State of Palestine
Palestinian Central Bureau of Statistics

Smoking and Tobacco Consumption, 2021

(Main Findings)

July, 2022

PCBS

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Palestinian Central Bureau of Statistics

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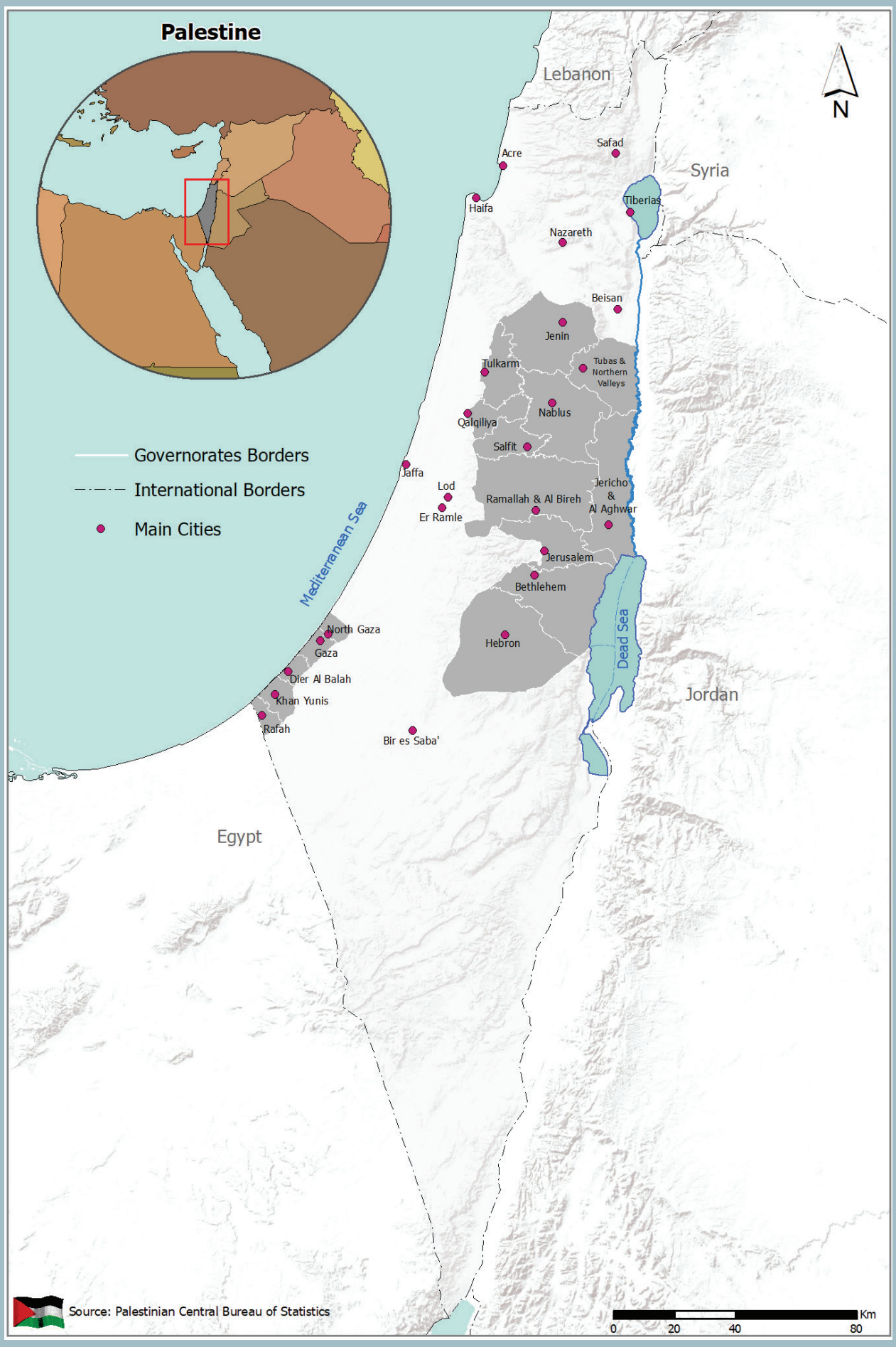
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Notice for Users

- The data of this survey were collected during the period from 14/09/2021 to 01/11/2021, as the interviews reference date for the questions of the survey (week, month, 6 months and 12 months).
- The symbol (-) is used in the tables of this report, and it indicates that there are no existing observations.
- Totals in some tables may not equal 100% due to rounding.

