

SOCIO-DEMOGRAPHIC PREDICTORS OF TOBACCO USE AMONG ADOLESCENTS RESIDING IN THE UAE

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Background

- Over 150M adolescents use tobacco



*Health
problems*

*Gateway for
substance
abuse*

*Establishment
of habit*



1/3 adolescents become regular smokers



3/4 adults start smoking in childhood or adolescence



Background Statistics

- Smoking rates among men as high as 77%
- Tobacco use among women on the rise
- 11.4% and 29.6% of Lebanese adolescents smoke cigarettes and shisha respectively
- 15.9% of male and 6.6% of female Syrian students are current smokers
- 12 to 29.8% among adolescents between 1987 and 2008 in Saudi Arabia

Current Statistics

- 30% of male school students in UAE (15-19 yrs) smokers
- Highest prevalence among those 17 years of age (43%)
- 2002 Global Youth Tobacco Survey (GYTS):
 - 20.9% of participants ever smoked cigarettes
 - 21.9% current users of any tobacco product
 - 29.7% males versus
 - 12.6% of females were current users of any tobacco product
- GYTS (2005):
 - 22.6% of participants reporting ever smoking cigarettes
 - 19.5% current users of any tobacco product
 - 25.2% males versus
 - 13.2% females

Research Objectives

1. To determine the prevalence of tobacco usage among the UAE adolescent population;
2. To examine the profile of tobacco use among the UAE adolescent population;
3. To assess demographic, socioeconomic, residential and behavioural predictors of tobacco use among the UAE adolescent population.

Methods

- *National Study of Population Health in the UAE (NSPHUAE)* (2007–2009)
- Cross-sectional study design
- Over 6,300 national and non-national adolescents (ages 13 to 20 years)
- 2 component survey:
 - smoking behaviors, type and frequency of tobacco use, data related to other determinants of health, and demographic and socioeconomic data
 - residential mobility and locations, and residential characteristics

Methods (cont'd)

- Stratified sampling strategy based on school enrolment data
- Schools selected randomly by lottery
- Fishbowl lottery method was used to select the class.
- Ethical approval was obtained from the UAE Ministries of Education and Health
- Detailed information letters were sent to parents / guardians
- Social workers trained to administer the survey on
- Second component sent home overnight

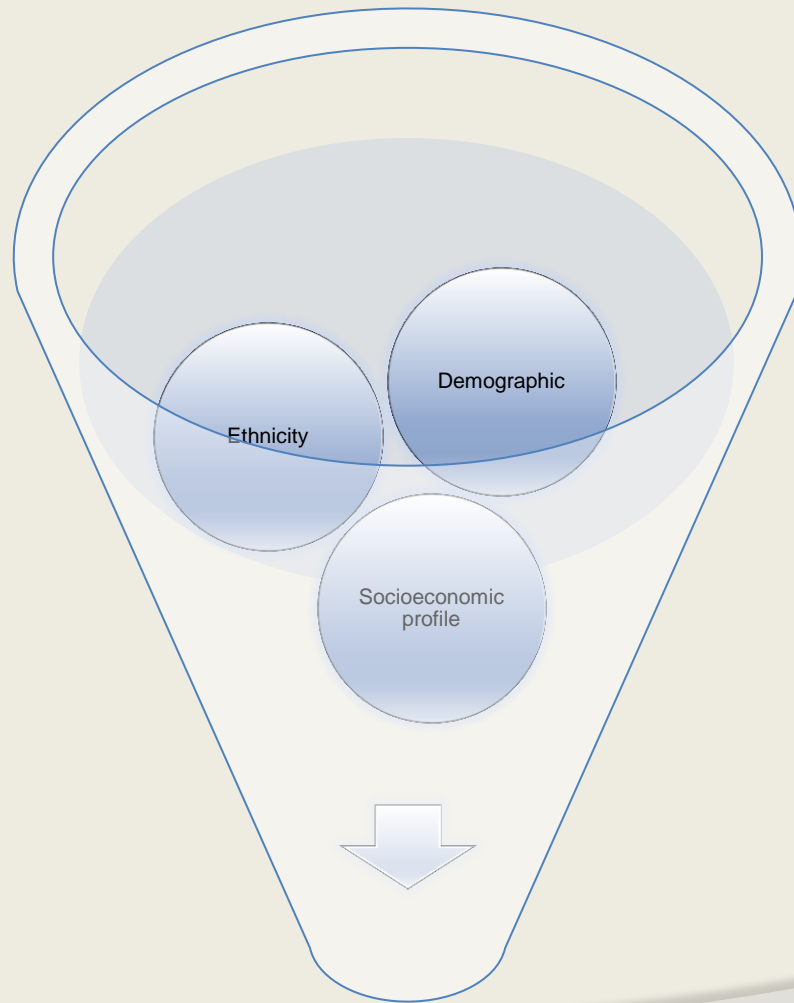
Outcome Variables

- Five items from the questionnaire:
 - ever smoked cigarettes or any form of tobacco such as shisha or midwakh (yes / no / do not know)
 - ‘During the past 30 days, how often did you smoke cigarettes?’
 - ‘During the past 30 days, how often did you smoke midwakh?’
 - ‘During the past 30 days, how often did you smoke shisha?’
 - ‘During the past 30 days, how often did you smoke any other form of tobacco?’

