Ministry of Health

Jordan National Stepwise Survey (STEPs) for Noncommunicable Diseases Risk Factors 2019

Jordan

STEPs Technical Report

Release Date 2020

The Ministry of Health gratefully thanks the World Health Organization and the Centre for Strategic Studies of the University of Jordan, for supporting the implementation of Jordan STEPwise approach to Noncommunicable Disease Risk Factor Surveillance (STEPS) survey 2019.

STEPwise approach to Noncommunicable Disease Risk Factor Surveillance (STEPS) survey 2019 was made possible through generous financial support of USAID.

To obtain a copy of the report:

All publications are available at the website of:

- MOH: www.moh.gov.jo
- WHO: www.who.int

For further information on the survey please contact MOH at: (ncd@moh.gov.jo)
or WHO CO Jordan at: (emwrojor@who.int)

Ministry of Health

مركز الدراسات الاستراتيجية
CENTER FOR STRATEGIC STUDIES

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World Health Organization

Jordan National Stepwise Survey (STEPs) for Noncommunicable Diseases Risk Factors 2019

STEPs Technical Report

Prepared through collaboration of:
Centre of Strategic Studies - University of Jordan
Directorate of Noncommunicable Diseases - Jordan Ministry of Health
World Health Organization

His Majesty King Abdullah II

His Royal Highness
Crown Prince Al Hussein bin Abdullah II

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List of Abbreviations

BMI	Body Mass Index
CSS	Centre for Strategic Studies
CI	Confidence Interval
CVD	Cardiovascular Diseases
DOS	Department of Statistics
EMRO	Eastern Mediterranean Regional Office
FCTC	Framework Convention on Tobacco Control
IRB	Institutional Review Board
Jor	Jordanian(s)
MoH	Ministry of Health
NCD	Non-Communicable Disease
ODK	Open Data Kit
PHC	Primary Health care Centre
PPS	Probability Proportionate to Size
PSU	Primary Sampling Unit
SPSS	Statistical Package for Social Sciences
SSU	Secondary Sampling Unit
STEPS	STEPwise Approach to Surveillance
Syr	Syrian(s)
ToT	Training of the Trainers
UNHCR	United Nations High Commissioner for Refugees
WHO	World Health Organization

Foreword

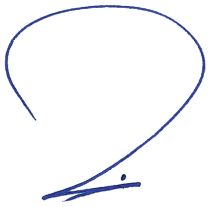
To promote and develop preventive health programs, which reflect positively on reducing morbidity and mortality from non-communicable diseases, promoting and improving health services for citizens, and updating prevention strategies and programs for non-communicable diseases in Jordan the Ministry of Health of Jordan, in collaboration with the World Health Organization and the Center of Strategic Studies at the University of Jordan, has implemented the Step Wise Surveillance Survey (STEPS), with the aim of providing necessary data on non-communicable diseases and the risk factors causing them. The results of the national survey showed a rise in the prevalence of risk factors for non-communicable diseases, including smoking, obesity, and lack of physical activity. The results entail taking measures and changing policies, and establishing laws from the health sector, government and non-governmental institutions and sectors, and voluntary organizations, which are no less responsible than the Ministry of Health in preventing these diseases and the risk factors causing them.

This cannot be achieved without the close collaboration and real partnership between all sectors. The preventive intervention shall take place on the national level to raise awareness and build skills in various areas of prevention, linked to healthy lifestyles in society, and the provision of the necessary financial and technical requirements, to overcome the difficulties that stand in the way of achieving the goal.

In conclusion, I can only thank the primary health care workers, the Directorate of Noncommunicable Diseases and all those who contributed to the implementation of this national survey for their outstanding efforts, as well as to the World Health Organization, the USAID and the Center of Strategic Studies at the University of Jordan for their support in implementing this national survey.

We ask the Almighty to guide us all to serve this country under the Hashemite leadership and its dean, his Majesty King Abdullah II bin Al-Hussein, and his beloved Crown Prince, may God protect and preserve them.

Minister of Health
Dr. Saad Jaber



Executive Summary

Rationale

In Jordan,
Noncommunicable Diseases (NCDs)
are the first cause of death
and morbidity,
accounting for 78%
of all deaths in 2016 [1].

In light of their substantial burden on the population's health and health care systems, NCDs and their risk factors must be monitored continuously. It is a national priority to provide accurate and updated information about NCDs, which would allow understanding the epidemiology of NCDs, forecasting the trends and planning interventions effectively.

The existing NCDs surveillance system in Jordan is stumbled in terms of robustness, comprehensiveness and continuity. This has created a wide gap in the information available on the prevalence of NCDs and their risk factors. The previous national survey of NCDs risk factors took place in 2007, i.e., twelve years ago. Hence, the need to generate updated data on NCDs and their risk factors is quite pressing. Particularly, with the ongoing turmoil in the region, primarily the Syrian crisis, which led to a big wave of immigration and Syrians settling in Jordan, and stressing an already exhausted health system that has been stretched out to accommodate this sudden increase in demand.

This report presents the STEPwise surveillance of NCDs risk factors in Jordan, which was conducted in 2019.

Methodology

The World Health Organization STEPwise approach for the surveillance of NCD risk factors was implemented to assess the prevalence of NCD risk factors in Jordan. The study sample involved both adult Jordanians and Syrians (residing out of camps) aged 18–69 years old. The STEPS instrument was adapted to the Jordanian setting and translated into Arabic. In addition to the NCD risk factors conventionally measured, the survey assessed unique indicators that have not been previously explored in the region, such as use instead of smoking of electronic cigarettes and vaping devices and air pollution. Data were collected electronically using handheld devices, and included behavioural, physical and biochemical indicators. Also, a urine sample was collected from a subsample to estimate urinary sodium and creatinine.

Data were cleaned and weighted to provide prevalence estimates at the population level. Then data analysis was done using Epi Info and SPSS.

Key Results

The survey involved 5713 adult respondents (2910 Jordanians and 2803 Syrians).

42% of the Jordanians

32.2% of the Syrians

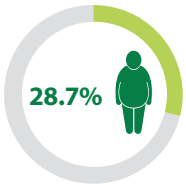
reported to be current tobacco smokers

Additionally, **e-cigarettes or vape current use instead of smoking** was reported by **9.2% of both Jordanians and Syrians.**

Current alcohol consumption was reported by 1.5% of Jordanians and 0.3% of Syrians.

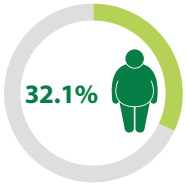
Fruit and Vegetables consumption was considered low, with 84.45 of population consuming fewer than 5 servings of fruit or vegetables on average per day as recommended by WHO. It was found that Jordanians and Syrians consumed on average three servings per day of both fruits and vegetables. One third of the population always added salt to their foods. Twenty-five percent of the population reported insufficient physical activity (moderate intensity), and 76% were not engaging in any vigorous activity.

For overweight it was evident in:



of both Jordanians and Syrians

For obesity it was evident in:



of both Jordanians and Syrians

The prevalence of raised blood pressure was:

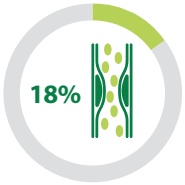
among Jordanians and Syrians, with almost **half of them (47.8%) currently not receiving medication.**

Raised fasting blood glucose (≥7 mmol/L, 126 mg/dl) was:

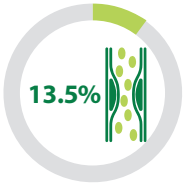
evident in 8% of total population and

of those aged (45–69 years old).

Raised Total Cholesterol was seen in:



of the Jordanian sample



of the Syrian sample

Almost 24% of the population aged 40–69 years had a 10-year cardiovascular disease (CVD) risk ≥ 30%, or had an existing CVD. On the other hand, 18% of the population had depression, with a therapy coverage reported in 6.5% of patients.

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Recommendations

The surge in NCDs risk factors reported in the STEPS 2019, explains the high prevalence of NCDs that Jordan is experiencing. This calls for a prompt and effective response that adopts a multisectoral approach to convene efforts of all relevant stakeholders to curb NCDs and their risk factors. Primarily, strict measures to combat tobacco consumption, dietary salt, physical inactivity, obesity, hypertension and diabetes.

1. Introduction

Non-Communicable Diseases (NCDs), primarily cardiovascular diseases, cancer, diabetes, and chronic respiratory diseases are the leading cause of death worldwide.

2/3

Globally,
two thirds (63%) of deaths are attributable to NCDs,
with low- and middle-income countries (LMICs) bearing 86% of the burden of these deaths which occur prematurely [2]

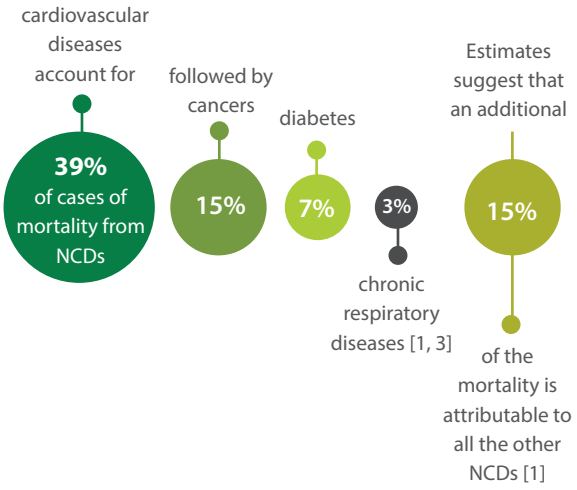
Most of the deaths attributed to NCDs are preventable by properly addressing their risk factors.

The WHO identifies five major risk factors for NCDs, which include:

- tobacco use
- unhealthy diet
- physical inactivity
- air pollution
- harmful use of alcohol

Cost-effective interventions to reduce impact of NCDs are widely available, and their implementation can avert premature death and prevent economic losses, which have been estimated to account for USD 7 trillion over the timeframe of 2015-2030 [2].

In line with the global trends, Jordan is increasingly affected by a significant epidemiological transition towards NCDs, accounting for 78% of deaths, which make them the leading cause of mortality and morbidity among Jordanians. **Namely,**



The Syrian refugees in Jordan share similar high NCDs morbidity patterns [3]. In 2015, Doocy et al. assessed the NCDs morbidity patterns among Syrian refugees residing out of the camps in Jordan, highlighting that more than half of Syrian refugee households reported having at least one family member with NCDs. [4]

The prevention and control of NCDs starts with the identification of its risk factors. Accordingly, the STEPS survey has been designed in order to provide an evidence-based and standardized platform to identify the NCDs risk factors. WHO recommends implementing STEPS surveys every 3-5 years.

The last STEPS survey conducted in Jordan was in the year 2007. Twelve years from that date, the STEPS 2019 took place, aiming at closing the considerable gap in information on NCDs risk factors in Jordan. The data generated are up-to-date, which would enable

informed planning of interventions and services related to NCDs and their risk factors.

The STEPS 2019, is particularly unique because, in addition to Jordanians, it also involved the Syrian Refugee population residing in Jordan. By this it explored NCD trends within this vulnerable population. Additionally, the survey reflected the demographic changes that the Jordanian society incurred, with the big influx of refugees due to the ongoing wars the region has been witnessing.

2. Objectives of the Survey

The objectives of STEPS are:

1. To determine the prevalence of behavioural, physical, and biochemical NCDs risk factors, in the adult Jordanian and Syrian refugee populations (18-69 years). Namely:

Behavioural Measurements:

- Tobacco use, including electronic cigarettes and vaping devices.
- Harmful use of alcohol.
- Dietary habits (including salt intake and vegetable and fruit consumption).
- Physical inactivity.
- Medical history for elevated blood pressure, diabetes, cardiovascular disease and risk.
- Mental Health.
- Air Pollution.

Physical Measurements:

- Blood pressure and heart rate.
- Weight and height to determine Body Mass Index (BMI), hence assess the prevalence of overweight and obesity.

Biochemical Measurements:

- Fasting blood glucose, to determine prevalence of impaired and raised blood glucose.
- Abnormal blood lipids;
- Abnormal sodium and creatinine in urine.

2. To assess socio-demographic status and correlate them with the NCDs risk factors.

3. To assess the implementation of the tobacco policy in Jordan.

4. To assess the mental health status of the Jordanian and Syrian population.

5. To assess Cervical Cancer status among women in the survey population.

6. To assess sources and patterns of energy consumption, which impact air pollution.

3. Methods

3.1 Scope of Survey

This survey used the WHO STEPwise approach for the surveillance of NCD risk factors. It assessed NCDs risk factors in a multi-step method, namely STEPS 1, 2 and 3. The STEP 1 and 2 collected data on behavioural and physical variables and were carried out in the same encounter with the participant. Whereas, STEP 3, followed the former two steps by one day to collect biochemical data with the participant in a fasting status. The STEPS survey assessed several core modules along with other expanded and optional modules related to NCD risk factors (table, 1).

Table 1: The Scope of the Jordan STEPS Survey 2019*.

	Core Items	Expanded Items	Optional Items
STEP 1 Behavioural	Basic demographic information, including age, sex and years at school	Expanded demographic information including highest level of education, ethnicity, marital status, employment status, household income	Mental health
	Tobacco use, duration and quantity of smoking, quit attempts, past smoking, smokeless tobacco use	Cessation exposure to environmental tobacco smoke Electronic cigarettes and vaping devices	Tobacco policy
	Alcohol consumption, cessation binge drinking, past 7 days drinking, consumption of untaxed alcohol	Alcohol use disorders	Oral health
	Fruit and vegetable consumption of salt and processed food high in salt	Awareness of too much salt as a health problem, control of salt intake	Sexual health
	Physical activity at work/in the household, for transport and during leisure time	Sedentary behaviour	Air pollution
	History of raised blood pressure, diabetes, raised total cholesterol and cardiovascular diseases		
	Lifestyle advice		Violence and injury
	Cervical cancer screening		Cervical cancer
STEP 2 Physical Measurements	Blood pressure	Heart rate	Objective measurement of physical activity
	Height and weight	Hip circumference	
	Waist circumference		
STEP 3 Biochemical Measurements	Fasting blood sugar	HDL cholesterol	
	Total Cholesterol		
	Urinary sodium and creatinine		

*Modules shaded in yellow were not covered in STEPs 2019.

3.2 Survey Population

The STEPS survey population included Jordanian and Syrian adults from both genders, aged (18-69 years old), residing in Jordan. The Jordanian sample was captured from all the 12 governorates of Jordan to enhance the geographical representation of the sample. Whereas, the Syrian refugees sample included those residing in four governorates, namely Amman, Zarqa, Irbid and Mafraq, where the majority of the Syrian refugee population exists, and only those residing outside refugee camps.

The study sample excluded those not residing in Jordan and visitors to the household. Pregnant women were excluded from some measurements such as height, weight and waist circumference, but were included for urine testing, blood pressure measurement and biochemical measurements (blood sugar and lipid profile).

Collective homes such as student housing, prisons, nursing homes, factory accommodations were also excluded, as they did not fit the definition of a Jordanian Household.

3.3 Sample Size

A representative sample size was calculated at 6000 participants (3000 Jordanians and 3000 Syrians) to represent Jordanian and Syrian adult population aged 18-69 years old residing in Jordan.

This sample size was calculated for STEPS 1, 2 and 3. As for the urine testing for salt and creatinine, the sample size was calculated at 1500 participants (750 Jordanians and 750 Syrians) residing in Amman.

The laboratory urine testing was limited to samples from Amman, out of convenience, to timely and effectively transport samples from the field to the laboratory facilities on a daily basis.

This subsample was meant to give an approximate indicator of the salt consumption at a national level.

3.4 Sampling Methods

3.4.1 Sampling of Jordanians

A national cross-sectional survey was conducted adopting a two-stage stratified-cluster sampling design. The margin error was (5%) and the confidence level was set at 95%. The Jordan Population and Housing Census 2015 was used as a sampling frame for Jordanians. A sample of 3000 households was randomly drawn to represent the Jordanian population. It was designed in a probability proportional to size (PPS) way to provide valid and reliable survey estimates across the entire Kingdom of Jordan - rural and urban areas, the twelve governorates and the smaller communities within.

The sample also ensured reliable estimates in terms of geographical distribution, where Jordan was divided into three regions; north, centre, and south, also at governorate level. The north of Jordan covered Ajloun, Irbid, Jerash, and Mafraq, the centre region covered Amman, Balqa, Madaba, and Zarqa, and the south region covered Aqaba, Karak, Ma'an, and Tafieleh. Furthermore, each governorate was subdivided into area units called census blocks, which were the Primary Sampling Units (PSU-Blocks) for this survey (on average a PSU comprises 50-70 households).

The PSU-Blocks were then regrouped to form clusters. From each PSU, eight households were randomly drawn with an equal probability systematic selection. A household was defined as a group of people living in the same dwelling space who eat meals together, acknowledging the authority of a man or a woman as the head of the household. After the household selection and obtaining the permission

of household residents to participate in the survey, all the eligible household members were entered into the STEPs program, which ran a random selection to choose one member from each household. The sample size from each governorate was proportionate to the population's size (table, 2).

Table 2: Jordanian Sample Size and PSUs per Governorate.

Governorate	Number	N of PSU's (Blocks)
Amman	1120	140
Balqa	184	23
Zarqa	416	52
Madaba	80	10
Irbid	592	74
Mafraq	144	18
Jerash	80	10
Ajloun	80	10
Karak	128	16
Tafelah	56	7
Ma'an	56	7
Aqaba	64	8
Total	3000	375

3.4.2 Sampling of Syrians

Sampling of Syrian refugees took place in four governorates; Amman, Zarqa, Irbid and Mafraq, where over than 90% of Syrian refugees reside in Jordan. The sample size was proportional to the population size in each of the governorate, i.e., the bigger the population, the bigger the sample size selected (table, 3). To update the sampling frame for Syrians, a prelisting of households took place, where Syrian households were visited and entered a listing frame (the same DOS listing questionnaire was used). This sampling frame enabled weight calculation and the selection of the final Syrians sample. This was followed by determining the sampling blocks (PSU) which were 375, then from each block, 8 households were randomly selected to fulfill the pre-calculated sample size of 3000.

Table 3: Syrian Sample Size and PSUs per Governorate.

Governorate	Total Number of proposed sample	Number of PSU's (Blocks)
Amman	1224	153
Zarqa	448	56
Irbid	840	105
Mafraq	488	61
Total	3000	375

3.5 Project Timeframe

Data collection incepted on 7 July 2019, and completed on September 13, 2019. The data management and analysis followed from October until December. The following months of January and Feb 2020 were dedicated to produce information products e.g., the factsheets, tobacco factsheets, data books and report. The project completed in March 2020. Appendix 1 shows a detailed timeline of the whole project.

3.6 Staff Recruitment and Training

The staff comprised a project manager and coordinator, a sampling expert, field coordinators and trainers, administrators, technical support team, and data collectors.

Twenty field supervisors and 60 data collectors were recruited to conduct the survey. They were native speakers of Arabic, had at least finished high school, and physically fit to do fieldwork. Equal gender distribution was taken into consideration during recruitment. Recruitment was full time, yet flexible working hours and shifts were permitted (evenings and weekends) to maximize capturing households.

3.6.1 Training of the Trainers (ToT)

A five-day ToT workshop took place at WHO Jordan Office, Amman during the period of 26-30 May 2019. It was delivered to 8 trainees from the Center of Strategic Studies (CSS) and MOH. Two experts from WHO Headquarters delivered the training with support of two officers from WHO Jordan Office.

The objectives of this ToT involved:

- Adapting of STEPs instruments to the local setting.
- Explaining to the trainers the conduction of STEPs 1, 2 and 3 and urine testing.
- Observing ethics.
- Using and entering data electronically into eSTEPs.
- Tracking the interviews (forms), liaising between teams and assuring control over quality of fieldwork.
- Preparing the pilot.

3.6.2 Training of the Field Workers

A six-day training workshop was conducted at the University of Jordan (Faculty of Art-Alkindi Hall) during the period 16-20 June 2019. A team from CSS/MOH/WHO led the training, who were trained during the above stated TOT.

The objectives of this training workshop were:

- Explaining the process of random household selection, identifying and entering eligible household members into electronic devices, and random Selection of participants.
- Emphasizing the ethics during conducting the survey.
- Explaining the STEPS Instrument (questionnaires), which included the conduction of STEPS 1 (behavioural measurements), STEPS 2 (physical measurements), and STEPS 3 (biochemical measurements).
- Utilization/recording on eSTEPS (software questionnaire), through role-playing and working in teams of 2, where trainees used tablets and had a hands-on training on using tablets, taking physical measurements (blood pressure, height, weight, waist and hip circumferences), and for medical doctors taking blood samples for STEP3 (biomedical measures).
- Tracking the interviews (forms) and coordinating between teams.
- Quality control at field level.

The training involved 58 data collectors, 18 field supervisors, 32 medical doctors, and 6 quality control and logistic support personnel.

3.7 Pilot Study

Two pilots were conducted; the first was on the 20th of June 2019, in two randomly selected blocks in Amman and Zarqa governorates, where 4 field supervisors and 16 data collectors participated in implementing STEPS 1 and 2. A pilot of STEP3 followed involving 12 medical doctors on the 22nd of June, visiting the same households.

Following the pilot, feedback was obtained from participants and some modifications were done accordingly. Mainly, culturalsensitivity issues arose when a male data collector interviewed a female. Hence, it was agreed, to minimize gender-sensitivity, that each team must comprise a male and a female data collector. The female is to introduce the project to household residents, enter all eligible respondents, randomly choose the participant, and continue with the questionnaire if the participant was a female. Otherwise, if a male were randomly selected to represent the household, then a male data collector would resume the interview.

A second pilot was decided to further enhance data collectors' capacity to conduct the survey. This was on 1 July 2019, where it involved all data collectors and took place in Amman and Zarqa governorates. Feedback from this second pilot was insignificant and the field work team was ready to implement the survey. Data collection started on 7 July 2019.

3.8 Survey Instrument and Data Collection

The global STEPS instrument was adopted to conduct the Jordan STEPS survey. The CSS, MoH, and WHO jointly adapted the STEPS Instrument and showcards to the Jordanian context to ensure their applicability. The STEPS Instrument, showcards and field data collection forms were adapted in both languages; English and Arabic. An electronic version of the instrument in both languages was created and entered into tablets provided by WHO.

Adaptation of the instrument to the Jordanian context entailed adding to the questionnaire the location of the household, governorate, district, cadastre, cluster, and Quick Response (QR) barcode. Furthermore, the nationality of Syrians was added and their registration status with UNHCR.

The data collection team composed of 48 data collectors, 24 medical doctors, 12 field supervisors and 4 quality control and logistic support personnel.

Fieldworkers approached the randomly selected households. They verbally explained the purpose of the survey and asked for permission to conduct it. Confidentiality of data was assured. In case of approval, the participant was invited to sign two consent forms on day one of the surveys; one form for Step 1 and Step 2 and a second form for Step 3. Two copies of each form were obtained, one copy for participants and the second for the data collector to submit on a daily basis to the team coordinator, to return the following day for STEPS 3. Upon obtaining consent forms, the data collector proceeded with the survey. The survey was conducted in Arabic. Step 1 questionnaire was done through face-to-face interviews. Responses from participants were directly recorded into the tablets. The questions were filled one at a time, as the software prohibited proceeding to next question unless the former is completed. Also the software allowed for a logical skip pattern to take place.

After completing STEP 1, the data collector resumed with taking the physical measurements of STEP 2. This entailed taking blood pressure measurements (3 times, at a 3-minute interval), the weight, height, waist and hip circumference. Blood pressure measurements were taken using digitalized blood pressure monitors. As for height and weight, measurements were taken on a pre-calibrated electronic scales. The height was measured with participants barefoot, and measurements were taken to the nearest 0.1 cm.

The weight was measured with the participant having light clothes on and barefoot and measurements were taken to the nearest 0.1 kg.

As for waist circumference, measurements were taken using a tape, by taking the midpoint between the bottom of the last palpable rib and the top of the iliac crest. Measurements were recorded to the nearest 0.1 cm.

At the end of STEP 2 participants were instructed to fast overnight (not to consume any food or drinks except water until the morning of the following day), and to collect a urine sample in the evening before fasting (this was for participants from Amman only).

One day following the visit for STEP 1 and 2, the team of medical doctors from the MOH visited the households who consented to conducting STEP 3 to take blood samples (all over Jordan) and collect urine samples (Amman only). In case the household did not respond to the first visit of STEP 3 another visit was made. If on the second visit no one responded, the household was recorded as missing for STEP 3 only.

Similarly, if the participant forgot to fast overnight a second visit was scheduled for the next day. However, on the second attempt, if the person forgot to fast again, the team collected the blood sample, indicating that it was a non-fasting sample. Blood glucose and cholesterol were measured using a cardio check Analyzer PA.

Urine samples collected were transported to the MOH Central Laboratory in Amman on a daily basis to be analyzed for sodium and creatinine. A special form was designed to record the number of valid urine samples, with all the necessary information that enables matching respondents of the STEP 1, STEP 2 and Lab results. This form required the lab technician to write the barcode (which was taped to the lid of the urine cup), and a printed label that had the participant name, age, sex, cluster ID.

Disposal of materials from STEP3 (used gloves, cotton, alcohol swaps, lancet, glucose/lipid strips, plasters, capillary tubes) occurred at the MOH laboratories.

All data collection members were linked through a WhatsApp group to facilitate interaction and communication between data collectors, field supervisors and project managers.

A field visit took place on Sep 10th with CSS, MOH, WHO and the Donor (USAID) in order to provide a snapshot on the data collection processes.

3.9 Data Management

3.9.1 Data Entry and Download

Data entry was conducted in the field using Android tablets to record the behavioural measurements (STEP 1), physical measurements (STEP 2), and biochemical measurements (STEP 3). WHO eSTEPS software (ODK) was instilled into Android tablets to enable data entry. A Storage Device Memory Card (SD) was integrated in the Android tablets to ensure that a backup copy of data was stored. Data from Android tablets were directly uploaded in the field into a WHO-recommended server (Ona server) www.ona.io.The data entered for Steps 1 and 2, and STEPS 3 and lab data, were linked and matched to respondents by using a specific QR codes for each of the participants. The QR codes were given to the data collectors, who distributed a code for each participant, this code allowed for tracking the participant throughout all the steps of the survey.

At the completion of the fieldwork all downloaded data were consolidated into a single master database.

3.9.2 Data Monitoring and Quality Control

The progress of the survey was monitored by tracking the households coverage against the data collection work plan, to ensure timely implementation of the work plan. The uploaded data from the field were monitored on a daily basis to promptly respond to any issues with data entry, if incurred. The duration of interviews was monitored on a daily basis, to make sure satisfactory time was given by the data collectors to conduct the STEPs.

Duration was compared to an estimated standard duration of 45 minutes to complete both steps 1 and 2. Monitoring also ensured the completeness of the questionnaires. Monitoring also involved screening for missing barcodes, duplicate ID/barcodes, and any mismatch between the selected participants and those who actually completed the questionnaire, whenever incurred. Additionally, weekly reports were shared with WHO Jordan Office to remain informed on the progress of the work plan. Fortnightly meetings of the STEPs Technical Group were convened to follow up on the implementation of the survey.

Quality of data was further ensured by carrying out telephone calls with all households after the first visit, to getfeedback on the visit. All participants who agreed to do STEP 3 were also telephoned to remind them of fasting overnight for the biochemical measurements to be taken the following day.

3.9.3 Data Weighting and Cleaning

In line with WHO STEPS manual, data cleaning and weighting were undertaken prior to data analysis. Data cleaning included checking ranges and combinations of variables; detecting and handling missing data and outliers.

On the other hand, data weighting was done to create a sample representative of the target population (Jordanians and Syrian refugees adults aged 18-69). Data weighting involved adjustment for:

- Probability of selection (sample weight);
- Non-response (non-response weight)
- Differences between the sample population and target population (population weight).

An overall weight was calculated for each step of the survey and applied to the final dataset.

3.9.4 Data Analysis

Data were analyzed using Epi Info analysis software, which was developed by WHO and adapted to the Jordanian context. SPSS was also used in some aspects of data analysis.

A data analysis training workshop was conducted between 20- 24 October, 2019, for the implementing partners to train them on using Epi Info and how to weight and analyze data.

A second workshop was held by WHO on 18-19 November 2019 to support the implementing partners in interpreting the survey results, compare them to the local and regional context, and identify significant trends in data. It also involved discussing data dissemination modalities and future implications of the survey results on NCD strategies and action plans.

3.10 Response Rate Calculation

For each step of the STEP's survey, a response rate was calculated as following:

- STEP1 Response Rate = total number of those who agreed to participate in the survey/total number of visited households.
- STEP2 Response Rate = total number of those who participated in STEP2/total number of those participated in STEP1.
- STEP3 response Rate = total number of those who participated in step 3/total number of those participated in STEP1.
- LAB response rate = Total number of those who gave valid urine samples/Total number of targeted population (1500 respondents).

4. Results

Table 4: Response Rate classified by Nationality for each Step of the Survey.

	Jor N.	Jor Response Rate %	Syr N.	Syr Response Rate %	Total N	Total %
Step 1	2910	97*	2803	93*	5713	95
Step 2	2690	92**	2651	95[a]	5341	93
Step 3	1675	58**	1931	69[a]	3606	63
Lab	504	67[b]	661	88[b]	1165	78

*Out of 3000 (eligible sample size)
** Out of respondents to step 1 (2910)
a. Out of respondents to step 1 (2803)
b. Out of 750 (pre-determined sample size).

4.1 Demographic Characteristics

A total of 2910 Jordanians and 2803 Syrians participated in the survey, out of which 2203 (39%) were male and 3510 (61%) were female, and two thirds of the sample were 18-44 years old (table, 5).

Table 5: Distribution of the Survey Sample, by Gender and Age.

Age Group (years)	Men		Women		Both Sexes	
	N	%	N	%	N	%
18–44	1392	37.1	2356	62.9	3748	65.6
45–69	811	41.3	1154	58.7	1965	34.4
18–69	2203	38.6	3510	61.4	5713	100.0

The sample was divided equally between Jordanians and Syrians (table, 6).

Table 6: Distribution of the Survey Sample by Nationality.

Age Group (years)	Both Genders		
	N	% Jordanian	% Syrian
18–44	3748	44.4	55.6
45–69	1965	63.5	36.5
18–69	5713	50.9	49.1

The average number of years spent in education was 8.9 years, with males and younger age groups tending to have slightly more years of schooling than females and older age group (table, 7).

Table 7: Mean number of years of education, by Gender and Age of the Jordanian/Syrian Survey Population.

Mean number of years of Education						
Age Group (years)	Men		Women		Both Sexes	
	N	Mean	N	Mean	N	Mean
18–44	1379	9.5	2318	9.3	3697	9.4
45–69	797	8.9	1092	7.2	1889	7.9
18–69	2176	9.3	3410	8.6	5586	8.9

Almost three quarters (72.3%) of the survey respondents were married (table, 8). The proportion of individuals that had never been married was higheramong men (24.7%) than women (10.6%) and the proportion of people widowed was ten times higher among women (11.7%) than among men (1.1%).

Table 8: Survey Sample classified by Marital Status and Age.

Age Group (years)	Both Sexes					
	N	Never married %	Currently married %	Separated %	Divorced %	Widowed %
18–44	3744	22.1	71.2	1.5	2.5	2.6
45–69	1963	4.4	74.4	2.3	1.8	17.1
18–69	5707	16.0	72.3	1.8	2.3	7.6

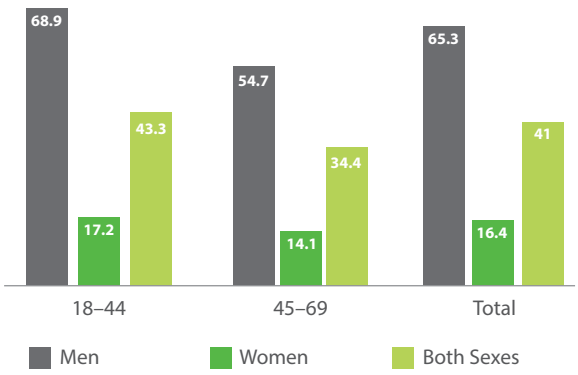
STEP 1: Behavioral Measurements

4.2 Tobacco Use/E-cigarettes and Vaping Devices Use

In this section conventional tobacco products refers to "manufactured cigarettes, hand-rolled cigarettes, shisha, pipe, cigars and smoke-less tobacco." In contrast, emerging products encompass "e-cigarettes and vaping devices." These two categories are independent and their prevalence does not overlap. Current tobacco users constituted 41% of total survey population, while current users of e-cigarettes and vaping devices constituted 9.2%.

