WHO STEP Survey

on Risk Factors for Noncommunicable Diseases

Maldives
2020 - 2021

THE MALDIVES NATIONAL UNIVERSITY
World Health Organization Maldives
Health Protection Agency

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INTRODUCTION

This report presents the finding of the Maldives STEPS survey 2020-21, a nation-wide study conducted by the Maldives National University (MNU) for Health Protection Agency in collaboration with the World Health Organization (WHO) and Ministry of Health (MoH). The study addresses the common risk factors for non-communicable diseases (NCDs), specificall the use of tobacco, alcohol, and also dietary habits that predispose to cardiovascular diseases, diabetes, chronic respiratory disease and cancer. The scope of the study
also covers mental health. addiction, injuries, and access to health care.

Background

The Maldives has transitioned epidemiologically, moving from a high burden of communicable diseases towards an increasing burden of NCDs (Ministry of Health, 2016). With lifestyle changes associated with development, and consequently the high prevalence of risk factors such as tobacco use, consumption of sugary and fatty foods and drinks, and sedentary lifestyles, NCDs have emerged as the major causes of morbidity and mortality in the country. NCDs are estimated to account for 84% of all deaths (World Health Organisation, 2018).

Previous studies on NCD risk factors were limited in geographical scope to Male' area only and was conducted a decade ago in 2011. As the National Multisectoral Action Plan for Prevention and Control of NCDs 2016-2020 (Ministry of Health, 2016), and National Mental Health Policy 2015-2025 (Government of the Maldives, 2015), are being updated, nationally representative data are needed for setting national targets in these plans. Moreover, this study is one of the areas identifie in the national health research priorities (Ministry of Health, 2019) of the Republic of Maldives and noted in the governments Strategic Action Plan 2019-2023(The President's Office 2019). The study provides updated evidence for policy and programming based on current baseline data. The finding will also be useful for reporting of the SDG goal 3 indicators on NCDs, enabling international comparisons and add to enriching academic literature relevant to the Maldives context.

Objectives

The aim of the study is to assess the prevalence of selected risk factors among 15—69-year-old population resident in the Maldives.

Specifi objectives are to

- Measure the prevalence of behavioural risk factors (tobacco use, areca nut use, harmful use of alcohol, inadequate fruit and vegetable consumption, average salt intake and inadequate physi cal activity)
- Assess the implementation of tobacco and alcohol control policies
- Assess the prevalence of substance use (drug use)
- Measure the prevalence of physiological and biological risk factors (raised blood pressure, overweight, obesity, raised blood glucose, and raised total cholesterol)
- Assess the response of the health system in terms of coverage with early detection and treatment of key physiological and biological risk factors (raised blood pressure, raised blood glucose and total cholesterol)
- Measure prevalence of mental health conditions (self-harm, anxiety and depression)
- Assess coverage (availability and use) of cervical screening services
- Measure prevalence of road traffic and work-related injury
- Asses access to health care (inpatient and outpatient) services
- Assess coverage (availability and use) of cervical screening services
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Methodology

STEPS survey methodology is conceptualized and developed by the WHO for collecting, analysing and disseminating data on risk factors of NCDs and associated health system response at the population level (WHO, 2017).

Study design

A national cross-sectional sample with multi-stage cluster sampling design is adopted to recruit households and eligible adults of both sexes (15-69 years of age) for a questionnaire interview and physical examinations (anthropometric and blood pressure measurements, and biological sample using blood and urine measurements). The study design adopts the methods proposed in the STEPS manual (WHO, 2017) for sample selection, interviews, physical and biochemical measurements with adaptation of the instrument to the country context.

Study population

The target population of the study is individuals, both male and female residents between the ages 15 to 69 years.

Inclusion criteria: All residents inclusive of male and female residents between the ages 15 to 69 years.

Exclusion criteria: Residents not able to comprehend or communicate (even with assistance) due to health or psychosocial conditions in all stages of the study. Pregnant women from anthropometric measurements and menstruating women from urine measurements.

Sample size

The sample size was calculated to ensure reliability and generalization and of the study results the Maldives population.

Table 1: Parameters for sample size calculation

Sampling parameters		
Level of Confidence Measure	1.96	Describes the level of uncertainty in the sample mean or prevalence as an estimate of the population mean or prevalence.
Margin of Error (MOE)	0.05	The expected half-width of the confidenc interval. The smaller the margin of error, the larger the sample size needed.
Baseline levels of the indicators	0.5	The estimated prevalence of the risk factors within the target population. Values closest to 50% are the most conservative. The 2011 survey estimated overweight prevalence of 47% and hence a value of 0.5 is used.
Design effect (Deff)	1.5	Describes the loss of sampling efficienc due to using a complex sample design. A value of 1. 5 is used based on the recommended value of 1.5 in the STEPS manual.
Expected Response Rate**	0.75	The anticipated response rate based on response rates of 70 percent observed in firs and second STEPS surveys in 2004 and 2011 respectively and the response rate from DHS 20016/17 survey. DHS2016/17 response rate was higher than the previous STEPS surveys averaging 76.5% for individual interviews. Hence we have adopted an estimated response rate of 75% as this sample also includes Atolls.
Number of age/sex Estimates	6	Proposed to provide estimates for 15-24 years, 25-39 years and 40-69 year old population by sex, creating 6 groups for which estimates will be calculated at the national level.

The initial sample size was calculated using the formula below.

Step 1: **Initial calculation:**

$$n = 1.96^2 * \frac{0.5 * (1 - 0.5)}{0.05^2} = 384.16$$

Step 2: Since, the initial n calculated above is less than 10% the size of the majority of the age groups, no Finite population correction is not applied.

Step 3: **Multiply by the design effect and number of age-sex estimates:**

$$n = 384.16 * 1.5 * 6 = 3457.44$$

Step 4: **Adjust for expected non-response to get your final sample size:**

$$n = 3226.94 / 0.75 = 4609.92$$

Sampling strategy

A multi-stage cluster sampling was adopted. At the outset, six clusters were identifie with greater Male' area as one cluster and the five regions in the atolls. Three residential islands of Male City were selected for greater Male area. For the five regions in the atolls, the 187 inhabited islands were further clustered based on population size into three sub clusters and one island was selected randomly from each sub cluster.

For Male' area, the survey used the 2014 Maldives Population and Housing census enumeration areas (or census blocks [CB]) as provided by National Bureau of Statistics as the sampling frame. For the atolls, instead of using census blocks, the list of the households on the randomly selected islands was used as the sampling frame. It was decided not to use the enumeration areas or census blocks for the islands as this may lead to very scattered samples substantially increasing the cost and logistic complexity of the survey administration.

First stage:

In Male' region selection of 74 census blocks or enumeration segments was based on probability proportion to size. The CB size is the number of residential households residing in the CB based on the 2014 Census. In the five regions in the atolls sample size was first allocated to all the 20 atolls based on population proportion to size.

Second stage:

In the second stage, households were selected proportional to the size of the Primary Sampling Unit (PSU). A listing of households was obtained from the Census 2014 household lists for Male' and from the Island Councils for the selected islands from the atolls. Before the main survey, a household listing operation was carried out in all the selected CBs in Male' and selected islands in the atolls. The household listing operation consists of visiting each of the selected PSUs to record on the household listing forms for all occupied residential households found in the PSUs, the address and the name of the head of the households. The resulting list of households served as the sampling frame for the selection of households in the second stage. To prevent considerable loss of sample size, it was planned that a CB/ island with less than 20 households,after updating the household list, will be attached to a geographically adjacent CB/island in the same atoll and not selected in the initial selection (if it is possible); these two combined CBs/islands form a new cluster/PSU.Similarly, to ensure adequate sample size for disaggregated analysis a CB/island with less than 20 households was allocated a minimum of 30 households. This strategy resulted in a fina sample size of 4766 households.

Systematic random sampling of households was adopted from each CB/island selected. Sampling interval to select households was obtained by dividing the number of cumulative households in the PSU by the number of households to be selected from the PSU (N/n). To select the first household a number was randomly chosen between 1 and the sampling interval and start from the top of the list. Sampling was primarily nonreplacement. However, where a selected household is found to be no more a household, it was be replaced by selecting another household using the same selection procedures.

Third stage:

Sampling of individuals/respondents to interview from sampled households. As the total sample size of participants or respondents for the survey is 4766, to select one eligible person from each of the selected households, the Kish method recommended by STEPS Surveillance was used. A sample size of 4766 allows for a decline rate of 25%. A high decline rate was considered for biochemical measurement due to its invasive nature.

Table 2: Sampled PSU and sample size

Region/ Atolls	Total Population of selected islands	Sam-ple size (n)	Atoll	PSU (Island)	Island population	Resi-dent house holds	Sample size
North	23468	838	HA	Ihavandhoo	2461	428	38
				Dhidhdhoo	2613	640	96
				Thuraakunu	393	86	30
			Hdh	Kulhudhufushi	8186	1477	299
				Makunudhoo	1213	288	44
				Finey	388	117	30
			Sh	Funadhoo	2015	457	74
				Komandoo	1054	213	39
				Kanditheemu	1057	239	39
			N	Manadhoo	1295	265	47
				Kedhikolhudhoo	1285	265	47
				Holhudhoo	1508	341	55
North central (R, B, Lh, K)	13478	794	R	Ugoofaaru	1384	378	79
				Maduvvari	1390	323	79
				Alifushi	1571	404	90
			B	Eydhafushi	271	396	30
				Kudarikilu	410	84	30
				Goidhoo	501	100	30
			Lh	Hinnavaru	2422	750	138
				Olhuvelifushi	500	127	30
				Kurendhoo	1177	264	68
			K	Thulusdhoo	1127	265	64
				Kaashidhoo	1715	352	98
				Gaafaru	1010	183	58
Male' (Male',	127826	768	Male'	Henveiru	26357	5401	150
				Galolhu	22165	4327	130
Hulhum-ale', Vilimale')				Machchangoalhi	22022	4243	132
				Maafannu	35292	6947	198
				Villimale'	7382	1297	44
				Hulhumale'	14608	2745	114

Central (AA, ADh, V, M)	10776	812	AA	Rasdhoo	943	183	70
				Himandhoo	666	116	49
				Bodufolhudhoo	584	83	43
			ADh	Mahibadhoo	1925	362	143
				Mandhoo	294	63	30
				Maamigili	2077	404	154
			V	Keyodhoo	635	117	47
				Fulidhoo	323	62	30
				Felidhoo	489	79	36
			M	Mulah	1194	463	88
				Kolhufushi	702	168	52
				Dhiggaru	944	174	70
South central (F, Dh, Th, L)	12231	779	F	F Nilandhoo	1548	273	97
				Feeali	808	198	51
				Biledhdhoo	868	178	55
			Dh	Kudahuvadhoo	2213	365	139
				Hulhudheli	681	139	43
				Ban'didhoo	714	90	45
			Th	Veymandoo	1051	213	66
				Buruni	312	83	30
				Madifushi	741	219	47
			L	Maavah	1399	384	87
				Isdhoo	907	239	57
				Hithadhoo	989	201	62
South (GA, GDh, Gn, S)	30719	775	GA	Villingili	2554	278	64
				Dhevvadhoo	504	116	30
				Kon'dey	258	178	30
			GDh	Thinadhoo	4669	451	117
				Nadallaa	738	163	30
				Vaadhoo	661	148	30
			Gn	Fuvahmulah (every avah)	7984	1841	200
			S	Maradhoo	2133	432	53
				Hulhudhoo	1104	530	30
				Hithadhoo 191	10114	2003	191
TOTAL	**339644**	**4766**					

Data collection tools

The survey was conducted using the standardized WHO NCD STEPS questionnaire version 3.1. The questionnaire consisted of a number of core and expanded questions that were adapted to the local context as well as country specific questions on access to health care. All core and expanded items were included (except alcohol use disorders) and questions from optional modules such as tobacco policy, cervical cancer, mental health, violence, and injury were included. Questions on substance abuse and access to inpatient and outpatient care were included based on country data needs.

The survey enumeration Included the three steps as specified in the STEPS methodology.

STEP-I included administration of the questionnaire to obtain information on:

- Demography
- Tobacco use (duration and quantity of smoking, quit attempts, past smoking, smokeless tobacco use) and related policies
- Alcohol use and related policies
- Substance use
- Fruit and vegetable consumption practices
- Dietary salt consumption practices, knowledge, and perceptions
- Oil consumption practices
- Physical activity levels in three domains (work, commute, and leisure) and seden tary behaviour
- History of raised blood pressure, raised total cholesterol, diabetes, and cardiovascu lar diseases
- Sources of treatment and reasons for non-treatment
- Mental health (self-harm, anxiety, depression)
- Cervical cancer screening
- Violence and injury

STEP-II included physical measurements: weight, height, waist and hip circumference, blood pressure and heart rate. These were conducted during (as a break from interviewing) or soon after STEP-I was completed. All measurements were taken following the standard technique recommended in the WHO STEPS manual5. Height, weight, and hip circumference was measured using standard stature tape (Seca). Weight was measured using a digital weighing machine (Microlife). Blood pressure was measured using digital device boso-medicus control (Bosch + Sohn).

STEP-III included biochemical measurements: fasting blood glucose, total cholesterol and HDL were measured in capillary whole using point of care device CardioChek PA analyser (pts Diagnostic) measured at the participant's household on the next day. Spot urine samples were processed for Sodium and Creatinine using an automated analyser at the central laboratory at Indira Gandhi Memorial Hospital (IGMH) in Male'.

