

Assessment of Dietary Behaviors and Weight Status among Adolescents from Multicultural Families and Non-Multicultural Families in Korea

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INTRODUCTION

- As Korean adolescents in multicultural families (MF) might experience health disparities, assessing their specific nutritional health status is necessary to design effective and tailored nutrition education programs.

AIMS

- This study was the first step to develop a nutrition education program for the Korean adolescent in MF.
- The aim of this study was to identify nutritional health problems of MF' adolescents through comparing dietary and lifestyle behaviors and weight status among Korean adolescents from MF and non-multicultural families (non-MF).

METHODS

- This study included 111,067 adolescents aged 12–18 years (MF: 1,751, non-MF: 109,316) from the 2017–2018 Korea Youth Risk Behavior Surveys.
- Data on dietary and lifestyle behaviors were self-reported using a web-based questionnaire and included foods consumption, alcohol drinking, smoking, physical activity, and weight control efforts.
- Body mass index (BMI) was calculated using the self-reported height and weight (kg/m²).
- Weight status was determined based on the 2017 Korean National Growth Chart: underweight (weight-for-age <5th percentiles), overweight (85th ≤ BMI-for-age <95th percentiles), and obesity (BMI-for-age ≥95th percentiles).
- Using a multiple logistic regression after adjustment for sex, school level, residence, and household income, odds ratios (ORs) for weight status, dietary and lifestyle behaviors were calculated in adolescents from MF compared to those from non-MF.

RESULTS

Table 1. Sociodemographic characteristics among adolescents from MF and non-MF

	Total (n=111,067)		Non-MF (n=109,316)		MF (n=1,751)		P-value
	n	%	n	%	n	%	
Sex							
Boys	56,299	51.9	55,471	51.9	828	49.7	0.132
Girls	54,768	48.1	53,845	48.1	923	50.3	
School level							
Middle school	56,064	46.4	54,978	46.3	1,086	56.5	<0.001
High school	55,003	53.6	54,338	53.7	665	43.5	
Living area							
Metropolitan	49,760	43.2	49,142	43.3	618	36.9	<0.001
Urban	53,246	51.0	52,399	51.0	847	50.4	
Rural	8,061	5.8	7,775	5.7	286	12.7	
Household income							
High	12,088	11.0	11,951	11.0	137	8.1	<0.001
Medium-high	33,947	30.9	33,650	31.1	297	17.2	
Medium	51,656	46.2	50,783	46.2	873	48.8	
Medium-low	11,391	10.1	11,032	10.0	359	20.7	
Low	1,985	1.8	1,900	1.8	85	5.3	

All analyses accounted for the complex sampling design effect and appropriate sampling weights. P-values were obtained from the chi-square test.