Prevelance of tobacco and emerging product use was significantly higher among men compared to women, being 65.3% of conventional tobacco smokers and 15% of emerging product users. In comparison, 16,4% and 2,4% of women were conventional tobacco smokers and emerging product users, respectively*. Furthermore, smoking and vaping were significantly higher among younger age group for both genders (figure, 1).

Figure 1: Percentage of Current Conventional Tobacco Smokers (%).



Among current conventional tobacco product smokers, daily smoking was reported by 34.6% versus 6.4% who smoked but not on a daily basis.

Half of the sample (54%) never smoked any conventional tobacco products (table, 9).

Table 9: Smoking Status of Conventional Tobacco Products classified by Age.

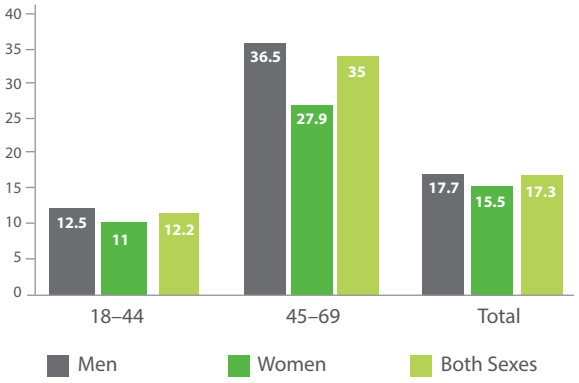
Smoking status (cigarette, cigar, shisha or pipe)									
Age Group (years)	Both Sexes								
	N	Current smoker				Non-smokers			
		% Daily	95% CI	% Non-daily	95% CI	% Former smoker	95% CI	% Never smoker	95% CI
18–44	3747	36.1	33.5-38.8	7.1	5.8-8.5	3.7	2.8-4.6	53.0	50.4-55.7
45–69	1965	30.1	27.0-33.2	4.3	3.0-5.6	9.6	7.5-11.7	56.0	52.7-59.2
18–69	5712	34.6	32.4-36.7	6.4	5.3-7.5	5.2	4.3-6.1	53.8	51.6-56.0

On average, the duration of conventional products smoking among smokers was 17 years, ranging up to 35 years of smoking among those aged 45-69 years old (figure, 2). Furthermore, the mean age at which men started smoking was significantly younger than women, being 17 and 24 years old, respectively.

In fact, 34.7% of adult Jordanian and Syrian current smokers indicated that they started smoking before the age of 16 years old (42% of Jordanian males and 40% of Syrian males), whereas 65.3% indicated that they started smoking at the age of 16 years old and above.

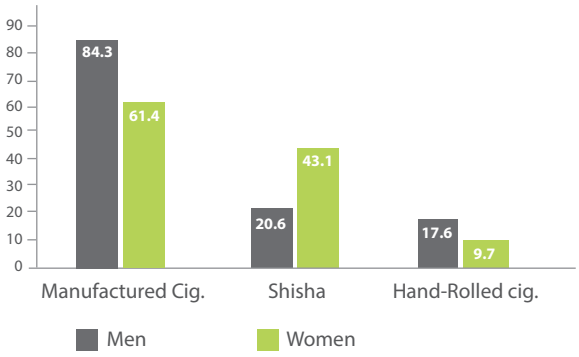
* Potential under reporting among female, especially among young one, due to cultural and social compact.

Figure 2: Mean Duration of Conventional Tobacco Smoking Among Daily Smokers (Years).



Among current smokers, the conventional tobacco products mainly smoked by males were primarily manufactured cigarette 84%, shisha 21%, and hand-rolled cigarettes 18%. Manufactured cigarettes were also the main tobacco product used among current female smokers as stated by 61% of respondents. On the other hand, smoking shisha among females at 43% was double that seen in men. Hand-rolled cigarettes were reported by 10% of females (figure, 3).

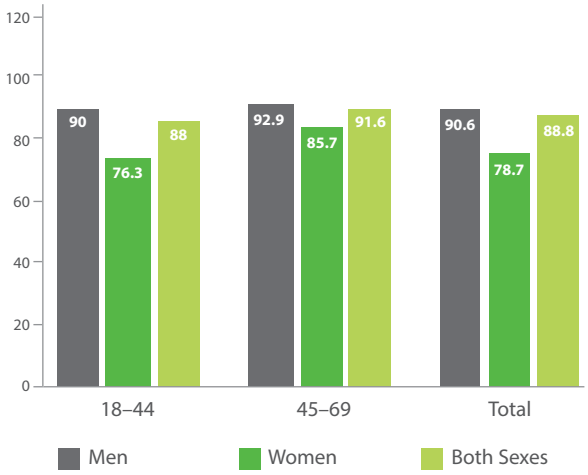
Figure 3: Current Smokers Classified by Type of Conventional Tobacco Product.



Females of the older age group used more manufactured cigarettes compared to younger females, conversely, shisha was more prevalent in younger females.

Among daily smokers, men used more manufactured cigarettes (91%) than women (79%), in both age groups (figures, 4).

Figure 4: Manufactured Cigarette Smokers Among Daily Smokers (%).



The average number of manufactured cigarettes smoked by daily smokers is 21 cigarettes. However, 47% of daily smokers of both genders smoked ≥25 manufactured or hand-rolled cigarettes per day.

Among all respondents, 9% of men were former daily smokers, compared to 3% among women (figure, 5). The mean number of years since quitting smoking was 9 years for females and 10 years for males.

As for smoking cessation, around 45% of all the current conventional tobacco smokers attempted to quit smoking during the past 12 months, with no significant difference between genders and age groups (figure, 6).

Figure 5: Former Daily Smokers (Do not Currently Smoke) Among All Respondents (%).

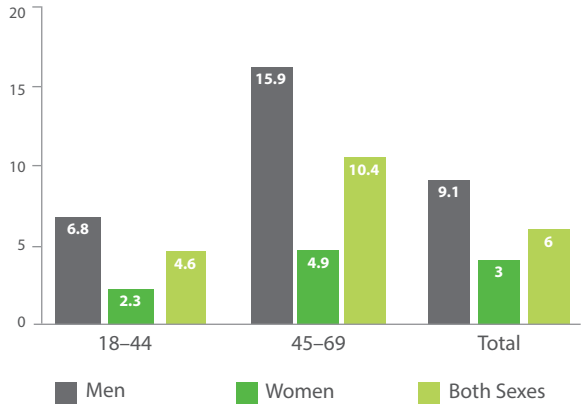
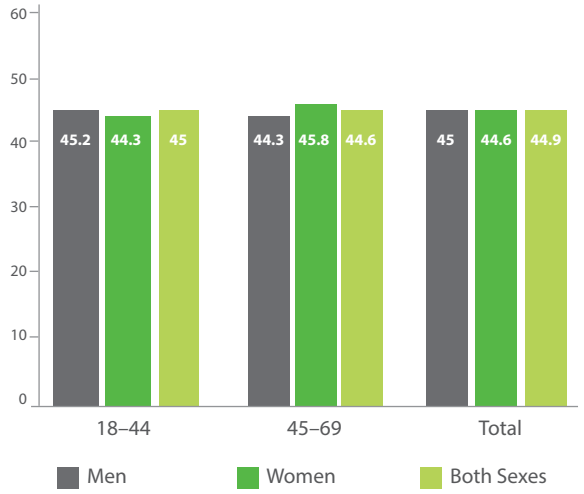
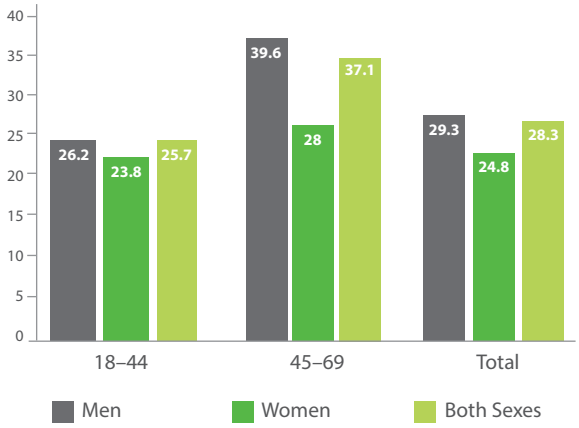


Figure 6: Current Smokers Who Have Tried to Stop Smoking (%).



Current conventional tobacco smokers who were advised by a health care professional to stop smoking constituted 28% of those who visited a doctor or other health workers in the past 12 months. Smokers aged 45-69 years old were significantly (37%) more likely to receive advice on tobacco cessation by health workers than younger age groups 18-44 years old (26%) (figure, 7).

Figure 7: Advice by Doctor or Health Worker to Current Conventional Tobacco Smokers to Stop Smoking (%).



The use of smokeless tobacco, e.g., snuff by mouth or nose, chewing tobacco or betel, was nil among smokers of both genders and age groups.

Of total respondents, 77% have previously heard of electronic cigarettes or vaping devices (figure, 8). Of those who heard of e-cigarettes or vaping devices, current users, whether daily or non-daily, mounted to 9.2% (15% in males and 2.4% in females) (figure, 9). The absolute majority (97%) of those who currently daily use e-cigarettes or vaping devices reported having been using them within the past 12 months (57% have been using them for less than 1 month and 29% for 1-3 months, for both genders).

Figure 8: Knowledge of E-Cigarettes or Vaping Devices (%).

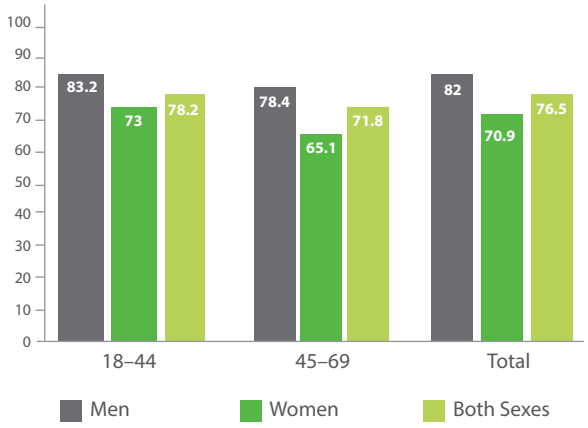
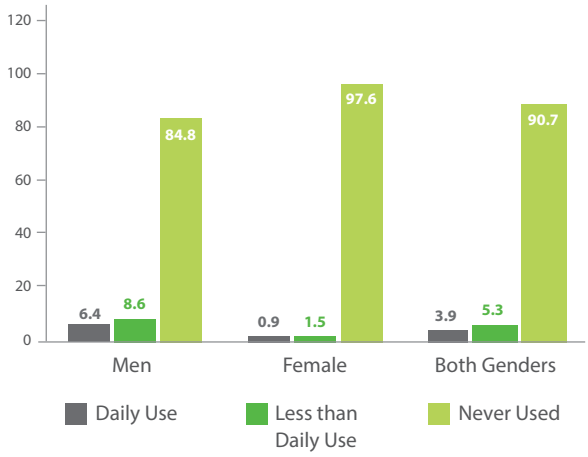


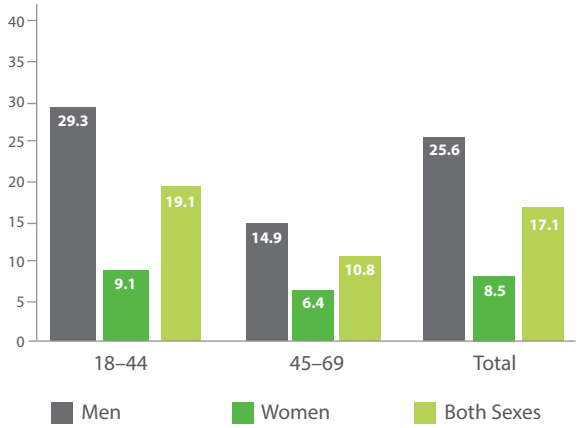
Figure 9: Prevalence of E-Cigarettes or Vaping Devices Use.



The prevalence of current use of emerging tobacco products (daily and less than daily) insignificantly differed between the younger and older age groups of 18-44 and 45-69 for both males and females.

However, males were significantly more than females in ever using (even once) e-cigarettes or vaping devices, being 26% and 9%, respectively (figure, 10).

Figure 10: Prevalence of Ever Using, Even Once, E-Cigarettes or Vaping Devices.



As for using emerging products in the past, 38% of those who heard of e-cigarettes or vaping devices reported using them (43% among males, 23% among females). The majority (98%) of past users, reported using them for less than one year (79% of them for less than 1 month and 13% for 1-3 months).

The use of e-cigarettes or other vaping devices was attributed to several reasons, primarily, to quit tobacco smoking (59%), it came in flavours (18%), friends and family smoked them (12%), to avoid reverting to conventional tobacco products (10%), they were less harmful than tobacco products (9.4%), they were enjoyable (8.3%), and they could be used when smoking tobacco is not allowed (3.5%).

Of all e-cigarettes and vaping devices, the e-cigarette (POD system) was the most used as seen in 85% of males and 84% of females. E-cigarettes POD systems were followed by disposable e-cigarettes in males (10%) and electronic argileh (MOD system) in females (11.5%).

The sources for buying emerging tobacco products were primarily the tobacco shops in Jordan as reported by 73% of those using e-cigarettes and vaping devices (figure, 11), online shopping 11% of users (figure, 12), and outside Jordan 6%. Other unspecified sources were stated by 9% of males and 20% of females.

Figure 11: Prevalence of Buying E-Cigarettes or Vaping Devices from Shops Inside Jordan.

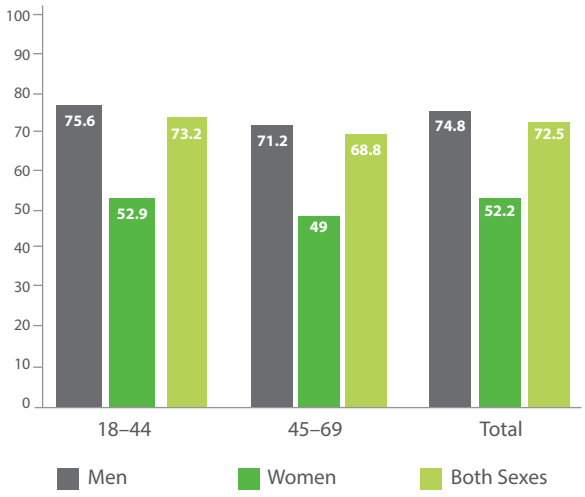
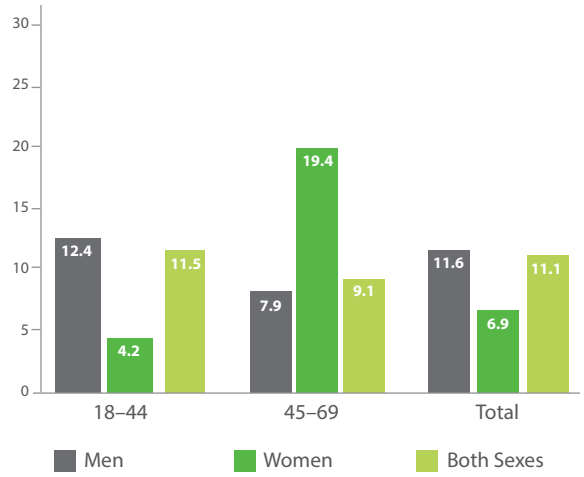


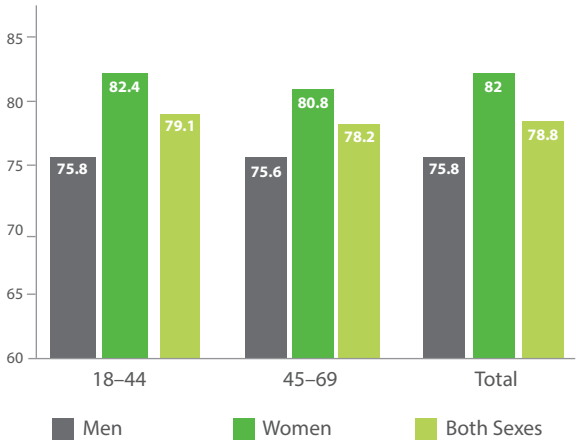
Figure 12: Prevalence of E-Cigarettes or Vaping Devices Online Shopping.



Second-hand smoking

Almost 80% of respondents reported being exposed to second-hand smoking in the past 30 days. Females were more significantly exposed (82%), compared to men 76% (figure, 13).

Figure 13: Second-Hand Smoking During the Past 30 Days (%).



Second-hand smoking was very prevalent at home, 63%, in public transportation (37%) at work 19%, at restaurants 14%, in governmental institute 7%, in health care facilities 6% and in universities and schools 6% (figures 14, 15, 16, 17, 18).

Figure 14: Second-Hand Smoking at Home (%).

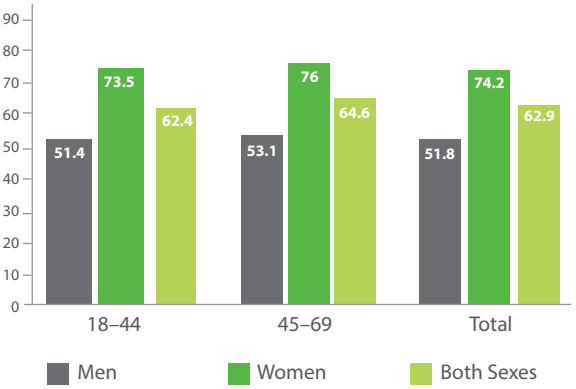


Figure 15: Second-Hand Smoking at Work (%).

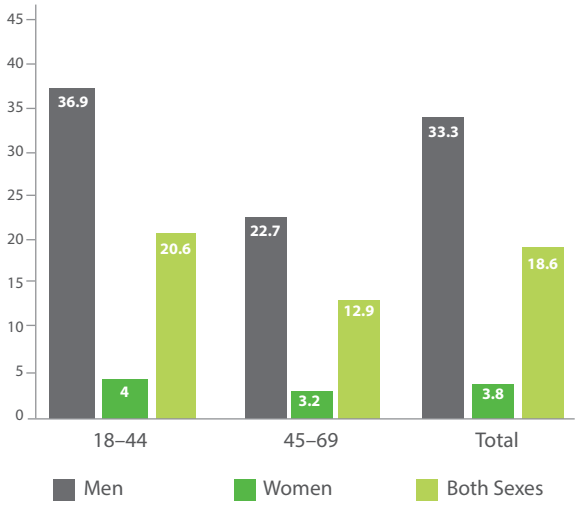


Figure 16: Second-Hand Smoking in Restaurant/Cafe (%).

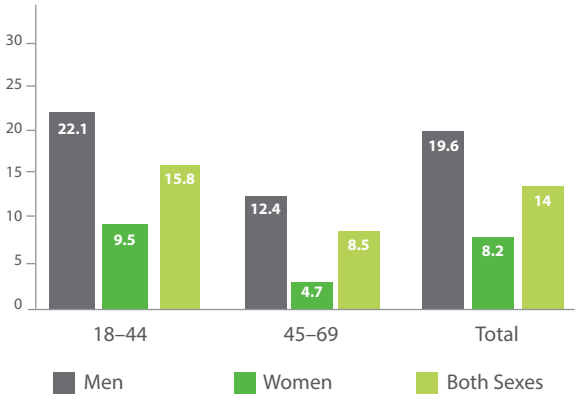


Figure 17: Second-Hand Smoking in Transportation (%).

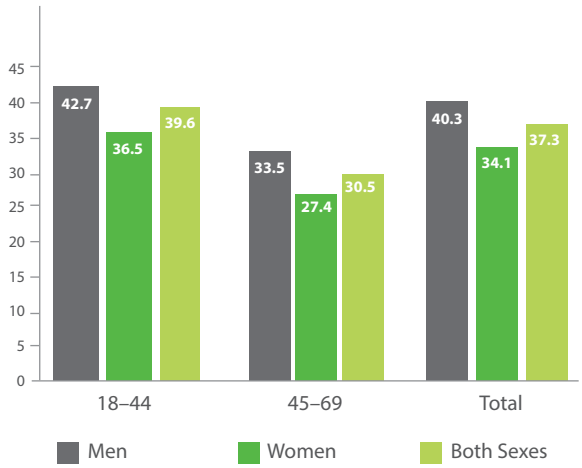
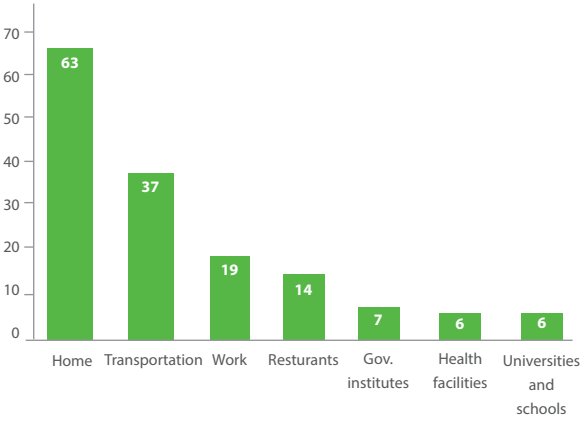


Figure 18: Comparison of Sources of Second-Hand Smoking (%).

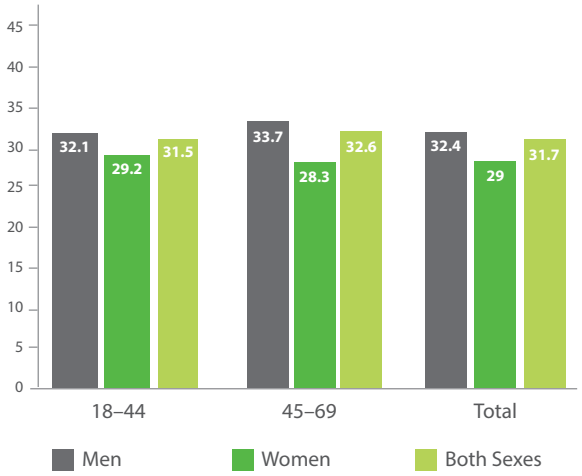


Tobacco Control Policy

Health Warnings on Cigarette Packages

Seventy-seven percent of males and 75% of females stated noticing health warnings on cigarette packages over the past 30 days. Nonetheless, these warnings led to thinking of quitting cigarette smoking in 31% of smokers (32% of males and 29% of females) (figure, 19).

Figure 19: Thinking of Quitting Tobacco Due to Warnings on Cigarette Packages.



Overall, respondents reported noticing (during the past 30 days) information about the dangers of smoking cigarettes or that encourages quitting through various media channels (figure, 20), primarily internet and social media (figure, 21), and television (figure, 22). Other sources involved magazines and newspapers (17%) and radio (15%).

Figure 20: Sources of Information about Dangers of Cigarette Smoking Noticed Over the Past 30 Days by respondents (%).

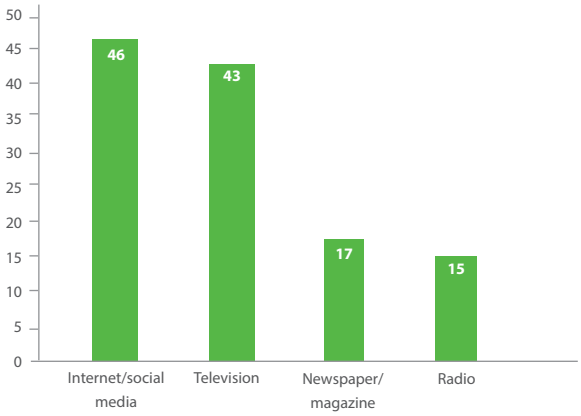


Figure 21: Internet/Social Media as a Source of Information on Dangers of Smoking (%).

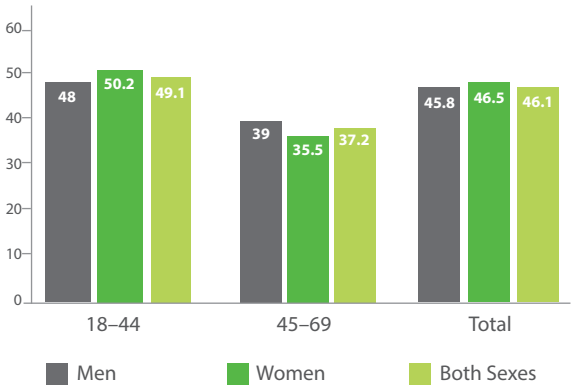
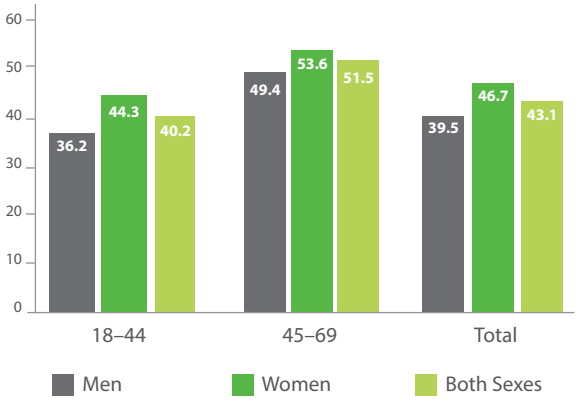


Figure 22: TV as a Source of Information on Dangers of Smoking (%).



Tobacco advertisement and promotion

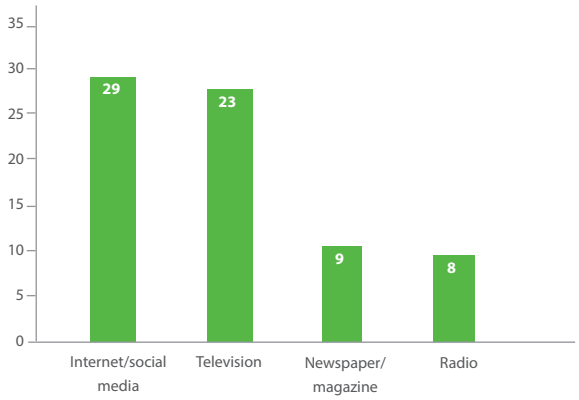
Adults who noticed cigarette marketing in stores where cigarettes are sold represent 14.7%, and those who noticed any cigarette promotions represent 18%.

Health Warnings on Shisha Molasses and Tombac Packages

Overall, half of shisha smokers stated noticing health warnings on molasses/tombac packages over the past 30 days (58% by males and 35% by females). Nonetheless, these warnings led to thinking of quitting shisha smoking in 28% of smokers (32% in males and 15% in females).

Sources of information on the dangers of smoking shisha or that encourages quitting through various media channels noticed by respondents during the past 30 days were primarily the internet and social media followed by television (figure, 23).

Figure 23: Sources of Information about Dangers of Shisha Smoking Noticed Over the Past 30 Days (%).



Tobacco Economics

On average, the amount spent on 20 manufactured cigarettes is JOD 1.85, based on last purchase. Average monthly expenditure on manufactured cigarettes is JOD 60.3. The cost of 100 packs of manufactured cigarettes as a percentage of per capita Gross Domestic Product (GDP) is 5.9%.

On average, the mean number of manufactured cigarettes used by daily smokers is 21 cigarettes (23 cigarettes/day in males and 13 cigarettes/day in females). As for rolled hand cigarettes, the overall mean number used/day was 4.6 (5 hand-rolled cigarettes/day in males and 2.3 hand-rolled cigarettes/day in females).

As for shisha, the average expenditure was similar for males and females at JOD 13 per month.

4.3 Alcohol Consumption

Alcohol consumption was generally low in Jordan as reported by 2.6% of males and 0.1% of females to have consumed alcohol during the past 30 days (table, 10).

The mean number of drinking occasions in the past 30 days among current drinkers was 4, with a mean number of standard drinks per drinking occasion of 4.

Table 10: Alcohol Consumption Status.

Age Group (years)	N of respondents	% Current drinkers (past 30 days)	% Drank in past 12 months, not current	% Past 12 months abstainers	% Lifetime abstainers
Men					
18–44	1391	2.8	1.2	7.3	88.7
45–69	811	2.1	0.6	5.9	91.4
18–69	2202	2.6	1	7	89.4
Women					
18–44	2356	0	0	0	100
45–69	1154	0.4	0.2	0.4	99.1
18–69	3510	0.1	0.1	0.1	99.7
Both Sexes					
18–44	3747	1.4	0.6	3.7	94.3
45–69	1965	1.2	0.4	3.1	95.2
18–69	5712	1.4	0.6	3.5	94.5

4.4 Diet

On average vegetables were consumed 6 days a week and fruits 3 days a week, which was similar across age groups and gender (figures, 24, 25).

Figure 24: Mean number of Days Fruit Consumed in a Typical Week (days).

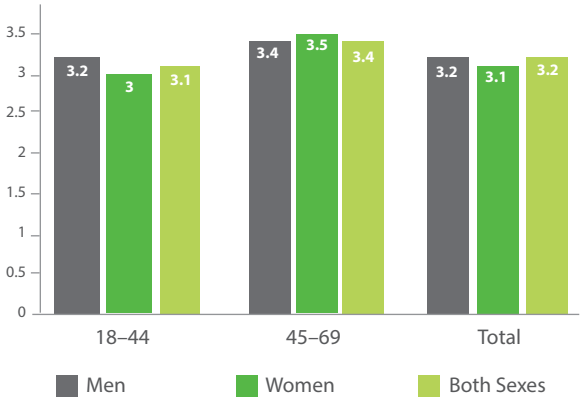
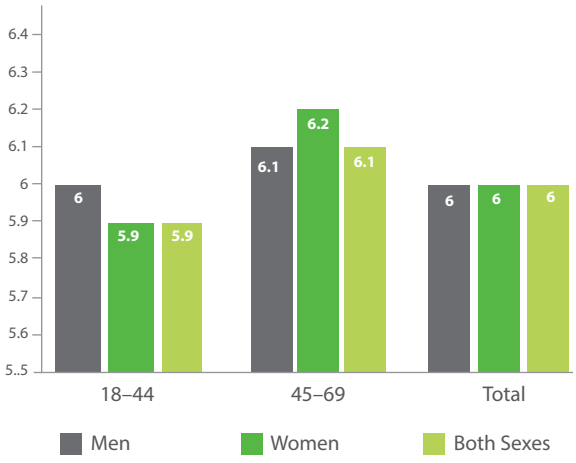


Figure 25: Mean Number of Days Vegetables Consumed in a Typical Week (days).



The Average number of servings* per day of vegetables was 2 and of fruit was 1 (figures, 26, 27). Half of the sample (50%) consumed 1-2 servings of vegetables or fruit per day. Only 16% of all respondents consumed the WHO recommended number of servings of vegetables and fruits, which is 5 or more servings per day (figure, 28).

Figure 26: Mean Number of Servings of Fruit on Average per Day (servings).

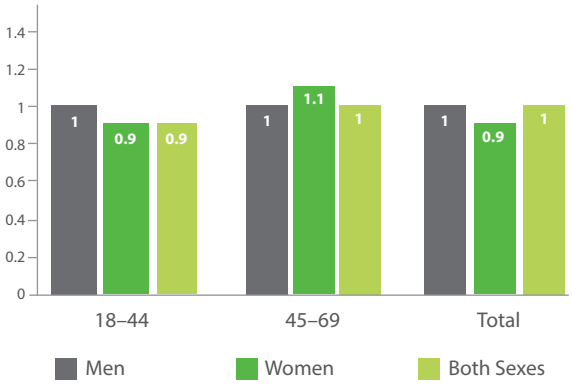


Figure 27: Mean Number of Servings of Vegetables on Average per Day (servings).