‘daily’; ‘occasionally’- circle number days 1-30; ‘not at all’; or ‘do not know’.

- Two variables derived:
 - current smokers - if they reported occasional or daily use of at least one form of tobacco in the past 30 days (namely cigarette, shisha, midwakh, or other).
 - occasional or daily use of > 1 tobacco product in past 30 days

Explanatory Variables



Demographic

Ethnicity

Socioeconomic profile

Location of residence

Residential crowding

Behavioral lifestyle

Results

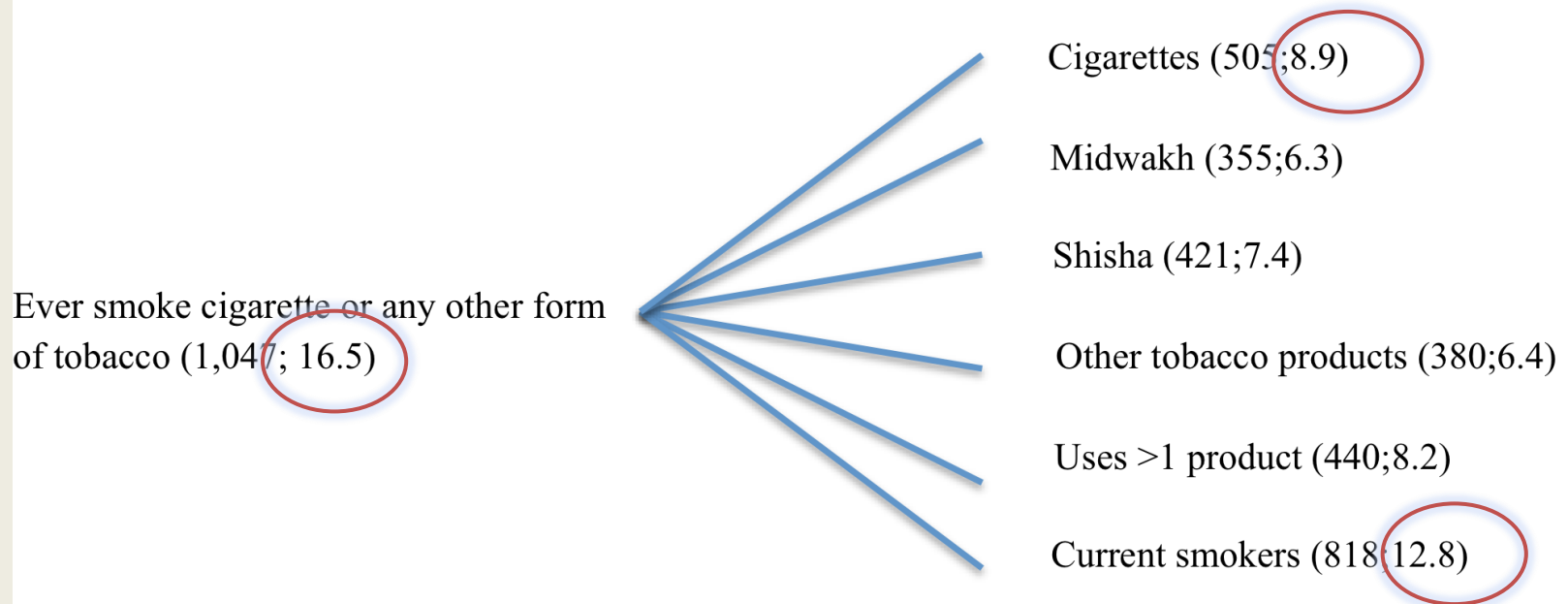
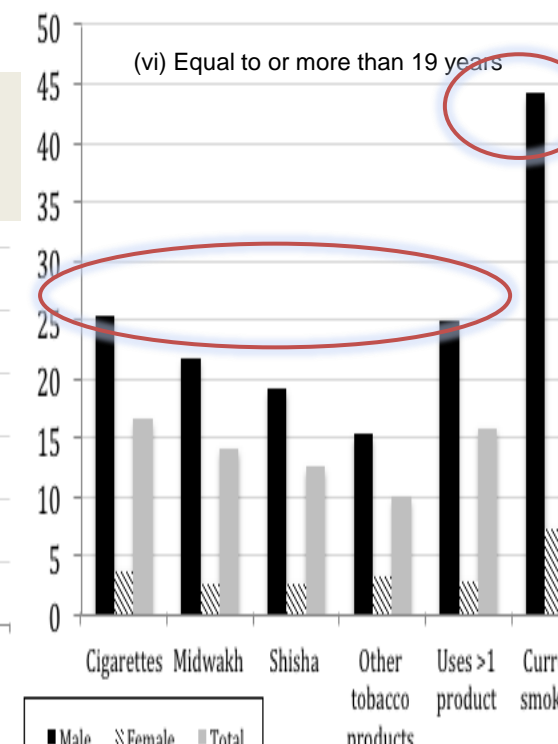
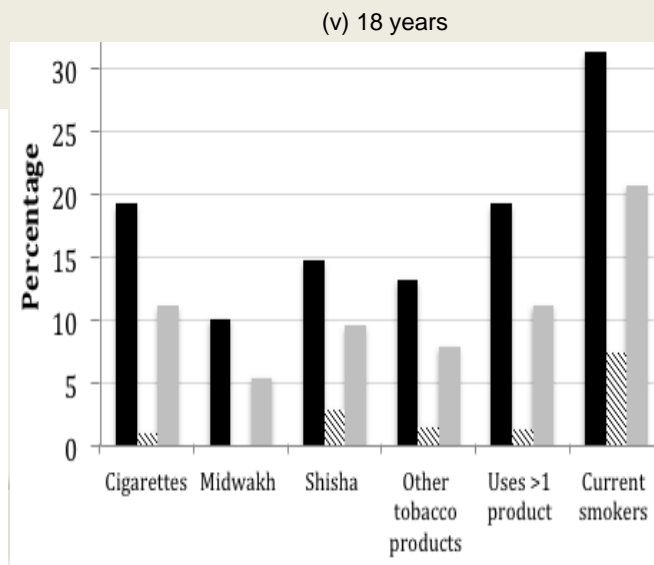
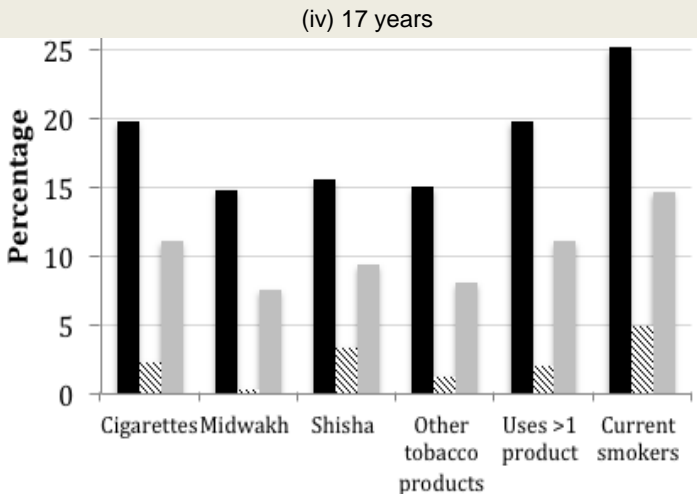
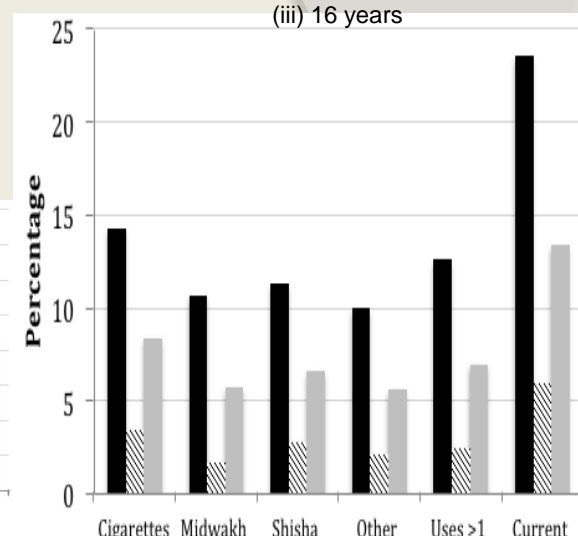
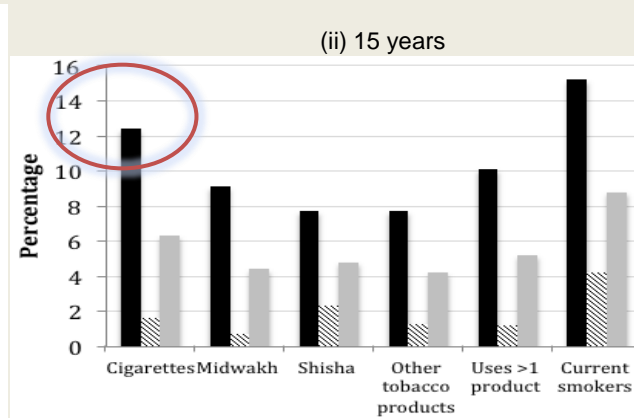
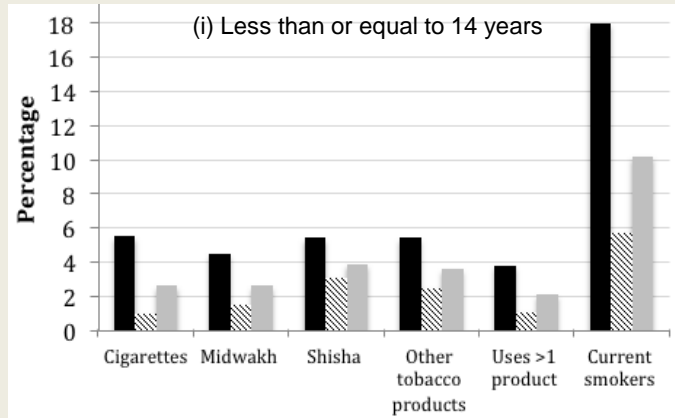


