International Journal of IT-based Public Health Management
Vol. 5, No.2 (2018), pp. 37-42
http://dx.doi.org/10.21742/ijiphm.2018.5.2.07

Factors Influencing the Drinking Risk of Drinking Middle School Students

Young-Ju Jee[1] and Kyoung-Nam Kim[2]

[1] *Dept. of Nursing, Kyungnam University*
Woryeongbuk 16-gil Masanhappo-gu, Changwon-si, Gyeongsangnam-do 631-701, KOREA
[2]*Dept. Nursing, Busan Women's Colle.,Jinnamro, Busan Jin-gu, Busan, Korea*
[1]*jeeyoungju@kyungnam.ac.kr,*[2]*fairycc@bwc.ac.kr*

Abstract

The purpose of this descriptive survey research is to identify the factors influencing the risk of middle school students' drinking based on the factors derived from the 2016 Youth Health Behavior Online Survey. Excluding the data relevant to the selected principal concepts whose values were missing from the entire raw data, the data of 2,144 subjects was analyzed with SPSS WIN 20.0. An increment in grade put students at 2.38 times greater risk of drinking. A negative increment in the risk of drinking led to 1.15-, 1.13-, 1.12- and 1.10-fold increases in academic performance, economic status, weekly mean allowance and subjective happiness index, respectively. That is, the risk of middle school students' drinking increased with girls and higher graders, and had negative effects on academic performance and economic status. [1]*Also, less weekly mean allowance and lower subjective happiness index predicted the increase in the risk of underage drinking. The findings suggest the academic performance, economic status, mean allowance and subjective happiness index should be considered in developing an intervention program for preventing middle school students from drinking.*

Keywords:*Drinking, Adolescents, Problem solving, Students*

1. Introduction

Middle school students in their teens are not mature in comparison to high school students, are prone to be influenced by others, and experience physically, mentally and psychologically chaotic and turbulent changes [1]. In that adolescence is a transitional stage of physical, mental and social developments into a whole person through diverse experiences, leisure activities are more crucial to middle school students than other developmental stages [2].

A previous study reported that adolescent drinking is an important predictor of adult alcohol dependence and addiction and that problematic drinking and alcohol-related disorder caused liver and cardiovascular diseases, nerve injury and mental health issues [5]. Particularly, those who start drinking at very young ages are faced with the increasing health risks. Odgers' longitudinal study shed light on the increasing likelihood of adolescents who started drinking before the age of 15 to end up with substance abuse in adulthood, STDs, teenage pregnancy and criminals [6]. Sohn found drinking affected teenage depression [7].

Article history:
Received (November 2, 2017), Review Result (November 12, 2017), Accepted (November 22, 2017)

ISSN: 2205-8508, eISSN: 2207-3905 IJIPHM

Likewise, a longitudinal study on the effects of teenage drinking on suicidal ideation reported underage drinking was a risk factor that increased both suicidal ideation and attempt [8].

Therefore, this study identified the factors influencing the risks of Korean middle school students' drinking in reference to the 2016 Youth Health Behavior Online Survey data [12] with intent to provide some reference data applicable to the programs for preventing underage drinking problems.

2. Method

2.1. Purpose

The purpose of this study is to identify the factors influencing the risk of middle school students' drinking based on the 2016 Youth Health Behavior Online Survey [12] by focusing on the following:

2.2. Design

This descriptive survey research is intended to determine the factors influencing the risk of middle school students' drinking based on the 2016 Youth Health Behavior Online Survey [12].

2.3. Subject and sampling

The 2016 Youth Health Behavior Online Survey data was used[12]. The 2016 Youth Health Behavior Online Survey comprises 15 areas, with the question items and indices developed by a advisory committee relevant to each area based on domestic and overseas data. Excluding the data about the selected principal concepts whose values were missing from the entire raw data, the data from 2,144 respondents was analyzed.

2.4. Data analysis

The data analysis with SPSS WIN 20.0 involved the following:

• The general characteristics relative to the hazardous drinking were comparatively analyzed using real numbers, percentages and x2-test and t-test;

• The perceived subjective status relative to hazardous drinking was compared using t-test; and

• The factors influencing the risk of middle school students' drinking were analyzed with logistic

3. Results

3.1. Comparison of general characteristics relative to hazardous drinking

Table 1. Comparison of characteristics between non-hazardous and hazardous drinking groups

(N=2,144)

Variables	Categories	Non-hazardous drinking (n=1558) mean±SD	Hazardous drinking (n=586) mean±SD	χ^2 or t	*p*
Gender	Boys(1)	968(63.1)	280(47.8)	36.04	〈.001
	Girls(2)	590(37.9)	306(52.2)		
Grade	1	370(23.8)	29(5.0)	148.98	〈.001
	2	494(31.7)	139(23.7)		
	3	694(44.5)	418(71.3)		
School type	Girl's school(1)	159(10.2)	72(12.3)	1.92	.383
	Boy's school(2)	287(18.4)	105(17.9)		
	Coeducation(3)	1112(71.4)	409(69.8)		
Academic performance		3.0±1.2	3.28±1.3	-4.41	〈.001
Economic status		2.60±.9	2.76±1.1	-3.55	〈.001
Counselor	Yes(1)	383(24.6)	117(20.0)	5.08	.013
	No(0)	1175(75.4)	469(80.0)		

Weekly allowance		3.13±3.0	4.51±4.2	-8.43	〈.001

3.2. Comparison of perceived subjective status relative to hazardous drinking

Table 2. Comparison of perceived subjective status between non-hazardous and hazardous drinking groups