The STEP-I questionnaire was translated to the local language Dhivehi pre-tested first with language and discipline experts. The tools were then field tested with 12 residents of one of the islands not selected in the sample. Feedback from the pre-test was used to finalize the questionnaire. The field test was also used to refine the processes used in the data collection for STEP-II and STEP-III.

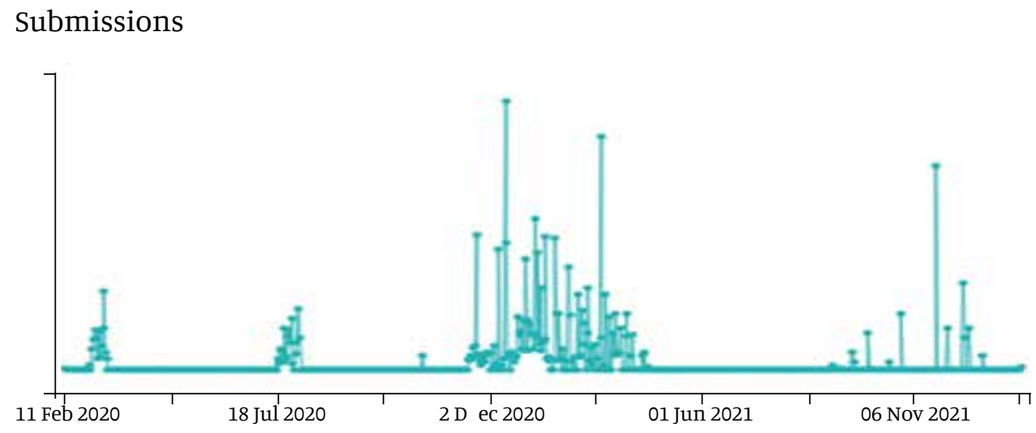
Data collection fiel work

Enumerators with a background of primary health care, public health, nursing, or laboratory technology were selected and trained for conducting the fieldwork. A total of 146 enumerators and 12 supervisors were trained in a four-day workshop conducted by the WHO technical experts from South East Asia Regional Office research team and MNU research team in Male' (28th January to 1st February 2021). The training included the following elements:

- Background and rationale for the survey
- Survey instrument
- Physical measurements
- Biochemical measurements
- Mock interviews
- Pre-test in the field

Fieldwork was planned to be carried out in two stages, first to cover all clusters in the atolls and when completed, to start in Male' area due to the limited number of measurement instruments for STEP-II and STEP-III. Although the first rollout was started in February 2020, the fieldwork had to be suspended with the announcement of COVID-19 pandemic and the declaration of public health emergency in the country on 12th March 2020. Attempt was made to restart fieldwork after the social measures and travel restrictions were lifted on 2nd June 2020, after a one-day refresher training Online, via Google Meet, on 14th July for enumerators that were initially trained. However, the country again went into strict movement control and social restriction in July 2020 and the survey was again suspended after 3 weeks. When the conditions improved, fieldwork was started in the atolls after another refresher training on 30th November 2020. Data collection was carried out across all clusters from 9 December 2020 to 10 April 2021. In Male' area data collection was started on 15 September 2021 and completed on 23 December 2021. Each time the enumerators were given a one-day training to refresh the questionnaire and procedures to be followed. Furthermore, in Male' area new enumerators had to be recruited and had to be provided with the full training (2-8 September 2021).

Figure 1 : Data collection periods (extracted from ona.io)



For the data collection, a team of 2 enumerators was provided a list of sampled households, a map of the cluster, a digital device (tablet) with the STEPS data collection application, instruments and devices for physical and biochemical measurements, fieldwork form set, and set of items for COVID-19 infection control (masks, gloves, hand sanitizer, disposal bag). The teams visited the households, provided information on the survey, and obtained verbal consent to proceed collecting information on eligible residents in the household. Although the sampled households were non replacement, exception was made to select the adjacent household in instances where the household was quarantined due to COVID-19. In selecting eligible respondents, people aged 15-69 years who resided through the previous night at the household and would be available for interview the next two days were entered in the application that selected a respondent at random. If the selected respondent was not available at the time of the visit, the contact number of the respondent is collected and contacted by phone to schedule a time to provide information and obtain consent.
For respondents who could not be contacted despite three follow-up attempts and those who refused to participate were counted as non-response. Enumerators completed three forms during the fieldwork. Form 1: Selected household list which was used to capture household information that enabled the enumerators to revisit the households for follow-up or for interviews. Form 2: interview tracking form which contained brief information of the respondent including information on consent to proceed with STEP-I, STEP-II and STEP-III and interview scheduled times. Form3: registration form for STEP-III with basic information of the respondent such as the participant ID generated from the STEPS application, QR code and other brief information to help the enumerator to communicate with the respondent.
If the selected individual was available at the time of the visit, they were requested to participate in the survey and written informed consent was obtained. If they were not available, but if the contact number was available, a phone call was made, and a time scheduled. If a contact number was not available, a second visit was made. Once the consent was obtained, a comfortable place for the respondent (and possibly a space where

the respondent can answer with privacy) was selected to conduct the interview. The QR code for the respondent was entered or scanned in the STEPS application to proceed to complete the STEP-I and STEP-II. Occasionally, the enumerators had to break the interview and schedule another time to complete the STEP-I and STEP-II at the convenience of the respondent. All data are entered in the STEPS application on the tablet. Pictorial cards were shown to respondents during the interview to provide visual reference such as various tobacco and alcohol products, servings of differen locally available fruits and vegetables and corresponding serving sizes, and various salty sauces and processed foods. Physical measurements were carried out as instructed in the WHO STEPS manual (Matteucci et al., 2014). After completing STEP-II a feedback form was given to the respondent that included their anthropometric measurements, blood pressure and heart rate from the third reading. Once the STEP-II is completed, the respondent's consent to continue to the STEP-III was taken. If consent is obtained, a date and time (if possible, the next day) for biochemical measurement was scheduled for the enumerator to visit the respondent. The respondent was instructed to fast overnight for 12 nights and diabetic patients were asked to take their medication after blood glucose and cholesterol measurement. The respondent was provided with the urine collection container with the QR code and instruction given on spot urine collection for the day of biochemical measurement. Respondent was visited to conduct the biochemical measurement and collect the urine specimen at the scheduled time.
Biochemical measurement on fasting capillary whole blood was done using Cardiocheck PA (Matteucci et al., 2014). Respondent's individual information, biochemical measurements and QR code from the urine specimen was entered or scanned in the STEPS application. Feedback form was given to the respondent on the biochemical measurement and if abnormal they were advised to consult a healthcare worker at the earliest. Urine samples were sent to the designated laboratory along with a sample transfer form that contained participant ID and QR code. Once all the data collection for the respondent was completed, the completed forms were uploaded from the tablets to the cloud-based server with geo-tag. Data collection progress was checked by WHO SEARO team from the cloud server from ona. io platform and communicated with the research team on the ground. Data on Sodium and Creatinine from laboratory analysis was sent in batches from the laboratory to the research team at MNU with the participant ID, QR code and the measurement results. These were collated as a dataset on an Excel sheet at MNU.

Quality Control

While the MNU lead the research, a steering committee was formed at the outset to coordinate and provide technical guidance for planning and implementation of the STEP survey 2020-2021. The committee included representatives from the Ministry of Health, the Health Protection Agency, WHO Maldives, and MNU. WHO SEARO provided continued technical expertise in planning, design and training of enumerators and facilitators by visiting the country, and from distance to solve technological problems and ensure the quality of the data collected as the data collection progressed. During the fieldwork, supervisors were allocated per region to respond to the queries of enumerators and guide them on problems faced on the ground.

Despite these quality control mechanisms, the COVID-19 pandemic and associated restrictions to movement and social activities imposed considerable delay and forced the researchers to bring about some changes to what was originally planned. Despite the challenges, attempts were made to minimize the effects such as providing a period of 4 weeks after restrictions are lifted each time, prior to resumption of data collection and providing refresher training to existing enumerators and providing full training for the new enumerators recruited for Male' area data collection. In addition, extracts of uploaded data were checked for errors, inconsistencies and unlikely durations and feedback given to the enumerators through the supervisors. Regardless, some quality issues were observed in data entry such as errors arising from manual entry of QR code and switching language while administering the interview. Frequently, to save time and to provide a break from interviewing, physical measurements were taken at mid-point of STEP-I and recorded on paper, which was later entered into the application for STEP-II. This process affect the quality check parametertime between blood pressure reading, and therefore making this not quite useful for quality assurance. A significant number of data entry errors were observed on the variables of tobacco purchases and cost. The data is not reliable and appears that the number of purchases and prices are entered in the wrong field for most of the respondents. Hence this data cannot be used to analyze tobacco pricing in the country. Furthermore, the household forms were reset before uploading to the cloud server when a new cluster was started with the same tablet resulting in loss of household counts. In addition, inadequate instructions on fasting and urine collection resulted in a significant non-response on STEP-III. Nevertheless, the data quality can be regarded as moderate. As data collection was conducted during the COVID-19 pandemic and in the situation of a public health emergency in the country, the finding are likely to be confounded by the contextual determinants that include the variables measured in this study.

Data management and analysis

The datasets for STEP-I & STEP-II are maintained separate from STEP-III dataset on the server. Once the data collection was completed the dataset was extracted from nation for processing. The datasets were cleaned for inconsistencies and duplicates, particularly the QR codes. After cleaning, the two datasets and urine measurement data were then linked using the participant ID and verified with the QR code. To ensure validity of the dataset, the process described in the WHO STEPS manual was followed for cleaning and linking the datasets and further technical guidance was obtained through discussions with the WHO team at headquarters and SEARO. Data analysis was performed by the MNU research team using IBM SPSS Statistics v20 and Epi Info 3.5.4. The guidance provided in the WHO STEPS manual were used to produce the measures and indicators. The demographic analysis produced is unweighted while all other measures are weighted. The descriptive statistics and measures of central tendency for the measures were produced Prevalence and mean variance by age groups and gender were calculated with 95% confidence interval. Standard templates provided in the STEPS manual were used to produce the main indicators.

Weightage was applied to the dataset to allow for generalisation of the data to the resident population of the Maldives. As the sample was selected with consideration of non-response, two weights (individual weight and population weight) were calculated separately to arrive at the overall weight for STEP-I and STEP-II. STEPIII weight is performed as a subset of the sample as the response rate is much lower.

Individual weight is the inverse of the probability of selection of each participant. As the individual selection was done using a cluster approach, the following steps were applied to calculate the individual weight.

Probability of selection of the PSU (Ipsu) = 1/number of islands in the atoll

Probability of selection of the household (Ihh) = total households at PSU/ sample households of PSUProbability of selection of the individual (Ii) = 1/sampled household size

Individual weight = 1/ (Ipsu*Ihh*Ii)

Population weight is used to adjust the sample's age-sex distribution to the target population's age-sex distribution. For this purpose, the target population's age was divided into three groups (15-29, 30-44, 45-69) and sex into two (male and female). The national population data (Maldives Bureau of Statistics, 2022) was used for the target population and population weights calculated using the following formula.

$$\textbf{Population weight} = \frac{\text{(number in age-sex group in population/total population)}}{\text{(number in age-sex group in population/total population)}}$$

Table 3: Calculated population weights

Sex	Age	Target popula-tio	Proportio n of populatio n (A)	Valid Sample popula-tion (STEP-I&II)	Propor-tion of sample (STEP-I&II) (B)	Weight STEPI&II (A/B)	Sample popula-tion (STEP-III)	Propor-tion of sample (STEPIII) (C)	Weight STEPIII (B/C)
Male	15-29	52,150	0.375	316	0.102	3.69	231	0.089	1.14
	30-44	45,583	0.328	282	0.091	3.61	236	0.091	1.00
	45-69	34,366	0.247	354	0.114	2.17	307	0.118	0.96
Female	15-29	44,963	0.324	614	0.198	1.64	461	0.178	1.11
	30-44	47,828	0.344	797	0.257	1.34	695	0.268	0.96
	45-69 3	5,159	0.253	741	0.239	1.06	665	0.256	0.93
Total		**138,960**		**3,104**			**2,595**		

Overall weight was calculated using the formula;

Overall weight = Individual weight*Population weight

Ethical approval

Ethical approval was obtained from the National Health Research Council prior to the implementation of the study (See appendix 2).

Results

The overall response rate for the survey was 3104 (65%). The results presented in this section based on this using IBM SPSS Statistics v20. For differen variables outlier limits were applied based on data distribution determined by the research team. It is therefore noted that any analysis using differen limits for variables may produce small variations in the results. Unless specified the results presented are weighted.

Demographic characteristics of participants

Demographic characteristics of the respondents, age, gender region, nationality, education, and employment are presented below. Majority of the respondents were females forming 69.3% of the sample. Although the response rate of males was low, within the age groups, the participants were equally distributed by sex (Table 5). Figure 2 shows the weighted data for age and sex. Table 6 shows that 77% of the respondents were married.