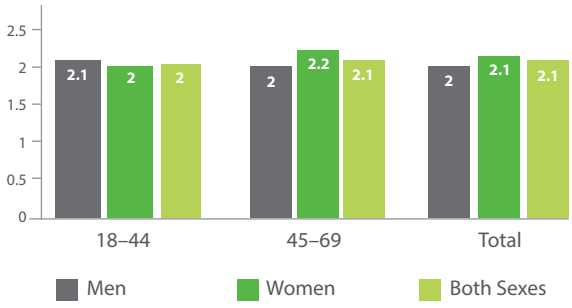
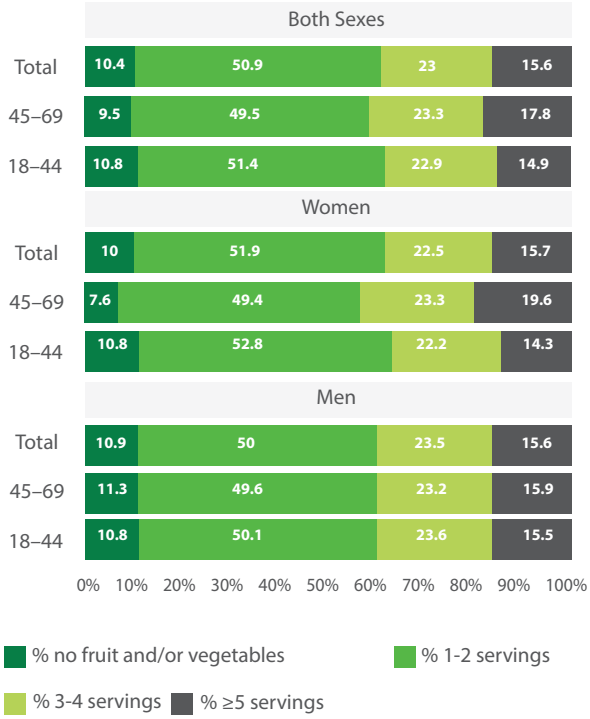


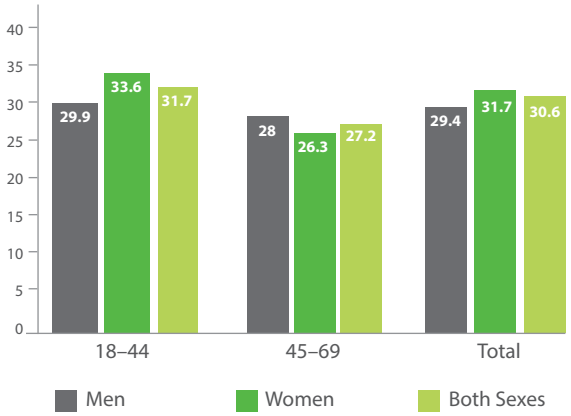
Figure 28: Consumption of Fruit and/or Vegetables per Day Classified by Number of Servings, Gender and Age.



Salt Consumption

Overall, 31% of all respondents always or often added salt to their food before or as they were eating (figure, 29).

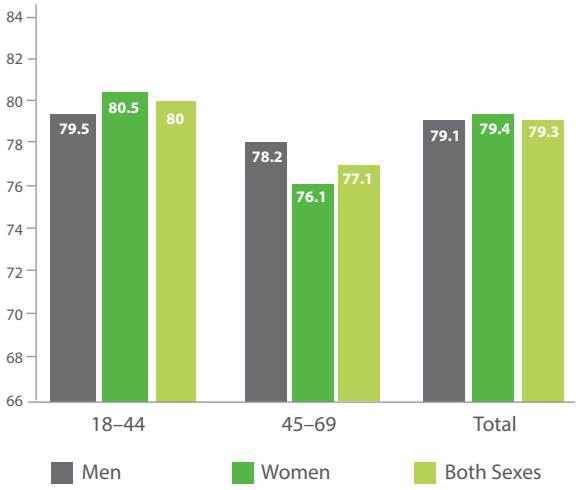
Figure 29: Salt Addition Before or During Eating (%).



* A fruit serving is one whole piece of fruit or half cup (120 ml) of chopped fruit.
* A vegetable serving is half cup (120 ml) of chopped vegetables or vegetable juice, or 1 cup (240 ml) of green leafy vegetables.

Adding salt, always or often, while cooking or preparing food at home was reported by 79% of respondents (figure, 30).

Figure 30: Salt Addition when Cooking or Preparing Food at Home (%).



One third of respondents often ate processed foods high in salt (33%). Consumption of processed foods was more prevalent among those aged 18-44 years old. Women slightly consumed processed foods more than men (figure, 31).

Eleven percent of respondents believed they consumed too much salt, whereas 49% believed in the high importance of lowering salt in their diets. A majority (89%) believed that too much salt could cause serious health problems (figure, 32). Females showed more awareness compared to males of the harmful effects of salt on health.

Nonetheless, half of respondents (53%) limited their consumption of processed food regularly to control their salt intake. Other measures to control salt intake included avoiding eating foods prepared outside home (37%), using spices instead than salt (36%), looking at salt content on food labels (22%), and buying low sodium alternatives (16%).

Figure 31: Consumption of High-in-Salt Processed Food (%).

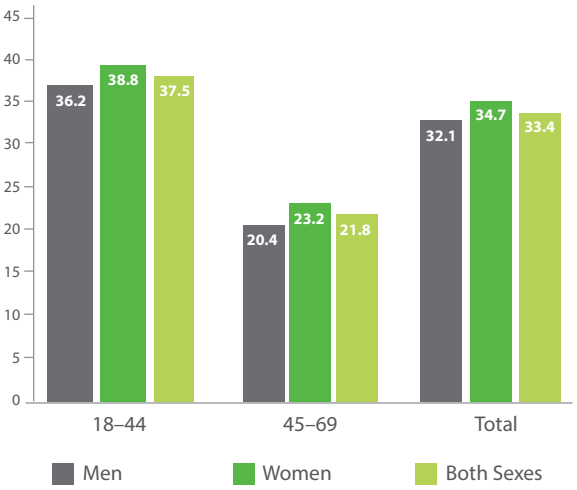
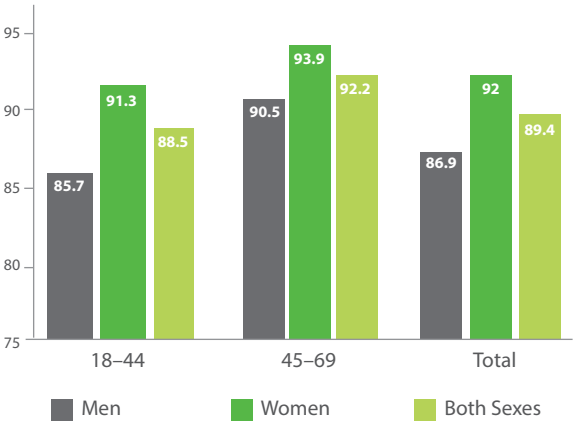


Figure 32: Perceptions on Correlation of Salt Consumption and Serious Health Problems (%).

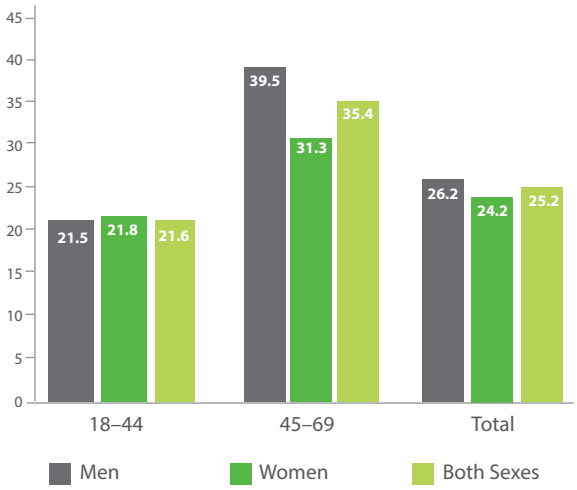


4.5 Physical Activity

Of all respondents, 25% did not meet the WHO recommendations on physical activity for health, which is doing at least a 150 minutes of moderate-intensity physical activity per week,

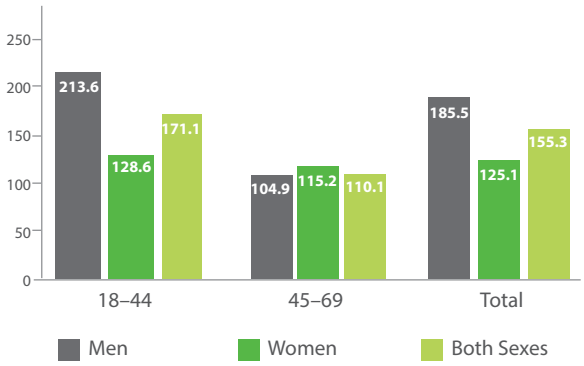
or 75 minutes of vigorous-intensity physical activity or an equivalent combination of moderate- and vigorous-intensity physical activity achieving at least 600 MET*-minutes. Variation was significant among both genders in the older and younger age groups, also between males and females of the age groups 45-69 (figure, 33).

Figure 33: Prevalence of Physical Inactivity as per WHO Recommendations (%).



Among all respondents, 155 minutes was the mean time of total physical activity per day. Overall, variation was significant between older and younger age groups being 110 and 171 minutes of physical activity per day, respectively. Also, younger males significantly spent more time in physical activity (214 min) compared to younger females (129 min). The difference between genders minimized as age increased as seen in the older age group of 45-69 years old (figure, 34).

Figure 34: Duration of Total Physical Activity per Day Classified by Age and Gender (mean minutes).



The average time of physical activity was highest during work (108 minutes), which significantly varied between younger and older age groups as well as gender, being higher in younger males. This was followed by duration of physical activity during transportation (37 minutes), which significantly varied between younger and older males, also between males and females. Whereas, physical activity related to recreation was on average 11 minutes in both genders, being significantly higher in males (16 minutes) compared to females (7 minutes).

However, in males, transportation, work and recreational activities contributed to total physical activity in 48%, 41% and 11% of respondents, respectively. In contrast, work contributed to total physical activity in 65% of females, compared to transport in 29% and recreation in 6%.

On average, all respondents spent 287 minutes per day in sedentary activities, with sedentary lifestyle being

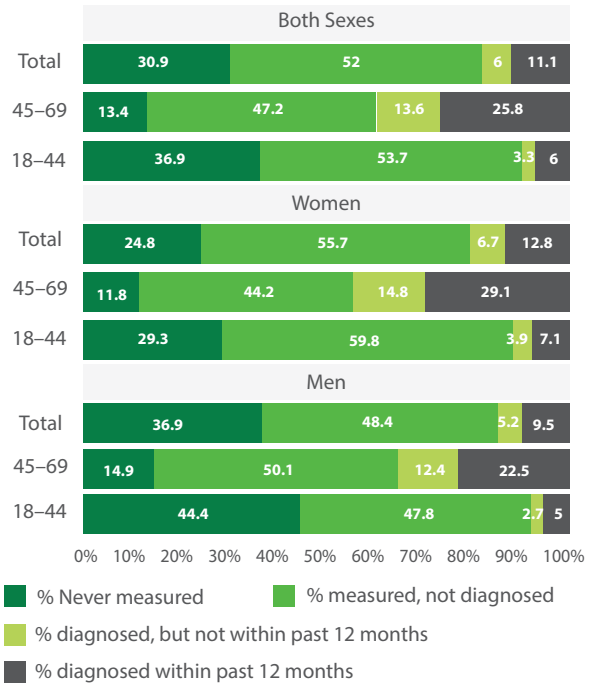
* MET: metabolic equivalents. METs are commonly used to express the intensity of physical activities. It is the ratio of a person's working metabolic rate relative to the resting metabolic rate. One MET is defined as the energy cost of sitting quietly, and is equivalent to a caloric consumption of 1 kcal/kg/hour. It is estimated that, compared to sitting quietly, a person's caloric consumption is four times as high when being moderately active, and eight times as high when being vigorously active.

significantly more in males compared to females, being 306 minutes and 268 minutes per day, respectively. Sedentary activities were also more evident in older age group compared to younger age group.

4.6 History of Raised Blood Pressure

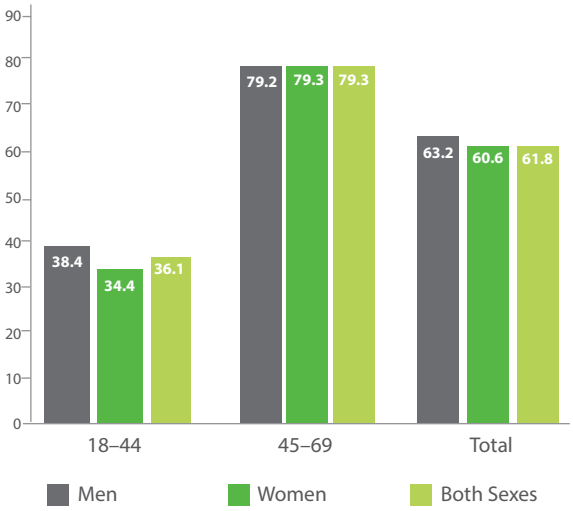
Upon asking all respondents if they ever had, their blood pressure measured or if they were ever told by a physician or another health worker that they had raised blood pressure, 31% reported never having their blood pressure measured and 52% had it measured but not diagnosed with raised blood pressure. In contrast 17% of all respondents were diagnosed of raised blood pressure, in 65% of them it was during the past 12 months. The diagnosis of raised blood pressure was significantly higher in older age group (39%) compared to younger age group (9%). Overall, more females were diagnosed with raised blood pressure 19.5% compared to males 14.7%; however, it was not statistically significant (figure, 35).

Figure 35: Blood Pressure Measurement and Diagnosis (STEP 1) (%).



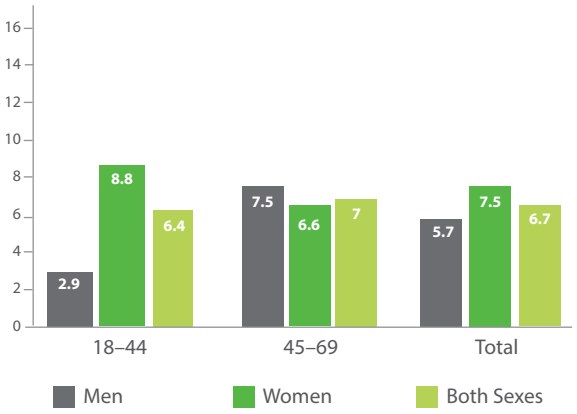
The majority of those diagnosed with raised blood pressure (62%) were currently taking medication, with no significant variation between males and females. Older patients, however, tended to take medication (79%) more than younger patients, where only 36% of them took a medication (figure, 36).

Figure 36: Receiving Medication for Raised Blood Pressure Among Those Diagnosed (%).



Among those previously diagnosed with raised blood pressure, 7% have seen a traditional healer for their blood pressure (figure, 37), and 10% were currently taking herbal or traditional remedy for raised blood pressure, with more females choosing to take these medications compared to males 11.3% and 8.2%, respectively.

Figure 37: Patients with Raised Blood Pressure Seeking a Traditional Healer (%).



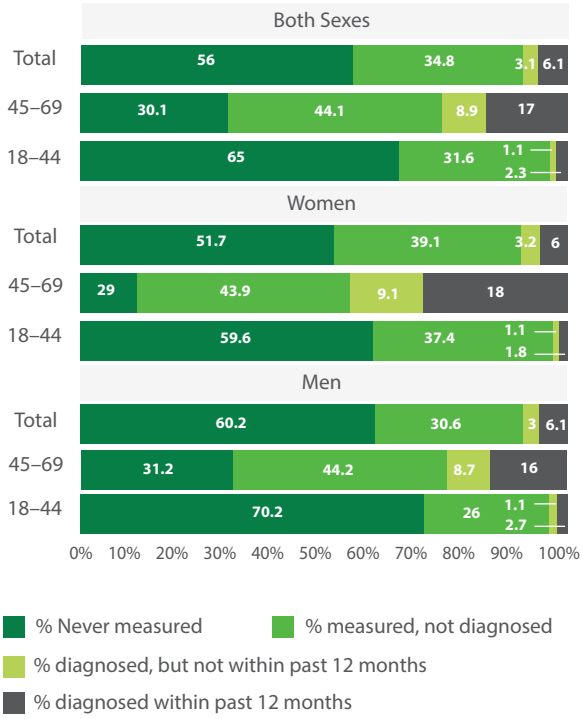
4.7 History of Diabetes

Of all respondents, 56% never had their blood sugar measured and 35% had it measured but had no raised blood sugar. In contrast, 9% were diagnosed of raised blood sugar over the past one year (figure 38).

Among males, 60% never had their blood sugar measured, 31% had their blood sugar measured but not diagnosed and 9% were diagnosed for raised blood sugar (16% older and 3% younger age group). Of the 9% diagnosed with raised blood sugar, 67% occurred over the past 12 months.

On the other hand, of females, 52% never measured their blood sugar, 39% had their blood sugar measured and had no elevated blood sugar. In contrast, 9% were found to have raised blood sugar (27% among older and 3% among younger females).

Figure 38: Blood Sugar Measurement and Diagnosis (STEP 1).



Of those previously diagnosed with raised blood sugar, 86% of males and 77% of females were currently taking medication (figure, 39). No significant difference was noted across genders nor age groups. Insulin was currently used by 82% of those previously diagnosed with raised blood sugar (figure, 40).

Figure 39: Respondents with Raised Blood Sugar Currently Taking Medication (%).

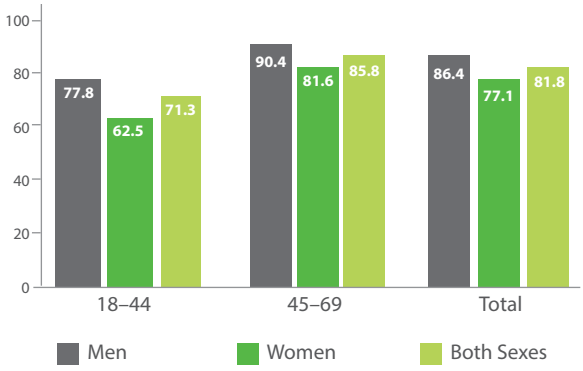
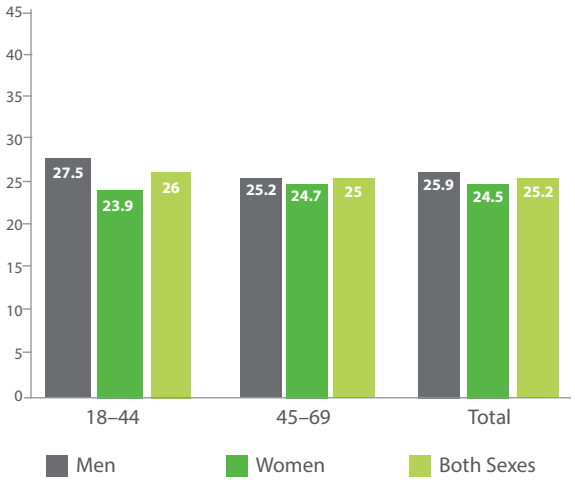


Figure 40: Respondents with Raised Blood Sugar Currently Taking Insulin.

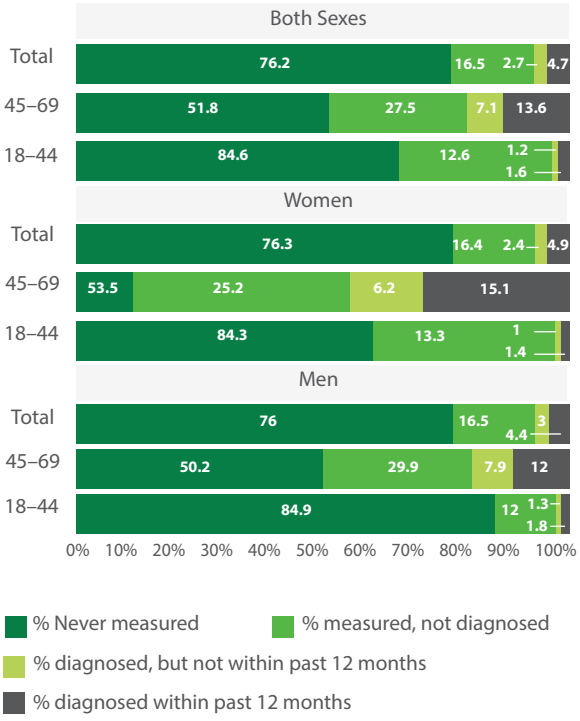


Among those previously diagnosed of raised blood sugar, 11% sought advice from a traditional healer, with no significant difference between genders nor age groups.

4.8 History of Raised Total Cholesterol

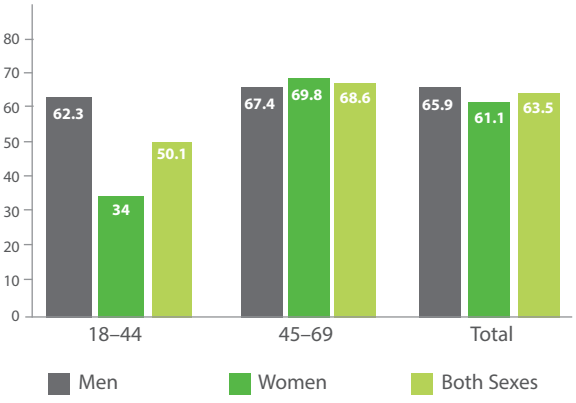
Among all respondents, 76% never had their total blood cholesterol measured, which was significantly more notable among the younger age group (85%) versus older ones (52%). In contrast, 7% have been diagnosed with elevated total cholesterol, which was significantly more prevalent among older age (14%) compared to younger ones (2%) (figure, 41).

Figure 41: Total Cholesterol Measurement and Diagnosis (STEP 1) (%).



Of those previously diagnosed with raised total cholesterol, 64% were currently taking medication, which was significantly more among older females compared to younger ones, yet no significant difference was noted among males nor across genders (figure, 42).

Figure 42: Respondents with Raised Total Cholesterol Currently Taking Oral Medication (%).



Of those previously diagnosed with raised blood cholesterol, 8.5% sought advice of a traditional healer (figure, 43), and 11% were currently taking a herbal or traditional treatment for raised cholesterol. No significant differences were noted across genders nor age groups (figure, 44).

Figure 43: Respondents with Raised Total Cholesterol Seeking a Traditional Healer, Classified by Age and Gender (%).

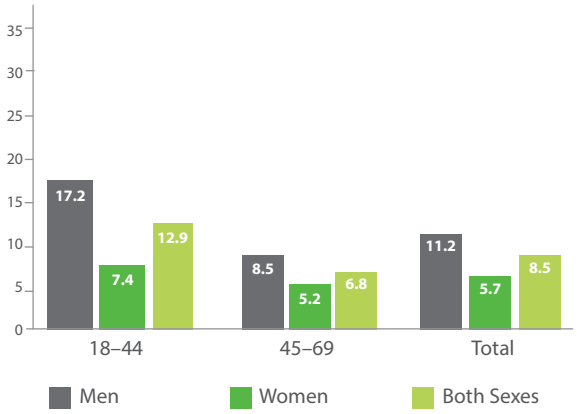
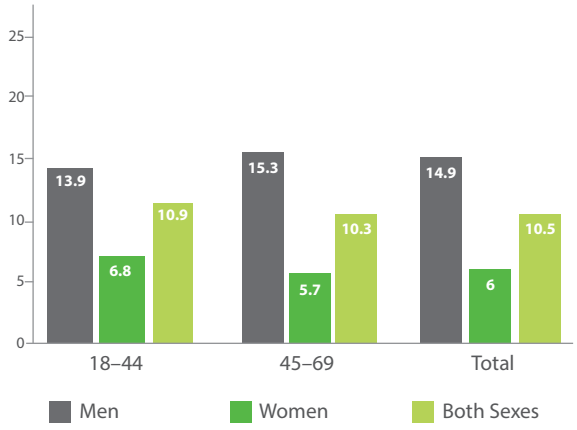


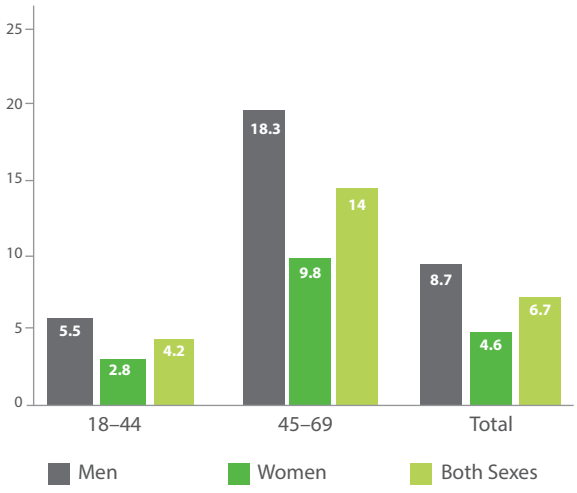
Figure 44: Respondents with Raised Total Cholesterol Currently Taking Herbal or Traditional Treatment Classified by Age and Gender (%).



4.9 History of Cardiovascular Diseases

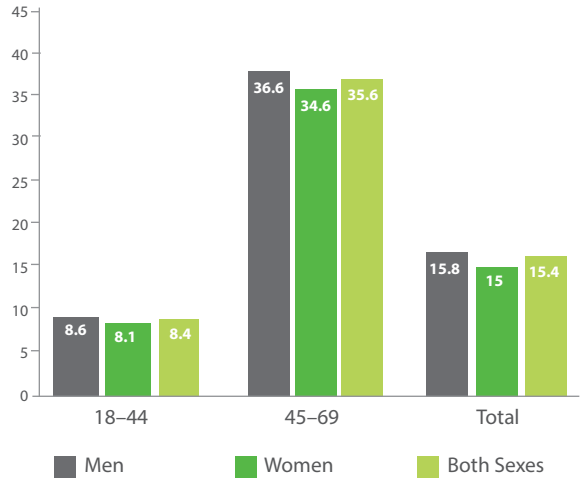
Upon asking respondents if they ever experience a heart attack, angina (chest pain due to a heart disease) or a stroke, 7% positively responded. This was significantly more reported by males (9%) compared to females (5%), and older age (14%) compared to younger age groups (4%), particularly older males as 18% reported CVD history (figure, 45).

Figure 45: History of Cardiovascular Disease Classified by Gender and Age (%).



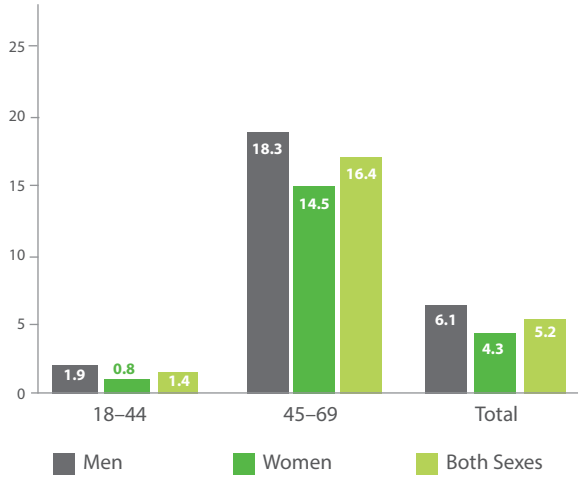
The percentage of respondents currently taking aspirin regularly to prevent or treat heart disease was 15%, which was more reported by the older age group (36%) compared to the younger one (8%). No significant difference in aspirin use was noted between males and females (figure, 46).

Figure 46: Aspirin Use to Prevent or Treat Heart Diseases Classified by Age and Gender (%).



On the other hand, of all respondents, 5% were taking statins (lipid-lowering therapy) regularly to prevent or treat CVD. This was prevalent in older respondents (16%) compared to younger ones (1.4%), with no significant difference across genders (figure, 47).

Figure 47: Statins Use to Prevent or Treat Heart Diseases Classified by Age and Gender (%).



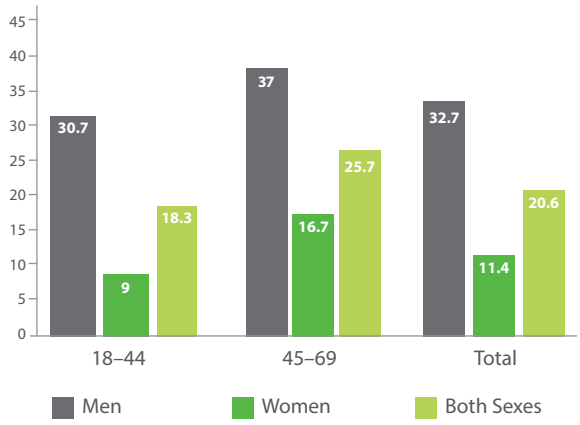
The regular use of aspirin among respondents who had a CVD history was reported by 64% of them, whereas statins were regularly used by 32% of them to prevent or treat CVD.

4.10 Lifestyle Advice

Upon asking respondents if they received advice by a physician or a health care worker on lifestyle during the past 12 months, it was reported that 21% were advised on quitting tobacco use (figure, 48), 27% were advised on dietary salt reduction (figure, 49), 36% on eating 5 servings of fruits/vegetables daily (figure, 50), 30% on reducing dietary fats (figure, 51), 33% on doing physical activity (figure, 52), 31% on body weight (figure, 53), and 27% on reducing sugary beverages (figure, 54).

Generally, more males received advice (33%) on quitting smoking compared to females (11%). Also, older age respondents (26%) reported being advised on tobacco use cessation more than younger ones (18%) (figure, 48).

Figure 48: Lifestyle Advice on Quitting Tobacco Use, Classified by Age and Gender.



Males and females similarly reported receiving advice on reducing dietary salt. However, significant variation was reported between older and younger age groups; 42% of older adults received this advice compared to 20% of the younger ones (figure, 49). Likewise, there was no significant difference between males and females in receiving advice on daily consumption of fruit and/or vegetables. More of the older age adults reported receiving this advice compared to the younger ones (figure, 50).

Figure 49: Lifestyle Advice on Dietary Salt Reduction, Classified by Age and Gender (%).

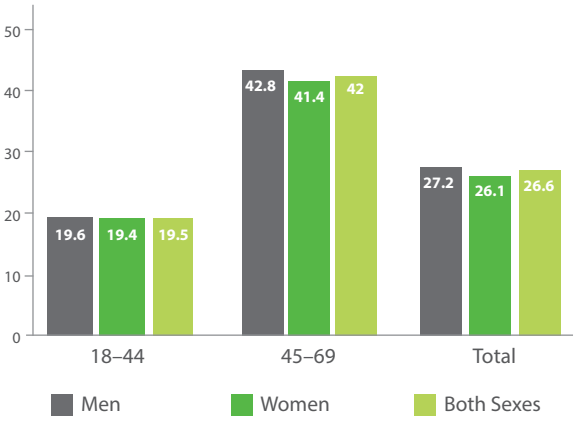
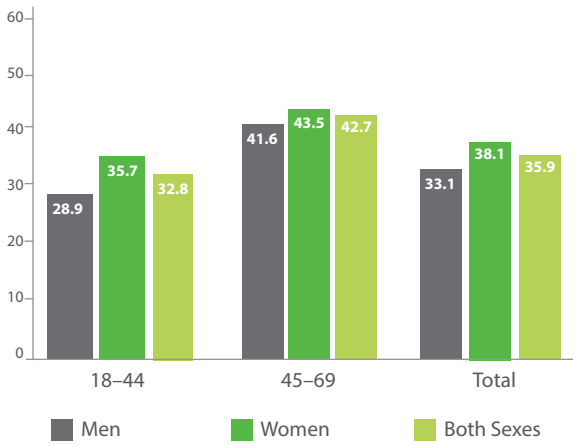
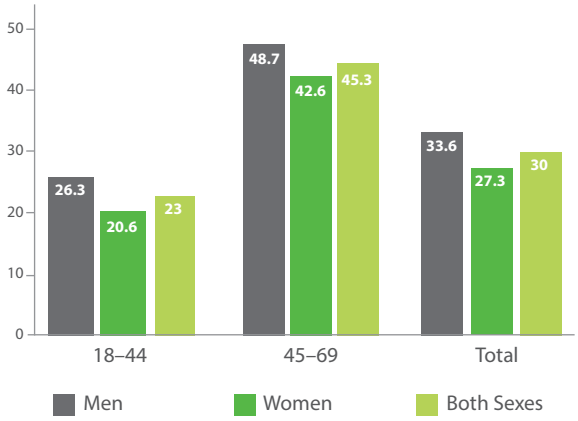


Figure 50: Lifestyle Advice on Daily Consumption of Fruit and Vegetables (5 Servings/day) (%).