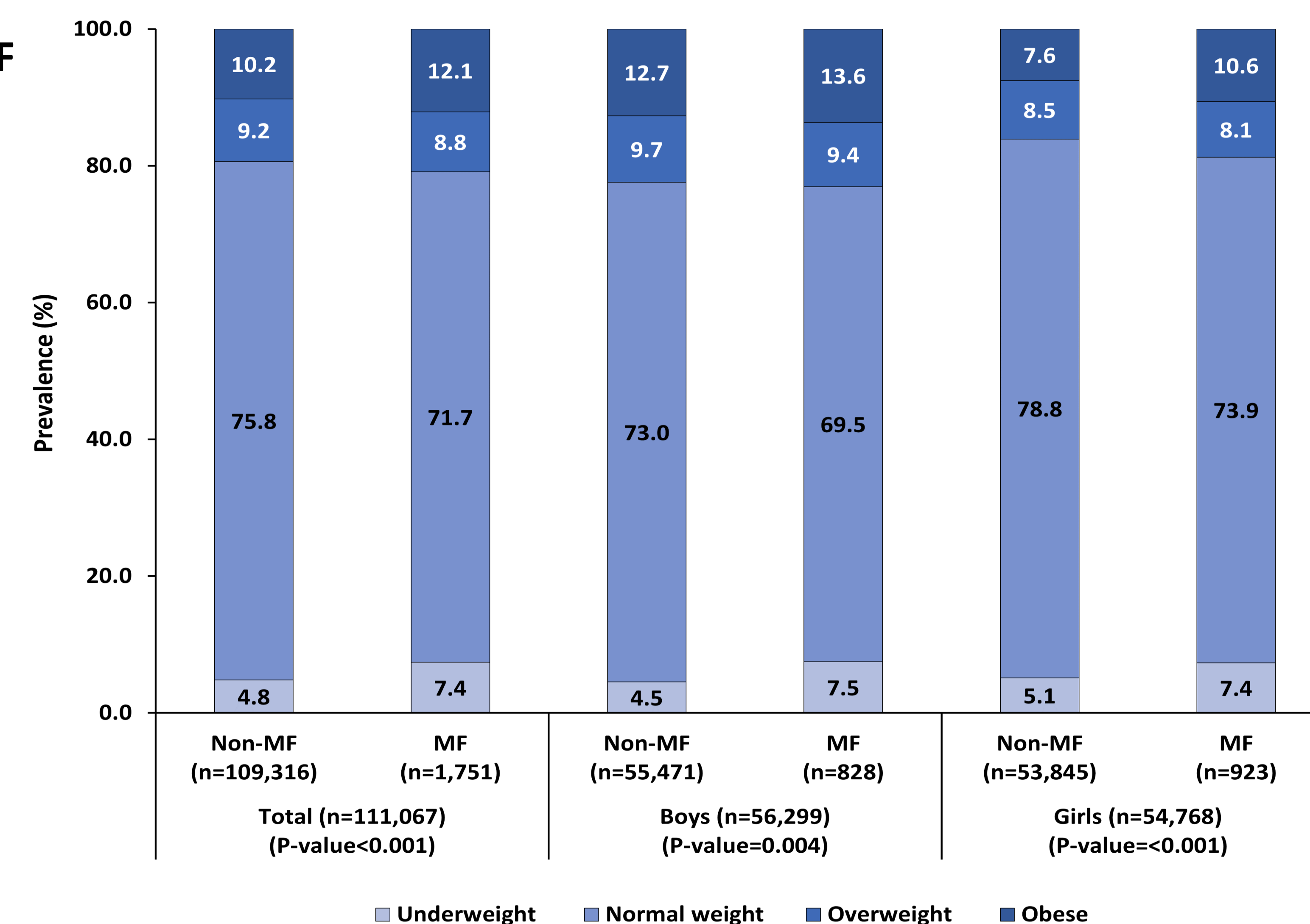


Figure 1. Weight status among adolescents from MF and non-MF. All analyses accounted for the complex sampling design effect and appropriate sampling weights. P-values were obtained from the chi-square test.

Table 2. Comparison of weight status, dietary and lifestyle behaviors among adolescents from MF and non-MF

	Total				Boys				Girls						
	Non-MF	MF	OR	95% CI	P-value	Non-MF	MF	OR	95% CI	P-value	Non-MF	MF	OR	95% CI	P-value
Weight status															
Underweight	1.00	1.60	1.29	1.99	<0.001	1.00	1.64	1.18	2.27	0.003	1.00	1.57	1.18	2.09	0.002
Overweight	1.00	0.98	0.81	1.18	0.838	1.00	1.01	0.77	1.32	0.936	1.00	0.95	0.73	1.23	0.687
Obese	1.00	1.22	1.03	1.43	0.018	1.00	1.11	0.88	1.39	0.381	1.00	1.40	1.10	1.77	0.006
Fruit consumption															
≥5 times/wk	1.00	0.86	0.76	0.96	0.009	1.00	0.87	0.73	1.04	0.124	1.00	0.84	0.71	0.99	0.039
Vegetable consumption															
≥5 times/wk	1.00	0.91	0.79	1.06	0.210	1.00	0.74	0.60	0.92	0.007	1.00	1.09	0.89	1.34	0.386
Milk consumption															
≥5 times/wk	1.00	1.17	0.99	1.38	0.061	1.00	1.17	0.93	1.47	0.186	1.00	1.17	0.94	1.45	0.159
Sweet drink consumption															
≥3 times/wk	1.00	0.89	0.80	0.98	0.025	1.00	0.84	0.72	0.98	0.028	1.00	0.93	0.80	1.08	0.334
Fast food consumption															
≥3 times/wk	1.00	0.82	0.70	0.95	0.008	1.00	0.78	0.63	0.96	0.022	1.00	0.86	0.70	1.04	0.117
Current alcohol drinking															
Yes	1.00	0.88	0.74	1.04	0.142	1.00	1.00	0.81	1.24	0.983	1.00	0.73	0.55	0.96	0.025
Current smoking															
Yes	1.00	1.14	0.89	1.47	0.308	1.00	1.05	0.79	1.41	0.737	1.00	1.32	0.82	2.13	0.248
Vigorous physical activity															
≥3 days/wk	1.00	0.83	0.74	0.94	0.002	1.00	0.71	0.60	0.83	<0.001	1.00	1.02	0.88	1.20	0.760
Weight control efforts															
Yes, to reduce	1.00	0.96	0.86	1.07	0.451	1.00	0.90	0.75	1.07	0.221	1.00	1.00	0.87	1.16	0.969

95% CI, 95% confidence interval. All analyses accounted for the complex sampling design effect and appropriate sampling weights.

DISCUSSION & CONCLUSIONS

- Korean adolescents in MF showed higher risks for having underweight and obesity as well as unhealthy dietary behaviors compared to those in non-MF.
- Our findings can be used to develop nutrition education programs for adolescents from MF.

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