Table 4: Age and sex of respondents

Age group and sex of respondents (unweighted)

Age Group (years)	Men		Women		Both Sexes	
	n	%	N	%	n	%
15-29	318	33.4	617	28.7	935	30.1
30-44	280	29.4	793	36.9	1073	34.6
45-69	354	37.2	741	34.4	1095	35.3
Total	**952**	**100**	**2152**	**100**	**3103**	**100**

Figure 2: Age and sex of respondents

Table 5: Marital status of the respondents

Marital status					
Male					
Age Group (years)	n	% Never married	% Currently married	%Divorced	%Widowed
15-29	318	52.5	42.1	4.4	0.9
30-44	279	9.0	85.7	5.0	0.4
45-69	354	2.0	91.2	5.9	0.8
Total	**951**	**20.9**	**73.2**	**5.2**	**0.7**

Marital status						
Female						
Age Group (years)	n	% Never married	% Currently married	% Separated	% Divorced	% Widowed
15-29	616	27.9	62.8	0.2	6.5	2.6
30-44	793	1.5	90.7	0.1	7.4	0.3
45-69	741	1.1	79.2	0.4	10.3	9.0
Total	**2151**	**8.9**	**78.8**	**0.2**	**8.1**	**4.0**

Marital status						
Age Group (years)	Both Sexes					
	n	% Never married	% Currently married	% Separated	% Divorced	% Widowed
15-29	934	36.3	55.8	0.1	5.8	2.0
30-44	1072	3.5	89.4	0.1	6.8	0.3
45-69	1095	1.4	83.1	0.3	8.9	6.4
Total	**3101**	**12.6**	**77.0**	**0.2**	**7.2**	**3.0**

Education

The survey results show that the mean number of years of education of males are more compared to females. The number of mean years of education is lower in older age groups compared to younger age groups (Table 7). Regarding education, 19.5% had no formal schooling or had less than primary school education, 53% had completed primary school or secondary school, while 6% of the respondents had completed high school, and 10.8% had completed university or postgraduate studies (Table 8).

Table 6: Mean years of education of respondents

Mean number of years of education (unweighted)

Age Group (years)	Men		Women		Both Sexes	
	N	Mean	N	Mean	n	Mean
15-29	314	10.9	605	10.6	919	10.7
30-44	279	10.0	792	9.5	1071	9.6
45-69	343	6.2	690	4.0	1033	4.8
Total	**936**		**2088**		**3024**	

Table 7: Highest level of education of respondents

Highest level of education (unweighted)								
Men								
Age Group (years)	n	% No for-mal schoolin	% Lessthan primary school	% Primary school completed	% Secondary school completed	% High school completed	% Colege/ University completed	% Post graduate degree completed
15-29	317	2.5	5.0	12.0	49.8	12.0	14.8	3.8
30-44	280	2.1	8.2	22.1	47.9	6.1	8.9	4.6
45-69	353	35.1	19.0	31.7	7.4	0.8	4.5	1.4
Total	**950**	**14.5**	**11.2**	**22.3**	**33.5**	**6.1**	**9.3**	**3.2**
Highest level of education								
Female								
Age Group (years)	n	% No formal schooling	% Less than primary school	% Primary school completed	% Secondary school completed	% High school completed	% Colege/ University complet-ed	% Post graduate degree completed
15-29	617	5.5	4.2	10.9	48.5	13.9	13.5	3.6
30-44	793	2.6	7.4	27.0	46.0	4.9	9.5	2.5
45-69	736	51.6	20.4	21.9	3.8	0.3	1.5	0.5
Total	**2146**	**20.3**	**11.0**	**20.6**	**32.2**	**5.9**	**7.9**	**2.1**

Highest level of education								
Both Sexes								
Age Group (years)	n	% No for-mal schoolin	% Lessthan primary school	% Primary school completed	% Secondary school completed	% High school completed	% Colege/ University completed	% Post graduate degree completed
15-29	934	4.5	4.5	11.2	48.9	13.3	13.9	3.6
30-44	1073	2.5	7.6	25.7	46.5	5.2	9.3	3.1
45-69	1089	18.5	19.9	25.1	5.0	0.5	2.5	0.8
Total	3096	18.5	11.0	21.1	32.6	6.0	8.3	2.5

Employment and paid work

Tables 9, 10 and 11 show the unweighted percentage of employment status of the surveyed population. The results show that 42.8% were employed either by the government or private sector or self. The respondentsincluded students (4%), homemakers (34%) and retired (1%). Among all respondents, 23% were employed in the government sector, 7.8% in the private sector, 12% self-employed, and 57% were unpaid. 21.7% of the unemployed respondents were able to work and 9.9% were not able to work.

Table 8: Employment status of respondents by type

Employment status (unweighted)					
Male					
Age Group (years)	n	% Government employee	% Nongovernment employee	% Selfemployed	% Unpaid
15-29	318	28.3	15.7	14.5	41.5
30-44	279	50.5	15.4	25.8	8.2
45-69	347	30.8	11.2	32.6	25.4
Total	**944**	**35.8**	**14.0**	**24.5**	**25.8**

Employment status					
Female					
Age Group (years)	n	% Government employee	% Nongovernment employee	% Selfemployed	% Unpaid
15-29	616	20.3	8.3	6.7	64.8
30-44	792	21.2	4.3	5.3	69.2
45-69	740	11.4	3.4	7.2	78.2
Total	**2148**	**17.6**	**5.1**	**6.3**	**71.0**

Employment status					
Both Sexes					
Age Group (years)	n	% Government employee	% Nongovernment employee	% Selfemployed	% Nopaid
15-29	934	23.0	10.8	9.3	56.9
30-44	1074	28.9	7.2	10.6	53.3
45-69	1087	17.6	5.9	15.3	61.3
Total	**3092**	**23.1**	**7.8**	**11.9**	**57.2**

Table 9: Respondents in unpaid work

Unpaid work and unemployed (unweighted)							
Male						Unemployed	
Age Group(years)	n	% Non-paid	% Student	% Homemaker	% Retired	% Able to work	% Not able to work
15-29	132	3.0	43.9	3.0	1.5	41.7	6.8
30-44	23	0.0	4.3	13.0	0.0	78.3	4.3
45-69	88	1.1	0.0	8.0	20.5	26.1	44.3
TOTAL	**243**	**2.1**	**24.3**	**5.8**	**8.2**	**39.5**	**20.2**

Unpaid work and unemployed							
Female						Unemployed	
Age Group(years)	n	% Non-paid	% Student	% Homemaker	% Retired	% Able to work	% Not able to work
15-29	399	0.0	15.8	44.4	1.0	32.6	6.3
30-44	548	0.4	0.4	77.7	0.2	18.4	2.9
45-69	578	0.2	0.0	74.9	0.7	9.5	14.7
TOTAL	1525	0.2	4.3	67.9	0.6	18.8	8.3

Unpaid work and unemployed							
Both Sexes						Unemployed	
Age Group(years)	n	% Non-paid	% Student	% Homemaker	% Retired	% Able to work	% Not able to work
15-29	531	0.8	22.8	34.1	1.1	34.8	6.4
30-44	571	0.4	0.5	75.1	0.2	20.8	3.0
45-69	666	0.3	0.0	66.1	3.3	11.7	18.6
TOTAL	1768	0.5	7.0	59.4	1.6	21.6	9.9

Tobacco

Tobacco Use: Smoke and smokeless

The finding show that 23.1% are current smokers out of which 35.6% are males and 7.6% are females. Smoking among age groups is almost the same (Figure 3, 4 and 5). As shown in the tables below, out of the current smokers, 87.1% are daily smokers and the most used type is manufactured cigarettes. About 5% of the population also uses smokeless tobacco. One third of the respondents stated that they were exposed to second-hand smoking at home and 10.1% people stated that they were exposed to second-hand smoking at the work place within the last 30 days. More than 30% of the respondents stated that they have seen health warnings on tobacco products and tobacco cessation information. Only less than 2% stated that they have seen advertisements promoting tobacco. As shown in Figure 6, more than half of the Maldivian population are daily areca nut chewers. It has to be noted that some people use tobacco while chewing areca nuts.

Table 10: Current smokers

Percentage of current smokers									
Male				Female			Both Sexes		
Age Group (years)	n	% Current smoker	95% CI	n	% Current smoker	95% CI	n	% Cur-rent smoker	95% CI
15-29	318	28.6	22.2-35.0	617	9.0	1.0-17.1	935	20.3	18.1-22.6
30-44	280	53.1	42.5-63.7	793	3.3	-1.2-7.9	1073	28.7	21.2-36.1
45-69	354	33.9	24.1-43.6	736	10.5	5.1-15.8	1090	23.4	16.3-30.4
TOTAL	**952**	**35.6**	**29.2-42.0**	**2146**	**7.6**	**1.2-14.0**	**3098**	**23.1**	**20.8-25.5**

