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**Analysis of Factors that Influence Smokers Using Alcohol among  
Students in a Private University in Yogyakarta**

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**Abstract**

Background: Nicotine and alcohol are both addictive substances that often used together. Current studies in the western countries show that 80-90% of the population who smoke, are drinking alcohol regularly compared with the general population, which is only 66%. Furthermore, smokers tend to be heavy drinkers than non-smokers. However, there are paucity of studies in regards of this relationship in Indonesia with a consideration of Indonesia as the country with the biggest Muslim population that prohibit alcohol consumption. Aim: the purpose of this study was to determine what factors are influencing smokers to consume alcoholic beverages among college students from one of a private university in Yogyakarta. Methods: a non-experimental study with analytic descriptive approach and cross sectional design. Subjects were 170 university students in one of a private university in Yogyakarta who smoke and/or drink alcohol. This research was conducted in May 2011 by distributing questionnaires on cigarettes smoking and alcohol consumption. Logistic regression is used to determine the correlation's strength of predictor factors with SPSS version 15. Results: indicating that factors influencing smokers to consume alcohol is unhealthy social condition (OR = 52.521), the belief that drinking alcohol can reduce boredom and stress (OR = 16.364), low self-esteem (OR = 9.774), curiosity (OR = 6.990), lack of achievement motivation (OR = 4.679), adherence to worship (OR = 1.788), and how to obtain recognition from her friends (OR = 1.238). A qualitative study was considered important in exploring deeper into the underlying perceptions.

Keywords: smokers, alcohol, adolescences, influencing factors, Muslim population.

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### **INTRODUCTION**

Nicotine and alcohol are addictive substances that often consumed together.<sup>1</sup> The consumption of one substance might lead to use of another.<sup>2</sup> Several studies in Western countries have shown that more than a half of smokers were a regular drinker, compared to the general population.<sup>3,4</sup> Moreover, smokers tended to be heavy drinkers than non-smokers. On the other hand, 80% of smokers were coming from drinkers compared to 23% of general population.<sup>5,6</sup>

Indonesia is considered to be the country with the largest Muslim population in the world.<sup>7</sup> With around 200 million Muslim, it comprises almost one eighth of the world Muslim population.

Islam is regarded as the way of life among Muslim. It can be seen in daily life such the practice of communal sholat in masjid, wearing hijab for women and many gestures and behavior in human interaction, for example. Moreover, there are specific teachings in Islam related to how Muslims dealt with daily life style, including the consumption of alcohol and smoking. Alcohol consumption is regarded as prohibited in Islam as it is explained in the Qur'an, as one of the main source of Islamic jurisprudence, along with hadits (the saying and example from the Prophet, Muhammad) and the 'ijma of the 'ulama or Muslim scholar.<sup>8</sup> Moreover, Al Qur'an has mentioned alcohol in several surah under the term intoxicant as in al Baqarah: 219 and al Maidah: 90, for example (The Quran, 2010).<sup>9</sup> While, in regards of smoking, which contains nicotine, Majelis Ulama Indonesia (MUI) or Indonesian Ulama Council, has declared it as haram or prohibited in certain conditions, such as for pregnant mother, children and if it is done in public spaces. [10] MUI is regarded as the top independent-muslim scholar in Indonesia which comprised of representative ulama from every province as well as Islamic organization in Indonesia.<sup>10</sup> One of the many function of MUI is to provide guidance on every issue related to daily Muslim life, as a part of the Islamic jurisprudence.

Despite the exceptional conditions, there is unanimous agreement among the MUI of nicotine's bad impact to health.<sup>10</sup> Nevertheless, data in 2007 showed that more than half (67%) of the men in Indonesia was active smokers. While, 51,3 % is exposed to tobacco smoke or secondhand smoker.<sup>11</sup> Furthermore, 4.6% of the population were drinking alcohol. They were more prevalent in the rural areas compared to the urban with the range of age between 15 to 34.<sup>12</sup> Indeed, in regards of Indonesian jurisprudence system in general, fatwa of MUI is not considered as formal and law.

