



**Palestinian National Authority  
Palestinian Central Bureau of Statistics**

# **Smoking and Tobacco Consumption, 2021**

**User Guide**

**March, 2023**

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## **Introduction**

The Survey of Smoking and Tobacco Consumption, 2021 represents the first specialized survey in Palestine on smoking, with financial and technical cooperation from the World Health Organization (WHO), the Statistical, Economic and Social Research and Training Centre for Islamic Countries (SESRIC), and the Centers for Disease Control and Prevention (CDC). This is to meet the needs of statistical data users and decision makers to take appropriate interventions to reduce this phenomenon and to develop comprehensive policies and programs to combat tobacco consumption.

The Palestinian Central Bureau of Statistics implemented the survey based on the Global Adult Tobacco Survey (GATS). As a household survey of individuals 18 years and above. The topics of the Smoking and Tobacco Consumption Survey cover a wide range of indicators as the prevalence of smoking in Palestine, the basic characteristics of the respondents, tobacco use (smokers and non-smokers), electronic cigarettes use, cessation, second-hand smoke, economics, Media, and knowledge, attitudes and perceptions towards tobacco use, in the Palestinian society.

## **Concepts and Definitions**

### **Daily Smoker:**

Daily means smoking at least one tobacco product every day or nearly every day over a period of a month or more.

### **Tobacco Products:**

Products made in whole or in part from tobacco leaves as a raw material intended for human consumption through smoking, sucking, chewing or inhaling.

### **Smoked Tobacco Products:**

Includes manufactured cigarettes, hand-rolled cigarettes, cigars, cheruts, pipes, water-pipes, kretek and any other form of tobacco consumed by smoking.

### **Smokeless Tobacco Products:**

Includes moist snuff, dry snuff, plug, dissolvable, loose leaf, and any other tobacco product that consumed by sniffing, holding in the mouth or chewing.

### **Electronic Cigarettes:**

E-cigarettes are devices that use batteries to heat a liquid that may or may not contain nicotine (but not tobacco), but also typically contain additives, flavours and chemicals that can be toxic. Electronic cigarettes are also called smoke pens, electronic pipes, or electronic hookahs, and do not include heated tobacco products.

### **Heated Tobacco Products (HTPs):**

Tobacco products that produce aerosols containing nicotine and toxic chemicals upon heating of the tobacco or activation of a device containing the tobacco. Users inhale these aerosols during a process of sucking or smoking involving a device. They contain highly addictive substance nicotine, non-tobacco additives and are often flavoured. Examples of HTPs include IQOS, Ploom, Glo and PAX

### **Chronic Disease:**

A disorder or impairment of the normal state of well-being which need continuous treatment, diagnosed by a specialist.

## **Survey Questionnaires**

The main objective of collecting data on smoking and tobacco consumption is to obtain basic information about the prevalence and characteristics of this phenomenon among individuals (18 years and above). This will provide an opportunity for researchers, scholars and decision makers to carry out appropriate interventions to reduce this phenomenon and to develop comprehensive policies and programs to combat tobacco consumption. This survey, as it follows a unified global methodology, also allows for regional and international comparison.

The questionnaire is the key tool for data collection. It must be conformed to the technical characteristics of fieldwork to allow for data processing and analysis. The survey questionnaire comprised the following parts:

- Questionnaire Cover: Includes the identification data and quality control.
- Part one: Data of households' members and social data.
- Part two: Includes data related to individuals (18 years and above), and the section covers identification data and characteristics of individuals (18 years and above), in addition to:
  - Tobacco consumption.
  - Cessation.
  - Smokeless tobacco consumption.
  - Exposure to secondhand smoking.
  - The use of heated tobacco products.
  - The use of electronic cigarettes.
  - Water pipe smoking.
  - Anti-smoking policies.
  - Expenditure on smoking.

## **Data Set Linkage**

The data set for users consists of one file.

## **Target Population**

The target population includes all Palestinian household and all individuals (18 years and above) and living with their households normally in the State of Palestine in 2021. And the domains were at the level of the region, the governorate and the locality type (urban, rural, camp).

## **Sampling**

The sampling frame consists of all enumeration areas which were enumerated in 2017, each enumeration area consists of buildings and housing units with average of about 124 households. These enumeration areas are used as primary sampling units (PSUs) in the first stage of the sampling selection.