(N=2,144)

Variables	Non-hazardous drinking (n=1558) mean±SD	Hazardous drinking (n=586) mean±SD	t	*p*
Perceived subjective health	1.99±0.88	2.15±0.97	-3.78	〈.001
Perceived body image	3.14±0.99	3.16±0.99	-0.31	.759
Perceived subjective happiness	2.09±0.96	2.40±1.08	-6.44	〈.001
Perceived subjective oral health	2.58±0.93	2.74±0.94	-3.52	〈.001

3.3. Factors influencing the risk of middle school students' drinking

Table 3. Factors influencing the risk of middle school students' drinking

(N=2,144)

Variables	B	SE	Wald	*p*	OR	(95% CI for OR)	
						Lower	Upper
Gender	-0.53	0.11	23.07	〈.001	0.59	0.48	0.73
Grade	0.86	0.08	112.52	〈.001	2.38	2.03	2.79
Academic performance	0.14	0.04	10.98	.001	1.15	1.06	1.25
Economic status	0.12	0.06	1.34	.040	1.13	1.01	1.27
Weekly allowance	0.11	0.01	58.11	〈.001	1.12	1.08	1.15

Subjective happiness recognition	0.20	0.06	12.00	.001	1.26	1.10	1.38
Constant	-4.47	0.33	184.77	〈.001	0.01		

Nagelkerke R2=.19; $\chi 2$=295.03; df=9; p<.001; Hit ratio=72.7%; Each variable adjusted for all other variables in the table; SE=Standardized Error; OR=Odds ratio; CI =Confidence interval.

4. Discussion

This study was intended to determine the factors influencing the risk of middle school students' drinking based on the 2016 Youth Health Behavior Online Survey data[12]. The general characteristics in relation to hazardous drinking showed statistically significant differences by gender (p<.001), grade(p<.001), academic performance(p<.001), economic status(p<.001), counselor(p=.013), and weekly allowance(p<.001). In that many of the surveyed middle school students had experienced drinking, prevention or intervention programs should be offered to younger as well as older teens. As for the perceived subjective status relative to hazardous drinking, perceived subjective health(p<.001), perceived subjective happiness(p<.001) and perceived subjective oral health(p<.001) showed statistically significant differences. This finding indicates the risk of drinking varied with the perceived subjective health, happiness and oral health.

Specifically, when it comes to the factors influencing the risk of middle school students' drinking, the regression model's explanatory power towards the dependent variables was 19%(Nagelkerke 의 R2), while its accuracy towards the classified factors influencing the risk of drinking was 72.7%.

As for the odds ratio of the factors influencing the risk of middle school students' drinking, girls were at 0.59 time's greater risk of drinking than boys. Also, an increment in grade put students at 2.38 time's greater risk of drinking. In addition, academic performance, economic status, weekly allowance and subjective happiness index increased 1.15, 1.13, 1.12 and 1.10 times, respectively, with a negative increment in the risk of drinking. In short, the risk factors of drinking increased with girls, increment in grades, low academic performance, unfavorable economic status, less weekly mean allowance and low subjective happiness index.

Future studies need to collect extensive data relevant to the variables presented here as the risk factors of middle school students' drinking and empirically verify their effects on domestic middle school students.

5. Conclusions

This study elucidated the risk factors of middle school students' drinking: girls were at 0.59 times greater risk of drinking than boys; an increment in grade led to a 2.38-fold increase in drinking; and each negative increment in the risk of drinking resulted in 1.15-, 1.13-, 1.12- and 1.10-fold increases in academic performance, economic status, weekly mean allowance and subjective happiness index, respectively. That is, girls, higher graders, poor academic performance, unfavorable economic status, less weekly mean allowance and low subjective happiness index seemed to increase the risk of drinking in middle school students. Hence, intervention programs for preventing middle school students from drinking should take into

account the proposed risk factors, i.e. academic performance, economic status, mean allowance and subjective happiness index.

References

[1] J. B. Shin, "Relationship of leisure activities to sociability in middle schoolers", Unpublished master's thesis, Korea National University of Education, Cheongwon. **(2008)**

[2] N-Y. Kim, Y-H. Choi, "The relationship between leisure activities and smoking/Drinking of middle school students", Journal of Korean Academy Community Health Nursing, Vol.22, No.2, pp.131-140. **(2011)**

[3] M. Theunissen, M. Jansen, A. van Gestel, "Are mental health and binge drinking associated in Dutch adolescents?", Cross-sectional public health study, BMC Research Notes, Vol.4, No.100, retrived June 30, 2012 from http://www.biomedcentral.com/content/pdf/175-0500-4-100,pdf. **(2011)**

[4] L. Odgers, A. Casper, D. Nagin, R. S. Milne, E. Moffit, "Is it important to prevent early exposure to drugs and alcohol among adolescents?", Psychological Science, Vol.19, pp.1037-1044. **(2008)**

[5] A. Sohn, S-D. Ko, "Drinking behavior and factors that affect problem drinking among Korean female high-school students", Journal of Korean Alcohol Science, Vol.12, No.2, pp.155-162. **(2011)**

[6] M. S. Yoon, H. C. Cho, "A longitudinal effects analysis of adolescent drinking on the suicidal ideation", Journal of Youth Welfare, Vol.13, No.3, pp.43-66. **(2011)**

[7] "The twelfth Korea youth risk behavior web-based survey", Ministry of Education, Ministry of Health and Welfare, Centers for Disease Control and Prevention. **(2016)**