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Introduction

In 1998, the World Health Organization, the Centers for Disease Control and Prevention, and partners initiated the Global Tobacco Surveillance System (GTSS) to assist countries in establishing tobacco control surveillance and monitoring programs. GTSS includes collection of data through three school-based surveys: the Global Youth Tobacco Survey, the Global School Personnel Survey, and the Global Health Professions Student Survey, and one household survey: the Global Adult Tobacco Survey (GATS). GTSS provides a consistent framework for surveillance including standard sampling procedures, core questionnaire items, training in field procedures, data analysis, and consistent reporting across all participating countries. GTSS also enhances the role of government and the nongovernmental sector in surveillance, monitoring of tobacco use and key tobacco control indicators, and policy and program interventions.

The Survey of Smoking and Tobacco Consumption, 2021 represents the first specialized survey in Palestine on smoking, and since the main task of the Palestinian Central Bureau of Statistics (PCBS) is to keep pace with the conditions experienced by the Palestinian society and provide data on the most important trends and changes that occur in the aspects of social and economic life. The work on this survey came in response to meeting the needs of statistical data users and decision makers to conduct appropriate interventions to reduce this phenomenon and to develop comprehensive policies and programs to combat tobacco consumption.

The survey covers a wide range of indicators that highlight the extent of the prevalence of smoking in Palestine, the characteristics of smokers and the most prevalent types of tobacco, in addition to exposure to secondhand smoking, as well as knowing the extent of media participation by publishing messages to combat tobacco consumption and advertisements related to encouraging smoking.

This report consists of four main chapters; the first chapter presents the terms, indicators, and classifications used in the survey, and the second chapter covers the main findings, while the third chapter contains the methodology, which presents the objectives and the survey questionnaire, the sampling frame, and the sample, as well as the field operations and data processing, and the fourth chapter deals with the quality and evaluation of the survey data by presenting the mechanisms that ensure the accuracy of the data. This process is carried out through dealing with the procedures that guarantee data accuracy and reduce possible sampling and non-sampling errors and also deals with the response rates of the survey.

PCBS hopes this report shall fill a gap in statistical data and can be used as reference for the Palestinian official statistics to help planners and decision makers make informed development decisions and plans.

Dr. Ola Awad

President of PCBS

July, 2022

Chapter One

Terms, Indicators and Classifications

1.1 Terms and Indicators

The following terms used in this report are defined in accordance with the glossary and guide on statistical indicators issued by PCBS, certified on the latest international recommendations in statistics, and consistent with international systems.

Housing Unit:

A housing unit is a separate and independent place (a building or part of a building) intended for habitation by a single household, or one not intended for habitation but occupied as a housing unit by a household at the time of the census. The housing unit may be an occupied or vacant, an occupied non-conventional housing unit or any other place occupied as housing unit by a household at the time of the census. This category includes housing unit of various levels of permanency and acceptability for habitation.

Household:

One person or a group of persons with or without a household relationship, who live in the same housing unit, share meals and make joint provision of food and other essentials of living.

Head of Household:

The person who usually lives with the household and is recognized as head of household by its other members. Often he/she is the main decision maker and is responsible for financial support and welfare of the household.

Household Membership:

Persons staying in the dwelling unit are considered members of the household if the dwelling unit is their usual or only place of residence.