## **Sample Size**

The estimated sample size is 9,232 households in the West Bank and Gaza Strip.

## Sample Design

The sample is three stage stratified cluster (pps) sample:

**First Stage:** Selection of a stratified sample of 577 EA with (pps) method.

**Second Stage:** Selection of a systematic random area sample of 16 households from each enumeration area selected in the first stage.

**Third Stage:** We selected one person in the household of the (18+) age group in a random method using Kish tables, so that the sex of the person chosen by the serial questionnaire number in the sample. If it is an odd number, we select a male household member and if it is an even number, we select a female household member.

## Sample Strata

The population was divided into the following strata:

1. Governorate (17 Governorates, where Jerusalem was considered as two statistical areas).
2. Locality type (urban, rural, refugee camp).

## Sample Weights

### Weights Calculation of households and individuals 18+

The weight of statistical units (sampling unit) in the sample is defined as the mathematical inverse of the selection probability, where the sample of the survey is a three-stage stratified cluster (pps) sample. In the first stage, we calculate the weight of enumeration areas which depending on the probability of each enumeration area. then In the second stage, we calculate the weight of households in each enumeration area. Initial household weights resulted from the product of the weight of the first stage and the weight of the second stage. The final household weights were obtained after adjustment of the initial weights with the household estimates for mid-2021 according to design strata (governorate, locality type).

Weights for ROSTER ( all individuals ) were file computed by following :

- 1- adding the household weights (wh) for each person household which known as the primary weight of person.
- 2- adjust the primary persons weights to be combatable with the total population at the middle 2021 on the levels: (region (West Bank ,Gaza Strip), sex (male, female), five-year age group (17 group).
- 3- finally we obtain the final person weight in each adjusted level, and getting the relative weight by dividing each person weight by the average of weights.

Weights for (18+ year) file computed by following:

- 1- adding the household weights (wh) for each person.
- 2- We calculate the primary person weight by multiplying (the household weight which the person belong to) and the # of person in the age group (18+ year ) by gender in the household which the person belong to.
- 3- adjust the primary persons weights to be combatable with the population persons size at the middle of 2021 by these adjusted levels: (region (West Bank ,Gaza Strip), gender (male, female), 14 age group (18-19, 20-24, ...,80+)).

- 4- finally we obtain the final person weight in each adjusted level which the person belong to.

## Variance Calculation

It is necessary to compute standard errors of the principal survey estimations, so that a user can identify the accuracy of estimations and the survey reliability.

Variance was calculated for the most important indicators. There is no problem at the level of dissemination of the mentioned estimates at the national level and the level of governorates for both the West Bank and Gaza Strip.

**Summary of Variance Calculation for Core Survey Indicators**

Indicator	Estimate %	Standard Error %	95% Confidence Interval		Coefficient of Variation %
			Lower %	Upper %	
Percentage of Individuals (18 Years and above) in Ramallah & Al-Bireh Governorate Who are Current Smokers, 2021	42.6	3.4%	36.1%	49.3%	8.0
Percentage of Individuals (18 Years and above) in Tulkarm Governorate Who are Current Smokers, 2021	49.0	2.8%	43.5%	54.3%	5.7
Percentage of Current Smokers in the Age Group (25-44 years) in Palestine, 2021	34.5	0.9%	32.8%	36.2%	2.5
Percentage of Male Individuals (18 Years and above) in Palestine Who are Current Smokers, 2021	54.4	1.1%	52.3%	56.4%	1.9
Percentage of Individuals (18 Years and above) with Higher Education in Palestine Who are Current Smokers, 2021	25.7	1.2%	23.5%	28.1%	4.6

## Reference period:

Data collection started on 14/09/2021 and was completed in all governorates on 01/11/2021.

## Data collection:

The data of the Smoking and Tobacco Consumption Survey, 2021 were collected through personal interviews using PC-tablets in both the West Bank and Gaza Strip, except for Jerusalem Governorate (J1), where the traditional paper questionnaire method was used due to its specificity, and the application was designed according to a supported survey questionnaire with automated edit rules to check the logicity and consistency of the data, as well as supported by alert or warning messages in the event of illogical and inconsistency in the data. As for the Jerusalem Governorate questionnaire (J1), its data were entered on computers in the entry hall at the headquarters, and the same designed application for tablets was used.