Figure 1: Distribution of tobacco use (n;%) among adolescents who reside in the United Arab Emirates (n=6,363)

Distribution of tobacco use (%) in relation to age (years) and gender, among adolescents who reside in the United Arab Emirates (n=6,363).



■ Male ▨ Female ■ Total

Results

Variable	Classification	Prevalence of Current Smoking for:		
		Overall Sample n (%)	Males n (%)	Females n (%)
Current smoking		818 (12.8)	624 (100)	174 (100)
Sex		***		
	Female	174(5.5)		
	Male	624(24.0)		
Age		***		
	< 14 years	31(10.2)	20(3.5)	11(6.8)
	T5 years	137(8.8)	98(17)	38(23.5)
	16 years	221(13.4)	161(28)	57(35.2)
	17 years	219(14.7)	181(31.4)	37(22.8)
	18 years	81(20.8)	66(11.5)	13(8)
	> 19 years	57(28.8)	50(8.7)	6(3.7)
School		**		
	Public	445(12.8)	373(59.8)	60(34.5)
	Private	373(15.9)	251(40.2)	114(65.5)
Exposed to tobacco smoke at home or with friends		***		
	Not at all	272(8.8)	198(36.8)	69(47.3)
	Occasionally	237(17.5)	189(35.1)	44(30.1)
	Daily	189(30.0)	44(30.1)	33(22.6)
UAE born				
	No	209(14.6)	138(22.7)	69(40.8)
	Yes	580(13.6)	471(77.3)	100(59.2)
Ethnicity‡		***		
	UAE	318(11.3)	256(42)	54(31.6)
	GCC	61(19.2)	54(8.9)	6(3.5)
	Arab/Middle East	215(23.9)	155(25.4)	60(35.1)
	Arab/Africa	93(16.0)	83(13.6)	10(5.8)
	South East Asia	66(7.0)	44(7.2)	21(12.3)
	Western	22(27.5)	6(1.0)	15(8.8)
	None/Other	17(23.0)	12(2.0)	5(2.9)
Parents' marital status		**		
	Married	687(13.8)	535(88.1)	150(86.7)
	Widowed	27(12.4)	41(6.8)	7(4.0)
	Separated/Divorced	22(9.8)	11(1.8)	7(4.0)
	Other	47(20.2)	20(3.3)	9(5.2)
Father graduated from high school				
	No	243(12.5)	195(42.1)	40(30.5)
	Yes	362(13.3)	268(57.9)	91(69.5)
Mother graduated from high school				
	No	291(12.4)	235(51.6)	50(37.9)
	Yes	306(13.1)	220(48.4)	82(62.1)
Monthly household income (AED)				
	<2 K	17(11.8)	13(3.4)	3(3.2)
	>2 and ≤5 K	100(12.1)	88(23.3)	12(12.8)
	>5 and ≤8 K	81(12.8)	63(16.7)	15(16.0)
	>8 and ≤10 K	52(12.0)	41(10.8)	10(10.6)
	>10 and ≤12 K	42(13.0)	34(9.0)	8(8.5)
	>12 and ≤15 K	44(15.0)	33(8.7)	10(10.6)
	>15 and ≤20 K	38(14.6)	29(7.7)	9(9.6)
	>20 K	105(16.1)	77(20.4)	27(28.7)
Income divided (AED)§				
	<15 K	342(12.9)	272(74.3)	63(65.6)
	>15 K	127(13.9)	94(25.7)	33(34.4)
Location of residence		***		
	Abu Dhabi	411(15.0)	331(53.0)	71(40.8)
	Ajman	39(17.9)	23(3.7)	16(9.2)
	Dubai	75(13.9)	64(10.3)	11(6.3)
	Fujairah	62(12.8)	37(5.9)	22(12.6)
	RAK	51(8.3)	38(6.1)	10(5.7)
	Sharjah	170(15.5)	125(20.0)	41(23.6)
	UAQ	10(7.6)	6(1.0)	3(1.7)
Residential crowding†		*		
	No	106(8.7)	74(44.0)	30(47.6)
	Yes	128(6.7)	94(56.0)	33(52.4)
Number of previous residences				
	None	580(14.5)	444(71.2)	117(67.2)
	1	160(13.5)	120(19.2)	40(23.0)
	2	41(12.1)	30(4.8)	10(5.7)
	3	18(11.3)	16(2.6)	2(1.1)
	4	19(13.8)	14(2.2)	5(2.9)
Ever used illegal drugs		***		
	No	757(13.8)	584(94.8)	159(95.8)
	Yes	43(47.8)	32(5.2)	7(4.2)
Unconventional drug use				
	No	577(14.8)	476(77.8)	91(54.8)
	Yes	218(13.2)	136(22.2)	75(45.2)