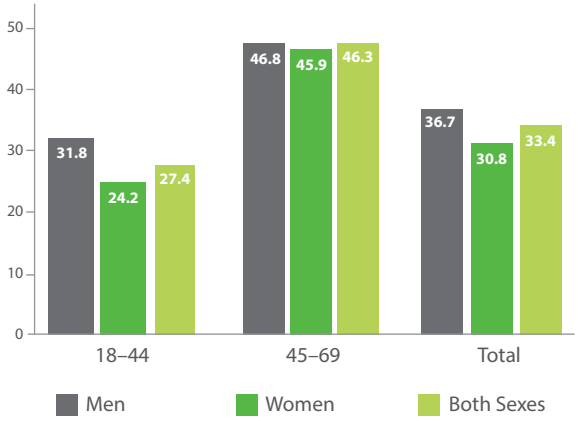
More males were advised to reduce dietary fats, compared to females (34% versus 27%), yet it was not statistically significantly different. In contrast, almost half of the older adults (45%) reported receiving this advice compared to younger ones (23%) (figure, 51)

Figure 51: Lifestyle Advice on Dietary Fat Reduction Classified by Age and Gender (%).



Older adults (45-69 years old) received more advice on starting or doing more physical activity compared to younger ones (18-44 years old), at 46% vs. 27%, respectively. No difference was reported between males and females in this lifestyle advice (figure, 52).

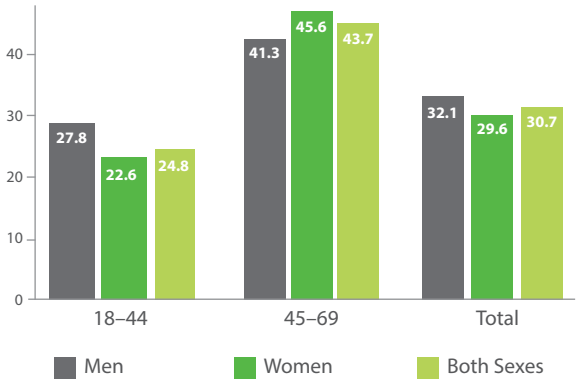
Figure 52: Lifestyle Advice on Physical Activity, Classified by Age and Gender (%).



Thirty one percent of all sample were advised by a doctor or health workers to maintain a healthy body weight or to lose weight. More people in the age group 45–69 years were given this advice (43.7%) compared to younger ones in the age group 18-44 years old (24.8%) (figure, 53).

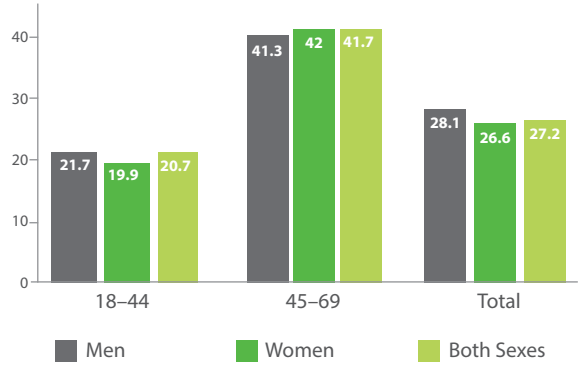
In the first group more women were advised than men (45.6% to 41.3%), while in the age group 18-44 more men (27.8%) were advised to maintain a healthy body weight compared to women (22.6%).

Figure 53: Lifestyle Advice on Healthy Body Weight, Classified by Age and Gender (%).



The advice to reduce sugary beverages in diet was similarly reported by males (28%) and females (27%). Older adults were twice more likely to receive this advice (42%) compared to younger ones (21%), (figure, 54).

Figure 54: Lifestyle Advice on Reduction of Sugary Beverages, Classified by Age and Gender (%).



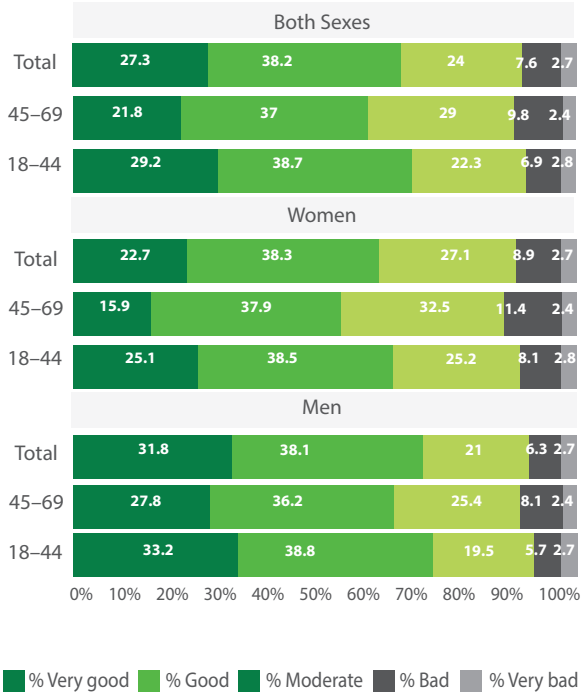
4.11 Cervical Cancer Screening

Of all female respondents aged between 30 and 49 years old, 12% stated ever having a screening test for cervical cancer.

4.12 Mental Health

Upon asking all respondents to rate their health status on the day of the interview, 70% of males described it as good or very good, 21% described it as moderate, and 9% as bad or very bad. Whereas, 61% of females described their health as good or very good, 27% as moderate, and 12% as bad. Significantly more males described their health as very good compared to females, and insignificant difference existed between both genders in terms of moderate and bad health status. Similarly, younger age group significantly described their health as very good compared to older ones, but no significant difference was reported for good, moderate, or bad health (figure, 55).

Figure 55: Perceptions of Health Status (%).



The Prevalence of Depression

The lifetime prevalence of depression, which comprised those ever being diagnosed with depression or ever receiving therapy for it (any type of therapy, whether medication, psychotherapy or counselling sessions) was 4%. This was similar in both genders and age groups (table,11).

Table 11: Lifetime Prevalence of Depression, Classified by Age and Gender.

Age Group (years)	Men			Women			Both Sexes		
	N	% Yes	95% CI	N	% Yes	95% CI	N	% Yes	95% CI
18–44	1391	4.3	2.8-5.9	2356	4.7	3.4-6.0	3747	4.5	3.5-5.6
45–69	811	2.9	1.4-4.4	1154	5.2	3.5-6.9	1965	4.0	2.9-5.2
18–69	2202	4.0	2.8-5.2	3510	4.8	3.8-5.9	5712	4.4	3.6-5.2

The prevalence of depression, which includes those stating having depression* over the past 12 months or those taking any type of therapy for depression (medication or other therapy) during the last two weeks is 18%. It was significantly higher in females (22%) more than males (14%), with no significant difference between age groups (table, 12), nor between Jordanians (17.7%) and Syrians (21.3%).

Table 12: Prevalence of Depression Over the Past 12 Months.

Age Group (years)	Men			Women			Both Sexes		
	N	% Yes	95% CI	N	% Yes	95% CI	N	% Yes	95% CI
18–44	1391	15.0	12.4-17.6	2356	22.5	19.7-25.3	3747	18.7	16.7-20.7
45–69	811	12.3	9.2-15.4	1154	20.2	17.0-23.5	1965	16.3	14.1-18.5
18–69	2202	14.3	12.2-16.4	3510	21.9	19.7-24.1	5712	18.1	16.5-19.7

* The diagnosis of depression was made based on the respondent answering positively two out of three of the following questions:
Over the past 12 months:

- Have you had a period lasting several days when you felt sad, empty or depressed?
- Have you had a period lasting several days when you lost interest in most things you usually enjoy such as hobbies, personal relationships or work?
- Have you had a period lasting several days when you have been feeling your energy decreased or that you are tired all the time?

And answering positively both of the following questions:

- Was this period [of sadness/loss of interest/low energy] for more than 2 weeks?
- Was this period [of sadness/loss of interest/low energy] most of the day, nearly every day?

If the above questions were positively answered with or without taking therapy (during the past 2 weeks) it was considered prevalence of depression over the past 12 months.

The percentage of coverage with therapy of those having depression over the past 12 months is 6.5% (7.2% in males and 6.2% in females). Coverage with therapy was similar across both age groups, genders (table, 13) and nationalities, with no statistically significant differences.

Table 13: Therapy Coverage of Those Having Depression over The Past 12 Months.

Age Group (years)	Men			Women			Both Sexes		
	N	% Yes	95% CI	N	% Yes	95% CI	N	% Yes	95% CI
18–44	247	8.1	4.5-11.7	530	5.3	3.3-7.2	777	6.2	4.4-7.9
45–69	114	5.3	1.2-9.4	266	7.9	4.7-11.1	380	7.1	4.4-9.8
18–69	361	7.2	4.4-10.0	796	6.2	4.5-7.9	1157	6.5	5.0-8.0

Severity of Depression

Findings from the assessment of severity of depression, which was based on four indicators; namely the loss of appetite, slowing of thinking, negative feelings about oneself and loss of confidence, and wishing or thinking of death during the last 12 months (for a period lasting for several days [more than 2 weeks], most of the day and nearly every day) are depicted in figures (56, 57, 58, 59).

More females expressed loss of appetite (76%) compared to males (69%) during the last 12 months. However, the difference between genders and age groups was statistically insignificant (figure, 56). Similarly, more females (64%) than males (58%) reported feeling negative about oneself or loss of confidence (figure 57), also more females thought of death or wishing to be dead (55%) compared to males (49%), yet the difference was insignificant (figure, 58). On the other hand, both males and females similarly noticed slowing of their thinking during the last 12 months, being 72% and 71%, respectively (figure, 57).

Figure 56: Loss of Appetite During the Last 12 Months, Classified by Age and Gender (%).

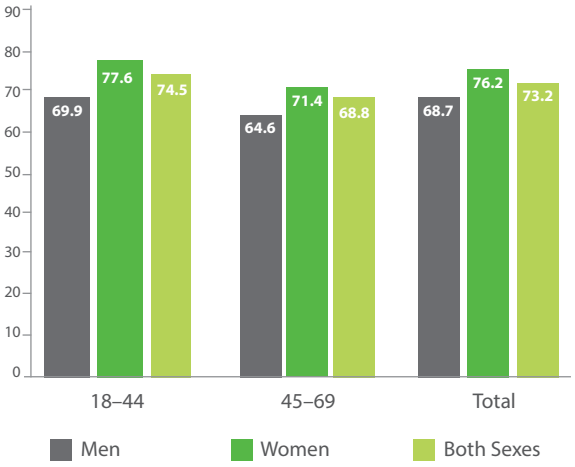


Figure 57: Slowing of Thinking During the Last 12 Months, Classified by Age and Gender (%).

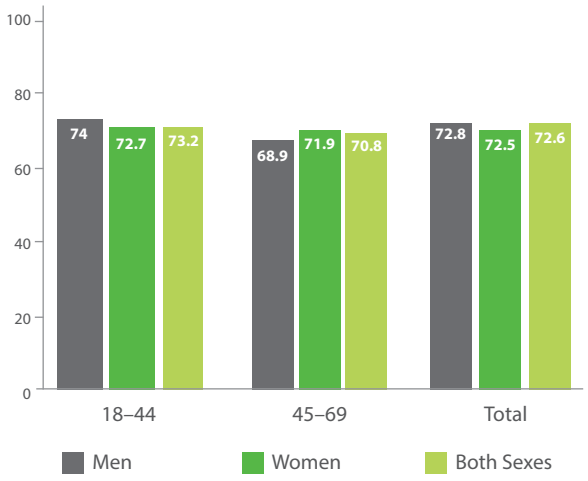


Figure 58: Negative Feeling about Oneself or loss of Confidence During the Last 12 Months, Classified by Age and Gender (%).

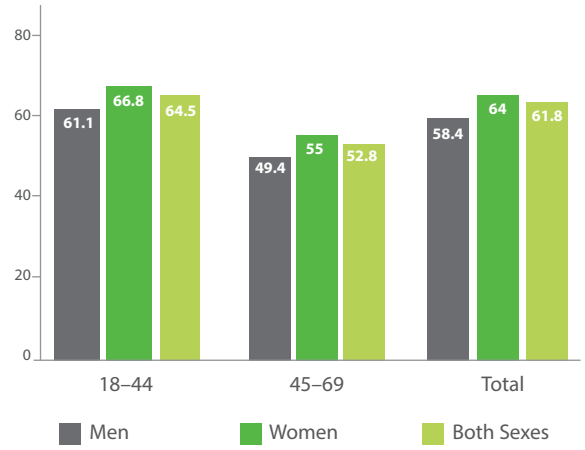
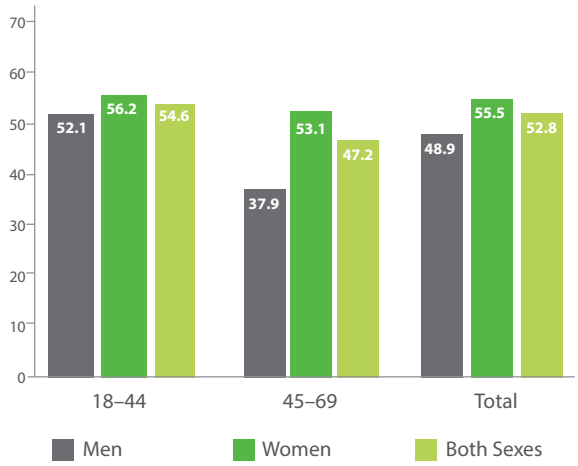


Figure 59: Thinking of or Wishing to be Dead During the Last 12 Months, Classified by Age and Gender (%).



4.13 Household Energy Use

An absolute majority of respondents (97%) stated consuming food or drink that is cooked/prepared by members of the household, and there was no difference between older and younger age groups.

The device used in cooking* whether cooking food, making tea/coffee or boiling water, was for 99% of the respondents the cooking gas (liquified petroleum gas stove), 4% stated using electrical stove or kettle and 2% stated open fire. The main source of fuel used by 99% of households for cooking was the cooking gas (liquified petroleum gas).

In terms of heating households, 98% of respondents stated using any form of space heating at any time during the year. The types of heaters** used in the households were gas heaters in (61%) of households, diesel/kerosene heaters in (41%), electricity heaters in (18%), air conditioning (heating) in 8%, wood/charcoal/olive mill solid waste in 10%, central heating (gas) in (5%), and central heating (diesel) in (2%) of households.

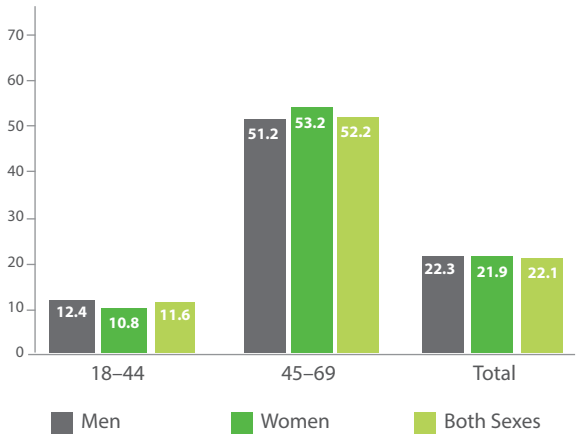
* Respondents could choose more than one cooking device; hence the percentages sum up to more than 100.
** Respondents could choose more than one type of heater; hence the percentages sum up to more than 100.

STEP 2: Physical Measurements

Upon the measurement of blood pressure for respondents who agreed to participate in STEP 2 of the survey, combined with asking them if they were currently on medication for raised blood pressure, 22.1% of respondents had raised blood pressure (defined as systolic blood pressure [SBP] ≥ 140 and/or Diastolic Blood Pressure [DBP] ≥90 mmHg) (figure, 60). Out of those with raised blood pressure, 13.5% had an SBP ≥ 160 and/or DBP ≥100 mmHg.

The prevalence of raised blood pressure was significantly higher in older age group (52%) compared to younger one (12%). However, no significant difference was evident between males and females (22%, each). Similarly, older group had significantly higher levels of BP (≥160/100 mmHg) as seen in 38%, whereas only 5% of younger age group had this elevated BP reading. More females (15%) had BP (≥160/100 mmHg BP), compared to males (12%). However the difference was not statistically significant.

Figure 60: Prevalence of Raised Blood Pressure (Raised BP or Currently on Medication) (%).



4.14 Blood Pressure: Treatment and Control

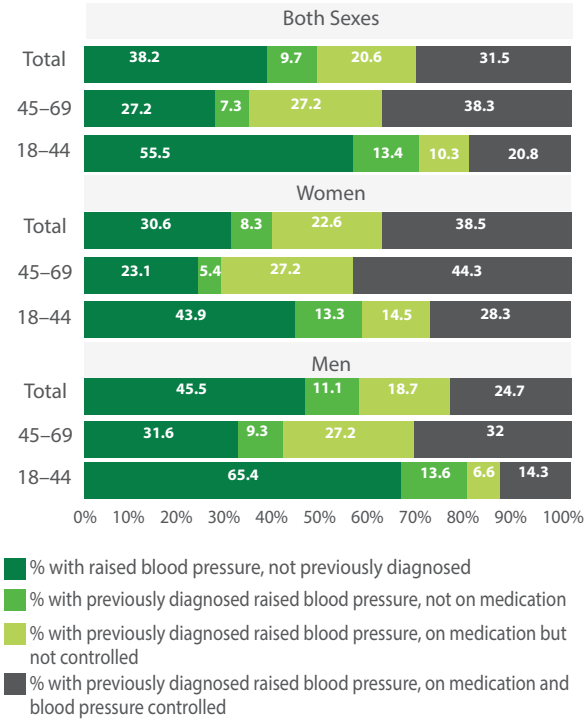
Of respondents with raised blood pressure, 48% were not covered with medication (male 46% and female 39%). Of those not covered with medication (38%) were not previously diagnosed (46% males and, and 31% females) and (10%) were previously diagnosed but not on medication (11% males and 8% females) (figure, 61).

Significantly more males (46%) than females (31%) were not aware they had raised blood pressure as it was not previously diagnosed. This was also more evident for the younger age group (56%) compared to the older one (27%). More males with raised blood pressure were not on any medication as compared to females being 11% and 8%, respectively, yet the difference was not significant.

In contrast, coverage with medication was found in 52% of patients with raised blood pressure (61% in females and 43% in males). Nonetheless, the BP was controlled in 32% of them and uncontrolled in 21%, despite receiving therapy.

Lack of control of raised blood pressure despite receiving medication was slightly more evident in females (23%) compared to males (19%). The control of raised blood pressure with medication was significantly more evident in females (39%) compared to males (25%), and more in older (38%) compared to younger (21%) age groups. (Figure, 61).

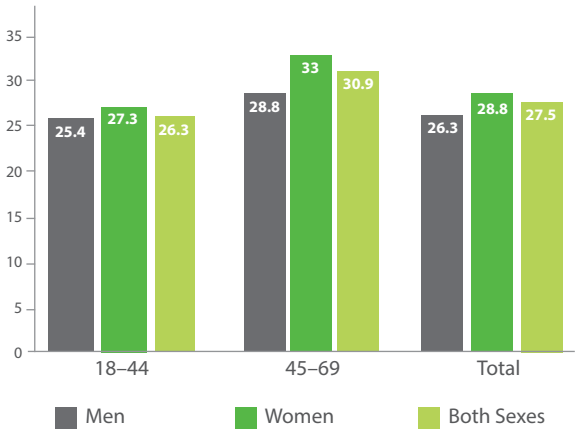
Figure 61: Coverage of Therapy and Control of Raised Blood Pressure, by Age and Gender (%).



4.15 Height, Weight, and Body Mass Index

The mean height for males was 173 cm and for females (excluding pregnant women) was 159 cm. On the other hand, the mean BMI Index (kg/m^2) for all the respondents was 27.5 kg/m^2. It was significantly higher for older age (31 kg/m^2) compared to younger age group (26 kg/m^2), and for females (29 kg/m^2) compared to males (26 kg/m^2) (figure, 62).

Figure 62: Mean BMI (kg/m^2).



Upon calculating BMI for all respondents; 61% were overweight or obese (figure, 63). Out of those, 32% were obese and 29% were overweight, 34% had normal weight, and 5% were under-weight (figure, 64). Obesity was more evident in females (40%) compared to males (24%). Highest obesity rates were among females 45-69 years old, as 68% of them had a BMI ≥30.0 compared to 30% of younger females. As for males, obesity and overweight were seen 36% and 43% of older males and 20% and 24% of younger males, respectively (figure, 64).

Figure 63: Prevalence of Overweight and Obesity (BMI≥25), Classified by Age and Gender (%).

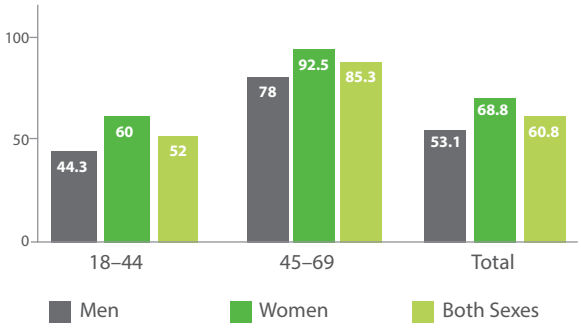
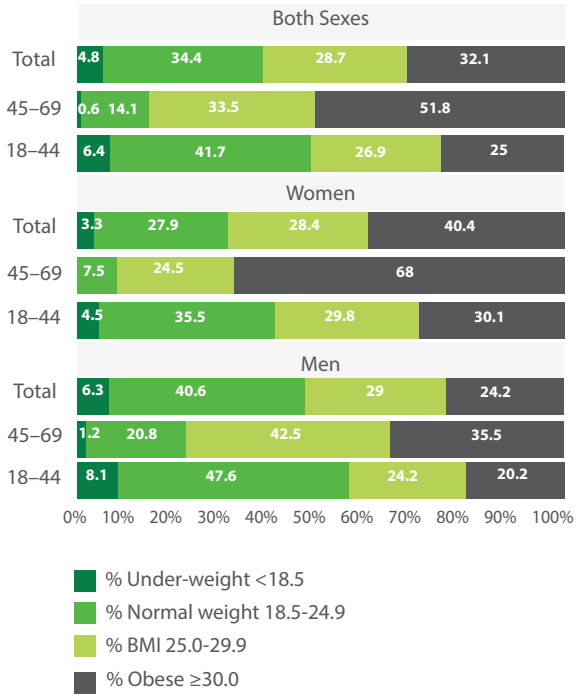


Figure 64: Respondents' Classification by BMI, Age and Gender (%).



The mean waist circumference for males was 91 cm, which was significantly higher in older males (101 cm) compared to younger males (88 cm). In contrast, mean waist circumference in females (excluding pregnant women) was 90 cm, which was higher in older females (102 cm) compared to younger ones (85 cm).

The mean waist/hip ratio for men was similar for both males and females at 0.9 each. It was higher in older males compared to younger ones, at 1.0 and 0.9, respectively. In females (excluding the pregnant), that ratio was 0.9 in older ones compared to 0.8 in younger ones.

STEP 3: Biochemical Measurements

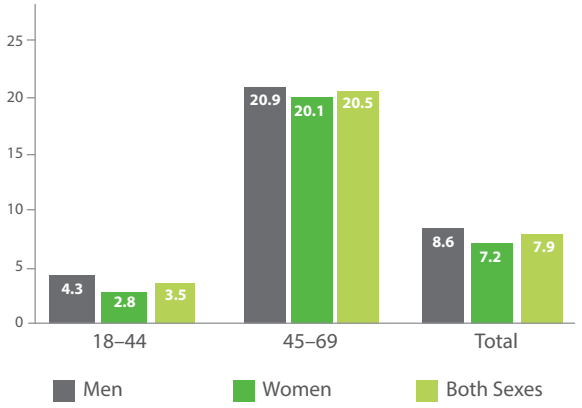
4.16 Blood Glucose levels

In all respondents who agreed to participate in STEP 3 and fasted over-night, the mean fasting blood glucose was 4.6 mmol/L (4.7 mmol/L in females, and 4.5 mmol/L in males). A significantly higher mean fasting blood glucose was found in older age group 5.5 mmol/L (5.7 in females and 5.4 in males) compared to younger age 4.3 mmol/L (4.3 in females and 4.2 in males).

Respondents with impaired fasting glucose*, raised blood glucose** or currently on medication for diabetes constituted 14% of all respondents who fasted and had their blood sugar measured. Impaired fasting glycaemia was evident in 6.1% of respondents (7% of females and 6% of males), which constituted 43% of respondents with above normal blood glucose levels. The differences were significant between older and younger age groups, being 13.3% in older males compared to 3% in younger ones, and 11% in older females compared to 5% in younger females. Whereas, raised blood glucose (whole capillary blood value ≥ 6.1 mmol/L) or those currently on medication for diabetes constituted 8% of respondents who had their blood glucose level measured. It was not significantly different between males (8.6%) and females (7.2%). Yet, the difference between older groups (21%) and younger ones 4% was evident (figure, 65).

* Capillary whole blood value ≥5.6 mmol/L (100 mg/dl) and <6.1 mmol/L (110 mg/dl), which is equivalent to plasma venous value ≥6.1 mmol/L (110 mg/dl) and <7.0 mmol/L (126 mg/dl).
** Capillary whole blood value ≥ 6.1 mmol/L (110 mg/dl), which is equivalent to plasma venous value ≥ 7.0 mmol/L (126 mg/dl).

Figure 65: Prevalence of Raised Blood Glucose or Currently on Medication for Diabetes (STEP3) (%).

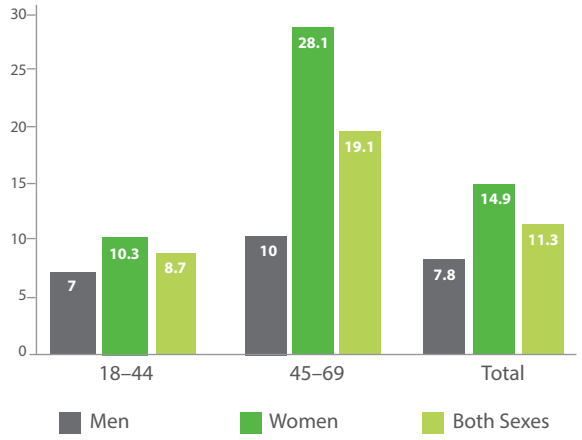


4.17 Total Cholesterol levels

The overall mean total cholesterol was 3.7 mmol/L (3.9 mmol/L in females and 3.5 mmol/L in males). The difference was significant between older (4.1 mmol/L) and younger (3.6 mmol/L) age groups.

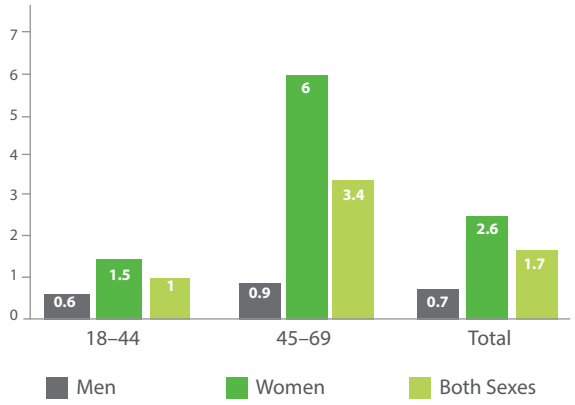
Raised total cholesterol (defined as ≥ 5.0 mmol/L or ≥ 190 mg/dl) was evident in 11.3% of all respondents, 15% in females and 8% in males, which was statistically significant. The variation between older age (19%) and younger (9%) age groups was also significant (figure, 66).

Figure 66: Prevalence of Raised Total Cholesterol by Age and Gender (%).



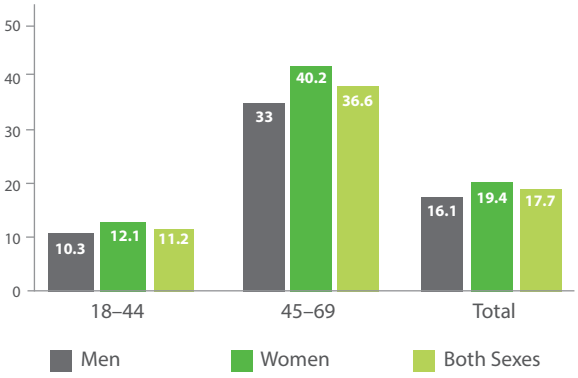
Similarly the prevalence of very high total cholesterol (defined as cholesterol ≥ 6.2 mmol/L or ≥ 240 mg/dl) was seen in 1.7% of all respondents (2.6% in females and 0.7% in males). The difference between males and females was significant. Likewise, the difference between older age (3.4%) and younger age group (1%) (figure, 67).

Figure 67: Prevalence of Very High Total Cholesterol (≥ 6.2 mmol/L) (%).



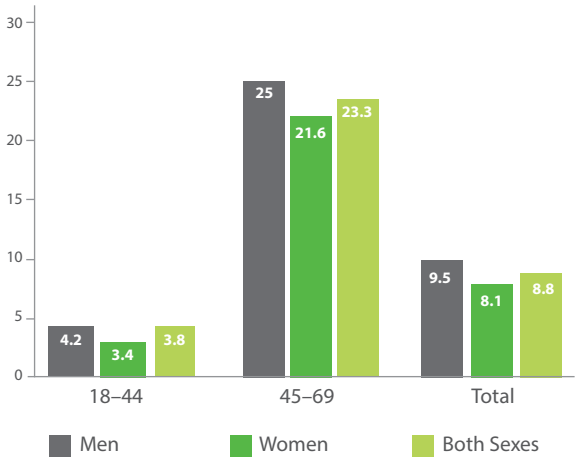
Respondents with raised total cholesterol or those currently on medication for raised cholesterol constituted 18% of those who measured their lipid level (19% in females and 16% in males). The difference between genders was not statistically significant, unlike the difference between older age group (37%) and younger age group (11%) (figure, 68).

Figure 68: Prevalence of Raised Total Cholesterol or Currently on Medication for Treatment of Elevated Cholesterol (%).



Respondents with very high total cholesterol or currently on medication constituted 9% of those who measured their lipid level (10% of males and 8% of females). Significant variation was seen across age groups (23% in older age versus 4% in younger age group) but not across genders (figure, 69).

Figure 69: Prevalence of Very High Total Cholesterol or Currently on Medication for Treatment of Elevated Cholesterol (%).

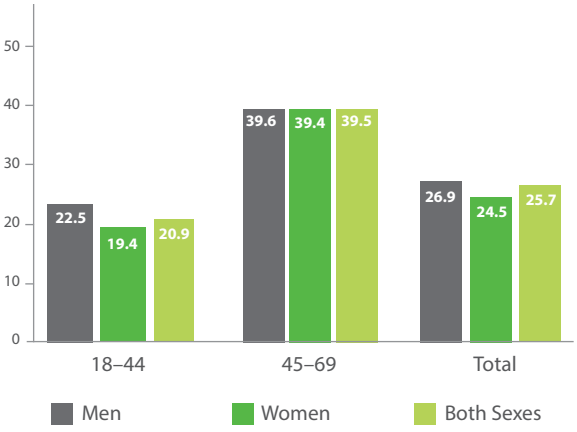


The overall mean High Density Lipoprotein (HDL) among all respondents participating in STEP 3 is 1 mmol/L (1.1 mmol/L in females and 0.9 mmol/L in males). No significant difference was evident between younger and older age groups. Low HDL (defined as <1.03 mmol/L in males and <1.29 mmol/L in females) was evident in 75% of males and 73% of females. This was statistically similar across both genders and age groups.

The overall mean Low Density Lipoprotein (LDL) among all respondents participating in STEP 3 was 2.2 mmol/L (2.3 mmol/L in females and 2.1 mmol/L in males). There was no significant difference between age groups (2.4 mmol/L in older age group versus 2.1 mmol/L in younger one). On the other hand, of all those who measured their lipid levels, LDL was high (LDL = 4.1-4.8 mmol/L) in 1.4% or respondents and very high (LDL ≥ 4.9 mmol/L) in 0.3% of respondents.