Refugee Status:

This status relates to the Palestinians who were forced to leave their land in Palestine, which was occupied by Israel in 1948. It applies to their male children and grandchildren.

1. Registered Refugees: It applies to registered refugees holding refugee registration cards issued by UNRWA.
2. Non-Registered Refugees: It applies to unregistered refugees who do not hold refugee registration cards issued by UNRWA.
3. Non-Refugees: It applies to any Palestinian not categorized under any of the two aforementioned statuses.

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.

Chapter Two

Main Finding

This chapter presents the main results of the Smoking and Tobacco Consumption Survey, 2021, which deals with the main topics related to the reality of smoking and the characteristics of tobacco smokers in Palestine.

2.1 Prevalence of Tobacco

The percentage of individuals (18 years and above) who smoke one or more smoked tobacco (manufactured cigarettes, hand-rolled cigarettes, cigars, and water-pipes) in Palestine increased to 31.3% of the total individuals (18 years and above) in the year 2021, while this percentage was 22.5% for 2010. At the region's level, the results of the survey indicated a large gap between the West Bank and Gaza Strip. There's a clear increase in the prevalence of smoking among individuals (18 years and above) in the West Bank, as it increased from 25.5% in 2010 to 40.1% in 2021 while it increased in Gaza Strip from 14.6% in 2010 to 17.0% in 2021.

Percentage of Smoking among Individuals (18 Years and above) by Region and Sex for the Years 2010 and 2021

Region	Both Sexes		Males		Females	
	2010*	2021	2010*	2021	2010*	2021
Palestine	22.5	31.3	41.9	54.4	2.3	7.7
West Bank	25.5	40.1	49.5	67.2	3.5	12.2
Gaza Strip	14.6	17.0	28.2	33.3	0.2	0.5

* Source: Palestinian Central Bureau of Statistics. Palestinian Family Survey, 2010

The prevalence of smoking among males (18 years and above) in Palestine reached 54.4%, compared to 7.7% among females. The percentage of male smokers constituted 67.2% among males (18 years and above) in the West Bank, compared to 33.3% in Gaza Strip. This percentage reached 12.2% among females in the West Bank, compared to only 0.5% of the females in Gaza Strip in the same age group.

In a related context, results showed a large variation in smoking rates at the level of the type of locality, as 40.6% of all individuals (18 years and above) in the rural areas reported that they currently use any type of smoked tobacco, compared to 29.5% of all individuals (18 and above) in the camps and 28. 8% in urban areas. (See Table 2).

Results of the survey indicated that the smoking habit is more prevalent among individuals in the age group 25-44 years in Palestine, where the percentage reached 34.5% of the total number of individuals in this age group. While the percentage of the smoking habit was less prevalent among the elderly (60 years and above) as it reached 16.2%. (See Table 2).

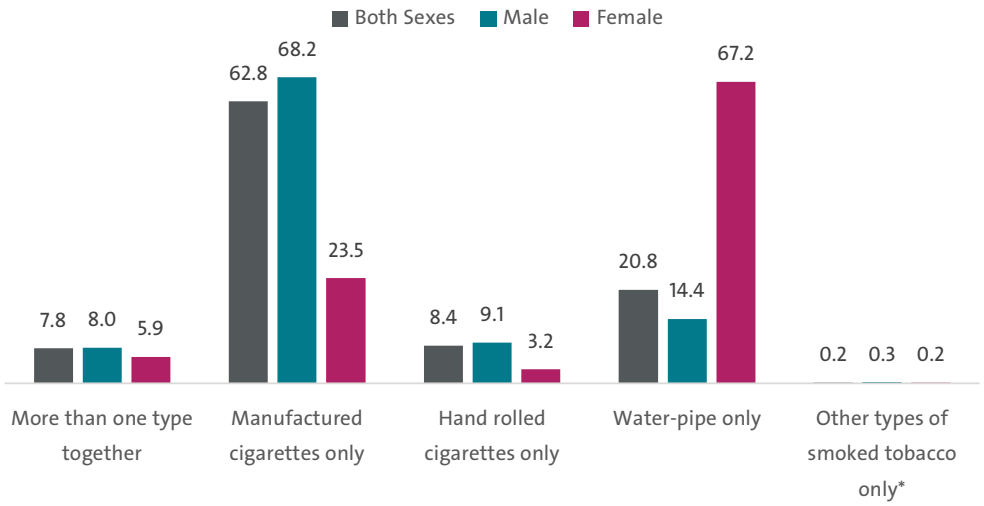
As for the governorates, results showed that Tulkarm Governorate in the West Bank recorded the highest percentage of smokers during 2021, which amounted to 49.0% of all individuals (18 years and above) in the governorate. While Salfit Governorate was the lowest percentage of smokers in the West Bank, where the percentage of smokers reached about 29.9% of all individuals (18 years and above). In Gaza Strip, Rafah Governorate recorded the highest percentage of smokers among the governorates of Gaza Strip, reaching 20.2% of all individuals (18 years and above) in the governorate, and the lowest percentage was in Khan Younis governorate, reaching 15.5%. (See Table 2).

