

Results of omnibus surveys with tobacco-related questions conducted in Ukraine in 2013-2020

All these surveys were conducted by the Kiev International Institute of Sociology with a sample of 2000+ adult dwellers of Ukraine aged 18 years or older. Questions for determining the smoking status were based on the GATS questionnaire.

Prevalence of smoking-related behaviors

While there were no statistically significant changes in the prevalence of daily and current smoking among either men or women between subsequent surveys (see Table 1), the change of proportion of daily smokers among men between 2013 and 2020 is significant.

The percentage of former smokers among men increased between 2017 and 2020, and, among women, it became significantly higher than in 2013 and 2014. There was an overall upward trend among women in the percentage that former smokers constitute among all those who have ever smoked daily from 13.8% in 2013 to 15.6% in 2014, to 18.7% in 2015, to 19.3% in 2017 and to 26.6% in 2019. The corresponding percentage among men was more stable in the range of 19-23%.

Although the percentage of daily and current smokers among women slightly decreased in 2013-2015, after 2015, it is on the rise again; some potential explanations of this trend are to follow in the tables below.

Table 1. Proportions of daily, current and former smokers among Ukrainian men and women, results of 2013, 2014, 2015, 2017, 2019, and 2020 omnibus surveys: percentages and 95% confidence intervals

	Year	Daily smokers	Current smokers	Ex-daily smokers
Men	2013	44.6 (41.4-47.9)	48.0 (44.8-51.3)	12.7 (10.5-14.8)
	2014	42.0 (38.8-45.2)	45.2 (41.9-48.4)	10.7 (8.7-12.7)
	2015	42.4 (39.2-45.6)	45.0 (41.8-48.2)	11.8 (9.7-13.9)
	2017	41.2 (38.0-44.4)	44.9 (41.7-48.1)	10.6 (8.6-12.6)
	2019	42.2 (39.0-45.4)	45.0 (41.8-48.3)	13.4 (11.2-15.6)
	2020	38.0 (34.9-41.1)	42.3 (39.1-45.4)	14.9 (12.6-17.2)
Women	2013	11.2 (9.3-13.0)	12.8 (10.8-14.7)	1.8 (1.0-2.6)
	2014	9.3 (7.6-11.0)	10.9 (9.1-12.7)	1.7 (0.9-2.5)
	2015	9.0 (7.3-10.7)	10.6 (8.7-12.4)	2.1 (1.2-2.9)
	2017	9.3 (7.6-11.0)	11.2 (9.4-13.1)	2.5 (1.6-3.4)
	2019	9.4 (7.7-11.2)	10.7 (8.9-12.5)	3.7 (2.6-4.8)
	2020	10.8 (9.0-12.6)	13.7 (11.7-15.7)	3.8 (2.7-4.9)
All	2013	26.2 (24.3-28.1)	28.6 (26.7-30.6)	6.7 (5.6-7.8)
	2014	24.0 (22.1-25.9)	26.3 (24.4-28.2)	6.2 (5.2-7.3)
	2015	24.1 (22.2-25.9)	26.1 (24.2-28.0)	6.5 (5.4-7.5)
	2017	23.7 (21.9-25.6)	26.4 (24.5-28.3)	6.1 (5.1-7.2)
	2019	24.2 (22.4-26.1)	26.2 (24.3-28.1)	8.1 (6.9-9.3)
	2020	23.1 (21.3-24.9)	26.6 (24.7-28.5)	8.8 (7.6-10.0)

To consider whether greater changes in smoking prevalence occurred in particular age groups, we conducted the stratified analysis in groups of people aged 30 or younger and those who are older than 30 (Table 2).