Demographic, socioeconomic, residential and behavioural profiles of study participants (n=6,363).

Variable	Classification	Cigarette (n=505) n (%)	Midwakh (n=355) n (%)	Shisha (n=421) n (%)	Other (n=380) n (%)	Uses >1 tobacco product (n=440) n (%)
Sex		***	***	***	***	***
	Female	71(2.4)	29(1.0)	84(2.8)	57(1.8)	52(1.8)
	Male	416(16.2)	310(12.1)	320(12.4)	303(11.4)	371(15.1)
Age		***	***	***	***	***
	≤ 14 years	8(2.6)	8(2.6)	12(3.9)	11(3.6)	6(2.1)
	15 years	94(6.3)	66(4.4)	72(4.8)	67(4.2)	74(5.2)
	16 years	135(8.4)	92(5.7)	106(6.6)	94(5.6)	108(7.0)
	17 years	158(11.1)	109(7.6)	134(9.4)	122(8.1)	148(7.0)
	18 years	43(11.2)	21(5.5)	37(9.6)	32(8.0)	40(11.3)
	> 19 years	33(16.6)	28(14.2)	25(12.6)	21(10.0)	29(15.9)
School		***	**	***	**	*
	Public	303(9.2)	235(7.1)	211(6.4)	253(7.1)	274(8.9)
	Private	202(8.5)	120(5.1)	210(8.9)	127(5.3)	166(7.3)
Exposed to tobacco smoke at home or with friends		***	***	***	***	***
	Not at all	92(3.0)	52(1.7)	84(2.8)	68(2.1)	60(2.0)
	Occasionally	159(12.3)	108(8.3)	134(10.3)	116(8.3)	150(12.2)
	Daily	176(29.4)	133(22.1)	139(23.0)	124(19.3)	183(28.7)
UAE born		*	**	*	*	*
	No	114(8.0)	61(4.3)	119(8.4)	80(5.4)	92(6.7)
	Yes	372(9.0)	278(6.7)	284(6.9)	284(6.5)	331(8.6)
Ethnicity		***	***	***	***	***
	UAE	187 (6.9)	155 (5.7)	121 (4.5)	173 (6.1)	170 (6.7)
	GCC	43 (13.6)	30 (9.5)	22 (6.9)	31 (9.1)	35 (11.6)
	Arab/Middle East	137 (16.0)	84 (9.9)	165 (19.3)	75 (8.1)	128 (15.9)
	Arab/Africa	70 (12.7)	41 (7.4)	42 (7.7)	49 (8.3)	51 (9.7)
	South East Asia	33 (3.4)	19 (2.0)	29 (3.0)	22 (2.3)	20 (2.1)
	Western	10 (12.3)	6 (7.5)	17 (21.0)	7 (8.8)	11 (13.9)
	None/Other	7 (10.0)	4 (5.7)	9 (13.0)	4 (5.1)	6 (9.0)
Parents' marital status		*	***	***	***	**
	Married	409(8.4)	282(5.8)	346(7.2)	290(5.7)	351(7.7)
	Widowed	16(7.5)	10(4.7)	13(6.2)	15(6.9)	13(6.6)
	Separated/Divorced	19(8.7)	12(5.5)	13(5.9)	18(7.8)	18(8.6)
	Other	33(14.8)	28(12.6)	23(10.3)	32(14.0)	31(14.8)