Upon observation, there were a lot of students who smoke inside the university perimeter, which was actually against the regulations of the university. Furthermore, to better understand the behavior of smoking and alcohol consumption among the adolescent, especially in this university, it needed to conduct a study to reveal factors that might involve in that particular actions.

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### MATERIALS AND METHODS

This was a descriptive analytic study with cross sectional design to analyse what factors that might influence a smoker to consume alcohol. The population of the study was the student in one department, with the number of 865 students. Target population was the students who smoke and drank alcohol. However, due to the confidentiality of data, since smoking was regarded prohibited inside the university parameter moreover drinking alcohol, snowball sampling was taken.<sup>13</sup> A questionnaire was used to collect the data. Chi-square test was used to reveal the relationship between smoking behavior and alcohol consumption. Logistic regression was used to reveal the most influent factors that might play a role in maintaining the relationship.

Prior to conduct the study, an ethical approval was gained from the Ethical Committee in the Faculty of Medicine and Health Sciences, Universitas Muhammadiyah Yogyakarta.

### RESULTS

This study was trying to explore the habit of smoking and alcohol drinking among the students in one private university, which was affiliated to one of the largest Muslim organization in Indonesia. This setting was considered important to give more emphasize in putting Islamic perspective into context, since the university's vision and mission was in line with Islamic's values.

Based from the snowball sampling technique 170 participants were collected, consisted of 147 male and 23 female students. All of the participants were smoking with more than a half were also a drinker (57.7%). According to the national data of the abuse of Narkoba, stands for narkotika, alcohol, psikotropika dan zat adiktif lainnya, or narcotics, alcohol, psychotropic and other addictive substances, the proportion of students were increasing for almost 4 fold, from 2011 to 2013.<sup>12</sup> However, the data did not distinguish between the alcohol drinker and other substances abuser. Furthermore, data from the Basic Health Research or Riskesdas 2007 showed that it was more prevalent in urban population than rural with data from Yogyakarta revealed the contrary.<sup>11</sup>

Unanimously, alcohol consumption is prohibited among the Muslim scholar since it is clearly stated in Al Qur'an as haram.<sup>9</sup> There are several surah in Al Qur'an mentioned the nature of alcohol such as Al Maidah verse 90 and 91 "(90) O you who believe! Intoxicants (all kinds of alcoholic drinks), gambling, *Al-Ansab*, and *Al-Azlam* (arrows for seeking luck or decision) are an abomination of *Shaitan's* (Satan) handiwork. So, avoid (strictly all) that (abomination) in order that you may be successful. (91). *Shaitan* (Satan) wants only to excite enmity and hatred between you with intoxicants (alcoholic drinks) and gambling, and hinder you from the remembrance of Allah and

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from *As-Salat* (the prayer). So, will you not then abstain?”. Or, Al Baqarah 219: “They ask you (O Muhammad ﷺ) concerning alcoholic drink and gambling. Say: “In them is a great sin, and (some) benefit for men, but the sin of them is greater than their benefit.” And they ask you what they ought to spend. Say: “That which is beyond your needs.” Thus, Allah makes clear to you His Laws in order that you may give thought.”

Unlike alcohol, there was no distinct and clear explanation on cigarette or smoking. However, several school of Muslim scholar who prohibited smoking, have put it under the term of “harmful” (Surah An Nisa verse 29) or “destructive behavior” (Surah Al Baqoroh verse 195).<sup>8</sup> Furthermore, another supportive argument came from the Fatwa of Majelis Ulama of Muhammadiyah, as one of the largest religious’ non-governmental organization in Indonesia. Smoking was considered haram or prohibited in several circumstances, including: pregnant women, children and in open public spaces.<sup>10</sup>

**Smoking behaviour among the students.** Among the sample of study, almost third quarter (74.7%) were moderately or heavily smoking. According to Mu’tadin (2002) moderate smoking refers to consuming 11 to 21 cigarettes a day with the earliest of smoking between 31 to 60 minutes after wake up in the morning, while heavily smoking refers to 21 to 30 cigarettes a day and 6-30 minutes after waking up in the morning. While, there was no female students in the heavily smoking category.