As for triglycerides (TG), the overall mean fasting TG level among all respondents who did the test was 1.4 mmol/L (1.5 mmol/L in males and 1.4 mmol/L in females). Overall, respondents with elevated fasting TG (defined as ≥ 1.7 mmol/L) was 26% (27% in males and 25% in females). Significant difference was noted between older (40%) and younger (21%) age groups (figure, 70).

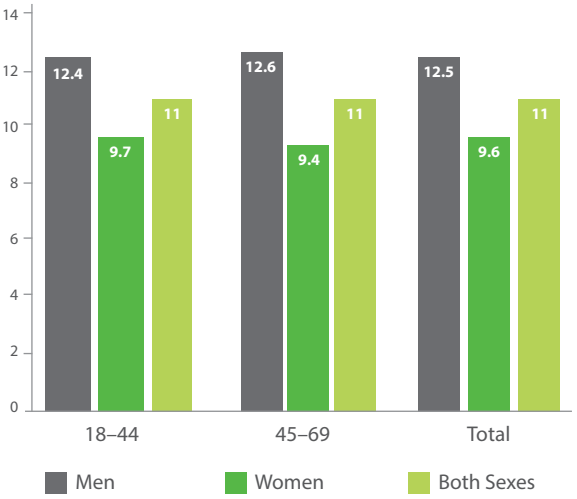
Figure 70: Prevalence of Elevated Triglycerides (≥1.7 mmol/L or ≥150 mg/dl) (%).



4.18 Daily Salt Intake

The mean daily salt intake in all respondents was 11 g/day. Males had a higher mean of 12.5 g/day compared to females 9.6 g/day. The values of daily salt intake were comparable between both younger and older age groups (figure, 71).

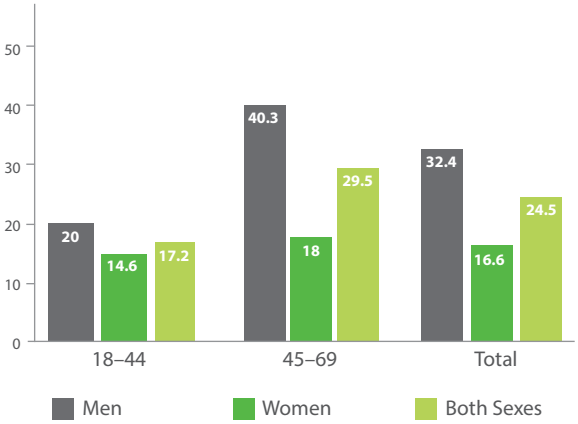
Figure 71: Mean Daily Intake of Salt (g/day).



4. 19 Cardiovascular Disease Risk

Overall, the percentage of respondents aged 40-69 years old with a 10-year CVD risk ≥30% (very high)* or with existing CVD was 25% (32% in males and 17% in females). The difference in CVD risk was significant among males and females, as well as between those aged 55-69 years old compared to those 40-54 years old. Males aged 55-69 years old, had a very high risk for CVD or existing CVD in 40% of them, compared to 18% of females in the same age group (figure, 72).

Figure 72: Prevalence of Very High 10-year CVD Risk (≥30%) or Existing CVD (%).



Summary of Combined Risk Factors

Of all respondents, 41.0% had 3-5 risk factors towards CVD, with a higher percentage in the age group 45-69 years old (63%) compared to those 18-44 years old (33%). Of note, 71% of males aged 45-69 years old had 3-5 CVD risks, compared to 40% of males aged 18-44 years old. As for females, 56% of those 44-69 years old versus 26% of younger females 18-44 years old had 3-5 CVD risk factors. Younger respondents aged 18-44 years old had 1-2 CVD risk factors in 65% of them (72% in females and 57% in males). In 2.2% of all the respondents that no risk factors towards CVD existed (figure, 73).

* A 10-year CVD risk of ≥30% is defined according to age, sex, blood pressure, smoking status (current smokers OR those who quit smoking less than 1 year before the assessment), total cholesterol, and diabetes (previously diagnosed OR a fasting plasma glucose concentration >7.0 mmol/L [126 mg/dl]).

Figure 73: Prevalence of Combined CVD Risk Factors by Age and Gender (%).

Table 14: Comparison between Jordanian and Syrian Populations.

Results for Adult Jordanians Aged 18–69 Years Old	Jordanians (95% CI)	Syrians (95% CI)
Percentage who currently smoke tobacco	42.0% (39.6-44.5)	32.2% (29.8-34.7)
Percentage who currently smoke tobacco daily	35.5% (33.1-37.9)	26.9% (24.6-29.1)
For those who smoke tobacco daily		
Average age started smoking (years)	18.2 (17.8-18.6)	17.8 (17.3-18.2)
Percentage of daily smokers smoking manufactured cigarettes	88.9% (86.4-91.3)	87.8% (84.7-90.9)
Mean number of manufactured cigarettes smoked per day (by smokers of manufactured cigarettes)	21.3 (20.3-22.4)	18.4 (17.3-19.4)
Step 1 Alcohol Consumption		
Percentage who are lifetime abstainers	94.2% (93.0-95.3)	97.4% (96.6-98.3)
Percentage who currently drink (drank alcohol in the past 30 days)	1.5% (0.9-2.1)	0.3% (0.0-0.5)

Results for Adult Jordanians Aged 18–69 Years Old	Jordanians (95% CI)	Syrians (95% CI)
Step 1 Diet		
Mean number of days fruit consumed in a typical week	3.4 (3.2-3.5)	1.8 (1.7-1.9)
Mean number of servings of fruit consumed on average per day	1.0 (1.0-1.1)	0.5 (0.4-0.5)
Mean number of days vegetables consumed in a typical week	6.0 (6.0-6.1)	5.5 (5.4-5.6)
Mean number of servings of vegetables consumed on average per day	2.1 (2.0-2.2)	1.7 (1.6-1.8)
Percentage who ate less than 5 servings of fruit and/or vegetables on average per day	83.4% (81.7-85.1)	92.4% (91.0-93.9)
Percentage who always or often add salt or salty sauce to their food before eating or as they are eating	30.4% (28.0-32.8)	31.9% (29.6-34.2)
Percentage who always or often eat processed foods high in salt	34.4% (32.2-36.7)	25.0% (22.8-27.2)
Step 1 Physical Activity		
Percentage with insufficient physical activity (defined as <150 minutes of moderate-intensity activity per week, or equivalent)*	25.7% (23.6-27.7)	21.2% (19.3-23.1)
Median time spent in physical activity on average per day (minutes) (presented with inter-quartile range)	87.9 (19.3-205.7)	110.0 (30–248.6)
Percentage not engaging in vigorous activity	76.4% (74.2-78.7)	74.0% (71.5-76.5)
Step 1 Screening for Cervical Cancer		
Percentage of women aged 30–49 years who have ever had a screening test for cervical cancer	12.4% (9.7-15.1)	7.7% (5.8-9.7)
Step 1 Mental Health		
Prevalence of depression over the past 12 months	17.7% (15.9-19.5)	21.3% (19.3-23.2)
Percentage of those with depression over the past 12 months, who are receiving any type of therapy	6.2% (3.6-8.9)	6.6% (3.9-9.3)
Step 2 Physical Measurements		
Mean body mass index—BMI (kg/m^2)	27.5 (27.2-27.8)	27.4 (27.1-27.7)
Percentage who are overweight (BMI ≥ 25 kg/m^2)	60.7% (58.3-63.0)	62.2% (59.6-64.8)
Percentage who are obese (BMI ≥ 30 kg/m^2)	32.3% (30.2-34.4)	30.5% (28.3-32.7)
Percentage with raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)	22.8% (21.0-24.6)	16.9% (15.2-18.5)
Percentage with raised BP* who are not currently on medication for raised BP	47.3% (43.0-51.5)	53.8% (49.0-58.6)

Results for Adult Jordanians Aged 18–69 Years Old	Jordanians (95% CI)	Syrians (95% CI)
Step 3 Biochemical Measurement		
Percentage with impaired fasting glycaemia as defined below • plasma venous value ≥6.1 mmol/L (110 mg/dl) and <7.0 mmol/L (126 mg/dl) • whole capillary blood value ≥5.6 mmol/L (100 mg/dl) and <6.1 mmol/L (110 mg/dl)	6.1% (4.7- 7.4)	6.6% (5.2–7.8)
Percentage with raised fasting blood glucose as defined below or currently on medication for raised blood glucose • venous value ≥ 7.0 mmol/L (126 mg/dl) • whole blood value ≥ 6.1 mmol/L (110 mg/dl)	8.2% (6.7-9.8)	6.1% (4.9 - 7.3)
Percentage with raised fasting blood glucose (≥7 mmol/L [126 mg/dl]) (or currently on medication for raised blood glucose aged 45-69.	20.5% (17.0-24.1)	19.9% (15.8-24.1)
Percentage with raised total cholesterol (≥ 5.0 mmol/L or currently on medication for raised cholesterol)	18.3% (16.1-20.4)	13.5% (11.7-15.3)
Mean intake of salt per day (in grams)	11.0 (10.7-11.4)	10.9 (10.6-11.3)
Cardiovascular Disease (CVD) Risk		
Percentage aged 40–69 years with a 10-year CVD risk ≥ 30%, or with existing CVD**	24.4% (17.3-31.4)	25.9% (18.2-33.6)
Summary of Combined Risk Factors ■ Current daily smokers ■ Fewer than 5 servings of fruits and vegetables per day ■ Insufficient physical activity	■ Overweight (BMI ≥ 25 kg/m^2) ■ Raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)	
Percentage with none of the above risk factors	2.3% (1.4-3.1)	1.3% (0.7-1.9)
Percentage with three or more of the above risk factors aged 18 to 44 years	33.3% (30.2-36.3)	29.8% (27.2-32.4)
Percentage with three or more of the above risk factors aged 45 to 69 years	63.2% (59.8-66.6)	67.0% (62.6-71.4)
Percentage with three or more of the above risk factors aged 18 to 69 years	41.7% (39.2-44.2)	35.1% (32.8-37.5)

5. Discussion

This survey is the second national STEPs survey taking place after twelve years from conducting the first one in 2007 [5,6]. For over a decade, updated information about non-communicable diseases and their risk factors in Jordan was lacking in the absence of national surveys. The findings of this survey provide ample information on the prevalence of NCDs and their risk factors, not only for Jordanians as was the case with the 2007 survey [5]. Instead, the 2019 survey has the advantage of involving Syrians too. The Syrian refugee population in Jordan constitutes 10% of the population, of which the vast majority (80%) lives in the hosting community outside of camps [7]. Their health status and conditions are becoming a coherent part of the health status of the hosting community. Hence, the assessment of their health, above being a humanitarian obligation, is imperative to improve public health in Jordan. Also to inform health strategies and action plans, and to better plan relevant health care services and interventions.

The heavy burden of NCDs and their risk factors is clearly evident in this survey.

The five main modifiable behavioural risk factors for major NCDs are tobacco use, unhealthy diet, physical inactivity, harmful alcohol use and air pollution. These risk factors are major leading causes to five main diseases, which are cardiovascular diseases, diabetes, cancer, chronic respiratory diseases, and mental health [1].

A few highlights about the current survey is that it includes a module on air pollution reflecting its recent proclaim by WHO as one of the main risk factors to NCDs [8]. It explored air pollution particularly within the household, and presented the most likely sources of energy used by the Jordanian and Syrian household. Furthermore, the survey involves an expanded module on use of emerging tobacco products such as e-cigarettes and vaping devices. In addition to this, an expanded module on mental health is included, providing information on prevalence of depression among Jordanians and Syrians. Mental health was not investigated in the 2007 STEPs survey. It only involved exploring general health and mental status [5].

Tobacco Use

The findings of STEPs 2019 regarding tobacco use are quite alarming, being among the highest in the world. Compared to the previous STEPs 2007, smoking rates among Jordanian males and females (29% and 6%) increased substantially over the past 12 years reaching (66% and 17%, respectively) in 2019. Furthermore, the STEPs 2019 spots an increasing use of emerging products including e-cigarettes and other vaping devices such as heated tobacco products (HTPs). In Jordan, these products have been available in the market for many years, yet unregulated and banned by tobacco control provisions in Public Health Law 47. In 2019, regulations on both, e-cigarettes and heated tobacco products, were issued by the Jordan Standards and Metrology Organization (JSMO) and the Jordan Food and Drug Administration (JFDA). An interesting finding is

that most emerging products users have started consuming them with the aim to quit smoking. Another notable finding was the very high rate of using shisha among females, almost doubling its rate in males.

Tobacco use evidently increases the risk of cardiovascular disease, cancer, chronic respiratory disease, diabetes and premature death. Risks to health result not only from direct consumption of tobacco but also from exposure to second-hand smoke (SHS) which affects about 80% of Jordanians and Syrians adults. Tobacco control provisions of the Public Health Law 47 prohibits tobacco smoking in public places. Nonetheless, the rates of SHS reported in this survey represent a real challenge whether at home, work, transportation, and other public places, even health care facilities, governmental and academic institutions.

About 45% of conventional tobacco products smokers have tried to stop smoking. Yet only about 30% of current conventional tobacco smokers were advised by a health provider to stop smoking. This shows a need for a better integration of cessation services in Primary Health Care in Jordan. Internet and social media together with television have been proven the most important source of information to raise awareness about dangers of smoking and quitting cessation services.

Tobacco has also a negative impact on the economy being one of the highest expenditure at a household. The average monthly expenditure on manufactured cigarettes is JOD 60/month and the cost of 100 packs of manufactured cigarettes as a percentage of per capita Gross Domestic Product are consistent with the 2019 economic study "Tobacco Control Investment Case in Jordan" [9].

The average age at which smoking starts is 18 years old, however, further analysis of results shows that one third of sample started smoking at an earlier age, younger than 16 years old. This stresses on the crucial need to target those younger age groups in tobacco prevention campaigns. The results from this survey are consistent with the high smoking levels reported in other surveys such as the Global Youth Tobacco Surveys conducted over the past ten years in Jordan.

Warnings on cigarettes packs and shisha devices can play an important role in raising awareness among youth and prevent them from starting smoking. Another interesting information is that around one third of smokers thought of quitting smoking due to warnings on cigarette packs which shows the importance of having larger pictorial health warnings (PHW) or plain packaging implemented in Jordan. Plain packaging is an important demand reduction measure that reduces the attractiveness of tobacco products, restricts use of tobacco packaging as a form of tobacco advertising and promotion, limits misleading packaging and labeling, and increases the effectiveness of health warnings.

Alcohol Consumption

The harmful use of alcohol is among the common risk factors for NCDs and is associated with over 200 diseases and conditions [10]. However, alcohol consumption rate was found to be very low in Jordan. This is attributable to religious beliefs and social norms that prohibit alcohol consumption.

Unhealthy Diet

Consuming a healthy diet throughout life-course helps to protect against malnutrition in all its forms, as well as noncommunicable diseases (NCDs), such as diabetes, heart disease, stroke and cancer. In contrast, increased production of processed foods, rapid urbanizationand changing lifestyles have led to a shift in dietary patterns. People in Jordan similar to other countries in EMR, are now consuming more foods high in energy, fats, free sugars and salt/sodium. Furthermore, many people are not eating enough portions of fruit, vegetables and other dietary fibers such as whole grains. WHO recommends at least 400 g (i.e., five portions) of fruit and vegetables per day [11]. The STEPs survey 2019 in Jordan confirmed that the majority of Jordanians are not consuming healthy diet; with significantly low number of servings of fruit and vegetables.

Keeping salt intake to less than 5 g/day (equivalent to sodium intake of less than 2 g/day) helps to prevent hypertension, and reduces the risk of heart disease and stroke in the adult population [12]. This survey revealed the high daily intake of salt among Jordanians and Syrians, being double that recommended by the WHO. In spite of having the absolute majority of the survey population believing in the correlation between salt consumption and serious health problems, still the majority often added salt during cooking or preparing their food. The frequent consumption of processed foods rich in salt is another factor that explained the high daily salt intake.

WHO and Member States have agreed to reduce the global population's intake of salt by 30% by 2025; therefore MOH should work with FDA, Trade and industry to reduce salt content in bread, dairy products and pickles through regulatory measures, supported by an advocacy campaign to promote healthy diet and increase people's awareness.

Physical Inactivity

The WHO defines physical activity as any bodily movement produced by skeletal muscles that requires energy expenditure– including activities undertaken while working, playing, carrying out household chores, travelling, and engaging in recreational pursuits [13]. Insufficient physical activity is a key risk factor for NCDs and death worldwide. Globally, 1 in 4 adults is not sufficiently active [14]. The findings for Jordanians in STEPs 2019 conform to these global figures. In contrast to Syrians who recorded more physical activity levels, which could be attributed to their status. Gender variation in terms of physical activity was more relevant to vigorous activity. This reflects the variation in types of works or sports that men tend to do compared to women.

Regular physical activity is proven to help prevent and treat noncommunicable diseases (NCDs) such as heart disease, stroke, diabetes and breast and colon cancer. It also helps to prevent hypertension, overweight and obesity and can improve mental health, quality of life and well-being. Furthermore, more active societies were found to generate additional returns, including a reduced use of fuels, cleaner air and less congested, safer roads. These outcomes are interconnected with achieving the Sustainable Development Agenda 2030 [15].

Barriers to physical activity must be assessed and identified. Effective physical education is key along with strategies that encourage the community to engage in regular physical activity.

Raised Blood Pressure

Raised blood pressure (BP) is a serious medical condition that increases risk of heart, brain, kidney and other diseases. It is a major cause of premature deaths worldwide. The complications of raised blood pressure contribute to 9.4 million deaths every year [16]. Raised blood pressure is reported to cause at least 45% of deaths due to heart diseases and 51% of deaths due to stroke [17]. Globally, raised blood pressure is evident in 1 in 4 men and 1 in 5 women, in 2015. The burden of the diseases is heavier in low- and middle-income countries, where two thirds of the cases are found. This is attributable to the high prevalence of risk factors in those countries [18].

This survey revealed that overall, 1 in five of the survey population (22%), and 1 in 2 of those aged 45-69 years old had raised blood pressure (SBP ≥ 140 and/or DBP ≥ 90 mmHg). Of note, half of those with raised blood pressure were not taking any medication, and 40% of those taking medications were uncontrolled. These identified gaps whether in patients' awareness of their blood pressure status, coverage with medication or management of raised blood must be effectively addressed to better curb the detrimental health consequences of uncontrolled blood pressure. They further substantiate the need to invest in implementing evidence-based interventions such as the WHO HEARTs technical package, which enhances the management of cardiovascular diseases at primary health care level [19].

Among the global targets for NCDs is to reduce the prevalence of hypertension by 25% in 2025. Dedicated efforts are crucial to attain this target, joining all related stakeholders and multiple sectors.

Overweight/Obesity

Obesity increases the likelihood of diabetes, hypertension, coronary heart disease, and stroke, certain cancers, obstructive sleep apnea and osteoarthritis. It also negatively affects reproductive performance. Overweight and obesity– i.e., BMI ≥25 kg/m^2 and ≥30 kg/m^2 respectively– were estimated to account for 3.4 million deaths worldwide per year and 93.6 million DALYs in 2010.

To achieve optimal health, the goal for individuals should be to maintain a BMI in the range 18.5-24.9 kg/m^2. The risk of comorbidities increases with a BMI in the range 25.0-29.9 kg/m^2, and the risk is moderate to severe with a BMI greater than 30 kg/m^2.

The results of the survey showed that about 61% of respondents were overweight and half of them were obese (32%). Obesity rates were significantly higher among women compared to men (40% and 24% respectively).

Impaired and Raised Blood Glucose

Raised blood glucose is a well-recognized cause of premature death and disability. Globally, the prevalence of diabetes almost doubled, rising from 4.7% in 1980 to 8.4% in 2014 [20]. In 2012, diabetes caused 1.5 million deaths, with 80% of them occurring in low and middle income countries [20, 21]. Additionally, higher than optimal blood glucose caused 2.2 million deaths [20].

The increase in prevalence of raised blood glucose prevalence reflects the increase in its risk factors such as overweight/obesity, unhealthy diets and sedentary lifestyle. Higher than optimal blood glucose

(impaired fasting glucose or impaired glucose tolerance) and raised blood glucose lead to serious complications such as ischemic heart disease, stroke, kidney failure, blindness and lower-limb amputation.

In this survey, the rate of impaired blood glucose (a fasting glucose level ≥ 6.1 mmol/L (110 mg/dl) and <7.0 mmol/L (126 mg/dl) or raised blood glucose [fasting glucose levels ≥ 7.0 mmol/L (126 mg/dl) constituted 14% of the overall study population. These results are comparable to the STEPs results from other neighboring countries such as Occupied Palestinian Territories (OPT) [22] and Lebanon [23] and other countries in the region such as Sudan [24]. This could be explained by the similar cultural and dietary habits across the region, particularly with Lebanon and OPT. The higher prevalence of raised blood glucose among adults older than 45 years old, seen in one fifth this age group, is considerable and more likely associated with type 2 diabetes.

Jordan 2019 STEPs could identify gaps in terms of respondents' awareness of their blood glucose levels. Having half of the sample and one third of adults above 44 years old never having their blood glucose measured proves insufficient early detection of diabetes.

In contrast, the coverage with medication for raised blood glucose was significant (8 in 10 respondents). Nonetheless, it was not possible to comment on the level of control of raised blood glucose among those taking medication, since fasting blood glucose can not be solely used to assess control of hyperglycemia.

One of the global NCD targets is to halt the increase in diabetes and obesity by the year 2025. Attainment of such target is linked to effective early detection and monitoring, as well as the implementation of WHO recommended cost-effective interventions ("best buys"), contained within the Global action plan [2].

Raised Blood Cholesterol

Raised cholesterol increases the risks of heart disease and stroke. Globally, one third of ischemic heart disease is attributed to high cholesterol [25]. The results in this survey call for corrective interventions, as 1 in 5 had raised total Cholesterol levels (defined as ≥ 5.0 mmol\L), 1 in 4 had elevated triglyceride levels (defined as ≥ 1.7 mmol/L), and 3 in 4 had low high-density lipoproteins (<1.03 mmol/L in males and <1.29 mmol/L in females). Gaps were also identified in respondents' awareness of their cholesterol levels, as more than two thirds of them never checked their cholesterol levels at the time of the survey.

Cardiovascular Disease Risk

The prevalence of "very high" 10-year-risk for CVD (≥ 30%) in one fourth of the survey population and one third of all men is alarming. Effective interventions must be applied to evade the heavy implications of CVD on public health. These findings conform to reports on CVD being responsible for 39% of all deaths in Jordan [1]. Furthermore, having two thirds the population and 70% of males (45-69 years old) with 3-5 CVD risk factors poses a serious health concern. Younger adults (18-69 years old) are not an exception to this, as one third of them were also found to have more than 3 risk factor towards CVD.

Combined Risk Factors

The STEPs survey found that four out of every ten people (41%) in the age groups 18-69 years have three or more NCDs risk factors including; current daily smoking, eating fewer than five servings of fruits and vegetables/day, being overweight, having raised BP and physically inactive. Only 2.2% of the sample had none of these risk factors. This dramatic fact raises great concerns about future trends of NCD in the country, which should be highly considered by decision makers in prioritizing future health plans.

Comparison Between Results of STEPS 2019 and STEPS 2007

The comparison between Jordan STEPs surveys of 2007 and 2019, did not reveal much change in some NCDs and their risk factors, and significant worsening in some others primarily smoking. Not all indicators could be compared due to the differences in methodologies of both surveys. The salient points from the comparison between the two surveys entailed the following:

- Overall, smoking trends increased between 2007 and 2019, especially with the emerging tobacco products taken into account. However, it must be stated that direct comparison between indicators in both surveys was not feasible due to the differences in the definition and scope of these indicators. As for shisha smoking, the prevalence significantly increased in both genders, particularly in females; doubling that in males.
- The mean number of days fruit were consumed per week decreased from 4.3 days in 2007 to 3.2 days in 2019.
- The mean number of servings of fruit consumed on average per day decreased from 1.8 portions per day in 2007 to 1 portion per day in 2019.
- Eating less than 5 servings of vegetables on average per day decreased from 95.4% in 2007 to 91.1% in 2019.
- The percentage of people with insufficient physical activity decreased from 32% in 2007 to 25% in 2019.
- Self-reporting of raised blood pressure (those who were told by a doctor or a health care worker) increased from 17% in 2007 to 28% in 2019. Similarly, self-reporting of raised blood glucose (those who were told by a physician or a health care worker) increased from 10% in 2007 to 25% in 2019. As self-reporting of having elevated cholesterol, it increased from 7% in 2007 to 39% in 2019.

Limitations to the Survey

Of the limitations faced during the conduct of the survey was having some respondents forgetting to fast in order to take the blood test the following morning. This required scheduling a second visit, yet, some participants failed to fast on the second visit too. Those respondents were excluded from the prevalence of raised blood glucose. However, it was not believed that this significantly impacted the prevalence of raised blood glucose. This limitation also explained how the number of respondents receiving medication for raised blood glucose slightly exceeded those with raised blood glucose, since non-fasting respondents (even if taking medication) were not tested and hence not included in the prevalence.

An interruption in fieldwork was interrupted for 10 consecutive days due to a national holiday, however, this is believed not to have affected the quality of data.

Finally, it has to be noted that this survey involved Jordanians and Syrians only, who constitute 80% of the total population in Jordan. Hence, the survey results were specific to these two nationalities and not to be generalized to the whole population.

Future Implications and Recommendations

It is well established that prevention and control of NCDs are mainstays not only to improve public health, but also to achieve social and economic development in Jordan.

Based on the 2019 STEPs survey findings the following recommendations are proposed:

- Ensure that NCDs prevention and control are included into the national development agenda. Develop multisectoral NCDs strategy and action plans based on the generated evidence herein.

- Set national time-bound targets to be achieved by 2030, based on WHO guidance that address the main risk factors for NCDs in Jordan, in particular;

- **Tobacco:** to implement and enforce strict tobacco control policies following WHO FCTC [26] and WHO effective policies on demand reduction, MPOWER [27]. The very high prevalence of smoking is quite alarming. In addition to conventional smoking, attention should be paid to the raising trends of emerging products use.

- **Lifestyle, diet and physical activity;** reduce physical inactivity through the implementation of the WHO Global Strategy on Diet, Physical Activity and Health. Raise the public awareness on the importance and impact of physical activity on health by implementing community-wide public awareness campaigns through mass media and community-based education to support behavioural change.

- **NCDs surveillance;** strengthen the surveillance, monitoring and evaluation systems for NCDs and institutionalize the NCDs surveillance within the MOH. This involves ensuring that a system of monitoring and financing is established for regular implementation of the STEPs survey every three to five years to generate trends and needed evidence for informed policy-making process. Furthermore, integrate NCD surveillance into existing Health Information Systems to enable regular monitoring of NCDs for better informed prevention and control policies.

- **Increasing awareness of the community on the importance of early detection for raised blood pressure, diabetes and hyperlipidemia** through ensuring regular and annual mass screening under the supervision of the MOH. Moreover, have proper control of those diagnosed by ensuring the provision of essential medications and treatment.

Conclusion

The heavy burden of NCDs and their risk factors among Jordanians and Syrians is evident. This requires dedicated efforts by all relevant stakeholders and sectors to effectively tackle them. Having multi-sectoral strategies and action plans in place is essential. Unless this takes place, all attempts to improve public health would be undermined, as well as reaching the SDGs 2030.

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7. Appendixes

Appendix 1: STEPs Timeline.

		Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-July 20	Aug-Sep 20
Output 1	**Planning and set up**															
Activity 1.1	Identify scope of STEPS survey (STEPs component and target population)															
Activity 1.2	Sampling (i.e., sample size, sample frame, sample design, sample selection, document sampling procedures)															
Activity 1.3	Adapt and translate documents															
Activity 1.4	Design the budget															
Activity 1.5	Design the protocol															
Activity 1.6	Prepare the WHO/CSS Cooperation agreement															
Activity 1.7	Approval of the WHO/CSS Cooperation agreement															
Activity 1.8	Acquire equipment and supplies															
Activity 1.9	Adapting electronic STEPS Instrument/ Preparing Android devices/Uploading electronic STEPS Instrument															
Activity 1.10	Shipping EMRO electronic and medical equipment from EMRO to WHO Jordan Office															
Output 2	**Data Collection**															
Activity 2.1	Household listing for Syrian refugees															
Activity 2.2	Workshop n° 1 (Training)			**26–30 May**												
Activity 2.3	CSS and MoH training				**16–20 June**											
Activity 2.4	Pilot testing				**19–20 June**											
Activity 2.5	Integrating the feedback from the Pilot testing				**23- 3rd Jul**											
Activity 2.6	Data collection process (Jun 2019-Aug 2019)					**7- Jul**		**11- Sep**								
Output 3	**Data Management and Analysis, Reporting and Disseminating Results**															
Activity 3.1	Creating the Final Dataset (cleaning/ weighting)							**15 Sep- 10 Oct**								
Activity 3.2	Workshop n° 2 (data analysis and dissemination)								**20- 24 Oct**							
Activity 3.3	Workshop n° 3 (data interpretation and disseminationv)									**18–19 Nov**						
Activity 3.4	Data analysis and reporting (Fact sheets, Data books and Technical report)															
Activity 3.5	Printing and Translation of technical report														**16- July**	
Activity 3.6	Data Dissemination															

Appendix 2: STEPs Survey Tool.

WHO STEPS Instrument for Noncommunicable Disease Risk Factor Surveillance in Jordan - 2019.

Survey Information		
Location	**Response**	**Code**
Governorate		
Liwa		
Cluster code		
Interviewer ID		I3

Consent and Name	Response			Code
Consent has been read and obtained	Yes	1		I5
	No	2	If NO, END	
Family Surname				I8
First Name				I9
Additional Information that may be helpful				
Contact phone number where possible				I10

Step 1 Demographic Information			
CORE: Demographic Information			
Question	**Response**		**Code**
What is your nationality?	Jordanian 1 Syrian 2 Other 3 If Other, END		X1
Sex (Record Male/Female as Observed)	Male	1	C1
	Female	2	
What is your date of birth?	If Known, Go to C4 dd mm year Don't Know 77 77 7777		C2
How old are you?	Years		C3
In total, how many years have you spent at school and in full-time study (excluding pre-school)?	Years		C4

EXPANDED: Demographic Information			
What is the highest level of education you have completed?	No formal schooling	1	C5
	Primary school completed	2	
	Secondary school completed	3	
	Post-secondary school completed	4	
	College/University completed	5	
	Postgraduate degree (Master/ Doctorate), completed Don't know	6 77	
	Refused to answer	88	
What is your marital status?	Single	1	C7
	Currently married	2	
	Separated	3	
	Divorced	4	
	Widowed	5	
	Refused to answer	88	
Which of the following best describes your main work status over the past 12 months?	Government employee	1	C8
	Non-government employee	2	
	Self-employed	3	
	Non-paid	4	
	Student	5	
	Homemaker	6	
	Retired	7	
	Unemployed (able to work)	8	
	Unemployed (unable to work)	9	
	Refused	88	
How many people older than 18 years, including yourself, live in your household?	Number of people	If Not Known, Go to C11	C9

EXPANDED: Demographic Information, Continued			
Question	**Response**		**Code**
Taking the past year, can you tell me what the average earnings of the household have been? (RECORD ONLY ONE, NOT ALL 3)	Per week OR per month OR per year Refused	Go to T1 Go to T1 Go to T1 88	C10a C10b C10c C10d
Can you give an estimate of the monthly household income if I read some options to you? Is it (READ OPTIONS)	<100 JD	1	C11
	100–199 JD	2	
	200–299JD	3	
	300–499JD	4	
	500 or more	5	
	Don't Know	77	
	Refused	88	

Step 1 Behavioural Measurements

CORE: Tobacco Use

Now I am going to ask you some questions about tobacco use.