Father graduated from high school		*	*	*	*	*
	No	159(8.5)	120(6.4)	102(5.5)	122(6.1)	135(7.7)
	Yes	197(7.4)	130(4.9)	195(7.3)	159(5.7)	174(6.9)
Mother graduated from high school		**	**	**	**	**
	No	179(7.9)	132(5.8)	124(5.5)	147(6.1)	149(7.0)
	Yes	175(7.7)	115(5.0)	172(7.5)	134(5.6)	158(7.2)
Monthly household income (AED)		*	*	*	*	*
	<2 K	10(6.5)	9(5.8)	10(6.5)	11(7.2)	9(6.2)
	>2 and ≤5 K	70(8.8)	44(5.5)	43(5.4)	50(5.9)	59(7.7)
	>5 and ≤8 K	44(7.2)	32(5.3)	35(5.8)	33(5.1)	44(7.7)
	>8 and ≤10 K	34(8.1)	22(5.3)	32(7.6)	28(6.4)	28(7.1)
	>10 and ≤12 K	38(11.8)	23(7.2)	30(9.3)	23(7.0)	26(8.5)
	>12 and ≤15 K	18(6.2)	15(5.1)	26(8.9)	20(6.6)	18(6.4)
	>15 and ≤20 K	18(7.0)	12(4.7)	18(7.0)	16(6.0)	18(7.5)
	>20 K	48(7.7)	39(6.2)	46(7.3)	43(6.4)	49(8.2)
Income divided (AED)		*	*	*	*	*
	<15 K	222(8.6)	153(5.9)	181(7.0)	169(6.3)	198(8.1)
	>15 K	73(8.2)	54(6.1)	74(8.3)	63(6.7)	71(8.4)
Location of residence		**	**	***	**	***
	Abu Dhabi	252(10.3)	185(7.6)	225(9.2)	175(6.2)	222(9.6)
	Ajman	24(10.5)	20(8.6)	21(9.1)	23(10.3)	23(10.8)
	Dubai	50(8.8)	32(5.7)	35(6.2)	47(8.4)	45(8.4)
	Fujairah	43(8.5)	17(3.4)	15(3.0)	31(6.4)	25(5.3)
	RAK	30(4.7)	32(5.0)	25(3.9)	28(4.5)	31(5.1)
	Sharjah	99(8.7)	65(5.7)	95(8.3)	73(6.6)	89(8.2)
	UAQ	7(4.9)	4(2.8)	5(3.5)	3(2.3)	5(3.9)
Residential crowding		*	*	*	*	*
	No	63(5.2)	50(4.2)	50(4.2)	57(4.6)	56(5.0)
	Yes	86(4.6)	62(3.3)	79(4.2)	77(4.0)	75(4.2)
Number of previous residence		*	**	**	**	**
	None	384(9.8)	281(7.2)	308(7.9)	292(7.1)	336(9.1)
	1	72(6.4)	44(3.9)	62(5.5)	55(4.6)	63(5.8)
	2	25(7.6)	14(4.2)	27(8.2)	12(3.6)	19(6.0)
	3	14(9.0)	9(5.7)	14(8.9)	12(7.4)	14(9.7)
	4	10(7.7)	7(5.4)	10(7.7)	9(6.1)	8(6.6)
Ever used illegal drugs		***	***	***	***	***
	No	448(8.4)	308(5.8)	366(6.9)	324(5.7)	386(7.5)
	Yes	51(55.4)	43(47.3)	50(55.6)	52(56.5)	51(57.3)
Unconventional drug use		*	*	*	*	*
	No	364(9.6)	255(6.7)	291(7.7)	258(6.4)	318(8.8)
	Yes	136(8.3)	94(5.8)	124(7.6)	116(6.9)	120(7.7)