Table 2. Proportions of daily smokers and former daily smokers in 2013-2020, by gender and age group: percentages and 95% confidence intervals

Gender	Age	Year	N	Daily smokers	Ex-daily smokers
Men	18-30	2013	252	53.6 (47.4-59.7)	6.3 (3.3-9.4)
		2017	238	40.3 (34.1-46.6)*	3.8 (1.4-6.2)
		2019	215	42.8 (36.2-49.4)	5.1 (2.2-8.1)
		2020	210	39.5 (32.9-46.1)	7.6 (4.0-11.2)
	>30	2013	662	41.2 (37.5-45.0)	15.1 (12.4-17.8)
		2017	679	41.4 (37.7-45.1)	13.0 (10.4-15.5)
		2019	701	42.1 (38.4-45.7)	16.0 (13.3-18.7)
		2020	713	37.6 (34.0-41.1)	17.3 (14.5-20.0)
Women	18-30	2013	245	20.0 (15.0-25.0)	2.9 (0.8-4.9)
		2017	234	12.8 (8.5-17.1)	4.3 (1.7-6.9)
		2019	201	11.4 (7.0-15.8)	6.5 (3.1-9.9)
		2020	191	20.4 (14.7-26.1)	2.6 (0.4-4.9)
	>30	2013	872	8.7 (6.8-10.6)	1.5 (0.7-2.3)
		2017	884	8.5 (6.6-10.3)	2.1 (1.2-3.1)
		2019	910	8.9 (7.1-10.8)	3.1 (2.0-4.2)
		2020	923	8.7 (6.9-10.5)	4.0 (2.7-5.3)
All	18-30	2013	497	37.0 (32.8-41.3)	4.6 (2.8-6.5)
		2017	472	26.7 (22.7-30.7)*	4.0 (2.3-5.8)
		2019	416	27.6 (23.3-31.9)	5.8 (3.5-8.0)
		2020	401	30.4 (25.9-34.9)	5.2 (3.1-7.4)
	>30	2013	1534	22.8 (20.7-24.8)	7.4 (6.1-8.7)
		2017	1563	22.8 (20.7-24.9)	6.8 (5.6-8.1)
		2019	1611	23.3 (21.3-25.4)	8.7 (7.3-10.1)
		2020	1636	21.3 (19.3-23.3)	9.8 (8.3-11.2)

* - the difference with the previous measurement is statistically significant at 95% confidence level

Specific tobacco or nicotine delivery products

Exploratory questions to estimate the prevalence of smoking of various tobacco and nicotine delivery products were asked starting from 2017 (see Table 3).

Table 3. Percentage of current smokers who reported using various tobacco and nicotine delivery products within the last 30 days, by year, 2017, 2019, and 2020

Tobacco and nicotine delivery products	Year	N	% (95% CI) who used within the last 30 days
Flavored cigarettes	2017	538	8.7 (6.4-11.1)
	2019	525	18.7 (15.3-22.0) *↗
	2020	543	26.5 (22.8-30.2) *↗
e-cigarettes	2017	538	2.0 (0.8-3.2)
	2019	525	4.4 (2.6-6.1)
	2020	544	8.5 (6.1-10.8) *↗
Water-pipe	2017	537	1.1 (0.2-2.0)
	2019	527	7.0 (4.8-9.2) *↗
	2020	543	5.9 (3.9-7.9)
Heat-not-burn products	2019	524	1.9 (0.7-3.1)
	2020	543	7.4 (5.2-9.6) *↗
<i>N - number of respondents</i>			
<i>*↗ - there is a significant increase compared to the previous survey</i>			

Flavored cigarettes

Among all current smokers, proportion of those who reported using flavored cigarettes within the last 30 days significantly increased from 8.7% in 2017 to 18.7% in 2019 and 26.5% in 2020 (see Table 3).

Among both men and women current smokers, the proportion of those who regularly smoke flavored cigarettes significantly increased, and it more than doubled between 2017 and 2020 (see Table 4).

As regards men-smokers, the increase in the proportion of those who smoke flavored cigarettes was greater between 2017 and 2019. About one in three current smokers below 30 years smoke flavored cigarettes and one in six current smokers older than 30 years.

