumed to provide substantial information to their children about drug use. Meanwhile, the health condition of family members also had to be considered as a relevant factor influencing participation in school-based programs. National surveys conducted with drug users in Indonesia showed that 48% of respondents disclosed their status of using drugs to their parents, and that most of them were injection drug users (IDU). Moreover, 23% of these participants’ family members were also using drugs [7].

The development of school-based prevention programs is considered effective if the process involves the community in a collaborative way. Health promotion approaches considering the complex nature of behavioural change is something that should be a part of all drug abuse prevention programs in schools [9, 10].

The results of statistical tests indicate that the condition of a student’s parents can be a variable of considerable influence, and that the involvement of parents in the development of the program is something that should be aimed at so that the information obtained from the school can be reinforced when students are at home. Additionally, the involvement of parents in prevention activities is also an important element of monitoring and evaluating the success of existing programs. A study of NARCONON programs in the USA shows that environmental influences such as family, media and peers are important for enhancing competency in such activities [5].

5. Conclusions

In the implementation of drug abuse prevention programs, schools especially should consider the influence of intrapersonal factor, particularly knowledge. In fact, those who have participated in prevention programs have low levels of knowledge. Therefore, communication strategies or methods of disseminating information should focus attention on the current situations and phenomena related to drug-abuse among students. For the development of programs in Jakarta, intrapersonal factors have to be considered, while the Makassar area needs to more closely consider interpersonal

factors, particularly the fathers' levels of education. Additionally, the health conditions of both mothers and fathers also need to be considered to build students' awareness of the valuable information delivered by prevention programs.

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