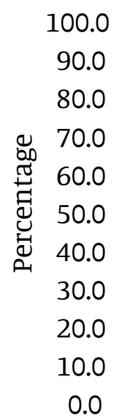


Figure 3: Current smokers for both sexes

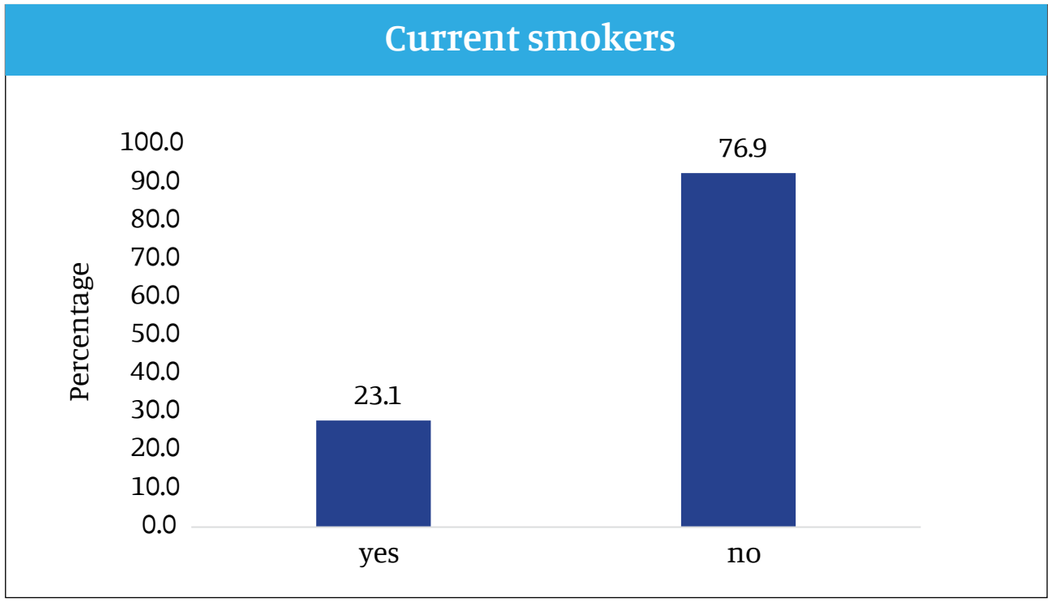


Figure 4: Current smokers by sex

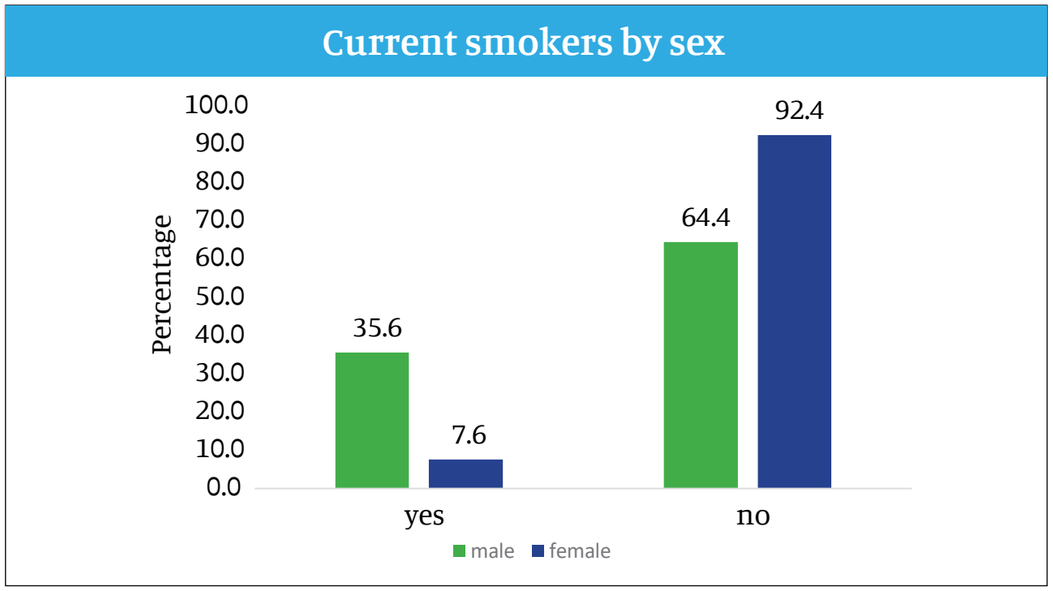


Figure 5: Current smokers by age

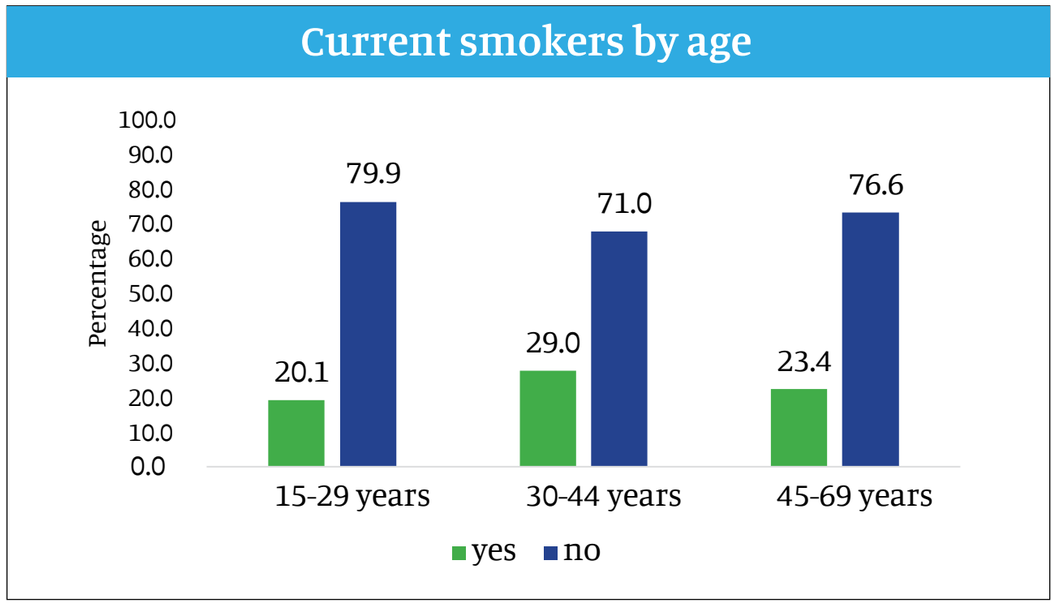


Figure 6: Current arecanut users both sexes

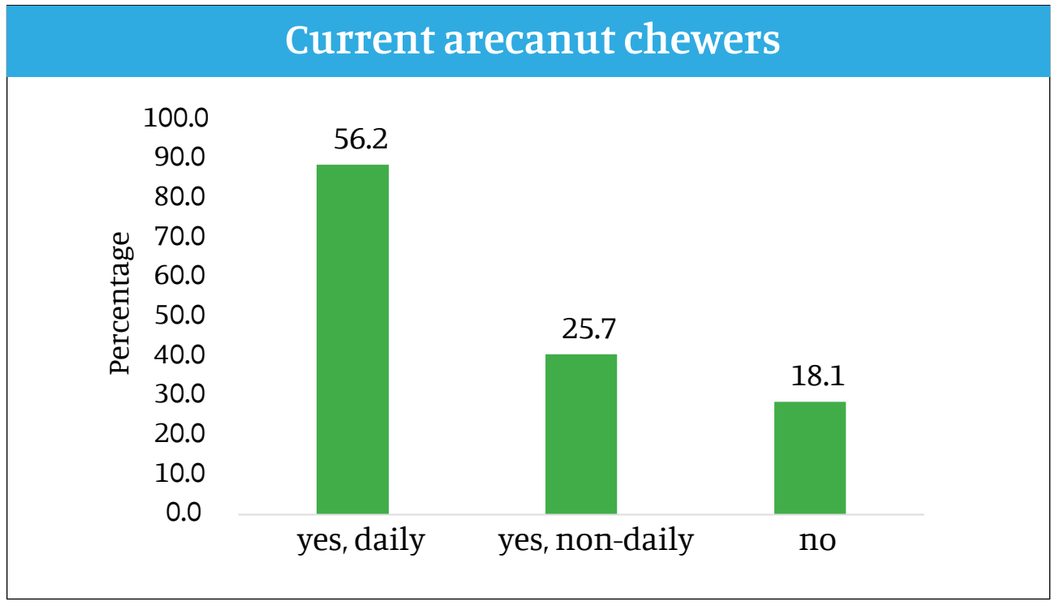


Table 11: Smoking status

Smoking status									
Male									
		Current smoker			Non-smokers				
Age Group (years)	n	% Daily	95% CI	% Nondai-ly	95% CI	% Former smoker	95% CI	% Never smoker	95% CI
15-29	318	27.6	22.1-33.1	1.0	-0.6-2.5	16.3	9.7-23.0	55.0	49.8-60.3
30-44	280	49.9	39.4-60.3	3.1	0.8-5.6	8.1	3.5-12.6	38.8	26.9-50.7
45-69	354	29.6	19.6-39.8	4.1	1.9-6.5	33.2	21.0-45.5	32.9	23.4-42.4
TOTAL	**952**	**33.5**	**28.4-38.7**	**2.1**	**0.6-3.5**	**17.2**	**12.9-21.5**	**47.2**	**42.0-52.4**

Smoking status									
Female									
		Current smoker			Non-smokers				
Age Group (years)	n	% Daily	95% CI	% Nondai-ly	95% CI	% Former smoker	95% CI	% Never smoker	95% CI
15-29	617	3.9	1.4-6.4	5.1	0.0-10.7	5.1	3.4-6.9	85.8	76.5-95.2
30-44	793	0.6	0.0-1.2	2.8	0.0-7.3	0.8	0.1-1.5	95.8	91.2-100.0
45-69	736	7.3	3.6-11.0	3.3	1.4-5.2	10.4	4.7-16.1	79.1	69.5-88.7
TOTAL	**2146**	**3.5**	**1.7-5.4**	**4.1**	**0.0-8.8**	**4.8**	**3.4-6.1**	**87.6**	**80.5-94.8**

Smoking status									
Both Sexes									
		Current smoker			Non-smokers				
Age Group (years)	n	% Daily	95% CI	% Nondai-ly	95% CI	% Former smoker	95% CI	% Never smoker	95% CI
15-29	935	17.6	15.4-19.8	2.7	0.9-4.6	11.6	6.9-16.3	68.1	61.9-74.3
30-44	1073	25.7	19.6-31.7	3.0	0.5-5.4	4.5	2.1-6.8	66.8	58.8-74.9
45-69	1090	19.6	12.7-26.6	3.7	2.2-5.2	23.0	16.5-29.4	53.7	45.8-61.6
TOTAL	**3098**	**20.1**	**17.9-22.3**	**3.0**	**1.5-4.5**	**11.6**	**8.7-14.5**	**65.3**	**61.0-69.5**

Table 12: Current daily smokers among the smokers

Current daily smokers among the smokers									
Male				Female			Both Sexes		
Age Group (years)	n	% Daily smokers	95% CI	n	% Daily smokers	95% CI	n	% Daily smokers	95% CI
15-29	111	96.5	91.5-100	23	43.3	28.3-58.4	134	86.5	78.0-95.1
30-44	124	94.0	89.5-98.5	16	17.4	0.00-42.3	140	89.5	82.6-96.5
45-69	105	87.7	79.8-95.6	70	69.3	50.5-88.2	175	84.0	76.5-91.4
TOTAL	**340**	**94.2**	**90.9-97.4**	**109**	**46.1**	**26.9-65.3**	**449**	**87.1**	**80.9-93.3**

Table 13: Mean age of smoking initiation

Mean age started smoking									
Male				Female			Both Sexes		
Age Group (years)	n	Mean age	95% C	n	Mean age	95% CI	n	Mean age	95% CI
15-29	101	16.3	15.1-17.5	13	16.8	–	114	16.4	15.2-17.6
30-44	115	18.8	17.5-20.1	9	17.9	–	124	18.8	17.5-20.1
45-69	90	18.0	16.7-19.2	46	17.3	--	136	17.9	17.9-21.0
TOTAL	**306**	**17.6**	**16.8-18.4**	**68**	**17.1**	**--**	**374**	**17.5**	**16.7-18.3**

Table 14: Mean duration of smoking

Mean duration of smoking (years)									
Male				Female			Both Sexes		
Age Group (years)	n	Mean dura-tion	95% C	n	Mean duration	95% CI	n	Mean duration	95% CI
15-29	101	7.8	6.6-9.0	13	6.3	–	114	7.7	6.5-8.9
30-44	115	18.2	16.9-19.4	9	19.0	–	124	18.2	16.9-19.4
45-69	90	38.4	36.0-40.8	46	41.1	--	136	38.8	36.8-40.9
TOTAL	**306**	**16.5**	**12.6-20.4**	**68**	**21.3**	**--**	**374**	**16.8**	**12.6-21.0**

Table 15: Manufactured cigarette smokers among the daily smokers

Manufactured cigarette smokers among the daily smokers									
Male				Female			Both Sexes		
Age Group (years)	n	% Manufac-tured cigarette smoker	95% CI	n	% Manufac-tured cigarette smoker	95% CI	n	% Manufac-tured cigarette smoker	95% CI
15-29	105	26.2	21.1-31.4	15	2.6	0.6-4.5	120	16.2	14.1-18.2
30-44	110	46.3	35.9-56.7	8	0.2	0.0-0.4	118	23.5	16.9-30.1
45-69	88	24.9	13.4-36.4	54	0.9	0.0-2.0	132	13.9	7.1-20.6
TOTAL	**303**	**31.0**	**26.2-35.7**	**67**	**1.6**	**0.0-3.1**	**370**	**17.7**	**15.6-19.9**

Table 16: Manufactured cigarette smokers among the current smokers

Manufactured cigarette smokers among the current smokers									
Male				Female			Both Sexes		
Age Group (years)	n	% Manu-factured cigarette smoker	95% CI	n	% Manufac-tured cigarette smoker	95% CI	n	% Manu-factured cigarette smoker	95% CI
15-29	109	27.2	21.2-33.3	22	3.5	1.2-5.9	131	17.1	14.7-19.6
30-44	118	48.6	38.2-58.9	13	0.3	0.0-0.7	131	24.7	18.1-31.3
45-69	99	28.1	17.3-39.0	61	1.1	0.0-2.3	160	15.7	9.1-22.3
TOTAL	**326**	**32.6**	**26.8-38.4**	**96**	**2.2**	**0.3-4.1**	**422**	**18.9**	**16.4-21.4**

Table 17: Mean amount of tobacco used by type, by the daily smokers

Mean amount of tobacco used by daily smokers by type									
Male									
Age Group (years)	n	Mean # of manu-factured cig.	95% CI	n	Mean # of han-drolled cig.	95% CI	n	Mean # of pipes of tobacco	95% CI
15-29	105	12.3	10.9-13.6	102	0.4	0.1-0.7	102	0.5	0.0-1.0
30-44	110	15.6	13.3-17.8	107	0.3	0.0-0.6	106	0.1	0.0-0.3
45-69	88	13.9	10.8-16.9	76	0.5	0.0-1.2	78	2.1	0.0-4.2
TOTAL	**303**	**13.7**	**12.3-15.1**	**285**	**0.4**	**0.2-0.6**	**286**	**0.6**	**0.2-0.9**

Mean amount of tobacco used by daily smokers by type									
Male									
Age Group (years)	n	Mean # of manu-factured cig.	95% CI	n	Mean # of han-drolled cig.	95% CI	n	Mean # of pipes of tobacco	95% CI
15-29	101	0.0	0.0-0.0	101	0.0	0.0-0.0	101	0.0	0.0-0.1
30-44	106	0.0	0.0-0.0	107	0.3	0.0-0.7	107	0.0	0.0-0.0
45-69	77	0.0	--	78	0.1	0.0-0.2	78	0.0	0.0-0.1
TOTAL	**284**	**0.0**	**0.0-0.0**	**286**	**0.1**	**0.0-0.3**	**286**	**0.0**	**0.0-0.0**

Mean amount of tobacco used by daily smokers by type									
Female									
Age Group (years)	n	Mean # of manu-factured cig.	95% CI	n	Mean # of han-drolled cig.	95% CI	n	Mean # of pipes of tobacco	95% CI
15-29	15	4.8	4.5-5.2	15	0.0	--	15	0.5	0.0-2.1
30-44	8	4.4	0.0-10.0	8	0.0	--	8	0.0	--
45-69	44	1.0	0.0-2.2	44	0.0	--	45	0.3	0.0-0.8
TOTAL	67	3.5	2.5-4.5	67	0.0	--	68	0.4	0.0-1.4

Mean amount of tobacco used by daily smokers by type									
Female									
Age Group (years)	n	Mean # of cigars, cheroots, cigarillos	95% CI	n	Mean # of shisha sessions	95% CI	n	Mean # of other type of tobacco	95% CI
15-29	15	0	--	15	0.0	--	16	0.8	0.0-2.0
30-44	8	0	--	8	0.0	--	9	4.5	0.5-8.5
45-69	44	0	--	44	0.1	0.0-0.2	47	2.7	1.5-4.0
TOTAL	**67**	**0**	**--**	**67**	**0.0**	**0.0-0.1**	**72**	**1.7**	**0.3-3.1**

Mean amount of tobacco used by daily smokers by type									
Both Sexes									
Age Group (years)	n	Mean # of cigars, cheroots, cigarillos	95% CI	n	Mean # of shisha sessions	95% CI	n	Mean # of other type of tobacco	95% CI
15-29	120	11.6	10.2-12.9	117	0.4	0.1-0.6	117	0.5	0.0-1.0
30-44	118	15.5	13.3-17.7	115	0.3	0.0-0.6	114	0.1	0.0-0.3
45-69	132	11.9	8.9-14.8	120	0.4	0.0-0.9	123	1.8	0.1-3.5
TOTAL	370	13.0	11.5-14.4	352	0.3	0.1-0.5	354	0.5	0.1-1.0

Mean amount of tobacco used by daily smokers by type									
Both Sexes									
Age Group (years)	n	Mean # of cigars, cheroots, cigarillos	95% CI	n	Mean # of shisha sessions	95% CI	n	Mean # of other type of tobacco	95% CI
15-29	116	0.0	0.0-0.0	116	0.0	0.0-0.0	117	0.1	0.0-0.2
30-44	114	0.0	0.0-0.0	115	0.3	0.0-0.7	116	0.1	0.0-0.2
45-69	121	0.0	--	122	0.1	0.0-0.2	125	0.5	0.2-0.8
TOTAL	351	0.0	0.0-0.0	353	0.1	0.0-0.3	358	0.2	0.1-0.2

