

Oral Health Disparities of Preschool Children among Southeast Asian Immigrant Women in Arranged Transnational Marriages in Taiwan : A Cross-sectional Study



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Background

As the number of women in arranged transnational marriages is increasing, they are in a vulnerable position regarding oral health. According to previous studies, children of these women are at a higher risk of developing dental caries due to the lack of support systems and medical care for their oral health.

Results

The dmft index (decayed, missing or filled tooth) was 2.61 in immigrant children and 1.92 in native children ($p < 0.001$). Children who consumed sugar-sweetened beverages (SSBs) more than once per day [adjusted odds ratio (aOR) = 3.01, 95% confidence interval (CI) 1.10-8.25] increased the likelihood of developing caries. The protect factor associated with children's oral health was who received maternal assistance in tooth-brushing before sleeping (aOR = 0.45; 95% CI 0.21-0.94).



Table 1. Characteristics of participants in the native and immigrant groups.

Demographics	Native (n=13,776)	Immigrant (n=416)	P
Age (months)	5.91 (6.74)	5.49 (6.63)	0.394
Gender			0.501
Female	6,441 (47.2)	399 (47.6)	
Male	10,107 (52.8)	217 (52.4)	
Parental age			<0.001
Female	14,668 (34.2)	266 (63.8)	
Male	5,118 (25.8)	150 (36.2)	
Parental education			<0.001
High school or above	341 (3.3)	94 (8.3)	
Below high school	12,340 (96.7)	85 (20.4)	
Maternal oral health			0.205
Good	4,276 (31.2)	58 (14.2)	
Poor	1,062 (8.4)	35 (8.4)	
Maternal dental visit			0.205
At least once	2,346 (17.2)	79 (19.0)	
Never	7,913 (60.0)	106 (25.6)	
Never	771 (5.8)	23 (5.6)	

Table 3. Oral health related behaviors of participants in the native and immigrant groups.

Variables	Native (n=13,776)	Immigrant (n=416)	P
Children			
Teeth brushing frequency			0.657
> 2 times	5,283 (26.7)	115 (27.6)	
≤ 2 times	14,495 (73.3)	301 (72.4)	
Teeth brushing time			0.294
> 3 minutes	15,095 (76.3)	327 (78.6)	
≤ 3 minutes	4,683 (23.7)	89 (21.4)	
Teeth brushing after meals			0.009
No	9,807 (49.6)	225 (54.1)	
Yes	9,871 (50.4)	191 (45.9)	
Teeth brushing after snacks			0.502
No	18,994 (96.0)	400 (96.2)	
Yes	784 (4.0)	16 (3.8)	
Fluoride toothpaste use			0.488
No	7,836 (39.6)	164 (39.4)	
Yes	11,942 (60.4)	252 (60.6)	
Sugary beverages consumed			0.001
less than once	3,809 (19.3)	75 (18.0)	
2-5 times/week	10,200 (51.6)	186 (44.7)	
more than once/day	5,769 (29.2)	155 (37.3)	
Sugary beverages consumed			0.001
less than once	11,438 (57.8)	213 (51.2)	
2-5 times/week	7,098 (35.9)	177 (42.5)	
more than once/day	1,242 (6.3)	26 (6.3)	
Maternal assisted child			<0.001
Teeth brushing before sleeping at night			
No/ seldom	1,439 (7.3)	52 (12.5)	
Every time/often	18,339 (92.7)	364 (87.5)	
Regular dental check-ups			<0.001
Every time/often	5,238 (26.5)	153 (36.8)	
Regular dental check-ups	14,540 (73.5)	263 (63.2)	
No	1,224 (6.4)	139 (33.4)	
Yes, every 6 months	14,316 (73.6)	271 (65.6)	

Table 4. Multiple logistic regression analysis of selected variables in the immigrant group.

Variables	aOR	95%CI
Children		
Teeth brushing frequency		
> 2 times	1.0	
≤ 2 times	0.98	0.88-1.09
Teeth brushing time		
> 3 minutes	1.0	
≤ 3 minutes	0.95	0.85-1.06
Teeth brushing after meals		
No	1.0	
Yes	0.45	0.21-0.94
Teeth brushing after snacks		
No	1.0	
Yes	1.02	0.92-1.13
Fluoride toothpaste use		
No	1.0	
Yes	0.98	0.88-1.09
Sugary beverages consumed		
less than once	1.0	
2-5 times/week	3.01	1.10-8.25
more than once/day	2.15	0.85-5.50
Sugary beverages consumed		
less than once	1.0	
2-5 times/week	1.02	0.92-1.13
more than once/day	1.05	0.95-1.16
Maternal assisted child		
Teeth brushing before sleeping at night		
No/ seldom	1.0	
Every time/often	0.45	0.21-0.94
Regular dental check-ups		
Every time/often	0.98	0.88-1.09
Regular dental check-ups	0.98	0.88-1.09
No	1.0	
Yes, every 6 months	0.98	0.88-1.09