2.2 Types of Smoked Tobacco

Smoked tobacco products are classified as any type of smoked tobacco, including manufactured cigarettes, hand-rolled cigarettes, cigars, pipes, water-pipes and any other form of tobacco consumed by smoking. Manufactured cigarettes are the most common type of smoked tobacco among smokers. Smokers of manufactured cigarettes without using other types of tobacco accounted for 62.8% of the total individuals currently smoking (18 years and above), 68.2% among current male smokers and 23.5% among female smokers.

While water-pipes smokers who don't use other types of tobacco constituted 20.8% of the current smokers, 14.4% of all current male smokers, compared to 67.2% of all current female smokers. Results also showed that individuals (18 years and above) who use more than one type of tobacco products constituted 8.4% of the total current smokers. (See Table 3).

Percentage Distribution of Current Smokers of Individuals (18 Years and above) by Type of Tobacco Used, 2021



*: Other types such as pipes and cigars.

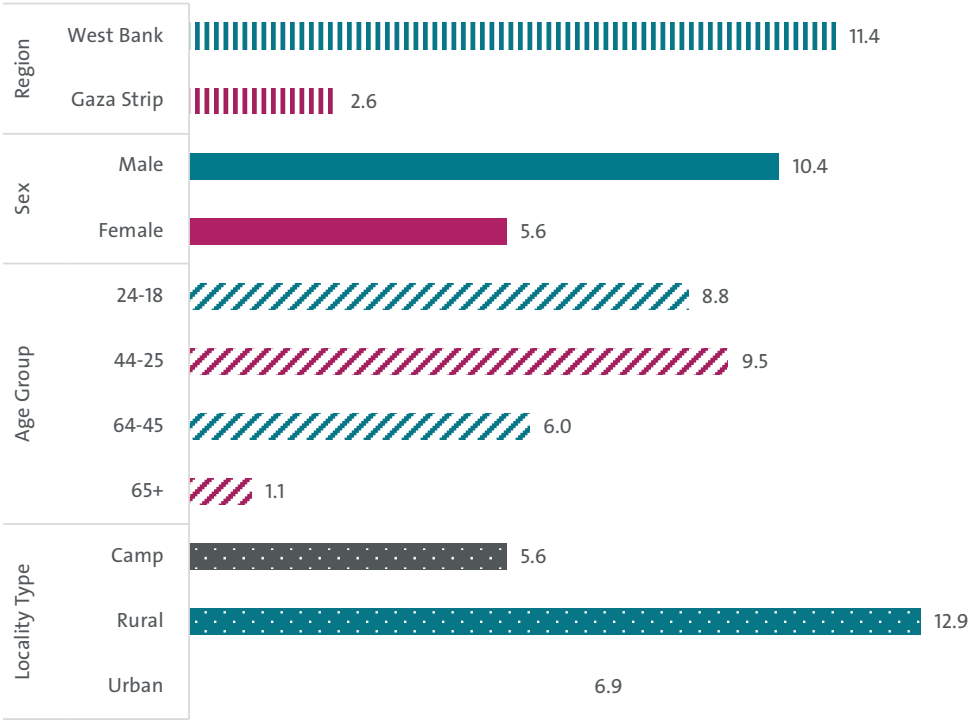
In the same context, the data showed that the average number of cigarettes smoked per person per day amounted to about 20 cigarettes, and this average amounted to 22 cigarettes in the West Bank compared to 11 cigarettes in Gaza Strip. (See Table 4). Data also showed that the average age at starting smoking among individuals in the age group (20-34 years) was 18 years in Palestine, with a clear discrepancy between males and females, reaching 17.7 years among males compared to 21.6 years among females. (See Table 5).