Table 18: Current smokers by type of product smoked

Percentage of current smokers smoking each of the following products									
Male									
Age Group (years)	n	% Manufac-tured cigarette	95% CI	n	% Han-drolled cigarette	95% CI	n	% Pipes of Tobaco	95% CI
15-29	109	97.9	96.1-99.7	106	7.1	2.7-11.4	106	8.6	4.9-12.3
30-44	118	94.7	89.9-99.4	116	5.5	0.0-13.2	115	5.0	0.0-11.8
45-69	99	90.6	81.5-99.6	87	4.1	0.0-9.9	89	13.8	3.2-24.5
TOTAL	**326**	**95.5**	**93.5-97.6**	**309**	**6.0**	**3.5-8.6**	**310**	**8.0**	**4.1-12.0**

Percentage of current smokers smoking each of the following products									
Male									
Age Group (years)	n	% Cigars, cheroots, cigarillos	95% CI	n	% Shisha	95% CI	n	% Other	95% CI
15-29	105	1.7	0.0-4.3	105	0.8	0.0-2.5	105	8.4	2.0-14.7
30-44	115	0.6	0.0-1.5	116	2.5	0.0-6.5	116	1.5	0.0-4.4
45-69	88	2.7	0.0-7.2	89	0.5	0.0-1.4	89	0.8	0.0-2.0
TOTAL	**308**	**1.5**	**0.0-2.9**	**310**	**1.4**	**0.0-3.1**	**310**	**4.6**	**2.2-7.1**

Percentage of current smokers smoking each of the following products									
Female									
Age Group (years)	n	% Manufac-tured cigarette.	95% CI	n	% Han-drolled cigarette.	95% CI	n	% Pipes of tobacco	95% CI
15-29	22	39.4	27.8-51.0	22	0.0	--	22	2.2	0.0-9.8
30-44	13	33.3	2.1-64.5	14	0.0	–	14	–	–
45-69	61	11.5	2.9-20.2	61	0.9	0.0-2.9	63	4.6	0.2-8.9
TOTAL	**96**	**32.2**	**28.7-35.7**	**97**	**0.2**	**0.0-0.7**	**99**	**2.5**	**0.0-8.1**

Percentage of current smokers smoking each of the following products									
Female									
Age Group (years)	n	% Cigars, cheroots, cigarillos	95% CI	n	% Shisha	95% CI	n	% Oth-er	95% CI
15-29	22	0.0	0.0-0.0	22	0.0	--	23	18.7	9.6-27.9
30-44	14	0.0	0.0-0.0	14	0.0	–	16	29.3	0.0-70.4
45-69	62	0.0	0.0-0.0	62	1.7	0.0-5.0	64	58.8	30.9-86.7
TOTAL	**98**	**0.0**	**0.0-0.0**	**98**	**0.4**	**0.0-1.3**	**103**	**29.5**	**8.5-50.4**

Percentage of current smokers smoking each of the following products									
Both Sexes									
Age Group (years)	n	% Manu-factured cigarette.	95% CI	n	% Han-drolled cigarette.	95% CI	n	% Pipes of tobac-co	95% CI
15-29	131	86.9	74.8-98.9	128	5.7	2.7-8.7	128	7.3	2.9-11.8
30-44	131	93.6	88.9-98.2	130	5.2	0.0-12.7	129	4.7	0.0-11.2
45-69	160	75.2	62.9-87.6	148	3.4	0.0-7.8	152	11.9	3.4-20.3
TOTAL	**422**	**87.0**	**80.6-93.4**	**406**	**5.2**	**3.0-7.3**	**409**	**7.2**	**3.3-11.1**

Percentage of current smokers smoking each of the following products									
Both Sexes									
Age Group (years)	n	% Cigars, cheroots, cigarillos	95% CI	n	% Shisha	95% CI	n	% Other	95% CI
15-29	127	1.4	0.0-3.2	127	0.6	0.0-2.0	128	10.4	5.5-15.3
30-44	129	0.6	0.0-1.4	130	2.3	0.0-6.1	132	3.2	0.4-6.1
45-69	150	2.1	0.0-5.7	151	0.7	0.0-1.7	153	13.2	6.6-19.8
TOTAL	**406**	**1.2**	**0.2-2.3**	**408**	**1.2**	**0.0-2.8**	**413**	**8.5**	**6.1-10.8**

Table 19: Quantity of manufactured or hand-rolled cigarettes used by daily smokers

Percentage of daily smokers smoking given quantities of manufactured or hand-rolled cigarettes per day											
Male											
Age Group (years)	n	% <5 Cigs.	95% CI	% 5-9 Cigs.	95% CI	% 10-14 Cigs.	95% CI	% 15-24 Cigs.	95% CI	% ≥ 25 Cigs.	95% CI
15-29	99	15.4	6.5-24.4	26.2	10.7-41.6	13.2	4.2-22.1	39.4	27.7-51.2	5.8	1.0-10.6
30-44	101	8.6	0.0-18.2	7.4	1.8-12.9	19.3	5.1-33.6	53.9	44.2-63.5	10.8	2.8-18.9
45-69	69	9.4	1.3-17.5	10.9	2.2-19.7	17.4	0.0-35.0	56.7	30.5-82.9	5.5	0.0-14.3
TOTAL	269	12.1	7.0-17.2	17.2	6.9-27.5	16.0	6.4-25.6	47.1	40.5-53.6	7.6	4.3-10.9

Percentage of daily smokers smoking given quantities of manufactured or hand-rolled cigarettes per day											
Female											
Age Group (years)	n	% <5 Cigs.	95% CI	% 5-9 Cigs.	95% CI	% 10-14 Cigs.	95% CI	% 15-24 Cigs.	95% CI	% ≥ 25 Cigs.	95% CI
15-29	10	36.0	15.4-56.7	34.1	21.3-46.8	0.0	0.0-0.0	29.9	19.3-40.5	--	--
30-44	2	--	--	55.9	0.0-116.2	0.0	0.0-0.0	44.1	0.0-100	--	--
45-69	6	63.9	29.3-98.4	5.1	0.0-17.1	11.5	0.0-37.7	19.5	0.0-55.2	--	--
TOTAL	18	37.7	22.0-53.4	31.8	21.5-42.2	1.1	0.0-4.3	29.3	19.6-39.0	--	--

Percentage of daily smokers smoking given quantities of manufactured or hand-rolled cigarettes per day											
Both Sexes											
Age Group (years)	n	% <5 Cigs.	95% CI	% 5-9 Cigs.	95% CI	% 10-14 Cigs.	95% CI	% 15-24 Cigs.	95% CI	% ≥ 25 Cigs.	95% CI
15-29	109	16.8	8.8-24.8	26.7	12.4-41.0	12.3	3.4-21.2	38.8	27.1-50.5	5.4	1.2-9.6
30-44	103	8.6	0.0-18.2	7.5	2.0-13.1	19.3	5.1-33.4	53.8	44.2-63.4	10.8	2.8-18.8
45-69	75	11.1	3.0-19.1	10.7	2.2-19.3	17.2	0.6-33.8	55.6	29.1-82.1	5.4	0.0-13.8
TOTAL	287	13.1	7.4-18.8	17.8	7.6-28.0	15.4	5.8-25.1	46.4	39.4-53.3	7.3	4.2-10.4

Table 20: Former daily smokers

Former daily smokers (who don't smoke currently) among all respondents									
Male				Female			Both Sexes		
Age Group (years)	n	% Former daily smokers	95% CI	n	% Former daily smokers	95% CI	n	% Former daily smokers	95% CI
15-29	318	14.5	9.6-19.4	617	4.7	1.7-7.7	935	10.4	6.2-14.5
30-44	280	9.0	4.7-13.2	793	0.5	0.0-1.0	1073	4.8	2.6-7.0
45-69	354	33.8	22.4-45.1	736	12.7	5.8-19.7	1090	24.3	18.3-30.3
TOTAL	952	16.5	13.3-19.6	2146	4.9	3.2-6.5	3098	11.3	9.0-13.6

Table 21: Former daily smokers among ever daily smokers

Former daily smokers (who don't smoke currently) among ever daily smokers									
Male				Female			Both Sexes		
Age Group (years)	n	% Former daily smokers	95% CI	n	% Former daily smokers	95% CI	n	% Former daily smokers	95% CI
15-29	144	34.5	24.0-44.9	33	54.6	51.6-57.6	177	37.1	26.9-47.2
30-44	148	15.2	8.8-21.7	13	46.6	12.2-81.1	161	15.8	9.3-22.3
45-69	190	53.2	37.6-68.8	120	63.6	51.2-76.0	310	55.3	43.4-67.3
TOTAL	**482**	**32.9**	**27.0-38.9**	**166**	**58.0**	**50.4-65.7**	**648**	**35.9**	**30.6-41.2**

Table 22: Mean years since cessation

Mean years since cessation									
Male				Female			Both Sexes		
Age Group (years)	n	Mean years	95% CI	n	Mean years	95% CI	n	Mean years	95% CI
15-29	42	--	--	24	--	--	66	--	--
30-44	30	7.7	4.8-10.5	11	5.3	-4.2-14.8	41	7.5	4.6-10.3
45-69	100	7.7	4.8-10.5	64	19.4	14.5-24.3	164	16.9	15.1-18.7
TOTAL	**172**	**16.3**	**14.3-18.3**	**99**	**4.9**	**0.0-14.4**	**271**	**2.8**	**-5.4-11.1**

Table 23: Current smokers tried to stop smoking

Current smokers who have tried to stop smoking									
Male				Female			Both Sexes		
Age Group (years	n	% Tried to stop smoking	95% CI	n	% Tried to stop smoking	95% CI	n	% Tried to stop smoking	95% CI
15-29	111	39.0	30.4-47.7	23	14.0	1.4-26.7	134	34.3	23.9-44.7
30-44	124	41.6	23.8-59.4	16	74.5	38.6-110.3	140	43.5	28.3-58.7
45-69	105	53.0	34.0-71.9	70	32.2	14.9-49.6	175	48.8	30.8-66.8
TOTAL	**340**	**42.3**	**29.6-55.0**	**109**	**26.4**	**18.9-33.9**	**449**	**39.9**	**27.2-52.7**

Table 24: Current smokers advised to stop smoking

Current smokers who have been advised by doctor to stop smoking									
Male				Female			Both Sexes		
Age Group (years)	n	% Advised to stop smoking	95% CI	n	% Advised to stop smoking	95% CI	n	% Advised to stop smoking	95% CI
15-29	97	11.3	1.0-21.7	21	15.7	14.4-16.9	118	11.9	3.2-20.6
30-44	101	25.3	10.5-40.1	15	14.5	-8.4-37.4	116	24.6	12.4-36.7
45-69	72	35.0	16.1-53.9	58	24.4	12.1-36.6	130	32.7	18.2-47.1
TOTAL	**270**	**20.1**	**13.8-26.5**	**94**	**18.1**	**11.0-25.3**	**364**	**19.9**	**14.2-25.6**

Table 25: Current users of smokeless tobacco

Current users of smokeless tobacco									
Male				Female			Both Sexes		
Age Group (years)	n	% Current users	95% CI	n	% Current users	95% CI	n	% Current users	95% CI
15-29	318	1.8	0.8-2.8	617	2.9	0.0-5.8	935	2.3	0.8-3.7
30-44	280	3.0	0.3-5.8	793	3.9	0.0-9.5	1073	3.5	0.3-6.6
45-69	354	9.4	5.5-13.3	736	8.7	4.8-12.5	1090	9.1	6.0-12.2
TOTAL	**952**	**3.4**	**2.1-4.8**	**2146**	**4.2**	**2.6-5.8**	**3098**	**3.8**	**2.8-4.7**

Table 26: Smokeless tobacco use

Smokeless tobacco use									
Male									
		Current user			Non user				
Age Group (years)	n	% Daily	95% CI	% Nondaily	95% CI	% Past user	95% CI	% Never used	% Never used
15-29	318	1.4	0.8-2.1	0.4	0.0-1.2	0.6	0.0-1.2	97.6	96.3-98.9
30-44	280	3.0	0.2-5.7	0.1	0.0-0.2	1.2	0.0-2.5	95.7	92.8-98.7
45-69	354	7.3	4.2-10.4	2.1	0.6-3.7	4.7	0.2-9.2	85.8	80.4-91.3
TOTAL	**952**	**2.8**	**1.9-3.7**	**0.6**	**0.0-1.2**	**1.4**	**0.3-2.5**	**95.1**	**93.2-97.1**

Smokeless tobacco use									
Female									
		Current user			Non user				
Age Group (years)	n	% Daily	95% CI	% Non-daily	95% CI	% Past user	95% CI	% Never used	95% CI
15-29	935	1.9	0.2-3.6	0.3	0.0-0.9	0.3	0.0-0.7	97.4	96.1-98.7
30-44	1073	3.4	0.2-6.5	0.1	0.0-0.2	0.9	0.2-1.5	95.7	92.5-98.9
45-69	1090	7.5	4.9-10.1	1.6	0.5-2.7	3.5	1.0-6.1	87.4	83.7-91.0
TOTAL	**3098**	**3.3**	**2.4-4.2**	**0.5**	**0.1-0.9**	**1.0**	**0.4-1.7**	**95.2**	**94.0-96.4**