Among women-smokers, although the initial percentage of those who smoked flavored cigarettes was higher than among men, the increase was more sizable between 2019 and 2020. The increase in this proportion was significant among all women-smokers and among women older than 30 years.

Percentages of non-smokers who reported smoking flavored cigarettes (probably by mistake) did not show any significant changes.

Table 4. Percentage of current smokers and non-smokers who reported using flavored cigarettes within the last 30 days, by gender, age, and year, 2017, 2019 and 2020

Smoking status	Gender	Age	Year	N	% (95% CI)
Current smokers	Men	All	2017	412	6.8 (4.4-9.2)
			2019	413	17.9 (14.2-21.6) *↗
			2020	390	20.3 (16.3-24.2)
		18-30	2017	106	11.3 (5.3-17.4)
			2019	97	38.1 (28.5-47.8) *↗
			2020	99	28.3 (19.4-37.2)
		>30	2017	306	5.2 (2.7-7.7)
			2019	316	11.7 (8.2-15.3) *↗
			2020	291	17.5 (13.2-21.9)
	Women	All	2017	124	14.5 (8.3-20.7)
			2019	120	20.8 (13.6-28.1)
			2020	154	42.9 (35.0-50.7) *↗
		18-30	2017	34	20.6 (7.0-34.2)
			2019	30	33.3 (16.5-50.2)
			2020	52	55.8 (42.3-69.3)
>30		2017	90	12.2 (5.5-19.0)	
		2019	90	16.7 (9.0-24.4)	
		2020	102	36.3 (26.9-45.6) *↗	
Current non-smokers	Men		2019	503	3.0 (1.5-4.5)
			2020	533	3.9 (2.3-5.6)
	Women		2019	994	1.2 (0.5-1.9)
			2020	961	0.7 (0.2-1.3)
<i>N - number of respondents</i>					
<i>*↗ - there is a significant increase compared to the previous survey</i>					

E-cigarettes

Among all current smokers, proportion of those who reported smoking e-cigarettes at least once a month constituted 2% in 2017, 4% in 2019 and more than 8% in 2020 (see Table 3).

The percentage of both men and women current smokers who smoke e-cigarettes, significantly increased between 2017 and 2020 (Table 5). While overall proportion of e-cigarette users among current smokers is higher among women than men and among younger smokers than older ones, the most significant increase in this proportion was seen among men-smokers older than 30 years.

Table 5. Percentage of current smokers and non-smokers who reported using e-cigarettes and vapes within the last 30 days, by gender, age, and year, 2017, 2019 and 2020

Smoking status	Gender	Age	Year	N	% (95%CI)
Current smokers	Men	All	2017	413	1.7 (0.4-2.9)
			2019	412	3.9 (2.0-5.7)
			2020	390	6.4 (4.0-8.8) *↖
		18-30	2017	107	3.7 (0.1-7.3)
			2019	96	12.5 (5.9-19.1)
			2020	98	11.2 (5.0-17.5)
		>30	2017	306	1.0 (0.1-2.1)
			2019	316	1.3 (0.0-2.5)
			2020	292	4.8 (2.3-7.2) *↖
	Women	All	2017	126	2.4 (0.0-5.0)
			2019	120	5.8 (1.6-10.0)
			2020	152	13.2 (7.8-18.5) *↖
18-30		2017	35	2.9 (0.0-8.4)	
		2019	30	13.3 (1.2-25.5)	
		2020	51	17.6 (7.2-28.1)	
>30		2017	91	2.2 (0.0-5.2)	
		2019	90	3.3 (0.0-7.0)	
		2020	101	10.9 (4.8-17.0)	
Current non-smokers	Men		2019	505	0.2 (0.0-0.6)
			2020	532	1.1 (0.2-2.0)
	Women		2019	994	0.4 (0.0-0.8)
			2020	960	0.3 (0.0-0.7)

N - number of respondents

**↖ - there is a significant increase compared to the first listed survey*

Water-pipe

The proportion of regular water-pipe users among current smokers increased from 1% in 2017 to 7% in 2019 (see Table 3). This increase was similar among men and women and predominantly expressed among those younger than 30 years (see Table 6). No significant change was seen between 2019 and 2020.