**Table 1. Smoking behavior among students**

Smoking behavior	Frequency (%)		
	Male	Female	Total
Mild smoking	27 (15,9%)	16 (9,4%)	43 (25,3%)
Moderate smoking	79 (46,5%)	7 (4,1%)	86 (50,6%)
Heavy smoking	41 (24,1%)	0 (0 %)	41 (24,1 %)

**Tabel 2. Alcohol consumption among students in a private university in Yogyakarta**

Description of alcohol consumption behavior	Frequency (%)		
	Male	Female	Total
<i>Abstainer</i>	61 (35,8%)	11 (6,5%)	72 (42,3%)
<i>Non-Hazardous drinking</i>	37 (21,8%)	11 (6,5%)	48 (28,3%)
<i>Hazardous or harmful alcohol use</i>	26 (15,3%)	1 (0,6%)	27 (15,9%)
<i>Alcohol dependence</i>	23 (13,5%)	0 (0%)	23 (13,5%)

**Alcohol consumption.** Among the sample of this study, the majority (57.7%) were drinking alcohol. This was in line with other studies from western countries.<sup>3,4</sup> However, there was slightly different proportion between male and female participants. Female participants who were drinking were slightly higher than non-drinker (52.17%). Among

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the drinker, mostly (28.3%) were categorized as non-hazardous drinker.

Tingkat ketergantungan minum minuman keras berbanding lurus dengan tingkat perilaku merokok responden hal ini sesuai dengan Batel *et al.* (1995).<sup>11</sup>

Data from the Riskesdas 2007 showed, nationally, almost half of the alcohol drinkers consume traditional type of drinks (43.1%), followed by beer, wine and liquor.<sup>11</sup> Furthermore, data from Yogyakarta revealed a very different phenomenon. Wine was the most popular drinks, followed by liquor, beer and traditional alcoholic drinks was only composed of less than 2% (1.8%). However, this study was not intended to gain more information on the type of alcoholic drinks.

**The relationship between influencing factors and smoking behaviour.** This sub section is discussing the relationship between factors that might play a role in influencing of alcohol consumption among the tobacco smokers. Odds ratio was used to show the probabilities of the consumption of alcohol appear in the influence of certain factors.<sup>13</sup> as displayed in Table 3.

**Table 3. The relationship between smoking behavior, predisposing factor, contribution factor and trigerring factor with the alcohol consumption behavior with Chi Square test**

Variable Sub Variable	alcohol consumption		P	OR	95%CI
	Yes	No			
a. Low self-respect					
a. Influencing	91	32	0,000	16,25	6,62-39,90
b. Not Influencing	7	40			
b. A belief to reduce boredom and stress					
a. Influencing	91	26	0,000	23,00	9,29-56,956
b. Not Influencing	7	46			
c. Curiosity					
a. Influencing	33	7	0,000	4,714	1,945-11,424
b. Not Influencing	65	65			
d. To gain peer recognition					
a. Influencing	87	34	0,000	8,849	4,055-19,272
b. Not Influencing	11	38			
e. Religious compliance					

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Variable Sub Variable	alcohol consumption		P	OR	95%CI
	Yes	No			
a. Influencing	85	33	0,000	7,727	3,667-16,283
b. Not Influencing	13	39			
f. Monitoring from and interpersonal relationship with the parents, and family integrity					
a. Influencing	35	18	0,136	1,667	0,849-3,273
b. Not Influencing	61	54			
g. Easy access to get alcohol					
a. Influencing	36	24	0,647	1,161	0,613-2,201
b. Not Influencing	62	48			
h. Unfavourable environment					
a. Influencing	93	19	0,000	51,884	18,315-146,98
b. Not Influencing	5	53			

Table 3. shows that ‘unfavorable environment’ among adolescent was the most influential factor for a smoker student to become an alcohol drinker, with a 51 times probability. ‘Unfavorable environment’ refers to any existing factors that might influence someone to be a drinker, such as the drinkers peer. Moreover, the underpinning factor of this tendency might be coming from the lack of self-control. It is in accordance to a study by Indraprasti and Rachmawati that has showed a significant relationship between lack of self-control among the adolescent between 13 to 21 years old in Yogyakarta.<sup>16</sup> There are 2 influential factor of drug abuse, those are internal factors (low self-esteem, anxiety, etc) and external factors (family and peers). This is in accordance to the fact that adolescent tends to gather with the peers instead of a more formal group.<sup>17</sup> Moreover, Hawari (2006),<sup>18</sup> mentioned that peer group has been playing a role in establishing a strong bond among the drinkers. However, this study was not aimed to revealed the underlying cause of this behavior. Thus, this might serve as recommendation for further studies.