Water- pipe Smoking

The percentage of Water-pipe smoking among all individuals (18 years and above) in Palestine reached 8.0%. Hence, results showed a great discrepancy at the regional level, reaching 11.4% in the West Bank compared to 2.6% in Gaza Strip. This percentage amounted to 10.4% of all males (18 and above), compared to 5.6% of all females (18 and above). (See Table 2).

Concerning the locality type, results showed that the percentage of water-pipe smoking is more prevalent among individuals (18 years and above) in rural areas, reaching 12.9% compared to 6.9% among urban areas and 5.6% in camps. At the age level, results showed that individuals in the age group (25-44 years) used water-pipes with a percentage of 9.5% of all individuals in this age group, followed by the age group (18-24 years) with a percentage of 8.8%. (See Table 2).

Percentage of Individuals (18 Years and above) Who Smoke Water-pipe by Demographic Characteristics, 2021



2.3 Heated Tobacco Products

In terms of heated tobacco products, which are modern tobacco products, results showed that 19.7% of the total individuals (18 years and above) in Palestine had previously heard of heated tobacco products, and only 1.1% of them used these products. (See Table 10).

2.4 Electronic Cigarettes

Results of the survey showed that 75.7% of the total individuals (18 years and above) in Palestine had previously heard of electronic cigarettes (Vaping devices), of whom 2.7% used these products. This percentage reached 4.1% among males, compared to 1.0% among females. (See Table 11).

2.5 Smoking Cessation

3.7% of individuals (18 years and above) reported that they are former smokers and have quit smoking permanently (at the time of the survey implementation). The average age at quitting smoking was 36 years. While 21.2% of individuals who are currently smoking reported that they tried to quit smoking during the past 12 months of the survey. This percentage varied greatly between the West Bank and Gaza Strip, reaching 18.4% and 31.9 %, respectively. In a related context, 15.3% of manufactured cigarette smokers reported that they considered quitting after noticing the warning messages about the dangers of smoking on cigarette packages. (See Tables 6 and 12).

2.6 Exposure to Secondhand Smoke

Results showed that 64.1% of individuals (18 years and above) were exposed to tobacco smoke at home during the 30 days preceding the survey, while 54.0% of individuals indicated that they were exposed to tobacco smoking while using public transportation. As for exposure to secondhand smoking in the workplace, results of the survey showed that 58.4 % of individuals (18 years and above) who are currently employed have been exposed to tobacco smoke in their workplace during the 30 days preceding the survey. (See Tables 13-16).

Percentage of Individuals (18 years and above) Who were Exposed to Secondhand Smoke by Place of Exposure and Region, 2021

2.7 Media and Social Networks

30.4% of individuals (18 years and above) noticed warning information about the dangers of smoking or tips to stop smoking through social media platforms during the 30 days preceding the survey, while 17.6% of individuals viewed this information through television, street advertisements and posters, and in lower percentages through radio and newspapers/magazines; 16.1% and 9.9%, respectively. (See Table 18).