Table 6. Percentage of current smokers and non-smokers who reported using water-pipes within the last 30 days, by gender, age, and year, 2017, 2019 and 2020

Smoking status	Gender	Age	Year	N	% (95% CI)
Current smokers	Men	All	2017	412	1.2 (0.2-2.3)
			2019	412	6.8 (4.4-9.2) *↗
			2020	391	5.4 (3.1-7.6)
		18-30	2017	106	2.8 (0.3-6.0)
			2019	96	19.8 (11.8-27.8) *↗
			2020	99	16.2 (8.9-23.4)
		>30	2017	306	0.7 (0.0-1.6)
			2019	316	2.8 (1.0-4.7)
			2020	292	1.7 (0.2-3.2)
	Women	All	2017	124	0.8 (0.0-2.4)
			2019	119	7.6 (2.8-12.3) *↗
			2020	153	7.2 (3.1-11.3)
		18-30	2017	34	2.9 (0.0-8.6)
			2019	29	31.0 (14.2-47.9) *↗
			2020	51	11.8 (2.9-20.6)
>30		2017	90	0.0 (0.0-0.0)	
		2019	90	0.0 (0.0-0.0)	
		2020	102	4.9 (0.7-9.1)	
Current non-smokers	Men		2019	504	1.6 (0.5-2.7)
			2020	532	1.5 (0.5-2.5)
	Women		2019	995	1.5 (0.8-2.3)
			2020	962	0.9 (0.3-1.5)
<i>N - number of respondents</i> <i>*↗ - there is a significant increase compared to the previous survey</i>					

Heat-not-burn products

The proportion of users of heat-not-burn products among current smokers increased significantly compared to the previous survey in 2019 from below 2% to over 7% in 2020 (see Table 3). However, due to small samples, this change was statistically significant only among men-smokers and those of them who are older than 30 years (see Table 7).

Table 7. Percentage of current smokers and non-smokers who reported using heat-not-burn products within the last 30 days, by gender, age, and year, 2019 and 2020

Smoking status	Gender	Age	Year	N	% (95%CI)
Current smokers	Men	All	2019	412	1.5 (0.3-2.6)
			2020	391	6.1 (3.8-8.5) *↗
		18-30	2019	96	4.2 (0.2-8.2)
			2020	99	13.1 (6.5-19.8)
		>30	2019	316	0.6 (0.0-1.5)
			2020	292	3.8 (1.6-6.0) *↗
	Women	All	2019	119	3.4 (0.1-6.6)
			2020	153	10.5 (5.6-15.3)
		18-30	2019	29	3.4 (0.0-10.1)
			2020	51	13.7 (4.3-23.2)
		>30	2019	90	3.3 (0.0-7.0)
			2020	102	8.8 (3.3-14.3)
Current non-smokers	Men		2019	503	0.2 (0.0-0.6)
			2020	532	1.3 (0.3-2.3)
	Women		2019	994	0.3 (0.0-0.6)
			2020	963	0.6 (0.1-1.1)
<i>N - number of respondents</i>					
<i>*↗ - there is a significant increase compared to the previous survey</i>					

Attitude towards tobacco control policies

Respondents were asked about their attitude towards some tobacco control policies:

- (1) the ban of the point-of-sale advertisement (in 2017-2020 surveys);
- (2) making more public places smoke-free (in 2019-2020) and
- (3) ban of e-cigarette sales to minors (in 2019-2020).

Questions on several more policies were added in 2020 (Table 9).