Mean number of days of cigarette, midwakh, shisha or other tobacco usage in the last 30 days.

Variable	Classification	Cigarette (n=505)		Midwakh (n=355)		Shisha (n=421)		Other (n=380)	
		Mean,SD	F	Mean,SD	F	Mean,SD	F	Mean,SD	F
Sex	Female	0.11,1.31	226.72***	0.02,0.45	82.50***	0.10,1.06	61.59***	0.08,1.89	245.25***
	Male	2.16,7.13		0.49,2.72		0.49,2.49		0.44,2.58	
Age	< 14 years	0.05,0.41	16.34***	0.17,1.99	2.82*	0.06,0.52	4.08**	0.19,1.23	1.28
	T5 years	0.50,3.34		0.15,1.50		0.15,1.46		0.16,1.60	
	16 years	0.80,4.26		0.17,1.35		0.28,1.88		0.26,1.97	
	17 years	1.76,6.58		0.35,2.44		0.44,2.33		0.27,1.99	
	18 years	1.30,5.58		0.24,1.95		0.28,1.77		0.42,2.59	
	> 19 years	2.73,8.21		0.54,2.62		0.40,2.42		0.19,1.08	
School	Public	1.16,5.37	3.34	0.30,2.14	9.07**	0.41,2.33	15.80***	0.29,2.12	11.75**
	Private	0.91,4.52		0.14,1.38		0.20,1.58		0.20,1.68	
Exposed to tobacco smoke at home or with friends	Not at all	0.23,2.28	216.67***	0.04,0.69	92.62***	0.12,1.40	54.89***	0.06,0.77	175.86***
	Occasionally	1.43,5.64		0.31,2.07		0.42,2.33		0.38,2.35	
	Daily	5.03,10.40		1.29,4.44		1.08,3.28		1.02,3.98	
UAE born	No	0.83,4.29	3.01	0.13,1.27	5.53*	0.34,2.00	2.98	0.23,1.90	1.36
	Yes	1.10,5.12		0.27,1.97		0.27,1.90		0.25,1.93	
Ethnicity	UAE	0.82,4.51	11.47***	0.23,1.92	3.75***	0.15,1.39	34.02***	0.23,1.84	6.31***
	GCC	1.24,5.34		0.34,2.40		0.22,1.86		0.32,2.62	
	Arab/Middle East	2.08,6.90		0.44,2.34		0.88,3.12		0.37,2.27	
	Arab/Africa	1.74,6.39		0.15,1.26		0.32,2.03		0.48,2.87	
	South East Asia	0.21,1.83		0.02,0.36		0.14,1.58		0.04,0.66	
	Western	0.90,4.10		0.38,2.67		0.95,3.60		0.44,2.00	
	None/Other	2.10,7.50		0.24,1.41		0.22,1.21		0.12,0.88	
	Married	1.00,4.89	0.72	0.21,1.78	2.41	0.27,1.78	0.89	0.21,1.70	8.81***
Parents' marital status	Widowed	1.48,6.02		0.35,2.59		0.19,1.28		0.39,2.88	
	Separated/Divorced	1.20,5.36		0.23,1.64		0.34,2.11		0.42,2.56	
	Other	1.14,1.03		0.56,2.74		0.60,3.52		0.56,2.86	
	No	0.94,4.78	0.94	0.25,2.04	1.61	0.16,1.39	3.51	0.23,1.89	0.91
Father graduated from high school	Yes	0.80,4.36		0.17,1.55		0.30,1.95		0.23,1.83	
	No	0.91,4.74	0.26	0.23,1.93	1.02	0.18,1.54	5.30*	0.21,1.77	1.13
Mother graduated from high school	Yes	0.84,4.37		0.18,1.58		0.30,1.91		0.25,1.90	
	<2 K	0.58,3.66	0.59	0.19,1.81	1.18	0.30,2.46	1.48	0.24,1.63	0.29
Monthly household income (AED)	>2 and ≤5 K	1.13,5.21		0.17,1.49		0.15,1.16		0.26,2.20	
	>5 and ≤8 K	0.73,3.91		0.13,1.17		0.26,1.74		0.22,2.00	
	>8 and ≤10 K	0.76,4.41		0.25,2.00		0.37,2.33		0.37,2.54	
	>10 and ≤12 K	1.01,4.76		0.36,2.26		0.28,1.52		0.23,1.80	
	>12 and ≤15 K	0.84,4.57		0.18,1.88		0.43,2.65		0.19,1.31	
	>15 and ≤20 K	0.90,4.64		0.06,0.53		0.23,1.38		0.26,1.71	
	>20 K	1.03,5.06		0.32,2.23		0.30,1.92		0.29,1.97	
	<15 K	0.91,4.65	0.48	0.20,1.70	1.00	0.27,1.83	1.28	0.23,1.84	0.70
>15 K	1.05,5.05		0.27,1.98		0.29,1.78		0.26,1.84		
Location of residence	Abu Dhabi	1.34,5.58	4.42***	0.37,2.42	3.26**	0.38,2.12	6.26***	0.32,2.21	2.59*
	Ajman	0.75,4.09		0.21,1.37		0.39,2.17		0.28,1.79	
	Dubai	1.06,5.05		0.17,1.80		0.17,1.08		0.32,2.24	
	Fujairah	0.84,4.34		0.12,0.99		0.12,1.52		0.12,0.92	
	RAK	0.38,3.19		0.13,1.15		0.15,1.85		0.24,2.25	
	Sharjah	1.17,5.45		0.16,1.37		0.32,2.76		0.16,1.46	
Residential crowding	No	0.57,3.69	0.97	0.17,1.69	2.30	0.20,1.80	0.01	0.11,1.11	0.62
	Yes	0.44,3.27		0.09,1.12		0.13,1.32		0.14,1.33	
Number of previous residence	None	1.16,5.24	1.70	0.25,1.90	0.25	0.30,1.96	1.33	0.27,2.10	1.83
	1	0.86,4.62		0.22,1.96		0.21,1.83		0.14,1.18	
	2	0.95,4.80		0.15,1.32		0.43,2.30		0.17,1.49	
	3	0.73,4.30		0.19,1.09		0.49,1.97		0.50,2.88	
Ever used illegal drugs	4	0.25,1.68		0.19,1.01		0.18,0.91		0.42,1.94	
	No	0.95,4.75	250.12***	0.23,1.85	21.10***	0.27,1.81	142.92**	0.23,1.86	375.06***
Unconventional drug use	Yes	10.19,13.50		1.39,3.88		3.17,6.83	*	2.10,5.82	
	No	1.14,5.25	1.07	0.25,1.96	0.31	0.31,2.04	0.08	0.28,2.09	0.06
	Yes	0.98,4.83		0.22,1.71		0.29,1.85		0.22,1.66	

Predictors of different forms of tobacco use among adolescents who reside in the United Arab Emirates (UAE).