Table 27: Former users of smokeless tobacco

Former daily smokeless tobacco users (who don't use tobacco currently) among all respondents									
Male				Female			Both Sexes		
Age =Group (years)	n	% Former daily users	95% CI	n	% Former daily users	95% CI	n	% Former daily users	95% CI
15-29	317	0.1	0.0-0.4	616	0.0	0.0-0.0	933	0.1	0.0-0.2
30-44	279	0.7	0.0-1.4	791	0.3	-0.1-0.6	1070	0.5	0.1-0.9
45-69	346	3.8	0.0-8.5	727	2.1	0.6-3.6	1073	3.0	0.3-5.7
TOTAL	**942**	**0.9**	**0.0-1.8**	**2134**	**0.5**	**0.2-0.7**	**3076**	**0.7**	**0.2-1.2v**

Table 28: Former daily smokeless tobacco users among ever daily users

Former daily smokeless tobacco users (who don't use tobacco currently) among ever daily users									
Male				Female			Both Sexes		
Age =Group (years)	n	% Former daily users	95% CI	n	% Former daily users	95% CI	n	% Former daily users	95% CI
15-29	6	9.3	0.0-24.2	5	0.0	0.0-0.0	11	4.1	0.0-12.8
30-44	11	18.8	0.0-40.3	20	7.0	0.0-21.0	31	12.7	0.0-26.7
45-69	39	33.6	1.0-66.1	87	21.2	7.9-34.5	126	28.4	7.9-48.8
TOTAL	**56**	**24.0**	**3.4-44.7**	**112**	**10.4**	**2.8-17.9**	**168**	**17.4**	**5.5-29.3**

Table 29: Mean times smokeless tobacco used by type

Mean times per day smokeless tobacco used by daily smokeless tobacco users by type									
Male									
Age Group (years)	n	Snu by mouth	95% CI	n	Snu by nose	95% CI	n	Chew-ing tobacco	95% CI
15-29	2	2.1	0.0-5.0	4	0.7	0.0-1.5	4	0.4	0.0-1.2
30-44	9	2.2	0.0-4.5	6	0.0	0.0-0.0	7	6.9	0.0-18.6
45-69	29	4.0	2.3-5.8	27	0.1	0.0-0.4	29	3.0	1.1-4.9
TOTAL	**40**	**3.0**	**2.0-4.0**	**37**	**0.3**	**0.0-0.7**	**40**	**3.3**	**0.1-6.5**

Mean times per day smokeless tobacco used by daily smokeless tobacco users by type						
Male						
Age Group (years)	n	Betel, quid	95% CI	n	Other	95% CI
15-29	4	1.4	0.5-2.3	4	0.0	0.0-0.0
30-44	7	8.6	0.0-18.2	7	6.9	0.0-18.6
45-69	29	4.8	2.8-6.8	30	3.3	2.1-4.5
TOTAL	**40**	**4.8**	**2.0-7.6**	**41**	**3.3**	**0.0-6.6**

Mean times per day smokeless tobacco used by daily smokeless tobacco users by type									
Female									
Age Group (years)	n	Snu by mouth	95% CI	n	Snu by nose	95% CI	n	Chew-ing tobacco	95% CI
15-29	5	5.3	5.1-5.5	5	0.0	0.0-0.0	5	1.5	1.4-1.6
30-44	17	2.1	1.5-2.6	16	0.2	0.0-0.5	16	1.0	0.0-2.4
45-69	65	4.2	2.7-5.7	63	0.0	0.0-0.0	61	2.4	1.2-3.6
TOTAL	**87**	**4.0**	**2.1-5.8**	**84**	**0.0**	**0.0-0.1**	**82**	**1.6**	**0.8-2.4**

Mean times per day smokeless tobacco used by daily smokeless tobacco users by type						
Female						
Age Group (years)	n	Betel, quid	95% CI	n	Other	95% CI
1	5	3.8	3.7-3.8	5	3.0	2.8-3.3
16	16	1.0	0.0-2.6	17	1.8	0.0-2.2
64	61	3.3	2.2-4.4	65	1.0	0.1-1.8
81	**82**	**2.8**	**1.0-4.6**	**87**	**2.0**	**0.9-3.0**

Mean times per day smokeless tobacco used by daily smokeless tobacco users by type									
Both Sexes									
Age Group (years)	n	Snu by mouth	95% CI	n	Snu by nose	95% CI	n	Chew-ing tobacco	95% CI
15-29	9	3.8	2.9-4.7	9	0.3	0.2-0.4	9	1.0	0.7-1.4
30-44	24	2.3	1.2-3.5	22	0.1	0.0-0.2	23	3.6	0.0-9.3
45-69	94	4.1	2.9-5.3	90	0.1	0.0-0.2	90	2.7	1.6-3.9

Mean times per day smokeless tobacco used by daily smokeless tobacco users by type						
Both Sexes						
Age Group (years)	n	Betel, quid	95% CI	n	Other	95% CI
15-29	9	2.8	2.5-3.1	9	1.8	0.9-2.6
30-44	23	4.5	0.0-10.2	24	4.1	0.0-9.2
45-69	90	4.1	2.9-5.3	95	2.3	1.3-3.2
TOTAL	**122**	**3.8**	**2.4-5.1**	**128**	**2.6**	**1.1-4.1**

Table 30: Current smokeless tobacco users by type of product used

Percentage of current users of smokeless tobacco using each of the following products									
Male									
Age Group (years)	n	Snu by mouth	95% CI	n	Snu by nose	95% CI	n	Chew-ing tobacco	95% CI
15-29	5	66.0	10.4-121.6	5	52.7	0.0-131.5	5	7.4	0.0-19.5
30-44	8	45.3	8.3-82.2	7	0.0	0.0-0.0	8	80.1	52.2-108.0
45-69	37	75.5	61.2-89.8	34	1.5	0.0-4.2	37	51.0	34.4-67.6
TOTAL	**50**	**65.8**	**45.0-86.7**	**46**	**18.6**	**0.0-52.0**	**50**	**44.0**	**29.8-58.2**

Percentage of current users of smokeless tobacco using each of the following products						
Male						
Age Group (years)	n	%Betel, quid	95% CI	n	Other	95% CI
15-29	5	88.1	53.9-100	5	22.1	0.0-58.4
30-44	8	97.8	92.6-100	8	59.4	0.0-119.5
45-69	37	76.6	61.8-91.3	38	61.1	40.9-81.3
TOTAL	**50**	**84.9**	**70.9-98.8**	**51**	**48.8**	**25.6-72.0**

Percentage of current users of smokeless tobacco using each of the following products									
Female									
Age Group (years)	n	% Snu by mouth	95% CI	n	Snu by nose	95% CI	n	Chew-ing tobacco	95% CI
15-29	6	80.3	72.4-88.1	6	0.0	0.0-0.0	6	69.1	41.7-96.5
30-44	18	92.1	77.1-107.2	17	4.0	0.0-10.5	17	24.2	10.0-38.5
45-69	74	83.7	69.4-97.9	72	0.0	0.0-0.0	70	41.3	20.9-61.6
TOTAL	**98**	**84.7**	**73.1-96.4**	**95**	**0.5**	**0.0-1.2**	**93**	**47.0**	**13.8-80.3**

Percentage of current users of smokeless tobacco using each of the following products						
Female						
Age Group (years)	n	% Betel, quid	95% CI	n	% Other	95% CI
15-29	6	100.0	100.0-100.0	6	59.2	35.8-82.7
30-44	17	27.1	9.0-45.2	18	84.2	56.8-111.7
45-69	70	65.8	46.5-85.2	74	18.8	7.5-30.1
TOTAL	**93**	**67.9**	**27.8-108.1**	**98**	**51.9**	**24.8-79.0**

Percentage of current users of smokeless tobacco using each of the following products									
Both Sexes									
Age Group (years)	n	% Snu by mouth	95% CI	n	Snu by nose	95% CI	n	Chew-ing tobacco	95% CI
15-29	11	73.7	50.6-96.8	11	24.2	4.8-43.5	11	40.8	16.1-65.5
30-44	26	71.1	39.9-102.4	24	1.3	0.0-3.4	25	49.5	16.4-82.5
45-69	111	79.0	66.5-91.6	106	0.8	0.0-2.3	107	47.0	32.2-61.8
TOTAL	148	75.3	64.3-86.2	141	10.1	0.0-24.9	143	45.5	33.7-57.2

Percentage of current users of smokeless tobacco using each of the following products						
Both Sexes						
Age Group (years)	n	% Betel, quid	95% CI	n	% Other	95% CI
15-29	11	94.5	79.3-109.8	11	42.2	25.5-58.9
30-44	25	59.0	17.3-100.8	26	73.1	36.7-109.5
45-69	107	72.2	59.7-84.7	112	43.3	24.7-62.0
TOTAL	**143**	**76.6**	**53.5-99.6**	**149**	**50.3**	**30.0-70.7**

Table 31: Current tobacco users

Current tobacco users									
Male				Female			Both Sexes		
Age =Group (years)	n	% Current users	95% CI	n	% Current users	95% CI	n	% Current userss	95% CI
15-29	318	30.1	24.3-35.9	617	10.4	1.3-19.6	935	21.8	19.0-24.5
30-44	280	53.6	42.8-64.4	793	7.1	2.1-12.1	1073	30.7	24.2-37.3
45-69	354	40.3	31.4-49.2	736	18.2	11.2-25.1	1090	30.4	23.7-37.0
TOTAL	**952**	**37.7**	**31.3-44.1**	**2146**	**10.8**	**5.2-16.4**	**3098**	**25.7**	**23.4-28.0**

Table 32: Daily tobacco users

Daily tobacco users									
Male				Female			Both Sexes		
Age =Group (years)	n	% Daily users	95% CI	n	% Daily users	95% CI	n	% Daily users	95% CI
15-29	318	28.9	23.9-34.0	617	5.1	1.0-9.1	935	18.8	16.8-20.9
30-44	280	51.7	41.0-62.3	793	4.3	0.0-9.9	1073	28.4	22.9-33.9
45-69	354	34.5	25.3-43.7	736	14.1	8.7-19.6	1090	25.3	18.8-31.9
TOTAL	952	35.5	30.5-40.6	2146	6.4	4.5-8.3	3098	22.6	20.2-24.9

Table 33: Exposure to second-hand tobacco smoke at home

Exposed to second-hand smoke in home during the past 30 days									
Male				Female			Both Sexes		
Age =Group (years)	n	% Exposed	95% CI	n	% Exposed	95% CI	n	% Exposed	95% CI
15-29	318	35.3	27.2-43.3	617	27.2	21.9-32.6	935	31.9	25.4-38.3
30-44	28	50.2	38.6-61.8	793	28.8	21.9-35.7	1073	39.6	30.3-49.0
45-69	354	37.5	28.0-47.1	736	24.2	15.3-33.0	1090	31.5	25.2-37.8
TOTAL	952	39.4	32.5-46.2	2146	27.1	22.2-32.1	3098	33.9	28.8-39.0

Table 34: Exposure to second-hand tobacco smoke at workplace

Exposed to second-hand smoke in the workplace during the past 30 days									
Male				Female			Both Sexes		
Age =Group (years)	n	% Exposed	95% CI	n	% Exposed	95% CI	n	% Exposed	95% CI
15-29	301	9.6	1.2-18.0	591	4.6	0.0-10.4	892	7.5	0.6-14.5
30-44	240	23.2	11.9-34.6	753	3.4	1.6-5.2	993	13.0	6.7-19.3
45-69	315	25.0	14.1-35.9	693	4.8	1.9-7.6	1008	15.6	8.7-22.4
TOTAL	856	15.4	4.4-26.3	2037	4.3	1.1-7.4	2893	10.4	3.6-17.2

Tobacco Policy

When asked whether they have noticed information in newspapers or magazines on dangers of smoking or that encourages quitting, 31.7%, 40.9%, and 31.8% affirme that they noticed information in newspapers, on television, and on radio respectively. A small proportion (4.4%) noticed cigarette promotion in stores.