Regarding most policies, a majority of respondents 'strongly approved' all suggested measures. The level of support was higher among non-smokers and women but was similar among younger and older respondents.

With repeated questions (Point-of-sale tobacco advertising ban), the level of support increased significantly over time.

As regards the newly introduced questions, the issue of eliminating smoking rooms at workplaces received the lowest level of support.

Table 8. Percentages of respondents who expressed various attitudes to tobacco control policies, 2017-2020

Policy	Year	N	Strongly approve	Approve	Disapprove	Strongly disapprove	No answer
Point-of-sale tobacco advertising ban	2017	2026	46.3	21.8	11.0	8.1	12.8
	2019	2028	67.9	15.6	4.8	4.8	6.9
	2020	2038	78.3	9.0	4.0	4.7	3.9
Making more public places smoke-free	2019	2031	68.0	18.3	4.6	3.7	5.5
	2020	2038	77.9	12.5	3.3	2.9	3.5
Ban of e-cigarette sales to minors	2019	2033	76.3	12.5	2.2	2.6	6.5
	2020	2038	84.7	6.8	2.2	2.1	4.2
Ban of heat-not-burn products use in public places	2020	2038	80.7	9.4	2.6	2.5	4.9
Tax increases on tobacco, e-cigarettes, heat-not-burn to diminish product use	2020	2038	56.0	10.6	10.0	17.3	6.1
Ban of designated smoking rooms in workplaces	2020	2038	33.6	8.8	14.7	34.0	9.0
Increase of minimal age for tobacco sales to 21 years	2020	2038	76.2	10.9	3.9	5.8	3.2
<i>N - number of respondents</i>							

Plain packaging attitudes

A new block of questions was devoted to the expectations regarding the introduction of plain packaging.

1. The statement which was endorsed by the largest proportion of respondents was that 'Plain packs will be less attractive for kids and young people'. It was supported by 42% of respondents; 44% of women vs. 39% of men.
 2. 'Smokers will smoke fewer cigarettes per day' - 12.6% of respondents agreed altogether, women were more supportive than men (14.6% vs. 10.1%) and non-smokers more supportive than current smokers and especially ex-smokers (14.6% vs. 10.7% vs. 7.4%).
 3. 'Smokers will smoke less in public places' (7.6%). This was considered as more likely by people younger than 30 years (11.5%) compared to older people (6.7%).
 4. 'Smokers will more likely quit smoking' - 9.8% of respondents agreed.
 5. 'Introduction of plain packaging is an effective public health policy' - 12.4% of respondents agreed. This was more supported by women than men (14.1% vs. 10.4%) and non-smokers vs. smokers (14.1% vs. 9.6%).
- No support to any of the above-mentioned statements was expressed by 31.3% respondents (34.2% of men vs. 28.9% of women) and more likely by smokers (38.5%).

Conclusions

1. Percentage of former smokers gradually increases among both men and women in Ukraine.
2. Percentage of daily smokers among men is significantly lower in 2020 compared to 2013.
3. The decline in smoking prevalence among women which was seen in earlier years is overturned. The likely cause of this unfavorable trend is related to the introduction of various new tobacco and nicotine delivery products which became attractive for substantial proportions of women-smokers.
4. Percentage of those who use flavored cigarettes, e-cigarettes, heat-not-burn products or water-pipe significantly increased among both men and women current smokers compared to earlier surveys.
5. Tobacco control policies which are longer on public health agenda get stronger support from the survey participants: the majority expressed 'strong approval' of several suggested policies: (1) the ban of the point-of-sale advertisement; (2) making more public places smoke-free and (3) ban of e-cigarette sales to minors. The support increased since the previous survey. The support is also high for the (1) Ban of heat-not-burn products use in public places, (2) Tax increases on tobacco, e-cigarettes, and heat-not-burn products, (3) Increase of minimal age for tobacco sales to 21 years. However, only a minority supports the ban of designated smoking rooms at workplaces.

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