Question	Response		Code
Do you currently smoke any tobacco products, such as cigarettes, cigars pipes, shisha? (USE SHOWCARD)	Yes	1	T1
	No	2 If No, go to T8	
Do you currently smoke tobacco products daily?	Yes	1	T2
	No	2	
How old were you when you first started smoking?	Age (years)	If Known, go to T5a/T5aw	T3
	Don't know 77		
Do you remember how long ago it was? (RECORD ONLY 1, NOT ALL 3) Don't know 77	In Years	If Known, go to T5a/T5aw	T4a
	OR in months	If Known, go to T5a/T5aw	T4b
	OR in Weeks		T4c
On average, how many of the following products do you smoke each day/week? (IF LESS THAN DAILY, RECORD WEEKLY) (RECORD FOR EACH TYPE, USE SHOWCARD) Don't Know 7777 For a number of "Number of Shisha sessions">0, ask the "Expanded: Shisha Use" and the "Tobacco Policy (shisha), once the section "Core: Tobacco Use" and "Expanded: Tobacco Use" have been completed.	DAILY	WEEKLY	
	Manufactured cigarettes		T5a/T5aw
	Hand-rolled cigarettes		T5b/T5bw
	Pipes full of tobacco		T5c/T5cw
	Cigars, cheroots, cigarillos		T5d/T5dw
	Number of Shisha sessions		T5e/T5ew
	Other	If Other, go to T5other, else go to T6	T5f/T5fw
	Other (please specify):		T5other/ T5otherw
During the past 12 months, have you tried to stop smoking?	Yes	1	T6
During any visit to a doctor or other health worker in the past 12 months, were you advised to quit smoking tobacco?	Yes	1 If T2=Yes, go to T12; if T2=-No, go to T9	T7
	No	2 If T2=Yes, go to T12; if T2=-No, go to T9	
	No visit during the past 12 months	3 If T2=Yes, go to T12; if T2=-No, go to T9	
In the past, did you ever smoke any tobacco products? (USE SHOWCARD)	Yes	1	T8
	No	2 If No, go to T12	
In the past, did you ever smoke daily?	Yes	1 If T1=Yes, go to T12, else go to T10	T9
	No	2 If T1=Yes, go to T12, else go to T10	

EXPANDED: Tobacco Use			
Question	**Response**		**Code**
How old were you when you stopped smoking?	Age (years)	If Known, go to T12	T10
	Don't Know 77		
How long ago did you stop smoking? (RECORD ONLY 1, NOT ALL 3) Don't Know 77	Years ago	If Known, go to T12	T11a
	OR Months ago	If Known, go to T12	T11b
	OR Weeks ago		T11c
Do you currently use any smokeless tobacco products such as snuff, chewing tobacco? (USE SHOWCARD)	Yes	1	T12
	No	2 If No, go to T15	
Do you currently use smokeless tobacco products daily?	Yes	1	T13
	No	2 If No, go to T14aw	
On average, how many times a day/ week do you use …. (IF LESS THAN DAILY, RECORD WEEKLY) (RECORD FOR EACH TYPE, USE SHOWCARD) Don't Know 7777		DAILY WEEKLY	
	Snuff, by mouth		T14a/ T14aw
	Snuff, by nose		T14b/ T14bw
	Chewing tobacco		T14c/ T14cw
	Other	If Other, go to T14other, if T13=No, go to T16, else go to T17	T14e/ T14ew
	Other (please specify):	If T13=No, go to T16, else go to T17	T14other/ T14otherw
In the past, did you ever use smokeless tobacco products such as snuff, chewing tobacco?	Yes	1	T15
	No	2 If No, go to T17	
In the past, did you ever use smokeless tobacco products such as snuff, chewing tobacco daily?	Yes	1	T16
	No	2	
	No	2	
	Don't work in a closed area	3	

EXPANDED: Shisha Use only asked to those who answer T5e> 0

Now I will ask you some question related to Shisha use

Question	Response		Code
How old were you when you started smoking shisha?	Age in years		X2
	Don't know 77	If known, go to X4	
Do you remember how long ago it was?			
(RECORD ONLY 1, NOT ALL 3)	Years	If known, go to X4	X3a
	Or Months	If known, go to X4	X3b
Don't know 77	Or Weeks		X3c
Where do you smoke shisha usually? (You can choose more than one answer)	Home	1	X4
	Restaurant	2	
	Coffee shop	3	
	In friend's home	4	
	Other	5	
Do you smoke shisha inside home in the presence of family members?	Yes	1	X5
	No	2	
	Refused to answer	88	
On average, which is the duration of a shisha session?	Hrs/mins		X6
On average, how many shisha heads do you smoke during a shisha session?			X7
On average, do you smoke shisha with flavoured tobacco (Molasses), unflavoured tobacco (Tombac), or both?	With flavour	1	X8
	Flavourless	2	
	Both	3	
	Don't know	77	
	Refused	88	

EXPANDED: Use of electronic cigarettes and other vaping devices

Now I want to ask you about electronic cigarettes, which are also called e-cigarettes, and other vaping devices. These devices are battery powered and heat a liquid to produce an aerosol instead of smoke. Using these products is often called "vaping." These products include personal vaporizers, modular systems, tank systems, and rechargeable systems with pods or cartridges. Examples of these products include [Minifit, JUUL, SMOK, Eleaf]

Question	Response		Code
Prior to today, have you ever heard of electronic cigarettes or vaping devices? (Use showcard)	Yes	1	X41
	No	2— If 2, end section	
	Refused	88 - If 88, end section	
Do you currently use electronic cigarettes or any other vaping device on a daily basis, less than daily, or not at all?	Yes, daily	1 - If 1, go to EC5/a	X42
	Yes, less than daily	2 - If 2, go to EC4	
	No, I don't use electronic cigarettes or any other vaping device	3- If 3, go to X 43	
	Don't know	77 - If 77, end section	
	Refused	88 - If 88, end section	

Question	Response		Code
Have you ever, even once, used an electronic cigarette or any other vaping device?	Yes	1	X43
	No	2— If 2, end section	
	Don't know	77 - If 77, end section	
	Refused	88 - If 88, end section	
Have you ever used electronic cigarettes or any other vaping device daily in the past?	Yes	1 - If 1, go to EC5/b	X44
	No	2— If 2, go to EC6	
	Don't know	77 - If 77, go to EC6	
	Refused	88 - If 88, go to EC6	
For how long have you been using e-cigarettes or any other vaping device on a daily basis? CHOOSE ONLY 1, NOT ALL	Less than 1 month	1 - if 1, go to EC6	X45/a
	1 to 3 months	2 - if 2, go to EC6	
	4 to 11 months	3 - if 3, go to EC6	
	1 to 2 years	4—if 4, go to EC6	
	more than 2 years	5—if 5, go to EC6	
	Don't know	77 - if 77, go to EC6	
	Refused	88 - if 88, go to EC6	
For how long had you been using e-cigarettes or any other vaping device on a daily basis in the past? CHOOSE ONLY 1, NOT ALL	Less than 1 month	1 - if 1, go to EC6	X45/b
	1 to 3 months	2 - if 2, go to EC6	
	4 to 11 months	3 - if 3, go to EC6	
	1 to 2 years	4—if 4, go to EC6	
	more than 2 years	5—if 5, go to EC6	
	Don't know	77 - if 77, go to EC6	
	Refused	88 - if 88, go to EC6	
Which of the following are reasons that you use (or used) electronic cigarettes or any other vaping device?	To quit smoking tobacco	Yes 1	X46
		No 2	
		Refused 88	
	To avoid going back to smoking tobacco	Yes 1	
		No 2	
		Refused 88	
	Because I enjoy it	Yes 1	
		No 2	
		Refused 88	
	Because I'm addicted to it	Yes 1	
		No 2	
		Refused 88	
	I can use it at times when or in places where tobacco smoking is not allowed	Yes 1	
		No 2	
		Refused 88	
	It is less harmful than smoking tobacco	Yes 1	
		No 2	
		Refused 88	
	It comes in flavours I like	Yes 1	
		No 2	
		Refused 88	
	A friend or family member uses them	Yes 1	
		No 2	
		Refused 88	

Question	Response		Code
What form of electronic cigarette or vape do you use? (Use showcards)	e-cigarette (POD system)	1	X47
	e-cigarette (Disposable)	2	
	e-argileh (regular tank system)	3	
	e-argileh (MOD system)	4	
	Others	5	
	Refuse to answer	Refused 88	
Where do you usually buy e-cigarettes/ vape from? You can choose more than one answer	Tobacco shops inside Jordan	1	X48
	Online shopping	2	
	Duty-Free	3	
	Outside of Jordan	4	
	Others	5	
	Refuse to answer	Refused 88	
EXPANDED: Second-hand Smoking Exposure **Now I will ask you questions related to second-hand smoking exposure**			
Have you been exposed to second-hand smoking during the last 30 days (in private and public places)?	Yes	1 – if 1 go to SH2	X49
	No	2—if 2 go to TP1a	
	Refuse to answer	Refused 88	
Where have you been exposed to second-hand smoking during the last 30 days?	Restaurant/cafe	Yes 1	X50
		No 2	
		Refused 88	
	Hospitals/healthcare centre	Yes 1	
		No 2	
		Refused 88	
	Governmental Institutions	Yes 1	
		No 2	
		Refused 88	
	University/school	Yes 1	
		No 2	
		Refused 88	
	Workplace	Yes 1	
		No 2	
		Refused 88	
	public transportation	Yes 1	
		No 2	
		Refused 88	
	Home	Yes 1	
		No 2	
		Refused 88	
	Others	Yes 1	
		No 2	
		Refused 88	

Tobacco Policy

Tobacco Policy

You have been asked questions on tobacco consumption before. The next questions ask about tobacco control policies. They include questions on your exposure to the media and advertisements, on cigarette promotions, health warnings and cigarette purchases.

Question	Response		Code
During the past 30 days, have you noticed or saw information about the dangers of smoking cigarettes, or that encourages quitting through the following media? (RECORD FOR EACH)			
Newspapers or magazines	Yes	1	TP1a
	No	2	
	Don't know	77	
Television	Yes	1	TP1b
	No	2	
	Don't know	77	
Radio	Yes	1	TP1c
	No	2	
	Don't know	77	
Internet and Social media	Yes	1	TP1d
During the past 30 days, have you noticed or heard of any advertisements or signs promoting cigarettes or in stores where cigarettes are sold?	Yes	1	TP2
	No	2	
	Don't know	77	
During the past 30 days, have you noticed any of the following types of cigarette promotions? (RECORD FOR EACH)			
Free samples of cigarettes	Yes	1	TP3a
	No	2	
	Don't know	77	
Cigarettes at sale prices	Yes	1	TP3b
	Number	2	
	Don't know	77	
Coupons for cigarettes	Yes	1	TP3c
	No	2	
	Don't know	77	
Free gifts or special discount offers on other products when buying cigarettes	Yes	1	TP3d
	No	2	
	Don't know	77	
Clothing or other items with a cigarette brand name or logo	Yes	1	TP3e
	No	2	
	Don't know	77	

Question	Response		Code
Cigarette promotions in the mail	Yes	1	TP3f
	No	2	
	Don't know	77	
Internet and social media	Yes	1	TP3g
	No	2	
	Don't know	77	
The next questions TP4—TP7 are administered to current smokers only.			
During the past 30 days, did you notice any health warnings on cigarette packages?	Yes	1	TP4
	No	2 If no, go to TP6	
	Did not see any cigarette packages	3 If "did not see any cigarette packages", go to TP6	
	Don't know	77 If don't know, go to TP6	
During the past 30 days, have warning labels on cigarette packages led you to think about quitting?	Yes	1	TP5
	No	2	
	Don't know	77	
The last time you bought manufactured cigarettes for yourself, how many cigarettes did you buy in total?	Number of cigarettes	If "Don't know or don't smoke or purchase manufactured cigarettes," end section	TP6
	Don't know or Don't smoke or purchase manufactured cigarettes 7777		
In total, how much money did you pay for this purchase?	Amount		TP7
	Don't know	7777	
	Refused	8888	

Tobacco Policy (shisha), only asked to those who answer T5e> 0			
Question	**Response**		**Code**
During the past 30 days, have you noticed information about the dangers of smoking shisha, or that encourages quitting through the following media?(RECORD FOR EACH)			
Newspapers or magazines	Yes	1	X9a
	No	2	
	Don't know	77	
Television	Yes	1	X9b
	No	2	
	Don't know	77	
Radio	Yes	1	X9c
	No	2	
	Don't know	77	

Question	Response		Code
Internet and social media	Yes	1	X9d
During the past 30 days, have you noticed any advertisements or signs promoting shisha or in stores where shisha is sold?	Yes	1	X10
	No	2	
	Don't know	77	
During the past 30 days, have you noticed any of the following types of shisha promotions? (RECORD FOR EACH)			
Free samples of shisha (Molasses/ Tombac)	Yes	1	X11a
	No	2	
	Don't know	77	
Shisha (Molasses/Tombac) at sale prices	Yes	1	X11b
	No	2	
	Don't know	77	
Coupons for shisha (Molasses/ Tombac)	Yes	1	X11c
	No	2	
	Don't know	77	
Free gifts or special discount offers on other products when buying shisha (Molasses/Tombac)	Yes	1	X11d
	No	2	
	Don't know	77	
Clothing or other items with a shisha (Molasses/Tombac) brand name or logo	Yes	1	X11e
	No	2	
	Don't know	77	
Shisha (Molasses/Tombac) promotions in the mail	Yes	1	X11f
	No	2	
	Don't know	77	
Internet and social media	Yes	1	X11g
During the past 30 days, did you notice any health warnings on Molasses/Tombac packages ?	Yes	1	X12
	No	2	
	Did not see any shisha packages	3 If "did not see any shisha packages", go to X14	
	Don't know	77 If Don't Know, go to X14	
During the past 30 days, have warning labels on Molasses/ Tombac packages led you to think about quitting?	Yes	1	X13
	No	2	
	Don't know	77	
In total, how much do you spend every month on smoking shisha (inside and outside home)?	Amount		X14
	Don't know	7777	
	Refused	8888	

CORE: Alcohol Consumption			
The next questions ask about the consumption of alcohol.			
Question	**Response**		**Code**
Have you ever consumed any alcohol such as beer, wine, spirits? (USE SHOWCARD)	Yes	1	A1
	No	2 If No, go to D1	
Have you consumed any alcohol within the past 12 months?	Yes	1 If Yes, go to A4	A2
	No	2	
Have you stopped drinking due to health reasons, such as a negative impact on your health or on the advice of your doctor or other health worker?	Yes	1	A3
	No	2	
During the past 12 months, how frequently have you had at least one standard alcoholic drink? (READ RESPONSES, USE SHOWCARD)	Daily	1	A4
	5–6days per week	2	
	3–4days per week	3	
	1–2days per week	4	
	1–3days per month	5	
	Less than once a month	6	
	Never	7	
Have you consumed any alcohol within the past 30 days?	Yes	1	A5
	No	2 If No, go to A13	
During the past 30 days, on how many occasions did you have at least one standard alcoholic drink?	Number		A6
	Don't know	77 If Zero, go to A13	
During the past 30 days, when you drank alcohol, how many standard drinks on average did you have during one drinking occasion? (USE SHOWCARD)	Number		A7
	Don't know	77	
During the past 30 days, what was the largest number of standard drinks you had on a single occasion, counting all types of alcoholic drinks together?	Largest number		A8
	Don't Know	77	
During the past 30 days, how many times did you have six or more standard drinks in a single drinking occasion?	Number of times		A9
	Don't Know	77	
During each of the past 7 days, how many standard drinks did you have each day? (USE SHOWCARD) Don't Know 77	Monday		A10a
	Tuesday		A10b
	Wednesday		A10c
	Thursday		A10d
	Friday		A10e
	Saturday		A10f
	Sunday		A10g
	I don't know Refused to answer	77 88	

CORE: Alcohol Consumption, continued

I have just asked you about your consumption of alcohol during the past 7 days. The questions were about alcohol in general, while the next questions refer to your consumption of home-brewed alcohol, alcohol brought over the border/ from another country, any alcohol not intended for drinking or other untaxed alcohol. Please only think about these types of alcohol when answering the next questions.

Question	Response		Code
During the past 7 days, did you consume any home-brewed alcohol, any alcohol brought over the border/from another country, any alcohol not intended for drinking or other untaxed alcohol? [AMEND ACCORDING TO LOCAL CONTEXT] (USE SHOWCARD)	Yes	1	A11
	No	2 If No, go to D1	
On average, how many standard drinks of the following did you consume during the past 7 days? [INSERT COUNTRY-SPECIFIC EXAMPLES] (USE SHOWCARD) Don't Know 77	Home-brewed spirits, e.g., moonshine		A12a
	Home-brewed beer or wine, e.g., beer, palm or fruit wine		A12b
	Alcohol brought over the border/from another country		A12c
	Alcohol not intended for drinking, e.g., alcohol-based medicines, perfumes, after shaves		A12d
	Other untaxed alcohol in the country		A12e

CORE: Diet

The next questions ask about the fruits and vegetables that you usually eat. I have a showcard here that shows you some examples of local fruits and vegetables. Each picture represents the size of a serving. As you answer these questions please think of a typical week in the last year.

Question	Response		Code
In a typical week, on how many days do you eat fruit?	Number of days Don't Know 77	If Zero days, go to D3	D1
How many servings of fruit do you eat on one of those days? (USE SHOWCARD)	Number of servings Don't Know 77		D2
In a typical week, on how many days do you eat vegetables?	Number of days Don't Know 77	If Zero days, go to D5	D3
How many servings of vegetables do you eat on one of those days? (USE SHOWCARD)	Number of servings Don't know 77		D4

Dietary Salt

With the next questions, we would like to learn more about salt in your diet. Dietary salt includes ordinary table salt, unrefined salt such as sea salt, iodized salt, salty stock cubes and powders, and salty sauces such as soy sauce or fish sauce (see showcard). The following questions are on adding salt to the food right before you eat it, on how food is prepared in your home, on eating processed foods that are high in salt such as fast food, canned meats, and pickled foods and questions on controlling your salt intake. Please answer the questions even if you consider yourself to eat a diet low in salt.

How often do you add salt or a salty sauce such as soy sauce to your food right before you eat it or as you are eating it? (SELECT ONLY ONE) (USE SHOWCARD)	Always	1	D5
	Often	2	
	Sometimes	3	
	Rarely	4	
	Never	5	
	Don't know	77	
How often is salt, salty seasoning or a salty sauce added in cooking or preparing food in your household?	Always	1	D6
	Often	2	
	Sometimes	3	
	Rarely	4	
	Never	5	
	Don't know	77	
How often do you eat processed food high in salt? By processed food high in salt, I mean foods that have been altered from their natural state, such as packaged salty snacks, canned salty food including pickles and preserves, salty food prepared at a fast food restaurant, cheese, and processed meat. (USE SHOWCARD)	Always	1	D7
	Often	2	
	Sometimes	3	
	Rarely	4	
	Never	5	
	Don't know	77	
How much salt or salty sauce do you think you consume?	Far too much	1	D8
	Too much	2	
	Just the right amount	3	
	Too little	4	
	Far too little	5	
	Don't know	77	

EXPANDED: Diet

Question	Response		Code
How important to you is lowering the salt in your diet?	Very important	1	D9
	Somewhat important	2	
	Not at all important	3	
	Don't know	77	
Do you think that too much salt or salty sauce in your diet could cause a health problem?	Yes	1	D10
	No	2	
	Don't know	77	
Do you do any of the following on a regular basis to control your salt intake? (RECORD FOR EACH)			
Limit consumption of processed foods	Yes	1	D11a
	No	2	
Look at the salt or sodium content on food labels	Yes	1	D11b
	No	2	
	Did not see any food label	3	

Question	Response		Code
Buy low salt/sodium alternatives	Yes	1	D11c
	No	2	
Use spices other than salt when cooking	Yes	1	D11d
	No	2	
Avoid eating foods prepared outside of a home	Yes	1	D11e
	No	2	
Do other things specifically to control your salt intake	Yes	1 If Yes, go to D11other	D11f
	No	2	
Other (please specify)			D11other

CORE: Physical Activity

Next I am going to ask you about the time you spend doing different types of physical activity in a typical week. Please answer these questions even if you do not consider yourself to be a physically active person.
Think first about the time you spend doing work. Think of work as the things that you have to do such as paid or unpaid work, study/training, household chores, harvesting food/crops, fishing or hunting for food, seeking employment. In answering the following questions "vigorous-intensity activities" are activities that require hard physical effort and cause large increases in breathing or heart rate, "moderate-intensity activities" are activities that require moderate physical effort and cause small increases in breathing or heart rate.

Question	Response		Code
Work			
Does your work involve vigorous-intensity activity that causes large increases in breathing or heart rate like (carrying or lifting heavy loads, digging or construction work) for at least 10 minutes continuously? (USE SHOWCARD)	Yes	1	P1
	No	2 If No, go to P 4	
In a typical week, on how many days do you do vigorous-intensity activities as part of your work?	Number of days		P2
How much time do you spend doing vigorous-intensity activities at work on a typical day?	Hours: minutes	hrs mins	P3 (a-b)
Does your work involve moderate-intensity activity that causes small increases in breathing or heart rate such as brisk walking or carrying light loads for at least 10 minutes continuously? (USE SHOWCARD)	Yes	1	P4
	No	2 If No, go to P 7	
In a typical week, on how many days do you do moderate-intensity activities as part of your work?	Number of days		P5
How much time do you spend doing moderate-intensity activities at work on a typical day?	Hours: minutes	hrs mins	P6 (a-b)

Travel to and from places			
The next questions exclude the physical activities at work that you have already mentioned. Now I would like to ask you about the usual way you travel to and from places. For example, to work, for shopping, to market, to places of worship.			
Do you walk or use a bicycle (pedal cycle) for at least 10 minutes continuously to get to and from places?	Yes	1	P7
	No	2 If No, go to P 10	
In a typical week, on how many days do you walk or bicycle for at least 10 minutes continuously to get to and from places?	Number of days		P8
How much time do you spend walking or bicycling for travel on a typical day?	Hours: minutes	hrs mins	P9 (a-b)

CORE: Physical Activity, Continued			
Question	**Response**		**Code**
Recreational activities			
The next questions exclude the work and transport activities that you have already mentioned. Now I would like to ask you about sports, fitness and recreational activities (leisure),			
Do you do any vigorous-intensity sports, fitness or recreational (leisure) activities that cause large increases in breathing or heart rate like (running or football), for at least 10 minutes continuously? (USE SHOWCARD)	Yes	1	P10
	No	2 If No, go to P 13	
In a typical week, on how many days do you do vigorous-intensity sports, fitness or recreational (leisure) activities?	Number of days		P11
How much time do you spend doing vigorous-intensity sports, fitness or recreational activities on a typical day?	Hours: minutes	hrs mins	P12 (a-b)
Do you do any moderate-intensity sports, fitness or recreational (leisure) activities that cause a small increase in breathing or heart rate such as brisk walking, (cycling, swimming, volleyball) for at least 10 minutes continuously? (USE SHOWCARD)	Yes	1	P13
	No	2 If No, go to P16	
In a typical week, on how many days do you do moderate-intensity sports, fitness or recreational (leisure) activities?	Number of days		P14
How much time do you spend doing moderate-intensity sports, fitness or recreational (leisure) activities on a typical day?	Hours: minutes	hrs mins	P15 (a-b)

EXPANDED: Physical Activity			
Sedentary behavior			
The following question is about sitting or reclining at work, at home, getting to and from places, or with friends including time spent sitting at a desk, sitting with friends, traveling in car, bus, reading, playing cards or watching television, but do not include time spent sleeping. (USE SHOWCARD)			
How much time do you usually spend sitting or reclining on a typical day?	Hours: minutes	hrs mins	P16 (a-b)

CORE: History of Raised Blood Pressure			
Question	**Response**		**Code**
Have you ever had your blood pressure measured by a doctor or other health worker?	Yes	1	H1
	No	2 If No, go to H6	
Have you ever been told by a doctor or other health worker that you have raised blood pressure or hypertension?	Yes	1	H2a
	No	2 If No, go to H6	
Were you first told in the past 12 months?	Yes	1	H2b
	No	2	
In the past two weeks, have you taken any drugs (medication) for raised blood pressure prescribed by a doctor or other health worker?	Yes	1	H3
	No	2	
Have you ever seen a traditional healer for raised blood pressure or hypertension?	Yes	1	H4
	No	2	
Are you currently taking any herbal or traditional remedy for your raised blood pressure?	Yes	1	H5
	No	2	

CORE: History of Diabetes			
Have you ever had your blood sugar measured by a doctor or other health worker?	Yes	1	H6
	No	2 If No, go to H12	
Have you ever been told by a doctor or other health worker that you have raised blood sugar or diabetes?	Yes	1	H7a
	No	2 If No, go to H12	
Were you first told in the past 12 months?	Yes	1	H7b
	No	2	
In the past two weeks, have you taken any drugs (medication) for diabetes prescribed by a doctor or other health worker?	Yes	1	H8
	No	2	
Are you currently taking insulin for diabetes prescribed by a doctor or other health worker?	Yes	1	H9
	No	2	
Have you ever seen a traditional healer for diabetes or raised blood sugar?	Yes	1	H10
	No	2	
Are you currently taking any herbal or traditional remedy for your diabetes?	Yes	1	H11
	No	2	

CORE: History of Raised Total Cholesterol			
Question	**Response**		**Code**
Have you ever had your cholesterol measured by a doctor or other health worker?	Yes	1	H12
	No	2 If No, go to H17	
Have you ever been told by a doctor or other health worker that you have raised cholesterol?	Yes	1	H13a
	No	2 If No, go to H17	
Were you first told in the past 12 months?	Yes	1	H13b
	No	2	
In the past two weeks, have you taken any oral treatment (medication) for raised total cholesterol prescribed by a doctor or other health worker?	Yes	1	H14
	No	2	
Have you ever seen a traditional healer for raised cholesterol?	Yes	1	H15
	No	2	
Are you currently taking any herbal or traditional remedy for your raised cholesterol?	Yes	1	H16
	No	2	

CORE: History of Cardiovascular Diseases			
Have you ever had a heart attack or chest pain from heart disease (angina) or a stroke (cerebrovascular accident or incident)?	Yes	1	H17
	No	2	
Are you currently taking aspirin regularly to prevent or treat heart disease?	Yes	1	H18
	No	2	
Are you currently taking statins (Lovastatin/Simvastatin/Atorvastatin or any other statin) regularly to prevent or treat heart disease?	Yes	1	H19
	No	2	

CORE: Lifestyle Advice			
Question	**Response**		**Code**
During the past 12 months, have you visited a doctor or other health worker?	Yes	1	H20
	No	2 If No and C1=1, go to M1 If No and C1=2, go to CX1	
During any of your visits to a doctor or other health worker in the past 12 months, were you advised to do any of the following? (RECORD FOR EACH)			
Quit using tobacco products or don't start	Yes	1	H20a
	No	2	
	Don't remember	3	
Reduce salt in your diet	Yes	1	H20b
	No	2	
	Don't remember	3	
Eat at least five servings of fruit and/or vegetables each day	Yes	1	H20c
	No	2	
	Don't remember	3	H20d

Question	Response		Code
During the past 12 months, have you visited a doctor or other health worker?	Yes	1	H20
	No	2	
	Don't remember	3	
Reduce fat in your diet	Yes	1	H20d
	No	2	
	Don't remember	3	
Start or do more physical activity	Yes	1	H20e
	No	2	
	Don't remember	3	
Maintain a healthy body weight or lose weight	Yes	1	H20f
	No	2	
	Don't remember	3	
Reduce sugary beverages in your diet	Yes	1	H20g
	No	2	
	Don't remember	3	

CORE (for married OR previously married women only): Cervical Cancer Screening

The next question asks about cervical cancer prevention. Screening tests for cervical cancer prevention can be done in different ways, including pap smear or Human Papillomavirus (HPV) test.

Have you ever had a screening test for cervical cancer, using any of these methods described above?	Yes	1	CX1
	No	2	
	Don't know	77	

Mental Health

New section—Mental Health state description and wellbeing

Now I will ask you some questions about your state of health and wellbeing

Code	Question	Response	
X17	In general, how would you rate your health today?	Very good	1
		Good	2
		Moderate	3
		Bad	4
		Very bad	5

Now I would like you to think about the last 30 days, taking both good and bad days into account.
When I ask about difficulty, I would like you to consider how much difficulty you have had, on average, in the last 30 days while doing the activity in the way that you usually do it. By difficulty, I mean requiring:

- increased effort,
- discomfort or pain,
- slowness or
- changes in the way you do the activity.

COGNITION— Overall in the last 30 days, how much difficulty did you have:

Code	Question	Response	
X18	With concentrating or remembering things?	None/no difficulty Mild Moderate Severe Extreme/cannot do	0 1 2 3 4
X19	In learning a new task (for example, learning how to get to a new place, learning a new game, learning a new recipe)?	None/no difficulty Mild Moderate Severe Extreme/cannot do	0 1 2 3 4
INTERPERSONAL ACTIVITIES - Overall in the last 30 days, how much difficulty did you have			
X20	With personal relationships or participation in the community?	None/no difficulty Mild Moderate Severe Extreme/cannot do	0 1 2 3 4
X21	With dealing with conflicts and tensions with others	None/no difficulty Mild Moderate Severe Extreme/cannot do	0 1 2 3 4
X22	With making new friendships or maintaining current friendships?	None/no difficulty Mild Moderate Severe Extreme/cannot do	0 1 2 3 4
X23	With dealing with strangers?	None/no difficulty Mild Moderate Severe Extreme/cannot do	0 1 2 3 4
SLEEP AND ENERGY - Overall in the last 30 days, how much difficulty did you have			
X24	With sleeping, such as falling asleep, waking up frequently during the night or waking up too early in the morning?	None/no difficulty Mild Moderate Severe Extreme/cannot do	0 1 2 3 4
X25	Due to not feeling rested and refreshed during the day (for example, feeling tired, not having energy)?	None/no difficulty Mild Moderate Severe Extreme/cannot do	0 1 2 3 4
AFFECT - Overall in the last 30 days, how much difficulty did you have			
X26	With feeling sad, low or depressed?	None/no difficulty Mild Moderate Severe Extreme/cannot do	0 1 2 3 4
X27	With worry or anxiety?	None/no difficulty Mild Moderate Severe Extreme/cannot do	0 1 2 3 4

New section—Depression			
Now I will ask you about depression			
Code	**Question**	**Response**	
X28	Have you ever been diagnosed with depression?	Yes	1
		No	2
Now I will ask you about taking medications and/or other treatment for depression (other treatments for depression can include psychological and social interventions like psychotherapy and counselling sessions)			
X29	Have you ever been treated for it?	Yes	1
		No	2
X30	Have you been taking any medications or other treatments for it during the last 2 weeks?	Yes	1
		No	2

During the last 12 months, have you experienced any of the following?

X31	Have you had a period lasting several days when you felt sad, empty or depressed?	Yes	1
		No	2
X32	Have you had a period lasting several days when you lost interest in most things you usually enjoy such as hobbies, personal relationships or work?	Yes	1
		No	2
X33	Have you had a period lasting several days when you have been feeling your energy decreased or that you are tired all the time?	Yes	1
		No	2
		If X31 = 1 AND X32 = 1 AND X 33 = 1, ask X34	
		If X31 = 1 AND X32 = 1 AND X 33 = 2, ask X34	
		If X31 = 1 AND X32 = 2 AND X 33 = 1, ask X34	
		If X31 = 2 AND X32 = 1 AND X 33 = 1, ask X34	
		If X31 = 2 AND X32 = 2 AND X 33 = 2, go to END SECTION	
		If X31 = 1 AND X32 = 2 AND X 33 = 2, go to END SECTION	
		If X31 = 2 AND X32 = 1 AND X 33 = 2, go to END SECTION	
		If X31 = 2 AND X32 = 2 AND X 33 = 1, go to END SECTION	

Code	Question	Response	
X34	Was this period [of sadness/loss of interest/low energy] for more than 2 weeks?	Yes	1—If X34 = 1, go to X35
		No	2 - If X34 = 2, go to END SECTION
X35	Was this period [of sadness/loss of interest/low energy] most of the day, nearly every day?	Yes	1
		No	2
X36	During this period, did you lose your appetite?	Yes	1
		No	2
X37	During this period, did you notice any slowing down in your thinking?	Yes	1
		No	2
X38	During this period, did you feel negative about yourself or like you had lost confidence?	Yes	1
		No	2
X39	Did you think of death, or wish you were dead?	Yes	1
		No	2

Household energy use

CORE: Household energy use

The next questions ask about household energy use. They include questions on the main device used for cooking and heating in the household.