Table 35: Noticed information on dangers of smoking in newspapers

Noticed information in newspapers or magazines about dangers of smoking or that encourages quitting									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
15-29	234	28.7	10.8-46.5	442	33.7	21.0-46.3	676	30.5	15.8-45.2
30-44	288	31.2	17.5-44.9	792	39.0	24.4-53.6	1080	34.9	21.2-48.7
45-69	352	28.3	18.1-38.6	698	29.8	22.1-37.5	1050	29.0	20.5-37.6
TOTAL	874	29.4	15.5-43.4	1932	34.6	23.3-45.9	2806	31.7	19.3-44.1

Table 36: Noticed information on dangers of smoking on television

Noticed information on television about dangers of smoking or that encourages quitting									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
15-29	232	35.6	7.9-63.4	428	38.7	19.8-57.6	660	36.8	13.2-60.4
30-44	294	44.0	28.8-59.2	792	45.2	30.3-60.1	1086	44.6	30.2-58.9
45-69	365	42.4	23.9-60.9	731	40.0	23.7-56.3	1096	41.3	24.6-58.0
TOTAL	891	40.2	19.7-60.7	1951	41.7	25.5-57.8	2842	40.9	22.7-59.1

Table 37: Noticed information on dangers of smoking on radio

Noticed information on the radio about dangers of smoking or that encourages quittin									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
15-29	188	23.9	4.1-43.6	368	30.9	16.8-44.9	556	26.5	8.8-44.3
30-44	259	34.0	18.0-50.0	697	36.4	26.3-46.5	956	35.2	24.3-46.0
45-69	339	34.2	20.1-48.3	693	33.7	18.8-48.6	1032	34.0	19.8-48.1
TOTAL	786	30.0	12.8-47.3	1758	33.9	22.5-45.3	2544	31.8	17.6-45.9

Table 38: Noticed cigarette advertisements or promotion in stores

Noticed advertisements or signs promoting cigarettes in stores									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
15-29	240	7.7	0.0-17.0	468	4.0	0.8-7.2	708	6.3	0.0-12.8
30-44	309	4.4	1.7-7.1	847	3.0	0.6-5.3	1156	3.7	1.5-5.9
45-69	382	3.8	1.0-6.7	773	2.0	0.2-3.8	1155	2.9	0.9-5.0
TOTAL	931	5.6	0.9-10.3	2088	3.0	0.6-5.4	3019	4.4	1.0-7.9

Table 39: Noticed free samples of cigarette

Noticed free samples of cigarettes									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
15-29	238	4.0	0.5-7.5	462	1.0	0.0-3.0	700	2.9	0.8-5.0
30-44	299	2.6	0.0-5.4	833	0.1	0.0-0.2	1132	1.4	0.0-2.9
45-69	375	0.1	0.0-0.4	752	0.5	0.0-1.1	1127	0.3	0.0-0.6
TOTAL	912	2.5	0.8-4.2	2047	0.5	0.0-1.0	2959	1.6	0.6-2.7

Table 40: Noticed sale prices on cigarettes

Noticed sale prices on cigarettes									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
15-29	238	3.0	1.2-4.9	456	2.4	0.0-6.7	694	2.8	1.1-4.5
30-44	299	1.7	0.0-4.9	832	1.3	0.0-4.0	1131	1.5	0.0-3.4
45-69	373	0.5	0.0-1.4	752	0.3	0.0-0.8	1125	0.4	0.0-0.9
TOTAL	910	1.9	0.8-3.0	2040	1.3	0.0-3.8	2950	1.7	0.7-2.6

Table 41: Noticed coupons for cigarettes

Noticed coupons for cigarettes									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
15-29	235	3.4	1.2-5.7	457	1.1	0.0-3.0	692	2.5	1.0-4.0
30-44	302	0.6	0.0-1.6	831	0.0	0.0-0.0	1133	0.3	0.0-0.8
45-69	374	0.5	0.0-1.5	747	0.5	0.0-1.1	1121	0.5	0.0-1.2
TOTAL	**911**	**1.7**	**0.8-2.7**	**2035**	**0.5**	**0.0-1.0**	**2946**	**1.2**	**0.6-1.7**

Table 42: Noticed gifts, discount offer on cigarettes

Noticed free gifts or special discount offer on other products when buying cigarettes									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
15-29	238	0.7	0.0-1.9	457	1.0	0.0-3.0	695	0.8	0.0-1.7
30-44	302	1.6	0.0-3.3	827	0.1	0.0-0.3	1129	0.9	0.1-1.8
45-69	375	0.3	0.0-0.6	740	0.2	0.0-0.5	1115	0.2	0.0-0.5
TOTAL	**915**	**0.9**	**0.1-1.7**	**2024**	**0.4**	**0.0-1.0**	**2939**	**0.7**	**0.3-1.1**

Table 43:Noticed clothing or other items with cigarette brand name or logo

Noticed clothing or other items with a cigarette brand name or logo									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
15-29	238	3.8	0.0-9.2	458	3.0	0.8-5.2	696	3.5	0.0-7.2
30-44	302	1.0	0.0-2.7	826	0.2	0.0-0.4	1128	0.6	0.0-1.5
45-69	374	1.1	0.2-2.1	744	0.2	0.0-0.6	1118	0.7	0.1-1.3
TOTAL	**914**	**2.2**	**0.0-4.5**	**2028**	**1.1**	**0.4-1.8**	**2942**	**1.7**	**0.3-3.1**

Table 44: Noticed cigarette promotion in mail

Noticed cigarette promotions in the mail									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
15-29	198	0.0	0.0-0.0	432	8.7	0.0-26.0	630	4.0	0.0-12.3
30-44	273	0.8	0.0-1.9	779	0.0	0.0-0.0	1052	0.4	0.0-1.0
45-69	339	0.0	0.0-0.0	675	2.6	0.0-6.6	1014	1.2	0.0-3.0
TOTAL	**810**	**0.3**	**0.0-0.7**	**1886**	**3.6**	**0.0-10.8**	**2696**	**1.9**	**0.0-5.2**

Table 45: Noticed health warning on packages

Current smokers who noticed health warnings on cigarette packages									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
15-29	14	0.0	0.0-0.0	3	87.6	87.4-87.9	17	33.2	12.2-54.1
30-44	24	37.0	26.7-47.2	3	0.0	0.0-0.0	27	29.7	26.2-33.3
45-69	25	17.8	7.7-27.9	10	8.9	1.2-16.7	35	15.8	5.3-26.4
TOTAL	**63**	**19.7**	**16.4-23.1**	**16**	**47.0**	**40.9-53.2**	**79**	**27.1**	**17.5-36.7**

Drug use

There are two questions on substance abuse included in the Maldivian STEPS survey. When asked about the frequency of drug use, 94.8% said they have not used it (use it 0 times). When the data on the use of drugs in the past month was further analysed, 26.5% of the surveyed population used drugs during the month.

Figure 7: Frequency of drug use ever

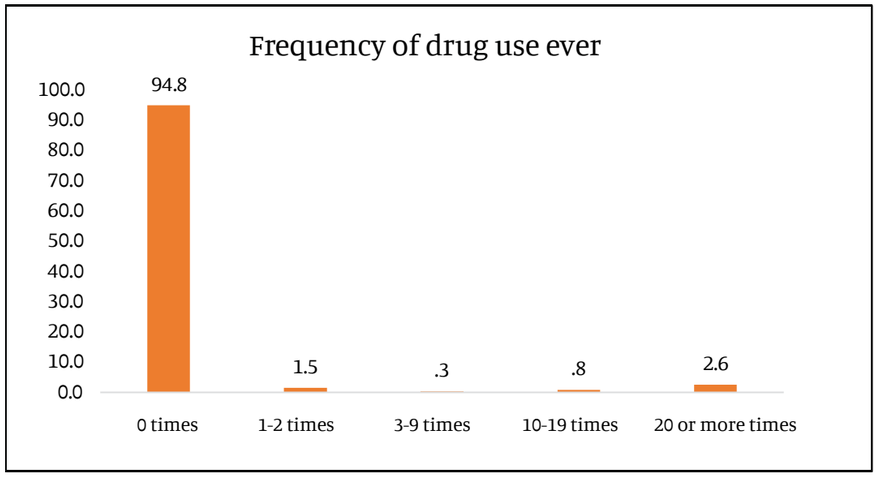


Figure 8: Drug use in the last month

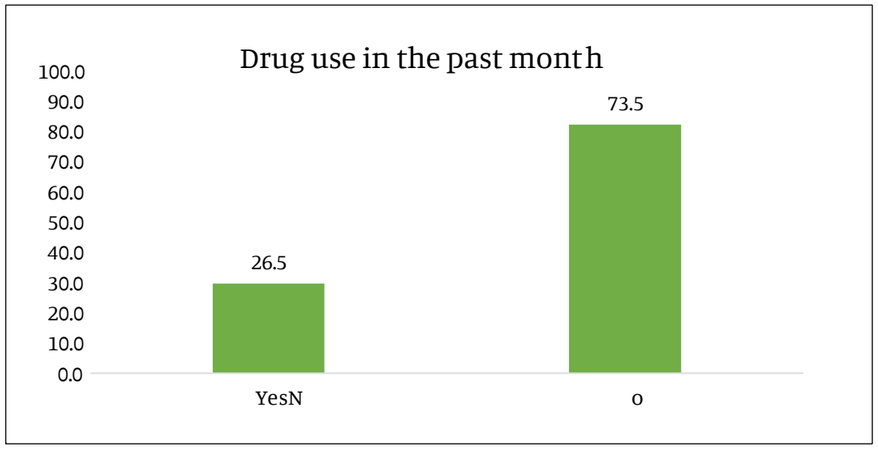
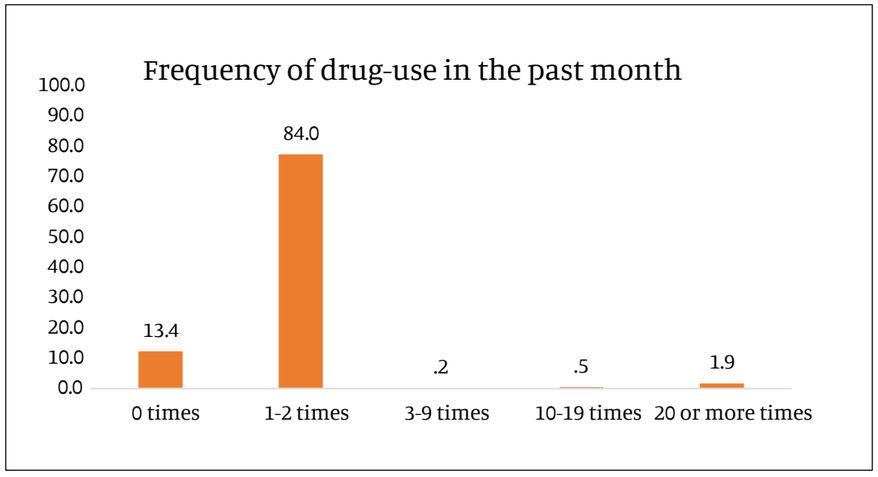


Figure 9: Frequency of drug use in the last month



Alcohol Consumption

When people were asked whether they have ever used alcohol, 4.7% said 'yes' and 95.3% said 'no'. From the people who said they consume alcohol, more than 50% of the youngest age group (15-29 years) said that they used alcohol in the last 12 months and 23.1% said that they consume more than 6 standard drinks per day. The tables below show the prevalence of alcohol consumption and information on reasons for stopping alcohol consumption.