Variable	Cigarette		Midwakh		Shisha		Other		Current Smoking		Uses >1 tobacco product	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Sex (Female)												
Male	5.77***	4.24-7.85	11.50***	6.68-19.81	3.68***	2.57-5.27	3.10***	2.34-4.11	4.34***	2.95-6.38	7.21***	5.00-10.39
Age (< 14 years)												
15 years	3.43**	1.49-7.89			1.83	0.78-4.32	0.14***	0.10-0.21			3.36*	1.34-8.43
16 years	3.45**	1.51-7.86			2.18	0.93-5.10	0.13***	0.09-0.19			3.34**	1.34-8.32
17 years	4.45***	1.96-10.12			3.65**	1.56-8.50	0.20***	0.14-0.30			5.57***	2.24-13.81
18 years	4.90***	2.00-11.97			5.56***	2.18-14.20	0.23***	0.14-0.39			6.35***	2.38-16.96
> 19 years	6.45***	2.49-16.65			5.90**	2.08-16.79	0.24***	0.13-0.46			7.99***	2.79-22.92
School (Public)												
Private							0.54***	0.41-0.70	1.77*	1.06-2.94	1.05	0.73-1.50
Exposed to tobacco smoke at home or with friends (Not at all)												
Occasionally	2.89***	2.15-3.88	4.06***	2.63-6.27	2.67***	1.85-3.87	2.01***	1.47-2.73			4.04***	2.86-5.69
Daily	8.09***	5.90-11.11	12.78***	8.17-19.99	4.81***	3.22-7.17	5.54***	4.04-7.59			10.67***	7.43-15.34
Ethnicity (South East Asia)												
GCC	1.85	1.01-3.41			1.40	0.58-3.37			2.77*	1.19-6.42	1.88	0.85-4.17
Arab/Middle East	2.71***	1.67-4.42			5.18***	2.79-9.61			3.10***	1.64-5.85	4.23***	2.28-7.82
Arab/Africa	2.42**	1.43-4.08			1.72	0.83-3.58			2.68**	1.31-5.47	2.37*	1.20-4.70
Western	2.13	0.79-5.79			7.98***	3.04-20.92			6.88**	2.01-23.61	3.49*	1.18-10.34
UAE	1.24	0.77-1.98			1.39	0.69-2.78			2.15*	1.10-4.22	1.60	0.81-3.13
None/Other	1.47	0.49-4.40			2.14	0.60-7.64			4.91**	1.62-14.91	1.51	0.42-5.46
Parents' marital status (Married)												
Widowed	1.10	0.69-1.76					1.06	0.65-1.72			1.21	0.73-2.00
Separated/Divorced	0.97	0.48-1.96					1.31	0.67-2.54			1.10	0.52-2.32
Other	2.72**	1.28-5.77					3.30**	1.60-6.78			3.47**	1.60-7.68
Location of residence (RAK)												
Ajman	2.61*	1.15-5.94							3.21**	1.36-7.53	2.47*	1.04-5.86
Dubai	2.23*	1.17-4.26							1.28	0.59-2.80	1.85	0.94-3.64
Fujairah	2.90**	1.17-4.26							1.09	0.45-2.67	1.12	0.51-2.49
Sharjah	2.63**	1.45-4.78							1.33	0.66-2.70	2.30**	1.24-4.27
UAQ	0.64	0.067-6.05							1.57	0.33-7.49	0.83	0.08-8.50
Abu Dhabi	2.83***	1.62-4.97							1.37	0.73-2.59	2.41**	1.35-4.29
Ever used illegal drugs (No)												
Yes	6.83***	3.58-13.05	5.11***	2.37-10.99	10.45***	4.91-22.23	11.92***	6.55-21.69	4.69**	1.54-14.35	8.48***	4.28-16.80

Conclusion and Implications

- Continued support of current anti-smoking strategies is crucial
- Anti-tobacco use campaigns and education programs should target males
- Anti-tobacco messages and education campaigns should target families and adolescents regarding the risks of all kinds of tobacco use
- Interventions can focus on peer groups and aim to alter social norms
- Might need to account for ethnicities in educational programs
- Public health programs should focus on further strengthening current educational campaigns to prevent adolescents from using illegal drugs

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