Chapter Three

Methodology

This chapter presents the scientific methodology used in the planning and implementation of the Smoking and Tobacco Consumption Survey, 2021, which was implemented during the period (14/09/2021 to 01/11/2021), and includes the design of basic surveying tools and methods to collect, process and analyze the data of survey.

3.1 Survey Objectives

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 objectives of the survey can be summarized as follows:

- Knowing the prevalence of smoking among individuals (18 years and above.(
- Knowing the characteristics of smokers.
- Providing data on the types of tobacco consumed and the most prevalent ones.
- Providing data on smoking cessation.
- Providing data on exposure to secondhand smoke.
- Providing data on the availability and accessibility of tobacco products.
- Knowing the extent of media participation by publishing messages to combat tobacco consumption and advertisements related to encouraging smoking.

3.2 Survey Questionnaire

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:

1. Questionnaire Cover: Includes the identification data and quality control.
2. Part one: Data of households' members and social data.
3. 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.

3.3 Sampling and Frame

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

3.3.1 Target Population

The target population includes all individuals (18 years and above) and living with their households normally in the State of Palestine in 2021.

3.3.2 Sampling Framework

The sampling frame consists of all enumeration areas which were enumerated in 2017, each numeration 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.

3.3.3 Sample Size

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

3.3.4 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.

3.3.5 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).

3.3.6 Domains

1. State of Palestine
2. Governorate (16 Governorates) and the center of the main cities (Nablus, Ramallah, Hebron, Gaza).

3.3.7 Weighting

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 systematic random sample. In the first stage, we calculate the weight of enumeration areas based on the probability of each enumeration area. 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).

The weight of the individual (18 years and above) is calculated in the survey by giving each individual's/member's his/her household final weight. The individual's initial weight is the product of multiplying the weight of the individual's household by the number of members (18 years and above) according to gender in the household of this individual. Then, these weights are adjusted based on population estimates in mid-2021, and the modification category is the region (West Bank, Gaza Strip), gender (male, female) and five age groups (17 groups), and thus, we get the final weight of the individual.

The final weights for ROSTER (all individuals) file were computed by giving each individual/member his/her household final weight, which is the individual's/member's initial weight. Then, these weights are adjusted based on population estimates in mid-2021, and the modification category is the region (West Bank, Gaza Strip), gender (male, female) and five age groups (17 groups), and thus we get the final weight of the individual.

Then, these weights are combined for the file of individuals (18 years and above), and find the product of the weight of each individual/member (the final weight of the individual from the roster) by the number of qualified individuals/members (18 years and above) in this household. So, we get the weight of the initial individual/member in the file of individuals/members (18 years and above). Then, these weights are modified based on population estimates mid-2021, and the adjustment category is the region (West Bank, Gaza Strip), gender (male, female) and five-year age groups (14 groups), and thus we get the final weight of the individual/member.

3.4 Fieldwork Operations

Field operations are the actual survey work conducted to collect data required from primary sources. Careful attention must be paid to details in this stage to provide all technical and administrative needs including recruitment and training, provision of material needs for the best performance possible of work.

3.4.1 Training and Appointment

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.

3.4.2 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 logicality 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.

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

3.4.3 Field Editing and Supervising

1. Various levels of supervision and monitoring took place according to the following hierarchy:
    - Fieldworkers: They collect data directly from households, through personal interviews using PC-tablets.
    - Fieldwork Supervisors: They carry out administrative and technical follow up on the fieldworkers, and assign households to fieldworkers.
    - Fieldwork Coordinator: He/She carries out administrative and technical follow up on the supervisors in addition to checking the workflow data collection as planned.
2. The follow up and data extraction programs are designed through the web, where the project management can enter and view the various reports according to the authorities given to them.
3. Due to the use of tablets in the collection of data, automated databases direct editing was adopted during data collection in all stages to minimize errors since the system sends warning messages and error messages to fieldworkers requesting either amendment or verification of data.
4. Because of the particular situation of the Jerusalem Governorate, especially Area J1, those parts of Jerusalem which were annexed by Israeli occupation in 1967, a different methodology for data collection was adopted, where a paper questionnaire was used, and the editors edited the questionnaire in a formal and technical manner according to the pre-prepared editing rules.

