Iran J Public Health, Vol. 52, No.6, Jun 2023, pp.1297-1299

Letter to the Editor

Association between School Health Education and Health Behaviors: Analysis of Korean Secondary School Students

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(Received 05 Apr 2022; accepted 15 Apr 2022)

Dear Editor-in-Chief

According to the WHO, health education is considered as an essential tool for enabling people to change their health behaviors (1). Much has been written about the relationship between health education and health behaviors (2-4). However, systematic studies on the relationship between school-based health education and health behaviors were lacking. In this study, therefore, we aimed to evaluate the effects of various school health education programs on health behaviors using the survey data from the 15th KYRBS (Korea Youth Risk Behavior Survey in 2019), which is an anonymous self-reported online survey of secondary school students in order to collect the statistics of the health behaviors of adolescents in Korea (5).

We examined 4 school health education programs (nutritional education, oral health education, personal hygiene education, and sex education) and 17 health behaviors (8 for nutritional education, 3 for oral health education, 5 for personal hygiene education, and 1 for sex education). We used Stata for all statistical analyses. A series of multivariable logistic regression analyses were conducted to examine the associations between school health education programs and health behaviors after controlling for covariates such as sex, age, BMI, academic performance, and family's economic status.

Table 1 shows the results of logistic regression analyses, giving adjusted odds ratios (AORs) for 17 health behaviors according to whether or not students participated in school health education programs. If students took nutritional education, they were more likely to have breakfast (AOR=1.06); to eat fruit (AOR=1.20); to eat vegetable (AOR=1.31); to drink milk (AOR=1.20); and to drink sweet beverages (AOR=1.12). If students took oral health education, they were more likely to brush teeth (AOR=1.14); to brush teeth before sleeping (AOR=1.09); and to brush teeth after lunch at school (AOR=1.08). If students took personal hygiene education, they were more likely to wash their hands before eating at school (AOR=1.28); to wash their hands after returning from restroom at school (AOR=1.29); to wash their hands before eating at home (AOR=1.25); to wash their hands after returning from restroom at home (AOR=1.31); and to wash their hands after going out and returning home (AOR=1.21). Lastly, if students took sex education, they were more likely to practice contraception (AOR=1.46).

Table 1: Adjusted odds ratios for 17 health behaviors according to whether or not students participated in school health education programs

Variables	*AOR(95% CI)*	*P-value*	*Variables*	*AOR(95% CI)*	*P-value*
[N1] Breakfast frequency (per week)			[N2] Fruit consumption (per week)		
Nutritional education			Nutritional education		
No	1		No	1	
Yes	1.06(1.02 - 1.10)	0.002**	Yes	1.20(1.16 - 1.25)	0.000***
Nutritional education			Nutritional education		
No	1		No	1	
Yes	1.31(1.25 - 1.37)	0.000***	Yes	1.20(1.16 - 1.24)	0.000***
Nutritional education			Nutritional education		
No	1		No	1	
Yes	1.03(.99 - 1.07)	0.097	Yes	1.00(.95 - 1.07)	0.832
Nutritional education			Nutritional education		
No	1		No	1	
Yes	1.12(1.08 - 1.16)	0.000***	Yes	1.04(1.00 - 1.08)	0.053
Oral health education			Oral health education		
No	1		No	1	
Yes	1.14(1.10 - 1.19)	0.000***	Yes	1.09(1.02 - 1.15)	0.006**
Oral health education					
No	1				
Yes	1.08(1.03 - 1.14)	0.002**			
Hygiene education			Hygiene education		
No	1		No	1	
Yes	1.28(1.23 - 1.33)	0.000***	Yes	1.29(1.23 - 1.37)	0.000***
Hygiene education			Hygiene education		
No	1		No	1	
Yes	1.25(1.20 - 1.31)	0.000***	Yes	1.31(1.24 - 1.38)	0.000***
Hygiene education					
No	1				
Yes	1.21(1.16 - 1.27)	0.000***			
Sex education					
No	1				
Yes	1.46(1.24 - 1.71)	0.000***			

*P<0.05; **P<0.01; ***P<0.001

All 13 health-promoting behaviors (N1~N4, O1~O3, H1~H5, and S1) were found to be positively associated with taking part in school health education, which indicates various school health education programs in Korea are contributing to the promotion of students' health behaviors. However, it was also found that one health-risk behavior (N7) was positively associated with nutritional education, and that there was no statistical significance on three other health-risk behaviors (N5, N6, and N8), which suggests that more systematic school-based interventions are necessary to help Korean students to avoid health-risk behaviors for their future health.

Acknowledgements

This work was supported by a research grant from Seoul Women's University (2023-0072).

Conflict of Interest

The authors declare that there is no conflict of interest.

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