

Table 1. Comparison of the absolute and relative frequencies of background variables in the experimental (n = 51) and control (n = 51) groups before educational intervention

Demographic variables	Experimental group	Control group	P value
Age group (year)			
20-30	17 (33.3)	14 (27.5)	0.872
31-40	17 (33.3)	19 (37.3)	
41-50	10 (19.6)	9 (17.6)	
Over 50	7 (13.7)	9 (17.6)	
Gender			
Male	44 (86.3)	45 (88.2)	0.767
Female	7 (13.7)	6 (11.8)	
Marital status			
Single	15 (29.4)	11 (21.6)	0.363
Married	36 (70.6)	40 (78.4)	
Education			
Below diploma	12 (23.5)	10 (19.6)	0.608
Diploma	25 (49.0)	30 (58.8)	
Academic	14 (27.5)	11 (21.6)	
History of hookah consumption			
Never	20 (39.2)	21 (41.2)	0.808
Sometimes	30 (58.8)	28 (54.9)	
Always	1 (2.0)	2 (3.9)	
History of smoking			
Never	26 (51.0)	26 (51.0)	0.233
Sometimes	17 (33.3)	22 (43.1)	
Always	8 (15.7)	3 (5.9)	
Drug history			
Never	39 (76.5)	38 (74.5)	0.818
Sometimes	12 (23.5)	13 (25.5)	
History of using educational materials			
Never	11 (21.6)	21 (41.2)	0.075
Sometimes	35 (68.6)	28 (54.9)	
Always	5 (9.8)	2 (3.9)	
History of hookah supply (year)			
<1	27 (52.9)	10 (19.6)	0.002
1-5	16 (31.4)	30 (58.8)	
>5	8 (15.7)	11 (21.6)	
Income			
Very little	11 (21.6)	6 (11.8)	0.072
Little	19 (37.3)	32 (62.7)	
Moderate	18 (35.3)	13 (25.5)	
Much	2 (3.9)	0	

Very much	1 (2.0)	0	
Type of business			
Grocery stores	38 (74.5)	42 (82.4)	0.333
Cafes, restaurants	7 (13.7)	7 (13.7)	
Hookah store	6 (11.8)	2 (3.9)	

Table 2. Comparison of the mean scores of the theory of planned behavior constructs before and after the educational intervention in the experimental and control groups

Theory constructs	Before intervention	After intervention	P value *
Attitude			
Experimental group	25.16±5.60	29.35±3.70	<0.001
Control group	25.22±5.10	25.37±4.20	0.571
P value **	0.956	<0.001	-
Abstract norms			
Experimental group	25.25±6.70	27.57±5.60	<0.001
Control group	22.84±5.30	22.63±4.90	0.273
P value **	0.049	<0.001	-
Perceived behavioral control			
Experimental group	18.86±4.80	23.04±3.30	<0.001
Control group	17.14±3.20	17.82±2.60	0.003
P value **	0.037	<0.001	-
Intention to reduce hookah and tobacco supply			
Experimental group	11.88±4.50	16.27±2.30	<0.001
Control group	11.24±2.90	11.61±2.20	0.103
P value **	0.395	<0.001	-

* Paired T test results; ** Independent T test results

Table 3. Comparison of the mean difference of the theory of planned behavior theory constructs before and after the intervention in the experimental and control groups

Theory constructs	Experimental group	Control group	Independent t value
Positive attitude toward reducing hookah and tobacco supply	4.20±3.30	0.16±1.90	7.395
Abstract norms of encouraging reducing hookah and tobacco supply	2.31±3.30	0.22±1.30	4.943
Perceived behavioral control regarding reducing hookah and tobacco supply	4.18±3.70	0.69±1.50	6.184
Intention to reduce hookah and tobacco supply	4.39±3.10	0.37±1.60	8.286

Significance level for all cases: $p < 0.001$

Table 4. Comparison of the difference (level of 100) of the constructs of the theory of planned behavior before and after the intervention in the experimental and control groups

Theory constructs	Experimental group			Control group			Intervention effect size
	Before	After	Difference	Before	After	Difference	
Positive attitude toward reducing hookah and tobacco supply	64.8%	79.8%	15.0%	65.0%	65.6%	0.6%	14.4%
Abstract norms of encouraging reducing hookah and tobacco supply	65.1%	73.4%	8.3%	56.5%	55.8%	-0.7%	9.0%
Perceived behavioral control regarding reducing hookah and tobacco supply	53.5%	71.0%	17.5%	46.4%	49.2%	2.8%	14.6%
intention to reduce hookah supply	49.2%	76.6%	27.4%	45.2%	47.5%	2.3%	25.1%