3.4.4 Office Editing and Coding

The office editing was only done for the Jerusalem Governorate (J1) questionnaire due to the use of paper questionnaires.

3.5 Data Processing

Data processing was done in different ways including:

3.5.1 Programming Consistency Check

1. Tablet applications were developed in accordance with the questionnaire's design to facilitate collection of data in the field. The application interfaces were made user-friendly to enable fieldworkers collect data quickly with minimal errors. Proper data entry tools were also used to concord with the question including drop down menus/lists.
2. The application was examined by all members of the technical committee, and all comments were modified in addition to updates, and the transition between questions. It was also ensured that all edit rules were applied to the survey program, and the final version of the application was provided on time.
3. 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.

4. In order to work in parallel with Jerusalem (J1) in which the data was collected in paper, as the same application that was designed on the tablets was used to enter their data as the software was downloaded on the devices after the completion of the editing of the questionnaires.

3.5.2 Data Processing Requirements

- PC-Tablets: In general, PC-tablets were user-friendly. During training, every interviewer was trained on a PC-tablet for their use.
- Data Collection Application (kobocollect): The application was well designed and had a user-friendly interface. Nevertheless, a programmer needed to be available when an error occurred by any supervisor and interviewer.
- Internet Connection (Wi-Fi): During the training, an internet connection was available for trainers and trainees.
- Follow up achievement: The website was friendly designed and easy to use, as it shows totals of the completed questionnaire by fieldworkers.

3.5.3 Data Cleaning

1. Concurrently with the data collection process, a weekly check of the data entered was carried out centrally and returned to the field for modification during the data collection phase and follow up. The work was carried out thorough examination of the questions and variables to ensure that all required items are included, and the check of shifts, stops and range was done too.
2. Data processing was conducted after the fieldwork stage, where it was limited to conducting the final inspection and cleaning of the survey databases. Data cleaning and editing stage focused on:
    - Editing skips and values allowed.
    - Checking the consistency between different the questions of questionnaire based on logical relationships.
    - Checking on the basis of relations between certain questions so that a list of non-identical cases was extracted, and reviewed toward identifying the source of the error case by case, where such errors were immediately modified and corrected based on the source of the error with the documentation process for the checks occurred on the questionnaire.
3. The SPSS program was used to extract and modify errors and discrepancies, to prepare clean and accurate data ready for scheduling and publishing.

3.5.4 Tabulation

After finishing from checking and cleaning any errors of data, tabulation was prepared for this purpose and extracted accordingly.

Chapter Four

Quality

This chapter deals with and assesses the quality of the data of the survey. This process is carried out through dealing with the procedures that guarantee data accuracy and reduce possible sampling and non-sampling errors.

4.1 Accuracy

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:

4.1.1 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. There is no problem at the level of dissemination of the mentioned estmiates 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

4.1.2 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 percentage compared to the household surveys conducted by PCBS, and the reason behind that is that the questionnaire was short and the experience of fieldworkers.

4.1.3 Response Rates

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

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

Response and Non-response Formulas:

Percentage of over coverage errors = Total cases of over coverage / Number of cases in original sample x 100%

= 4.8%

Non response rate = Total cases of non-response / Net Sample size x 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:

$$w'i = wi * fgi$$

4.2 Data Comparison and Examination

This standard is linked to the statistical product, since statistics must have comparative advantage with other sources and with other time periods. Many analyses are based on comparison. The data of the survey were compared to the Socio-Economic Conditions Survey, 2020 data. Moreover, inconsistency between questions and the inconsistency of the data were examined as part of the review of logic and completion of the data.

Statistical Tables