A belief of alcohol consumption as a way ‘to reduce boredom and stress’ showed to be the second influential factor with 23 times probability, and it was in accordance to the study from Kartini.<sup>14</sup> It was followed by ‘low self-respect’ followed and 16 times probability, respectively. ‘Low self-respect’ was also found as determinant factor in drugs abuse in other studies.<sup>17,19</sup>

Furthermore, ‘curiosity’ has showed a significant influence for a smoker to become a drinker, with 4.7 times probability, which was in line with Sari (2008),<sup>19</sup> that

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mentioned the nature of adolescent who keen to seek and try something new. While, the sub variable of 'as a means to gain peer recognition' was significantly correlated to the behavior of alcohol drinking. The nature of adolescent was characterized by the need to gain acknowledgement from their peer, as well as maintaining solidarity among them has influenced them to follow what others have done, including in alcohol.<sup>17</sup> Every individual has or attached to his or her own preference group. If the preference group was an alcoholic drinker, there was highly likely that everyone in the group was also and accepted as a drinker since everyone has to agree to the rule inside the group.<sup>20</sup>

While, the 'compliance to religion' only play a role in inhibiting 7 times of the probability of consuming alcohol. There are several factors that might play into role of how someone would comply or adhere to the teachings of his or her religion. The religious knowledge is regarded important in hindering someone from performing an act that prohibited by the religion.<sup>19</sup> Individual with a religious family's background would highly unlikely to drink alcohol.<sup>16</sup> Furthermore, if someone with lack of religious background would shift his or her dependency from God to the habits. Thus, alcohol would become the way of coping against any difficulties in life.<sup>17</sup>

Furthermore, this study found that the influence of family, in term of 'parents' monitoring and family integrity' did not have a relationship with the tendency to become an alcohol drinker, with level of significance  $> 0.05$ . This was not in accordance to the study from Lestary and Sugiharti.<sup>21</sup> Hawari (2006) mentioned that drugs abuse has been correlated with the family system disorder and alcohol abuse among adolescent, which reflecting a dysfunctional relationship between the family member.<sup>22</sup>

Sub variable of 'easy access to get the alcohol drinks' had a level of significance of  $>0.05$ , which means there was no relationship. This result was not in accordance to the study from Sari (2008), which mentioned that easy access to get the drink was the influential factor of particular behavior. [19] It was argued that there are two factors that influenced substances abuse, those are: internal (low self-esteem, anxiety, etc.) and external (family and peer) Ouellette, et al. (1999).<sup>16</sup> The underpinning of such relationship was probably caused by the fact of the tendency of someone who already addicted would do anything to get the drugs, regardless that access.<sup>21</sup>

## **CONCLUSION**

Despite the clear and distinct Islamic norms in regards of alcohol consumption, the study found the practice of alcohol consumption among the students in a private university affiliated to the biggest Islamic organization in Indonesia. Moreover, it was not only evident among the male but also female students.

Unfavorable environment has revealed as the most determinant factor in influencing a smoker to become an alcohol drinker. Followed by a belief that alcohol

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might reduce stress and boredom, and the low self-respect. The influence of religion has also played a role to a lesser extent, which has questioned the role of Islamic norms in their daily life, not the least the role of the university in the effort to implement their vision and mission which were in line with Islamic values and norms. Other influential factors were curiosity, as an effort to gain peer recognition, the influence of family and the access to get the alcohol.

Further study might be directed in discovering the underpinning facts behind the phenomenon. Qualitative study would be more beneficial in trying to shed some lights in revealing how a Muslim might start to become an alcohol drinker, since Islamic norms were very clear on this subject.

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