**Training:** In preparation to the implementation of the survey according to the plan, training session was organized at the headquarters of PCBS in the West Bank and Gaza Strip office through the video conference technology and in conjunction with the West Bank team. The training lasted for 4 days during the period 05-09/09/2021, where it included theoretical lectures in which fieldworkers and field supervisors were trained on various field operations in general

before the start of the survey, in order to provide them with the basic skills needed to collect information and to consolidate the concepts and definitions contained in the questionnaire, the mechanism of completing the questionnaire, in addition to the mechanism and technique of conducting interviews in the field and ways of dealing with developments faced by the team at fieldwork.

Training on the practical side also was included in the training program, where the work was to train fieldworkers and field supervisors were trained to collect survey data by conducting personal interviews in both the West Bank and Gaza Strip, and the interview was managed through an application on the tablet device that reflects the survey questionnaire. In Jerusalem (J1), the data were collected using the traditional paper questionnaire.

The fieldwork team (supervisors and fieldworkers) was appointed based on the highest marks in the results of the daily exams, the final exam and the commitment to attend at the end of the training course.

## Response Rate

The survey sample consists of about 9,232 households of which 7,763 households completed the interview; whereas 5,049 households from the West Bank and 2,714 households in Gaza Strip. Weights were modified to account for non-response rate. The response rate in the West Bank reached 85.4% while it reached 94.2% in Gaza Strip.

**Response, Non-Response Cases and Over Coverage for the Households**

<b>Response, Non-Response Cases and Over Coverage</b>	<b>No. of Cases</b>
Household completed	<b>7,763</b>
<b>Non-response cases</b>	
Traveling households	137
No one at home	410
Refused to cooperate	366
No available information	39
Other	74
<b>Over coverage cases</b>	
Unit does not exist	24
Vacant housing unit	419
<b>Total sample size</b>	<b>9,232</b>

## Response and Non-response Formulas:

$$\text{Percentage of over coverage errors} = \frac{\text{Total cases of over coverage}}{\text{Number of cases in original sample}} \times 100\% \\ = 4.8\%$$

$$\text{Non response rate} = \frac{\text{Total cases of non-response}}{\text{Net Sample size}} \times 100\% \\ = 11.7\%$$



Net sample = Original sample – cases of over coverage

Response rate = 100% - non-response rate  
= 88.3%

#### **Treatment of Non-response Cases Using Weight Adjustment:**

$$fg = \frac{\sum_{ng} wi - \sum_{o.c} wi}{\sum_{rg} wi}$$

Where

$wi$ : the primary weight before adjustment for the household  $i$

$g$ : adjustment group by ( governorate, locality type ).

$fg$ : weight adjustment factor for the group  $g$ .

$\sum_{ng} wi$  : Total weights in group  $g$

$\sum_{o.cg} wi$  : Total weights of over coverage cases

$\sum_{rg} wi$  : Total weights of response cases

We calculate  $fg$  for each group, and we obtain the final household weight ( $w'i$ ) by using the following formula:

$$w'i = wi * fgi$$

## **Data Quality**

There are many aspects related to the concept of data quality. This comprises the initial planning of the survey, the dissemination of the results, and how well users understand and use the data. There are three components to the quality of statistics: accuracy, data comparability, and quality control.

To ensure the high quality of the data, a series of steps were undertaken:

- Inspect and review all the tools of the survey.
- Training of researchers on the questionnaires for sufficient time according to international recommendations and by qualified trainers.
- The constant supervision of all areas and all phases of fieldwork.
- Develop automated data editing mechanism consistent with the use of technology in the survey and uploading the tools for use to clean the data entered into the database and ensure they are logic and error free as much as possible. The tool also accelerated conclusion of preliminary results prior to finalization of results.
- In Jerusalem Governorate (J1), there was an office editing for the questionnaire due to the use of paper questionnaires, then the questionnaires were entered.
- on the questionnaires, then the questionnaires were entered.
- Continuous examination of the data entered in terms of consistency and rationality.
- After receipt of the raw data file it has been cleaned and examined the abnormal values and examine the consistency between the different questions on the questionnaire .

The data accuracy test includes multiple aspects of the survey, the most notably is sampling errors and non-sampling errors which refers to the staff and survey tools, as well as survey response rates and their most important impact on estimates. This section includes the following:

### **Sampling Errors**

Data of this survey are affected by sampling errors due to the use of a sample and not a complete enumeration for the target population. Therefore, certain differences are expected to appear in comparison with the real values obtained through censuses. Variance was calculated for the most important indicators.