COOKING

Question	Response		Code
Is any of the food or drink consumed by household members cooked by members of the household?	Yes	1	HE1
	No	2 If No, go to HE5	
	Don't know	77	
What does this household use for cooking (including cooking food, making tea/coffee, and boiling drinking water)? You can choose more than one answer	LPG (liquefied petroleum gas)/cooking gas stove	1 Go to HE4	HE2
	Piped natural gas stove	2 Go to HE4	
	Liquid fuel stove	3 Go to HE4	
	Electrical stove/kettle Manufactured solid fuel stove: no chimney	4 Go to HE4 5 Go to HE4	
	Open fire—contained and moveable	6 Go to HE4	
	Other	7 Go to HE4	
	Don't know	77	
What type of fuel or energy source does this household most commonly use for cooking in this cookstove or device? (choose one answer)	Electricity	1	HE4
	Solar energy	2	
	LPG (liquefied petroleum gas)/cooking gas	3	
	Piped natural gas	4	
	Diesel	5	
	Kerosene	6	
	Charcoal	7	
	Wood	8	
	olive mill solid waste	9	
	others (specify)	10	
	Don't know	77	

CORE and EXPANDED: Household energy use			
HEATING			
Question	**Response**		**Code**
Does this household use any form of space heating at any time during the year?	Yes	1	HE5
	No	2 If No, end section	
	Don't know	77	
What is the type of heater used in this household? You can choose more than one answer	Central heating—gas	1	HE6
	Central heating—diesel	2	
	Space heater, diesel/kerosene	3	
	Space heater—electricity	4	
	Space heater—gas	5	
	Solar Air Heater	6	
	Air condition (heating)	7	
	Wood/charcoal/olive mill solid waste	8	
	Other (specify)	9	
	Don't know	77	

Step 2 Physical Measurements

CORE: Blood Pressure			
Question	**Response**		**Code**
Interviewer ID			M1
Device ID for blood pressure			M2
Reading 1	Systolic (mmHg)		M4a
	Diastolic (mmHg)		M4b
Reading 2	Systolic (mmHg)		M5a
	Diastolic (mmHg)		M5b
Reading 3	Systolic (mmHg)		M6a
	Diastolic (mmHg)		M6b
During the past two weeks, have you been treated for raised blood pressure with drugs (medication) prescribed by a doctor or other health worker?	Yes	1	M7
	No	2	
CORE: Height and Weight			
For women: Are you pregnant?	Yes	1 If Yes, go to B1	M8
	No	2	
Interviewer ID			M9
Device IDs for height and weight	Height		M10a
	Weight		M10b
Height	in Centimetres (cm)		M11
Weight If too large for scale 666.6	in Kilograms (kg)		M12

Question	Response	Code
CORE: Waist		
Device ID for waist		M13
Waist circumference	in Centimetres (cm)	M14

EXPANDED: Hip Circumference and Heart Rate		
Hip circumference in Centimetres (cm)		M15
Heart Rate Reading		
Reading 1	Beats per minute	M16a
Reading 2	Beats per minute	M16b
Reading 3	Beats per minute	M16c

Step 3 Biochemical Measurements

CORE: Blood Glucose

Question	Response		Code
During the past 12 hours, have you had anything to eat or drink, other than water?	Yes	1	B1
	No	2	
Technician ID			B2
Device ID			B3
Time of day blood specimen taken (24-hour clock)	Hours: minutes	hrs mins	B4
Fasting blood glucose	mmol/l		B5
Today, have you taken insulin or other drugs (medication) that have been prescribed by a doctor or other health worker for raised blood glucose?	Yes	1	B6
	No	2	
CORE: Blood Lipids			
Device ID			B7
Total cholesterol	mmol/l		B8
During the past two weeks, have you been treated for raised cholesterol with drugs (medication) prescribed by a doctor or other health worker?	Yes	1	B9
	No	2	
CORE: Urinary sodium and creatinine			
Had you been fasting prior to the urine collection?	Yes	1	B10
	No	2	
Technician ID			B11
Device ID			B12
Time of day urine sample taken (24-hour clock)	Hours: minutes	hrs mins	B13
Urinary sodium	mmol/l		B14
Urinary creatinine	mmol/l		B15

EXPANDED: Triglycerides and HDL Cholesterol		
Triglycerides	mmol/l	B16
HDL Cholesterol	mmol/l	B17

Appendix 3:

Fact Sheets and Tobacco Fact Sheets

Jordan STEPS Survey 2019
Fact Sheet - Jordanians and Syrians

The STEPS survey of noncommunicable diseases (NCDs) risk factors in Jordan was carried out from 7 July to 13 September 2019. Jordan carried out Step 1, Step 2 and Step 3. Socio-demographic and behavioral information were collected in Step 1. Physical measurements such as height, weight and blood pressure were collected in Step 2. Biochemical measurements were collected to assess blood glucose and cholesterol levels in Step 3. The survey was a population-based survey of adult Jordanians and Syrians aged 18–69 years old. A multistage cluster sampling design was used to produce representative data for that age range in Jordan. A total of 5713 adults participated in the survey. The response rates were [STEPs 1, 2 and 3; 95%, 93%, 63%, respectively]. A repeat survey is planned for the year 2024 – 25 if funds permit.

Results for Adults Aged 18–69 Years Old	Both Sexes (95% CI)	Males (95 % CI)	Females (95 % CI)
Step 1 Tobacco Use[1]			
Percentage who currently smoke tobacco[2] (daily and non-daily)	41.0% (38.8-43.2)	65.3% (62.3–68.2)	16.4% (14.2-18.6)
Percentage who currently smoke tobacco daily	34.6% (32.4-36.7)	58.0% (54.9-61.1)	10.8% (9.1-12.5)
For those who smoke tobacco daily			
Average age started smoking (years)[3]	18.2 (18.3-19.1)	17.1 (-)	23.9 (-)
Percentage of daily smokers smoking manufactured cigarettes	88.8% (86.5-91.1)	90.6% (88.2-93.0)	78.7% (71.4-85.9)
Mean number of manufactured cigarettes smoked per day (by smokers of manufactured cigarettes)	21.1 (20.2-22.0)	22.6 (-)	13.0 (-)
STEP 1 Electronic Cigarettes and other Vaping Devices Use [1, 4]			
Percentage who currently use e-cigarettes or other vaping devices (daily and non-daily)	9.2% (-)	15.0% (-)	2.4% (-)
Percentage who currently use e-cigarettes or other vaping devices daily	3.9% (2.7-5.1)	6.4% (4.4-8.5)	0.9% (0.1-1.7)
Percentage who currently use e-cigarettes or other vaping devices non-daily	5.3% (4.2-6.4)	8.6% (6.7-10.4)	1.5% (0.8-2.2)
Step 1 Alcohol Consumption			
Percentage who are lifetime abstainers	94.5% (93.5-95.5)	89.4% (87.5-91.3)	99.7% (99.5-100.0)
Percentage who are past 12 months abstainers	3.5% (2.7-4.4)	1.0% (0.4-1.7)	0.1% (0.0-0.2)
Percentage who currently drink (drank alcohol in the past 30 days)	1.4% (0.8-1.9)	2.6% (1.6-3.7)	0.1% (0-0.3)
Percentage who engage in heavy episodic drinking (6 or more drinks on any occasion in the past 30 days)	0.6% (0.3-0.9)	1.2% (0.6-1.8)	0.0% (0.0-0.1)

Results for Adults Aged 18–69 Years Old	Both Sexes (95% CI)	Males (95 % CI)	Females (95 % CI)
Step 1 Diet			
Mean number of days fruits consumed in a typical week	3.2 (3.1-3.3)	3.2 (3.1-3.4)	3.1 (3.0-3.3)
Mean number of servings of fruits consumed on average per day	1.0 (0.9-1.0)	1.0 (0.9-1.1)	0.9 (0.9-1.0)
Mean number of days vegetables consumed in a typical week	6.0 (5.9-6.1)	6.0 (5.9-6.1)	6.0 (5.9-6.1)
Mean number of servings of vegetables consumed on average per day	2.1 (2.0-2.1)	2.0 (1.9-2.1)	2.1 (2.0-2.2)
Percentage who ate less than five servings of fruits and/or vegetables on average per day	84.4% (82.9-85.9)	84.4% (82.2-86.6)	84.3% (82.3-86.4)
Percentage who always or often add salt or salty sauce to their food before eating or as they are eating	30.6% (28.4-32.7)	29.4% (26.4-32.5)	31.7% (28.9-34.4)
Percentage who always or often eat processed foods high in salt	33.4% (31.4-35.4)	32.1% (29.2-35.1)	34.7% (32.1-37.4)
Step 1 Physical Activity			
Percentage with insufficient physical activity (defined as <150 minutes of moderate-intensity activity per week, or equivalent)*	25.2% (23.4-27.0)	26.2% (23.4-28.9)	24.2% (21.9-26.6)
Median time spent in physical activity on average per day (minutes) (presented with inter-quartile range)	90.0 (20.0-210.0)	85.7 (17.1-274.3)	90.0 (21.4-182.1)
Percentage not engaging in vigorous activity	76.2% (74.2-78.2)	63.0% (59.7-66.2)	89.4% (87.4-91.3)

* For complete definitions of insufficient physical activity refer to the GPAQ Analysis Guide (http://www.who.int/chp/steps/GPAQ/en/index.html) or to the WHO Global recommendations on physical activity for health (http://www.who.int/dietphysicalactivity/factsheet_recommendations/en/index.html)

[1] Potential underreporting among females, especially among younger ones, due to cultural and social context.
[2] Tobacco smoke includes manufactured cigarettes, hand-rolled cigarettes, shisha, pipe, and cigars.
[3] 34.7% of adult Jordanian and Syrian current smokers indicated that they started smoking before the age of 16 years, whereas 65.3% indicated that they started smoking at the age of 16 years old and above. This is consistent with the high levels of smoking among minors from the Global Youth Tobacco Surveys (GYTS) conducted over the past years in Jordan and the Eastern Mediterranean Region.
[4] There is no overlap between prevalence of tobacco smokers and e-cigarettes/vaping products users. These are two independent groups, which are only counted once.

Results for Adults Aged 18–69 Years Old	Both Sexes (95% CI)	Males (95 % CI)	Females (95 % CI)
Step 1 Cervical Cancer Screening			
Percentage of women aged 30–49 years who have ever had a screening test for cervical cancer			11.8% (9.4-14.1)

Results for Adults Aged 18–69 Years Old	Both Sexes (95% CI)	Males (95 % CI)	Females (95 % CI)
Step 1 Mental Health			
Prevalence of depression over the past 12 months	18.1% (16.5-19.7)	14.3% (12.2-16.4)	21.9% (19.7-24.1)
Percentage of those with depression over the past 12 months, who are receiving any therapy	6.5% (5.0-8.0)	7.2% (4.4-10.0)	6.2% (4.5-7.9)
Step 2 Physical Measurements			
Mean body mass index—BMI (kg/m^2)	27.5 (27.3-27.8)	26.3 (25.9-26.7)	28.8 (28.5-29.2)
Percentage who are overweight (BMI ≥ 25 kg/m^2)	60.8% (58.7-62.9)	53.1% (49.7-56.6)	68.8% (66.3-71.3)
Percentage who are obese (BMI ≥ 30 kg/m^2)	32.1% (30.3-34.0)	24.2% (21.5-26.8)	40.4% (37.8-43.0)
Average waist circumference (cm)		91.1 (90.0-92.3)	89.6 (88.7-90.5)
Mean systolic blood pressure—SBP (mmHg), including those currently on medication for raised BP	116.2 (115.5-116.9)	120.6 (119.6-121.6)	111.9 (111.1-112.8)
Mean diastolic blood pressure—DBP (mmHg), including those currently on medication for raised BP	77.6 (77.2-78.1)	77.8 (77.1-78.5)	77.5 (76.9-78.0)
Percentage with raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)	22.1% (20.5-23.8)	22.3% (19.9-24.8)	21.9% (19.9-23.9)
Percentage with raised BP* who are not currently on medication for raised BP	47.8% (44.0-51.7)	56.6% (50.9-62.2)	38.9% (34.1-43.7)
Step 3 Biochemical Measurement			
Mean fasting blood glucose, including those currently on medication for raised blood glucose (mmol/L)	4.6 (4.5-4.7)	4.5 (4.4- 4.6)	4.7 (4.6-4.8)
Percentage with impaired fasting glycaemia as defined below ■ plasma venous value ≥6.1 mmol/L (110 mg/dl) and <7.0 mmol/L (126 mg/dl). ■ capillary whole blood value ≥5.6 mmol/L (100 mg/dl) and <6.1 mmol/L (110 mg/dl).	6.1% (4.9- 7.3)	5.5% (3.7- 7.2)	6.7% (5.2–8.3)
Percentage with raised fasting blood glucose as defined below or currently on medication for raised blood glucose ■ plasma venous value ≥ 7.0 mmol/L (126 mg/dl). ■ capillary whole blood value ≥ 6.1 mmol/L (110 mg/dl).	7.9% (6.5-9.3)	8.6% (6.2-10.9)	7.2% (5.6-8.8)

Results for Adults Aged 18–69 Years Old	Both Sexes (95% CI)	Males (95 % CI)	Females (95 % CI)
Percentage with raised fasting blood glucose (≥7 mmol/L [126 mg/dl]) or currently on medication for raised blood glucose (aged 45–69).	20.5% (17.2-23.8)	20.9% (15.8-26.0)	20.1% (16.0-24.2)
Mean total blood cholesterol, including those currently on medication for raised cholesterol (mmol/L)	3.7 (3.7-3.8)	3.5 (3.5–3.6)	3.9 (3.9-4.0)
Percentage with raised total cholesterol (≥ 5.0 mmol/L or currently on medication for raised cholesterol)	17.7% (15.8-19.7)	16.1% (13.2-19.1)	19.4% (16.8-21.9)
Mean intake of salt per day (in grams)	10.9 (10.6-11.2)	12.5 (12.0-12.9)	9.6 (9.3-9.9)
Cardiovascular Disease (CVD) Risk			
Percentage aged 40–69 years with a 10-year CVD risk ≥ 30%, or with existing CVD**	24.5% (17.9-31.0)	32.4% (21.4-43.3)	16.6% (9.9-23.2)
Summary of Combined Risk Factors ■ Current daily smokers ■ Less than five servings of fruits and vegetables per day ■ Insufficient physical activity ■ Overweight (BMI ≥ 25 kg/m2) ■ Raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)			
Percentage with none of the above risk factors	2.2% (1.4-2.9)	3.0% (1.6-4.4)	1.3% (0.7-2.0)
Percentage with three or more of the above risk factors aged 18 to 44 years	32.8% (30.2-35.5)	39.7% (35.4-44.0)	25.7% (22.8-28.6)
Percentage with three or more of the above risk factors aged 45 to 69 years	63.4% (60.3-66.6)	70.7% (66.5-74.9)	56.2% (51.6-60.8)
Percentage with three or more of the above risk factors aged 18 to 69 years	41.0% (38.8-43.2)	47.9% (44.4-51.4)	34.0% (31.5-36.5)

* Those with SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP.
** A 10-year CVD risk of ≥30% is defined according to age, sex, blood pressure, smoking status (current smokers OR those who quit smoking less than 1 year before the assessment), total cholesterol, and diabetes (previously diagnosed OR a fasting plasma glucose concentration>7.0 mmol/L [126 mg/dl]).

For additional information, please contact:
Noncommunicable Diseases Directorate - Ministry of Health - Jordan
Email: ncd@moh.gov.jo
Tel: +962-6–5660623

Jordan STEPS Survey 2019
Fact Sheet - Jordanians only (18–69 years)

The STEPS survey of noncommunicable diseases (NCDs) risk factors in Jordan was carried out from 7 July-13 September 2019. Jordan carried out Step 1, Step 2 and Step 3. Socio-demographic and behavioural information were collected in Step 1. Physical measurements such as height, weight and blood pressure were collected in Step 2. Biochemical measurements were collected to assess blood glucose and cholesterol levels in Step 3. The survey was a population-based survey of adult Jordanians and Syrians aged 18–69 years old. A multistage cluster sampling design was used to produce representative data for that age range in Jordan. The data presented in this fact sheet are for Jordanians only. A total of 2910 Jordanian adults participated in the survey. The overall response rates were [STEPs 1, 2 and 3; 97%, 92%, 58%, respectively]. A repeat survey is planned for the year 2024-25 if funds permit.

Results for Adults Aged 18–69 Years Old	Both Sexes (95% CI)	Males (95 % CI)	Females (95 % CI)
Step 1 Tobacco Use[1]			
Percentage who currently smoke tobacco[2] (daily and non-daily)	42.0% (39.6-44.5)	66.1% (62.8-69.3)	17.4% (15.0-19.8)
Percentage who currently smoke tobacco daily	35.5% (33.1-37.9)	58.9% (55.4-62.3)	11.5% (9.6-13.5)
For those who smoke tobacco daily			
Average age started smoking (years)[3]	18.2 (17.8-18.6)	17.1 (-)	24.0 (-)
Percentage of daily smokers smoking manufactured cigarettes	88.9% (86.4-91.3)	90.8% (88.2-93.4)	78.6% (70.9-86.2)
Mean number of manufactured cigarettes smoked per day (by smokers of manufactured cigarettes)	21.3 (20.3-22.4)	22.9 (-)	13.0 (-)
STEP 1 Electronic Cigarettes and other Vaping Devices Use [1, 4]			
Percentage who currently use e-cigarettes or other vaping devices (daily and non-daily)	9.6% (-)	15.9% (-)	2.6% (-)
Percentage who currently use e-cigarettes or other vaping devices daily	4.1% (2.8-5.4)	6.9% (4.6-9.1)	1.0% (0.1- 1.8)
Percentage who currently use e-cigarettes or other vaping devices non-daily	5.5% (4.4-6.7)	9.0% (6.9-11.1)	1.6% (0.8-2.3)
Step 1 Alcohol Consumption			
Percentage who are lifetime abstainers	94.2% (93.0-95.3)	88.8% (86.7-90.9)	99.7% (99.4-100.0)
Percentage who are past 12 months abstainers	3.7% (2.8-4.6)	7.3% (5.5-9.0)	0.1% (0.0-0.2)
Percentage who currently drink (drank alcohol in the past 30 days)	1.5% (0.9-2.1)	2.9% (1.7-4.0)	0.1% (0.0-0.3)
Percentage who engage in heavy episodic drinking (6 or more drinks on any occasion in the past 30 days)	0.7% (0.3-1.0)	1.3% (0.6-2.0)	0.0% (0.0-0.1)

Results for Adults Aged 18–69 Years Old	Both Sexes (95% CI)	Males (95 % CI)	Females (95 % CI)
Step 1 Diet			
Mean number of days fruits consumed in a typical week	3.4 (3.2-3.5)	3.4 (3.2-3.6)	3.3 (3.2-3.5)
Mean number of servings of fruits consumed on average per day	1.0 (1.0-1.1)	1.1 (1.0-1.1)	1.0 (0.9-1.1)
Mean number of days vegetables consumed in a typical week	6.0 (6.0-6.1)	6.0 (5.9-6.1)	6.1 (6.0-6.2)
Mean number of servings of vegetables consumed on average per day	2.1 (2.0-2.2)	2.1 (2.0-2.2)	2.1 (2.0-2.2)
Percentage who ate less than five servings of fruits and/or vegetables on average per day	83.4% (81.7-85.1)	83.6% (81.3-86.0)	83.2% (80.9-85.5)
Percentage who always or often add salt or salty sauce to their food before eating or as they are eating	30.4% (28.0-32.8)	29.1% (25.7-32.4)	31.7% (28.7-34.8)
Percentage who always or often eat processed foods high in salt	34.4% (32.2-36.7)	32.7% (29.4-36.0)	36.2% (33.3-39.1)
Step 1 Physical Activity			
Percentage with insufficient physical activity (defined as <150 minutes of moderate-intensity activity per week, or equivalent)*	25.7% (23.6-27.7)	26.8% (23.8-29.8)	24.5% (21.9-27.2)
Median time spent in physical activity on average per day (minutes) (presented with inter-quartile range)	87.9 (19.3-205.7)	80.0 (17.1-257.1)	90.0 (20.0-182.9)
Percentage not engaging in vigorous activity	76.4% (74.2-78.7)	63.9% (60.4-67.5)	89.0% (86.8-91.2)

* For complete definitions of insufficient physical activity refer to the GPAQ Analysis Guide (http://www.who.int/chp/steps/GPAQ/en/index.html) or to the WHO Global recommendations on physical activity for health (http://www.who.int/dietphysicalactivity/factsheet_recommendations/en/index.html)

[1] Potential underreporting among females, especially among younger ones, due to cultural and social context.
[2] Tobacco smoke includes manufactured cigarettes, hand-rolled cigarettes, shisha, pipe, and cigars.
[3] 34.7% of adult Jordanian and Syrian current smokers indicated that they started smoking before the age of 16 years, whereas 65.3% indicated that they started smoking at the age of 16 years old and above. This is consistent with the high levels of smoking among minors from the Global Youth Tobacco Surveys (GYTS) conducted over the past years in Jordan and the Eastern Mediterranean Region.
[4] There is no overlap between prevalence of tobacco smokers and e-cigarettes/vaping products users. These are two independent groups, which are only counted once.

Results for Adults Aged 18–69 Years Old	Both Sexes (95% CI)	Males (95 % CI)	Females (95 % CI)
Step 1 Cervical Cancer Screening			
Percentage of women aged 30–49 years who have ever had a screening test for cervical cancer			12.4% (9.7-15.1)

Results for Adults Aged 18–69 Years Old	Both Sexes (95% CI)	Males (95 % CI)	Females (95 % CI)
Step 1 Mental Health			
Prevalence of depression over the past 12 months	17.7% (15.9-19.5)	13.8% (11.4-16.1)	21.7% (19.2-24.2)
Percentage of those with depression over the past 12 months, who are receiving any therapy	6.2% (3.6-8.9)	8.3% (2.5-14.0)	4.9% (2.5-7.3)
Step 2 Physical Measurements			
Mean body mass index—BMI (kg/m^2)	27.5 (27.2-27.8)	26.3 (25.9-26.7)	28.8 (28.4-29.2)
Percentage who are overweight (BMI ≥ 25 kg/m^2)	60.7% (58.3-63.0)	53.0% (49.2-56.9)	68.6% (65.8-71.4)
Percentage who are obese (BMI ≥ 30 kg/m^2)	32.3% (30.2-34.4)	24.5% (21.5-27.5)	40.5% (37.6-43.4)
Average waist circumference (cm)		91.3 (90.0-92.6)	89.7 (88.7-90.7)
Mean systolic blood pressure—SBP (mmHg), including those currently on medication for raised BP	116.4 (115.7-117.2)	120.7 (119.6-121.8)	112.2 (111.2-113.2)
Mean diastolic blood pressure—DBP (mmHg), including those currently on medication for raised BP	77.6 (77.1-78.1)	77.8 (77.0-78.6)	77.5 (76.9-78.1)
Percentage with raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)	22.8% (21.0-24.6)	23.0% (20.3-25.7)	22.6% (20.3-24.9)
Percentage with raised BP* who are not currently on medication for raised BP	47.3% (43.0-51.5)	56.2% (50.0-62.4)	38.1% (32.8-43.4)
Step 3 Biochemical Measurement			
Mean fasting blood glucose, including those currently on medication for raised blood glucose (mmol/L)	4.6 (4.5-4.7)	4.5 (4.4- 4.6)	4.7 (4.6-4.8)
Percentage with impaired fasting glycaemia as defined below ■ plasma venous value ≥6.1 mmol/L (110 mg/dl) and <7.0 mmol/L (126 mg/dl). ■ capillary whole blood value ≥5.6 mmol/L (100 mg/dl) and <6.1 mmol/L (110 mg/dl).	6.1% (4.7- 7.4)	5.5 % (3.6–7.5)	6.6 % (4.9–8.3)
Percentage with raised fasting blood glucose as defined below or currently on medication for raised blood glucose ■ plasma venous value ≥ 7.0 mmol/L (126 mg/dl). ■ capillary whole blood value ≥ 6.1 mmol/L (110 mg/dl).	8.2% (6.7-9.8)	9.0% (6.4-11.6)	7.5% (5.7-9.3)

Results for Adults Aged 18–69 Years Old	Both Sexes (95% CI)	Males (95 % CI)	Females (95 % CI)
Percentage with raised fasting blood glucose (≥7 mmol/L [126 mg/dl]) or currently on medication for raised blood glucose (aged 45–69).	20.5% (17.0-24.1)	21.2% (15.8-26.7)	19.8% (15.5-24.2)
Mean total blood cholesterol, including those currently on medication for raised cholesterol (mmol/L)	3.7 (3.7-3.8)	3.5 (3.5- 3.6)	3.9 (3.9-4.0)
Percentage with raised total cholesterol (≥ 5.0 mmol/L or currently on medication for raised cholesterol)	18.3% (16.1-20.4)	16.9% (13.6-20.1)	19.7% (16.8-22.6)
Mean intake of salt per day (in grams)	11.0 (10.7-11.4)	12.5 (12.0-13.0)	9.6 (9.3-9.9)
Cardiovascular Disease (CVD) Risk			
Percentage aged 40–69 years with a 10-year CVD risk ≥ 30%, or with existing CVD**	24.4% (17.3-31.4)	32.4% (20.7-44.1)	16.1% (8.9-23.4)
Summary of Combined Risk Factors ■ Current daily smokers ■ Less than five servings of fruits and vegetables per day ■ Insufficient physical activity ■ Overweight (BMI ≥ 25 kg/m2) ■ Raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)			
Percentage with none of the above risk factors	2.3% (1.4-3.1)	3.2% (1.7-4.7)	1.3% (0.6-2.0)
Percentage with three or more of the above risk factors aged 18 to 44 years	33.3% (30.2-36.3)	40.3% (35.4-45.1)	26.0% (22.7-29.3)
Percentage with three or more of the above risk factors aged 45 to 69 years	63.2% (59.8-66.6)	70.8% (66.4-75.2)	55.7% (50.8-60.6)
Percentage with three or more of the above risk factors aged 18 to 69 years	41.7% (39.2-44.2)	48.7% (44.8-52.6)	34.5% (31.7-37.4)

* Those with SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP.
** A 10-year CVD risk of ≥30% is defined according to age, sex, blood pressure, smoking status (current smokers OR those who quit smoking less than 1 year before the assessment), total cholesterol, and diabetes (previously diagnosed OR a fasting plasma glucose concentration>7.0 mmol/L [126 mg/dl]).

For additional information, please contact:
Noncommunicable Diseases Directorate - Ministry of Health - Jordan
Email: ncd@moh.gov.jo
Tel: +962-6–5660623

Jordan STEPS Survey 2019

Fact Sheet - Syrians only (18–69 years)

The STEPS survey of noncommunicable diseases (NCDs) risk factors in Jordan was carried out from 7 July-13 September 2019.]. Jordan carried out Step 1, Step 2 and Step 3. Socio-demographic and behavioural information were collected in Step 1. Physical measurements such as height, weight and blood pressure were collected in Step 2. Biochemical measurements were collected to assess blood glucose and cholesterol levels in Step 3. The survey was a population-based survey of adult Jordanians and Syrians aged 18–69 years old. A multistage cluster sampling design was used to produce representative data for that age range in Jordan. The data presented in this fact sheet are for Syrians only. A total of 2803 adult Syrians participated in the survey. The overall response rates were [STEPs 1, 2 and 3; 93%, 95%, 69%, respectively]. A repeat survey is planned for the years 2024-25 if funds permit.

Results for Adults Aged 18–69 Years Old	Both Sexes (95% CI)	Males (95 % CI)	Females (95 % CI)
Step 1 Tobacco Use[1]			
Percentage who currently smoke tobacco[2] (daily and non-daily)	32.2% (29.8-34.7)	58.2% (54.2-62.2)	8.3% (6.9-9.7)
Percentage who currently smoke tobacco daily	26.9% (24.6-29.1)	50.6% (46.7-54.5)	5.0% (3.9-6.1)
For those who smoke tobacco daily			
Average age started smoking (years)[3]	17.8 (17.3-18.2)	17.2 (16.7-17.6)	23.1 (-)
Percentage of daily smokers smoking manufactured cigarettes	87.8% (84.7-90.9)	88.6% (85.3-91.8)	80.9% (71.4-90.4)
Mean number of manufactured cigarettes smoked per day (by smokers of manufactured cigarettes)	18.4 (17.3-19.4)	19.1 (17.9-20.2)	11.8 (-)
STEP 1 Electronic Cigarettes and other Vaping Devices Use [1, 4]			
Percentage who currently use e-cigarettes or other vaping devices (daily and non-daily)	4.9% (-)	7.6% (-)	1.0% (-)
Percentage who currently use e-cigarettes or other vaping devices daily	1.7% (0.9-2.4)	2.6% (1.3-3.8)	0.4% (0.0-0.8)
Percentage who currently use e-cigarettes or other vaping devices non-daily	3.2% (2.0-4.3)	5.0% (3.2-6.9)	0.6% (0.1-1.2)
Step 1 Alcohol Consumption			
Percentage who are lifetime abstainers	97.4% (96.6-98.3)	94.7% (93.0-96.4)	100.0% (99.9-100.0)
Percentage who are past 12 months abstainers	2.0% (1.3-2.7)	4.1% (2.6-5.7)	0.0% (0.0-0.0)
Percentage who currently drink (drank alcohol in the past 30 days)	0.3% (0.0-0.5)	0.5% (0.0-1.0)	0.0% (0.0-0.0)
Percentage who engage in heavy episodic drinking (6 or more drinks on any occasion in the past 30 days)	0.0% (0.0-0.1)	0.1% (0.0-0.2)	0.0% (0.0-0.0)

Results for Adults Aged 18–69 Years Old	Both Sexes (95% CI)	Males (95 % CI)	Females (95 % CI)
Step 1 Diet			
Mean number of days fruits consumed in a typical week	1.8 (1.7-1.9)	2.0 (1.8-2.1)	1.5 (1.5-1.6)
Mean number of servings of fruits consumed on average per day	0.5 (0.4-0.5)	0.5 (0.5-0.6)	0.4 (0.3-0.4)
Mean number of days vegetables consumed in a typical week	5.5 (5.4-5.6)	5.7 (5.5-5.8)	5.4 (5.2-5.5)
Mean number of servings of vegetables consumed on average per day	1.7 (1.6-1.8)	1.8 (1.7-1.9)	1.6 (1.5-1.7)
Percentage who ate less than five servings of fruits and/or vegetables on average per day	92.4% (91.0-93.9)	91.1% (88.7-93.5)	93.7% (92.2-95.1)
Percentage who always or often add salt or salty sauce to their food before eating or as they are eating	31.9% (29.6-34.2)	32.6% (29.2-36.1)	31.3% (28.5-34.0)
Percentage who always or often eat processed foods high in salt	25.0% (22.8-27.2)	27.2% (23.6-30.8)	23.0% (20.7-25.4)
Step 1 Physical Activity			
Percentage with insufficient physical activity (defined as <150 minutes of moderate-intensity activity per week, or equivalent)*	21.2% (19.3-23.1)	20.5% (17.5-23.6)	21.8% (19.5-24.2)
Median time spent in physical activity on average per day (minutes) (presented with inter-quartile range)	110.0 (30–248.6)	135.0 (30.0-372.9)	90.0 (25.7-180.0)
Percentage not engaging in vigorous activity	74.0% (71.5-76.5)	54.3% (50.0-58.5)	91.8% (90.3-93.4)

* For complete definitions of insufficient physical activity refer to the GPAQ Analysis Guide (http://www.who.int/chp/steps/GPAQ/en/index.html) or to the WHO Global recommendations on physical activity for health (http://www.who.int/dietphysicalactivity/factsheet_recommendations/en/index.html)

[1] Potential underreporting among females, especially among younger ones, due to cultural and social context.
[2] Tobacco smoke includes manufactured cigarettes, hand-rolled cigarettes, shisha, pipe, and cigars.
[3] 34.7% of adult Jordanian and Syrian current smokers indicated that they started smoking before the age of 16 years, whereas 65.3% indicated that they started smoking at the age of 16 years old and above. This is consistent with the high levels of smoking among minors from the Global Youth Tobacco Surveys (GYTS) conducted over the past years in Jordan and the Eastern Mediterranean Region.
[4] There is no overlap between prevalence of tobacco smokers and e-cigarettes/vaping products users. These are two independent groups, which are only counted once.