### **Non- Sampling Errors**

Non-sampling errors are probable in all stages of the project, during data collection or processing. This is referred to as non-response errors, response errors, interviewing errors, and data entry errors. To avoid errors and reduce their effects, great efforts were made to train the fieldworkers intensively. They were trained on how to carry out the interview, what to discuss and what to avoid, through practical and theoretical training during the training course.

Also, data entry employees were trained on the entry program that was examined before starting the data entry process. Continuous contacts with the fieldwork team were maintained through regular visits to the field and regular meetings during the different field visits. Problems faced by fieldworkers were discussed to clarify issues and provide relevant instructions.

The implementation of the survey encountered non-response, where the case (household was not present at home) during the fieldwork visit become the high percentage of the non-response cases. The total non-response rate reached 11.7% which is very low once compared to the household surveys conducted by PCBS. The refusal rate reached 4.1% which is relatively low

## Derived Variables

Variable name	Description	Values
Region	Region	1. West Bank 2. Gaza Strip
Locality_type	Locality type	1. Urban 2. Rural 3. Camps
educational_level	Educational level	1. No education 2. Elementary 3. Preparatory 4. secondary 5. higher
smoker	Detailed Tobacco Smoking Status	1. Daily tobacco smoker 2. Occasional tobacco smoker, formerly daily 3. Occasional tobacco smoker, never daily 4. Former daily tobacco smoker 5. Former occasional tobacco smoker 6. Never smoker of tobacco
dcsmk	Daily Cigarette Smokers	1. YES 2. NO
cigday	Average Number of Cigarettes Smoked per Day	Value
cigday5	Average Number of Cigarettes Smoked per Day in 5 Categories	1. Less than 5 Cigs/day 2. 5-9 Cigs/day 3. 10-14 Cigs/day 4. 15-19 Cigs/day 5. +20 Cigs/day
numcig	Number of manufactured cigarettes bought at last purchase (all manuf cig smokers)	Value
paycig	Average price paid per manufactured cigarette (NIS)	Value
nummanuf	Number of manufactured cigarettes smoked (all manuf cig smokers)	Value

Variable name	Description	Values
monthcost	Total Monthly Expenditures on Manufactured Cigarettes (NIS)	Value
paympk	Average price paid per 20 manufactured cigarettes (NIS)	Value
paympk100	Average price paid per 100 manufactured cigarettes (NIS)	Value
agesmk	Age at Daily Smoking Initiation for respondents age 20-34	Value
AGESMK4	Age at Daily Smoking Initiation in 4 Categories	1. Less than 15 2. 15-16 yrs 3. 17-19 yrs 4. 20 yrs or older
agqsmk	Age quit Smoking	Value
yrsqtsmk	Time since Quitting Smoking in Years among former daily smokers	Value
YRSQTSMK4	Time Since Quitting Smoking in Years in 4 Categories among former smokers	1. Less than 1yr 2. 1-4 yrs 3. 5-9 yrs 4. +10 yrs
chronic	Do you have any chronic diseases	1. YES 2. NO
shspubtrans	Exposure to SHS on Public Transportation Among All Adults	1. YES 2. NO or didn't use any public transportation
shspubtransx	Exposure to SHS on Public Transportation Among Those Who Visited	1. YES 2. NO
csmker	Current Smoker	1. YES 2. NO
tproducts	tobacco products	1. manucig 2. handroll 3. Cigar 4. Shisha 5. other 6. more than one type

<b>Variable name</b>	<b>Description</b>	<b>Values</b>
qtsmk121	Smoking Quit Attempt in the Past 12 Months	1. YES 2. NO
sawciglabe1	Noticed Health Warning Labels on Cigarette Packages Among Current Tobacco Smokers	1. YES 2. NO
lablcigpk	Thinking of Quitting Because of Health Warning Labels on Cigarette Packages Among Current Tobacco Smokers	1. YES 2. NO

## **Data processing**

Data entry were performed using Data Collection Application (kobocollect). The design of the data entry used to develop relationships of data to control the data and detect errors, where through this program to connect all parts and take into account the logical answer. And the SPSS software program was used to extract and modify errors and discrepancies, to prepare clean and accurate data ready for tabulation and dissemination.