Results for Adults Aged 18–69 Years Old	Both Sexes (95% CI)	Males (95 % CI)	Females (95 % CI)
Step 1 Cervical Cancer Screening			
Percentage of women aged 30–49 years who have ever had a screening test for cervical cancer			7.7% (5.8-9.7)

Results for Adults Aged 18–69 Years Old	Both Sexes (95% CI)	Males (95 % CI)	Females (95 % CI)
Step 1 Mental Health			
Prevalence of depression over the past 12 months	21.3% (19.3-23.2)	18.9% (15.8-22.0)	23.5% (21.2-25.8)
Percentage of those with depression over the past 12 months, who are receiving any therapy	21.3% (19.3-23.2)	18.9% (15.8-22.0)	23.5% (21.2-25.8)
Step 2 Physical Measurements			
Mean body mass index—BMI (kg/m^2)	27.4 (27.1-27.7)	26.0 (25.5-26.4)	28.9 (28.5-29.3)
Percentage who are overweight (BMI ≥ 25 kg/m^2)	62.2% (59.6-64.8)	54.1% (49.8-58.4)	70.1% (67.4-72.9)
Percentage who are obese (BMI ≥ 30 kg/m^2)	30.5% (28.3-32.7)	21.3% (17.9-24.6)	39.6% (36.9-42.3)
Average waist circumference (cm)		89.6 (88.4-90.8)	88.9 (87.9-89.8)
Mean systolic blood pressure—SBP (mmHg), including those currently on medication for raised BP	114.6 (113.9-115.3)	120.1 (119.0-121.1)	109.7 (108.9-110.5)
Mean diastolic blood pressure—DBP (mmHg), including those currently on medication for raised BP	77.5 (77.0-78.0)	77.9 (77.1-78.8)	77.1 (76.6-77.7)
Percentage with raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)	16.9% (15.2-18.5)	17.0% (14.2-19.7)	16.8% (14.8-18.8)
Percentage with raised BP* who are not currently on medication for raised BP	53.8% (49.0-58.6)	60.8% (53.2-68.5)	47.2% (40.8-53.7)
Step 3 Biochemical Measurement			
Mean fasting blood glucose, including those currently on medication for raised blood glucose (mmol/L)	4.4 (4.3-4.5)	4.2 (4.1-4.4)	4.5 (4.4-4.6)
Percentage with impaired fasting glycaemia as defined below ■ plasma venous value ≥6.1 mmol/L (110 mg/dl) and <7.0 mmol/L (126 mg/dl). ■ capillary whole blood value ≥5.6 mmol/L (100 mg/dl) and <6.1 mmol/L (110 mg/dl).	6.6% (5.2–7.8)	4.8 % (2.9- 6.7)	8.0% (6.1-9.8)
Percentage with raised fasting blood glucose as defined below or currently on medication for raised blood glucose ■ plasma venous value ≥ 7.0 mmol/L (126 mg/dl). ■ capillary whole blood value ≥ 6.1 mmol/L (110 mg/dl).	6.1% (4.9 - 7.3)	6.1% (4.2- 8.0)	6.0% (4.7-7.3)

Results for Adults Aged 18–69 Years Old	Both Sexes (95% CI)	Males (95 % CI)	Females (95 % CI)
Percentage with raised fasting blood glucose (≥7 mmol/L [126 mg/dl]) or currently on medication for raised blood glucose (aged 45–69).	19.9% (15.8-24.1)	15.7% (10.2-21.2)	23.9% (18.0-29.8)
Mean total blood cholesterol, including those currently on medication for raised cholesterol (mmol/L)	3.7 (3.7-3.8)	3.5 (3.4-3.6)	3.9 (3.9-4.0)
Percentage with raised total cholesterol (≥ 5.0 mmol/L or currently on medication for raised cholesterol)	13.5% (11.7-15.3)	9.9% (7.2-12.7)	16.7% (14.4-19.1)
Mean intake of salt per day (in grams)	10.9 (10.6-11.3)	12.3 (11.7-12.9)	9.6 (9.4-9.8)
Cardiovascular Disease (CVD) Risk			
Percentage aged 40–69 years with a 10-year CVD risk ≥ 30%, or with existing CVD**	25.9% (18.2-33.6)	31.6% (17.5-45.8)	21.5% (11.9-31.2)
Summary of Combined Risk Factors ■ Current daily smokers ■ Less than five servings of fruits and vegetables per day ■ Insufficient physical activity ■ Overweight (BMI ≥ 25 kg/m2) ■ Raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)			
Percentage with none of the above risk factors	1.3% (0.7-1.9)	1.2% (0.3-2.1)	1.4% (0.6-2.3)
Percentage with three or more of the above risk factors aged 18 to 44 years	29.8% (27.2-32.4)	35.9% (31.4-40.5)	24.0% (21.3-26.6)
Percentage with three or more of the above risk factors aged 45 to 69 years	67.0% (62.6-71.4)	69.8% (62.7-76.8)	64.3% (58.7-69.8)
Percentage with three or more of the above risk factors aged 18 to 69 years	35.1% (32.8-37.5)	40.8% (36.6-44.9)	29.7% (27.3-32.2)

* Those with SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP.
** A 10-year CVD risk of ≥30% is defined according to age, sex, blood pressure, smoking status (current smokers OR those who quit smoking less than 1 year before the assessment), total cholesterol, and diabetes (previously diagnosed OR a fasting plasma glucose concentration>7.0 mmol/L [126 mg/dl]).

For additional information, please contact:
Noncommunicable Diseases Directorate - Ministry of Health - Jordan
Email: ncd@moh.gov.jo
Tel: +962-6–5660623

Jordan STEPS Survey 2019

Tobacco Fact Sheet - Jordanians and Syrians

The WHO STEPwise approach to surveillance (STEPS) is a simple, standardized method for collecting, analyzing and disseminating data on noncommunicable diseases (NCDs) and risk factors. Data are collected on the established risk factors and NCD conditions that determine the major NCD burden, including tobacco use, harmful use of alcohol, unhealthy diet, insufficient physical activity, overweight and obesity, raised blood pressure, raised blood glucose, and abnormal blood lipids. Data from STEPS surveys is used to monitor progress in meeting the global voluntary targets related to specific risk factors such as tobacco, alcohol, diet and physical inactivity. The tobacco indicators from STEPS can be used to evaluate and monitor existing tobacco-control policies and programs.* The STEPS survey on NCD risk factors in Jordan was carried out from 7 July-13 September 2019. The STEPS survey in Jordan was a population-based survey of adult Jordanians and Syrians aged 18–69 years old. A multistage cluster sampling design was used to produce representative data for that age range in Jordan. Survey information was collected electronically using handheld devices. The survey was implemented by the Center for Strategic Studies (CSS) and Ministry of Health. A total of 5713 adults participated in the Jordan STEPS survey.

Highlights [Jordanians and Syrians 18–69 years Old]

TOBACCO USE/ ELECTRONIC CIGARETTES OR OTHER VAPING DEVICES USE

65.3% of men

16.4% of women

41% overall (1.9 million adults) **were current smokers of tobacco**

15% of men

2.4 % of women

9.2% overall **were current e-cigarettes or other vaping devices users**

CESSATION

5 in 10 current smokers tried to stop smoking in the last 12 months.

3 in 10 current smokers were advised by a health care provider to stop smoking in the last 12 months.

SECOND-HAND SMOKE

78.8 % of adults were exposed to second-hand smoking in general in the past 30 days.

1 in 5 adults (over 800 thousand adults) was exposed to tobacco smoke at the workplace.

6 in 10 of adults (63%, 2.8 million adults) were exposed to tobacco smoke at home.

MEDIA

1 in 2 adults noticed anti-cigarette smoking information on the television or radio.

1 in 3 of current smokers thought about quitting because of warning labels on cigarette packages.

1 in 5 adults noticed cigarette promotions.

15% of adults noticed cigarette marketing in stores where cigarettes are sold.

ECONOMICS

Average monthly expenditure on manufactured cigarettes was over JOD 60.

* Data presented in this fact sheet relate only to select tobacco indicators. Additional information on tobacco or other NCD risk factors from the survey are available in the data book and STEPs report.

Results for Adults Aged 18–69 Years Old	Both Sexes (95% CI)	Males (95 % CI)	Females (95 % CI)
Tobacco Use[1]			
Current Tobacco Users (smoked and/or smokeless tobacco)[2] (of total population)			
Current tobacco users (daily and non-daily)	41.0% (38.8-43.2)	65.3% (62.3-68.2)	16.4% (14.2-18.6)
Current daily tobacco users	34.6% (32.4-36.7)	58.1% (54.9-61.2)	10.8% (9.1-12.5)
Current Tobacco Smokers[3] (of total population)			
Current tobacco smokers	41.0% (38.8-43.2)	65.3% (62.3-68.2)	16.4% (14.2-18.6)
Current daily tobacco smokers	34.6% (32.4-36.7)	58.0% (54.9-61.1)	10.8% (9.1-12.5)
Current cigarette smokers [4]	32.5% (30.4-34.5)	54.9% (51.8-58.0)	9.9% (8.3-11.5)
Current daily cigarette smokers	30.4% (28.3-32.5)	52.5% (49.3-55.6)	8.3% (6.8-9.7)
Average age started tobacco smoking (years)[5]	18.2 (17.8-18.5)	17.1 (-)	23.9 (-)
Average number of cigarettes smoked per day (among daily cigarette smokers)	21.1 (20.2-22.0)	22.6 (-)	13.0 (-)
Current Smokeless Tobacco Users (of total population)			
Current smokeless tobacco users	0.2% (0.0-0.4)	0.4% (0.0-0.8)	0.0% (-)
Current daily smokeless tobacco users	0.0% (0.0-0.1)	0.1% (0.0-0.1)	0.0% (-)
Current Electronic Cigarettes and Other Vaping Devices Use[1, 6] (of total population)			
Current e-cigarettes or other vaping devices users (daily and non-daily)	9.2% (-)	15.0% (-)	2.4% (-)
Current daily e-cigarettes or other vaping devices users	3.9% (2.7-5.1)	6.4% (4.4-8.5)	0.9% (0.1-1.7)
Current non-daily e-cigarettes or other vaping devices users	5.3% (4.2-6.4)	8.6% (6.7-10.4)	1.5% (0.8-2.2)
Current Non-users (smoked and/or smokeless)[1] (of total population)			
Former tobacco users[7]	5.3% (4.4-6.2)	7.8% (6.2-9.4)	2.8% (2.0-3.6)
Former tobacco smokers[8]	5.2% (4.3-6.1)	7.7% (6.1-9.3)	2.7% (1.9-3.5)
Never users	53.7% (51.5-55.9)	26.9% (24.2-29.6)	80.8% (78.6-83.0)
Exposure to Second-hand Smoke			
Adults exposed to second-hand smoking in general in the past 30 days[9]	78.8% (77.2 – 80.5)	75.6% (73.3 – 78.2)	82% (79.8 – 84.1)
Adults exposed to second-hand smoke at home*	62.9% (61.0-64.9)	51.8% (48.8-54.8)	74.2% (71.8-76.5)
Adults exposed to second-hand smoke in the closed areas in their workplace*	18.6% (16.9-20.3)	33.3% (30.2-36.3)	3.8% (2.8-4.8)

Results for Adults Aged 18–69 Years Old	Both Sexes (95% CI)	Males (95 % CI)	Females (95 % CI)
Tobacco Cessation			
Current smokers who tried to stop smoking in past 12 months	44.9% (41.3-48.5)	45.0% (40.8-49.1)	44.6% (38.2-51.1)
Current smokers advised by a health care provider to stop smoking in past 12 months[10]	28.3% (24.9-31.8)	29.3% (25.4-33.2)	24.8% (18.9-30.7)
Health Warnings			
Current smokers who thought about quitting because of a warning label*	31.7% (28.0-35.5)	32.4% (28.1-36.7)	29.0% (22.0-36.0)
Adults who noticed anti-cigarette smoking information on the television or radio *	45.2% (43.0-47.5)	42.1% (38.8-45.5)	48.4% (45.5-51.2)
Adults who noticed anti-cigarette smoking information in newspapers or magazines*	17.1% (15.3-19.0)	17.7% (15.1-20.3)	16.5% (14.2-18.9)
Tobacco Advertisement and Promotion			
Adults who noticed cigarette marketing in stores where cigarettes are sold*	14.7% (13.0-16.3)	18.1% (15.5-20.8)	11.1% (9.0-13.1)
Adults who noticed any cigarette promotions*	17.7% (15.8-19.5)	21.8% (18.9-24.7)	13.4% (11.3-15.4)
Economics	**Local Currency**		
Average amount spent on 20 manufactured cigarettes	1.85 JOD (1.8-1.9)		
Average monthly expenditure on manufactured cigarettes	60.3 JOD (60.4-65.6)		
Cost of 100 packs of manufactured cigarettes as a percentage of per capita Gross Domestic Product (GDP) [YEAR][11]	5.9% (5.8%-6.1%)		

[1] Potential underreporting among females, especially among younger ones, due to cultural and social context.
[2] Tobacco users include smoked and smokeless tobacco (manufactured cigarettes, hand-rolled cigarettes, shisha, pipe, cigars, and smokeless tobacco). Current refers to daily and less than daily.
[3] Tobacco smokers include manufactured cigarettes, hand-rolled cigarettes, shisha, pipe, and cigars. It does not include smokeless tobacco.
[4] Includes manufactured cigarettes and hand-rolled cigarettes. Current refers to daily and less than daily.
[5] 34.7% of adult Jordanian and Syrian current smokers indicated that they started smoking before the age of 16 years, whereas 65.3% indicated that they started smoking at the age of 16 years old and above. This is consistent with the high levels of smoking among minors from the Global Youth Tobacco Surveys (GYTS) conducted over the past years in Jordan and the Eastern Mediterranean Region.
[6] There is no overlap between prevalence of tobacco smokers and prevalence of e-cigarettes/vaping products users. These are two independent groups, which have only been counted once.
[7] Current non-users.
[8] Current non-smokers.
[9] General second-hand smoking refers to adult population exposed to indoor smoking in all public places (at home, at work, restaurants/cafes, hospitals/health care centers, universities, schools, governmental institutions, public transportation and any other places)
[10] Among those who visited a health care provider in past 12 months.
[11] Source and year for per capita GDP: World Bank, 2018.
* During the past 30 days.
† Promotions include free cigarette sample, cigarettes at sale prices, coupons for cigarettes, free gifts upon purchase of cigarettes, clothing or other items with cigarette brand name or logo and cigarette promotions in mail. Adults refer to persons age 18-69 years. Data have been weighted to be nationally representative of all Jordanian and Syrian men and women age 18-69 years residing in Jordan. Technical assistance for the survey was provided by the World Health Organization (WHO) and funding was by US Agency for International Development (USAID).

For additional information, please contact:
Noncommunicable Diseases Directorate - Ministry of Health - Jordan
Email: ncd@moh.gov.jo
Tel: +962-6–5660623

Jordan STEPS Survey 2019
Tobacco Fact Sheet - Jordanians only

The WHO STEPwise approach to surveillance (STEPS) is a simple, standardized method for collecting, analyzing and disseminating data on noncommunicable diseases (NCDs) and risk factors. Data are collected on the established risk factors and NCD conditions that determine the major NCD burden, including tobacco use, harmful use of alcohol, unhealthy diet, insufficient physical activity, overweight and obesity, raised blood pressure, raised blood glucose, and abnormal blood lipids. Data from STEPS surveys are used to monitor progress in meeting the global voluntary targets related to specific risk factors such as tobacco, alcohol, diet and physical inactivity. The tobacco indicators from STEPS can be used to evaluate and monitor existing tobacco-control policies and programs.* The STEPS survey on NCD risk factors in Jordan was carried out from 7 July-13 September 2019. The STEPS survey in Jordan was a population-based survey of adult Jordanians and Syrians aged 18–69 years old. A multistage cluster sampling design was used to produce representative data for that age range in Jordan. Survey information was collected electronically using handheld devices. The survey was implemented by the Center for Strategic Studies (CSS) and Ministry of Health. The data presented in this fact sheet are for Jordanians only. A total of 2910 Jordanian adults participated in the Jordan STEPS survey.

Highlights [Jordanians 18–69 Years Old]

TOBACCO USE/ ELECTRONIC CIGARETTES OR OTHER VAPING DEVICES USE

66.1% of men

17.4% of women

42% overall (1.7 million adults) **were current smokers of tobacco**

15.9% of men

2.6 % of women

9.6% overall **were current e-cigarettes or other vaping devices users**

CESSATION

4 in 10 current smokers tried to stop smoking in the last 12 months.

3 in 10 current smokers were advised by a health care provider to stop smoking in the last 12 months.

SECOND-HAND SMOKE

79.6 % of adults were exposed to second-hand smoking in general in the past 30 days.

1 in 5 adults (over 800 thousand adults) was exposed to tobacco smoke at the workplace.

6 in 10 of adults (63%, 2.44 million adults) were exposed to tobacco smoke at home.

MEDIA

1 in 2 adults noticed anti-cigarette smoking information on the television or radio.

1 in 3 of current smokers thought about quitting because of warning labels on cigarette packages.

1 in 5 adults noticed cigarette promotions.

15% of adults noticed cigarette marketing in stores where cigarettes are sold.

ECONOMICS

Average monthly expenditure on manufactured cigarettes was over JOD 63.

* Data presented in this fact sheet relate only to select tobacco indicators. Additional information on tobacco or other NCD risk factors from the survey are available in the data book and STEPs report.

Results for Adults Aged 18–69 Years Old	Both Sexes (95% CI)	Males (95 % CI)	Females (95 % CI)
Tobacco Use[1]			
Current Tobacco Users (smoked and/or smokeless tobacco)[2] (of total population)			
Current tobacco users (daily and non-daily)	42.0% (39.6-44.5)	66.1% (62.8-69.3)	17.4% (15.0-19.8)
Current daily tobacco users	35.5% (33.1-37.9	58.9% (55.5-62.3)	11.5% (9.6-13.5)
Current Tobacco Smokers[3] (of total population)			
Current tobacco smokers	42.0% (39.6-44.5)	66.1% (62.8-69.3)	17.4% (15.0-19.8)
Current daily tobacco smokers	35.5% (33.1-37.9)	58.9% (55.4-62.3)	11.5% (9.6-13.5)
Current cigarette smokers [4]	33.4% (31.1-35.7)	55.8% (52.4-59.3)	10.6% (8.8-12.4)
Current daily cigarette smokers	31.3% (29.0-33.6)	53.3% (49.9-56.8)	8.8% (7.2-10.5)
Average age started tobacco smoking (years)[5]	18.2 (17.8-18.6)	17.1 (-)	24.0 (-)
Average number of cigarettes smoked per day (among daily cigarette smokers)	21.3 (20.3-22.4)	22.9 (-)	13.0 (-)
Current Smokeless Tobacco Users (of total population)			
Current smokeless tobacco users	0.2% (0.0-0.4)	0.5% (0.0-0.9)	0.0% (-)
Current daily smokeless tobacco users	0.0% (0.0-0.1)	0.1% (0.0-0.2)	0.0% (-)
Current Electronic Cigarettes and Other Vaping Devices Use[1, 6] (of total population)			
Current e-cigarettes or other vaping devices users (daily and non-daily)	9.6% (-)	15.9% (-)	2.6% (-)
Current daily e-cigarettes or other vaping devices users	4.1% (2.8-5.4)	6.9% (4.6-9.1)	1.0% (0.1- 1.8)
Current non-daily e-cigarettes or other vaping devices users	5.5% (4.4-6.7)	9.0% (6.9-11.1)	1.6% (0.8-2.3)
Current Non-users (smoked and/or smokeless)[1] (of total population)			
Former tobacco users[7]	5.3% (4.4-6.2)	7.8% (6.2-9.4)	2.8% (2.0-3.6)
Former tobacco smokers[8]	5.2% (4.3-6.1)	7.7% (6.1-9.3)	2.7% (1.9-3.5)
Never users	53.7% (51.5-55.9)	26.9% (24.2-29.6)	80.8% (78.6-83.0)
Exposure to Second-hand Smoke			
Adults exposed to second-hand smoking in general in the past 30 days[9]	79.6% (77.8-81.5)	76.3% (73.5-79.0)	83.0% (80.7-85.4)
Adults exposed to second-hand smoke at home*	63.4% (61.2-65.6)	51.8% (48.5-55.2)	75.3% (72.7-77.9)
Adults exposed to second-hand smoke in the closed areas in their workplace*	19.1% (17.2-21.0)	33.7% (30.3-37.1)	4.1% (3.0-5.2)

Results for Adults Aged 18–69 Years Old	Both Sexes (95% CI)	Males (95 % CI)	Females (95 % CI)
Tobacco Cessation			
Current smokers who tried to stop smoking in past 12 months	44.2% (40.3-48.0)	44.1% (39.6-48.6)	44.3% (37.4-51.1)
Current smokers advised by a health care provider to stop smoking in past 12 months[10]	28.1% (24.4-31.9)	29.1% (24.8-33.4)	24.7% (18.4-31.0)
Health Warnings			
Current smokers who thought about quitting because of a warning label*	31.0% (27.0-35.0)	31.7% (27.0-36.4)	28.5% (21.2-35.7)
Adults who noticed anti-cigarette smoking information on the television or radio *	45.7% (43.2 - 48.2)	42.4% (38.7 - 46.1)	49.1% (45.9 - 52.3)
Adults who noticed anti-cigarette smoking information in newspapers or magazines*	17.7% (15.6 - 19.7)	18.3% (15.4 - 21.2)	17.0% (14.4 - 19.6)
Tobacco Advertisement and Promotion			
Adults who noticed cigarette marketing in stores where cigarettes are sold*	15.4% (13.5 - 17.3)	18.9% (16.0 - 21.8)	11.8% (9.5 - 14.1)
Adults who noticed any cigarette promotions*	18.5% (16.4 - 20.5)	22.7% (19.5 - 26.0)	14.0% (11.7 - 16.2)
Economics	**Local Currency**		
Average amount spent on 20 manufactured cigarettes	1.85 JOD (1.8 - 1.9)		
Average monthly expenditure on manufactured cigarettes	63.4 JOD (60.6 - 66.3)		
Cost of 100 packs of manufactured cigarettes as a percentage of per capita Gross Domestic Product (GDP) [YEAR][11]	5.9 % (5.8 - 6.1)		

[1] Potential underreporting among females, especially among younger ones, due to cultural and social context.
[2] Tobacco users include smoked and smokeless tobacco (manufactured cigarettes, hand-rolled cigarettes, shisha, pipe, cigars, and smokeless tobacco). Current refers to daily and less than daily.
[3] Tobacco smokers include manufactured cigarettes, hand-rolled cigarettes, shisha, pipe, and cigars. It does not include smokeless tobacco.
[4] Includes manufactured cigarettes and hand-rolled cigarettes. Current refers to daily and less than daily.
[5] 34.7% of adult Jordanian and Syrian current smokers indicated that they started smoking before the age of 16 years, whereas 65.3% indicated that they started smoking at the age of 16 years old and above. This is consistent with the high levels of smoking among minors from the Global Youth Tobacco Surveys (GYTS) conducted over the past years in Jordan and the Eastern Mediterranean Region.
[6] There is no overlap between prevalence of tobacco smokers and prevalence of e-cigarettes/vaping products users. These are two independent groups, which have only been counted once.
[7] Current non-users.
[8] Current non-smokers.
[9] General second-hand smoking refers to adult population exposed to indoor smoking in all public places (at home, at work, restaurants/cafes, hospitals/health care centers, universities, schools, governmental institutions, public transportation and any other places)
[10] Among those who visited a health care provider in past 12 months.
[11] Source and year for per capita GDP: World Bank, 2018.
* During the past 30 days.
† Promotions include free cigarette sample, cigarettes at sale prices, coupons for cigarettes, free gifts upon purchase of cigarettes, clothing or other items with cigarette brand name or logo and cigarette promotions in mail. Adults refer to persons age 18-69 years. Data have been weighted to be nationally representative of all Jordanian and Syrian men and women age 18-69 years residing in Jordan. Technical assistance for the survey was provided by the World Health Organization (WHO) and funding was by US Agency for International Development (USAID).

For additional information, please contact:
Noncommunicable Diseases Directorate - Ministry of Health - Jordan
Email: ncd@moh.gov.jo
Tel: +962-6–5660623

Jordan STEPS Survey 2019
Tobacco Fact Sheet - Syrians only

The WHO STEPwise approach to surveillance (STEPS) is a simple, standardized method for collecting, analyzing and disseminating data on noncommunicable diseases (NCDs) and risk factors. Data are collected on the established risk factors and NCD conditions that determine the major NCD burden, including tobacco use, harmful use of alcohol, unhealthy diet, insufficient physical activity, overweight and obesity, raised blood pressure, raised blood glucose, and abnormal blood lipids. Data from STEPS surveys are used to monitor progress in meeting the global voluntary targets related to specific risk factors such as tobacco, alcohol, diet and physical inactivity. The tobacco indicators from STEPS can be used to evaluate and monitor existing tobacco-control policies and programs.* The STEPS survey on NCD risk factors in Jordan was carried out from 7 July-13 September 2019. The STEPS survey in Jordan was a population-based survey of adult Jordanians and Syrians aged 18–69 years old. A multistage cluster sampling design was used to produce representative data for that age range in Jordan. Survey information was collected electronically using handheld devices. The survey was implemented by the Center of Strategic Studies. The data presented in this fact sheet are for Syrians only. A total of 2803 adult Syrians participated in the STEPS survey.

Highlights [Syrians 18–69 years Old]

TOBACCO USE/ ELECTRONIC CIGARETTES OR OTHER VAPING DEVICES USE

58.3% of men

8.3% of women

32.3% overall (194 thousand) **were current smokers of tobacco**

7.6% of men

1 % of women

4.9% overall **were current e-cigarettes or other vaping devices users**

CESSATION

5 in 10 current smokers tried to stop smoking in the last 12 months.

3 in 10 current smokers were advised by a health care provider to stop smoking in the last 12 months.

SECOND-HAND SMOKE

72.4% of adults were exposed to second-hand smoking in general in the past 30 days.

1 in 7 adults (over 86 thousand adults) was exposed to tobacco smoke at the workplace.

6 in 10 of adults (356 thousand) were exposed to tobacco smoke at home.

MEDIA

4 in 10 adults noticed anti-cigarette smoking information on the television or radio.

4 in 10 of current smokers thought about quitting because of warning labels on cigarette packages.

1 in 10 adults noticed cigarette promotions.

8% of adults noticed cigarette marketing in stores where cigarettes are sold.

ECONOMICS

Average monthly expenditure on manufactured cigarettes was over JOD 58.

* Data presented in this fact sheet relate only to select tobacco indicators. Additional information on tobacco or other NCD risk factors from the survey are available in the data book and STEPs report.

Results for Adults Aged 18–69 Years Old	Both Sexes (95% CI)	Males (95 % CI)	Females (95 % CI)
Tobacco Use[1]			
Current Tobacco Users (smoked and/or smokeless tobacco)[2] (of total population)			
Current tobacco users (daily and non-daily)	32.3% (29.8-34.7)	58.3% (54.4-62.3)	8.3% (6.9-9.7)
Current daily tobacco users	26.9% (24.6-29.1)	50.6% (46.7-54.5)	5.0% (3.9-6.1)
Current Tobacco Smokers[3] (of total population)			
Current tobacco smokers	32.2% (29.8-34.7)	58.2% (54.2-62.2)	8.3% (6.9-9.7)
Current daily tobacco smokers	26.9% (24.6-29.1)	50.6% (46.7-54.5)	5.0% (3.9-6.1)
Current cigarette smokers [4]	24.6% (22.5-26.8)	46.7% (42.8-50.6)	4.7% (3.7-5.7)
Current daily cigarette smokers	23.2% (21.1-25.3)	44.7% (40.9-48.5)	3.7% (2.8-4.7)
Average age started tobacco smoking (years)[5]	17.8 (17.3- 18.2)	17.2 (16.7- 17.6)	23.1 (-)
Average number of cigarettes smoked per day (among daily cigarette smokers)	25.1 (23.6 – 26.5)	25.7 (24.2 – 27.2)	18.5 (-)
Current Smokeless Tobacco Users (of total population)			
Current smokeless tobacco users	0.0% (0.0-0.1)	0.1% (0.0-0.3)	0.0% (-)
Current daily smokeless tobacco users	0.0% (0.0-0.0)	0.0% (0.0-0.0)	0.0% (-)
Current Electronic Cigarettes and Other Vaping Devices Use[1, 6] (of total population)			
Current e-cigarettes or other vaping devices users (daily and non-daily)	4.9% (-)	7.6% (-)	1.0% (-)
Current daily e-cigarettes or other vaping devices users	1.7% (0.9-2.4)	2.6% (1.3-3.8)	0.4% (0.0-0.8)
Current non-daily e-cigarettes or other vaping devices users	3.2% (2.0-4.3)	5.0% (3.2-6.9)	0.6% (0.1-1.2)
Current Non-users (smoked and/or smokeless)[1] (of total population)			
Former tobacco users[7]	4.8% (3.8-5.8)	7.3% (5.3-9.2)	2.5% (1.7-3.2)
Former tobacco smokers[8]	4.6% (3.6-5.6)	7.0% (5.1-8.9)	2.4% (1.6-3.1)
Never users	62.9% (60.4-65.5)	34.4% (30.4-38.4)	89.2% (87.6-90.8)
Exposure to Second-hand Smoke			
Adults exposed to second-hand smoking in general in the past 30 days[9]	72.4% (70.1-74.6)	71.2% (67.7-74.7)	73.4 (70.8-76.1)
Adults exposed to second-hand smoke at home*	58.7% (56.4-61.1)	51.5% (47.9-55.1)	65.4% (62.6-68.1)
Adults exposed to second-hand smoke in the closed areas in their workplace*	14.7% (12.9-16.5)	29.4% (26.0-32.8)	1.2% (0.7-1.8)

Results for Adults Aged 18–69 Years Old	Both Sexes (95% CI)	Males (95 % CI)	Females (95 % CI)
Tobacco Cessation			
Current smokers who tried to stop smoking in past 12 months	53.1% (49.0-57.3)	53.5% (48.9-58.1)	50.6% (41.6-59.7)
Current smokers advised by a health care provider to stop smoking in past 12 months[10]	30.6% (26.3-34.9)	31.3% (26.6-36.1)	26.3% (18.9-33.7)
Health Warnings			
Current smokers who thought about quitting because of a warning label*	40.1% (34.8-45.5)	40.3% (34.4-46.2)	38.8% (27.9-49.6)
Adults who noticed anti-cigarette smoking information on the television or radio *	41.3% (38.9-43.8)	39.9% (35.9-44.0)	42.6% (39.6-45.7)
Adults who noticed anti-cigarette smoking information in newspapers or magazines*	12.5% (10.9-14.1)	12.5% (10.0-15.0)	12.6% (10.6-14.5)
Tobacco Advertisement and Promotion			
Adults who noticed cigarette marketing in stores where cigarettes are sold*	7.9% (6.4-9.4)	10.9% (8.0-13.7)	5.1% (3.8-6.3)
Adults who noticed any cigarette promotions*	10.6% (9.0-12.2)	13.1% (10.3-15.9)	8.3% (6.7-9.9)
Economics	**Local Currency**		
Average amount spent on 20 manufactured cigarettes	1.92 JOD (1.87 -1.96)		
Average monthly expenditure on manufactured cigarettes	58.4 JOD (55.3 - 61.4)		
Cost of 100 packs of manufactured cigarettes as a percentage of per capita Gross Domestic Product (GDP) [YEAR][11]	6.2% (6.0 - 6.3)		

[1] Potential underreporting among females, especially among younger ones, due to cultural and social context.
[2] Tobacco users include smoked and smokeless tobacco (manufactured cigarettes, hand-rolled cigarettes, shisha, pipe, cigars, and smokeless tobacco). Current refers to daily and less than daily.
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