Figure 10: Ever used alcohol

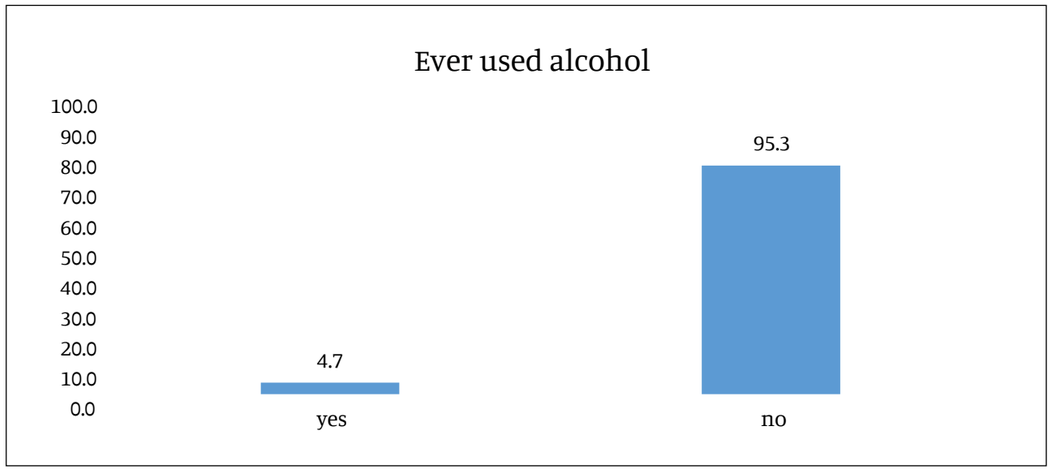


Figure 11: Alcohol use in the past 12 months

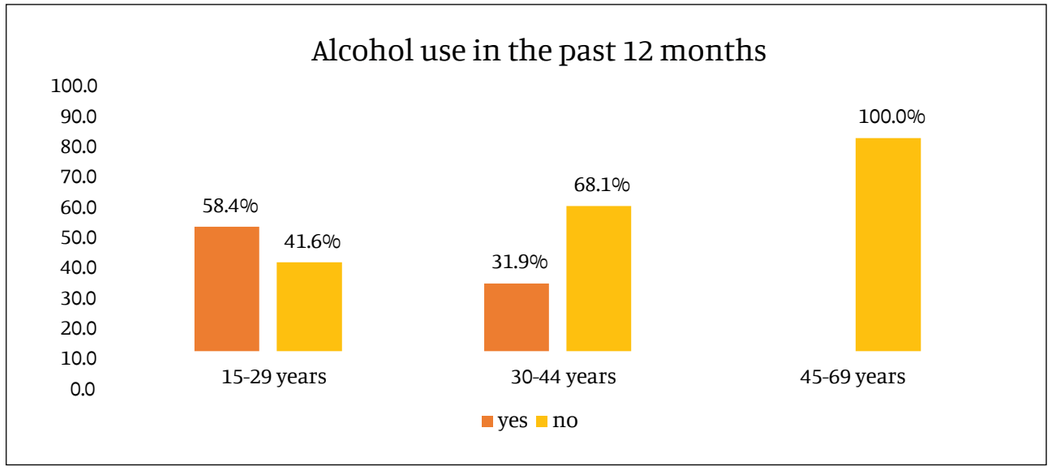


Figure 12: Consumption of standard drinks

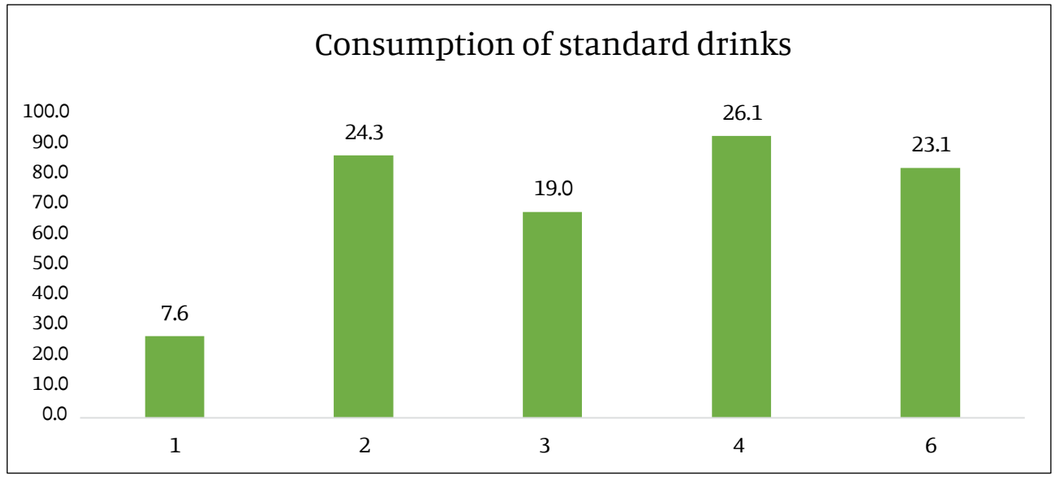


Table 46: Status of alcohol consumption

Alcohol consumption status									
Male									
Age Group (years)	n	% Current drinker (past 30 days)	95% CI	% Drank in past 12 months, not current	95% CI	% Past 12 months abstainer	95% CI	% Lifetime abstainer	95% CI
15-29	202	2.3	0.0-4.9	0.7	0.0-1.7	2.2	0.1-4.4	94.7	91.5-97.9
30-44	279	0.6	0.0-1.4	3.3	0.0-6.9	8.2	0.8-15.6	87.9	77.5-98.3
45-69	352	0.0	0.0-0.0	0.0	0.0-0.0	2.6	0.8-4.4	97.4	95.6-99.2
TOTAL	**833**	**1.1**	**0.1-2.0**	**1.5**	**0.1-2.9**	**4.6**	**1.5-7.7**	**92.8**	**88.7-96.9**

Alcohol consumption status									
Female									
Age Group (years)	n	% Current drinker (past 30 days)	95% CI	% Drank in past 12 months, not current	95% CI	% Past 12 months abstainer	95% CI	% Lifetime abstainer	95% CI
15-29	435	--	--	0.1	0.0-0.4	0.0	0.0-0.0	99.9	99.6-100.0
30-44	795	--	--	0.0	0.0-0.0	0.0	0.0-0.0	100.0	100.0-100.0
45-69	732	--	--	0.0	0.0-0.0	0.1	0.0-0.4	99.9	99.6-100.0
TOTAL	**1962**	**--**	**--**	**0.0**	**0.0-0.1**	**0.0**	**0.0-0.1**	**99.9**	**99.8-100.0**

Alcohol consumption status									
Both Sexes									
Age Group (years)	n	% Current drinker (past 30 days)	95% CI	% Drank in past 12 months, not current	95% CI	% Past 12 months abstainer	95% CI	% Lifetime abstainer	95% CI
15-29	641	1.3	0.0-2.7	0.5	0.0-1.0	1.3	0.1-2.4	97.0	95.3-98.7
30-44	1069	0.3	0.0-0.7	1.7	0.0-3.6	4.2	0.3-8.1	93.9	88.3-99.4
45-69	1085	0.0	0.0-0.0	0.0	0.0-0.0	1.5	0.5-2.5	98.5	97.5-99.5
TOTAL	**2795**	**0.6**	**0.1-1.1**	**0.8**	**0.0-1.6**	**2.5**	**0.7-4.3**	**96.1**	**93.7-98.5**

Table 47: Stopped drinking alcohol due to health reasons

Stopping drinking due to health reasons									
Male				Female			Both Sexes		
Age Group (years)	n	% stopping due to health reasons (mentioned)	% stopping due to health reasons (not mentioned)	n	% stopping due to health reasons (mentioned)	% stopping due to health reasons (not mentioned)	n	% stopping due to health reasons (mentioned)	% stopping due to health reasons (not mentioned)
15-29	11	-	100.0%	3	0	100.0%	14	0	100.0%
30-44	16	9.3%	90.7%	1	0	100.0%	16	9.3%	90.7%
45-69	10	26.7%	73.3%		-	-	11	25.6%	74.4%
15-69	**37**	**7.3%**	**92.7%**	**4**	**0**	**100.0%**	**41**	**4.8%**	**95.2%**

Diet

Fruit and vegetable consumption

As shown in the figures and tables below, fruit and vegetable consumption of Maldivians is low. More than 50% of the people consume less than or equal to one serving of fruit per day and more that 80% consume less or equal to one vegetable serving per day. In addition, the mean number of days fruits and vegetables were consumed were less than four days per week. This means the majority (54.5%) of the Maldivian population does not meet the WHO recommendation of fi e servings of fruit and/or vegetables per day.

Table 48: Mean days fruit consumed in a week

Mean number of days fruit consumed in a typical week									
Male				Female			Both Sexes		
Age Group (years)	n	Mean number of days	95% CI	n	Mean number of days	95% CI	n	Mean number of days	95% CI
15-29	266	2.0	1.3-2.6	503	2.1	1.5-2.8	769	2.0	1.4-2.7
30-44	247	3.9	3.3-4.6	699	3.6	3.2-4.1	946	3.8	3.4-4.2
45-69	312	4.1	3.6-4.6	670	4.0	3.5-4.5	982	4.0	3.6-4.4
Total	**825**	**2.9**	**2.1-3.7**	**1872**	**3.0**	**2.4-3.5**	**2697**	**2.9**	**2.3-3.6**

Table 49: Mean days vegetables consumed in a week

Mean number of days vegetables consumed in a typical week									
Male				Female			Both Sexes		
Age Group (years)	n	Mean number of days	95% CI	n	Mean number of days	95% CI	n	Mean number of days	95% CI
15-29	270	2.2	1.2-3.2	529	2.5	1.7-3.3	799	2.3	1.4-3.2
30-44	262	3.8	3.3-4.3	724	4.1	3.6-4.7	986	4.0	3.6-4.4
45-69	324	4.0	3.3-4.7	678	4.1	3.8-4.3	1002	4.0	3.6-4.5
Total	**856**	**3.0**	**2.1-3.8**	**1931**	**3.3**	**2.6-4.1**	**2787**	**3.1**	**2.3-3.9**

Figure 13: Fruit servings consumed per day

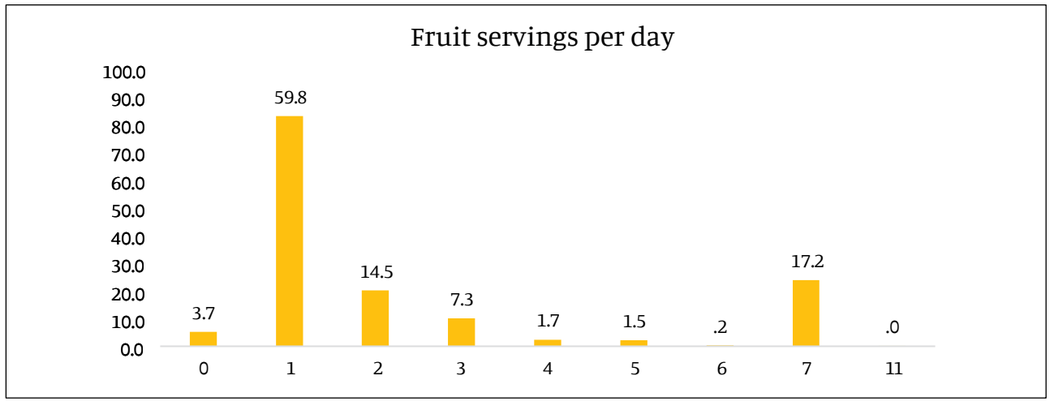


Figure 14: Vegetable servings consumed per day

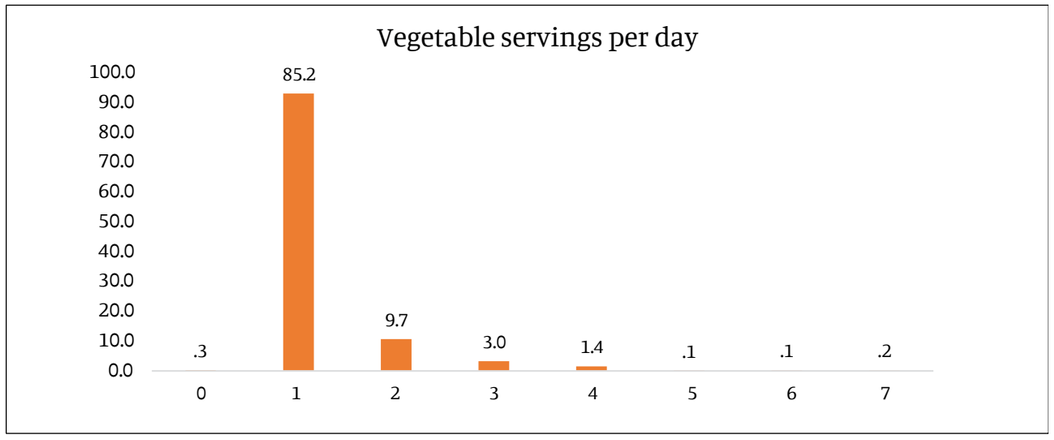


Table 50: Mean servings of fruits consumed per day

Mean number of servings of fruit on average per day									
Male				Female			Both Sexes		
Age Group (years)	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI	n	Mean num-ber of serv-ings	95% CI
15-29	254	0.7	0.6-0.8	491	0.7	0.6-0.8	745	0.7	0.6-0.8
30-44	243	0.8	0.6-1.0	679	0.7	0.6-0.8	922	0.7	0.6-0.8
45-69	305	0.7	0.6-0.9	656	0.7	0.6-0.8	961	0.7	0.6-0.8
Total	**802**	**0.7**	**0.7-0.8**	**1826**	**0.7**	**0.6-0.8**	**2628**	**0.7**	**0.7-0.8**

Table 51: Mean servings of vegetables consumed per day

Mean number of servings of vegetables on average per day									
Male				Female			Both Sexes		
Age Group (years)	n	Mean number of serv-ings	95% CI	n	Mean num-ber of serv-ings	95% CI	n	Mean num-ber of serv-ings	95% CI
15-29	255	0.4	0.2-0.6	506	0.4	0.3-0.6	761	0.4	0.2-0.6
30-44	250	0.7	0.6-0.9	681	0.8	0.6-1.0	931	0.8	0.7-0.9
45-69	314	0.7	0.6-0.8	653	0.8	0.7-0.9	967	0.7	0.6-0.9
Total	**819**	**0.5**	**0.4-0.7**	**1840**	**0.6**	**0.4-0.8**	**2659**	**0.6**	**0.4-0.7**

Table 52: Mean servings of fruit or vegetables consumed per day

Mean number of servings of fruit and/or vegetables on average per day									
Male				Female			Both Sexes		
Age Group (years)	n	Mean numb er of servin gs	95% CI	n	Mean numb er of servin gs	95% CI	n	Mean num-be r of servin gs	95% CI
15-29	273	1.0	0.7-1.3	527	1.0	1.0-1.1	800	1.0	0.8-1.2
30-44	262	1.4	1.1-1.8	720	1.4	1.2-1.6	982	1.4	1.2-1.6
45-69	327	1.3	1.1-1.6	681	1.4	1.3-1.6	1008	1.4	1.2-1.6
Total	**862**	**1.2**	**1.0-1.4**	**1928**	**1.2**	**1.1-1.4**	**2790**	**1.2**	**1.0-1.4**

Table 53: Mean servings of fruit or vegetable consumed per day

Percentage of current users of smokeless tobacco using each of the following products									
Male									
Age Group (years)	n	% no fruit and/or vegeta-bles	95% CI	% 1-2 servings	95% CI	% 3-4 serv-ings	95% CI	% ≥5 servings	95% CI
15-29	273	50.1	39.5-60.7	46.2	37.2-55.2	3.4	0.0-7.3	0.4	0.0-1.0
30-44	262	39.9	29.4-50.3	49.5	42.1-57.0	6.2	1.9-10.6	4.4	0.0-9.3
45-69	327	41.7	29.6-53.8	52.1	41.4-62.9	4.4	1.9-6.8	1.8	0.3-3.3
TOTAL	**862**	**45.7**	**38.4-53.1**	**48.2**	**42.0-54.4**	**4.3**	**1.2-7.4**	**1.7**	**0.8-2.6**

Number of servings of fruit and/or vegetables on average per day									
Female									
Age Group (years)	n	% no fruit and/or vegeta-bles	95% CI	% 1-2 servings	95% CI	% 3-4 serv-ings	95% CI	% ≥5 servings	95% CI
15-29	527	46.9	41.1-52.7	49.5	42.2-56.9	2.4	0.5-4.4	1.1	0.1-2.2
30-44	720	38.7	28.7-48.6	50.2	42.9-57.5	9.5	5.1-14.0	1.6	0.8-2.4
45-69	681	37.5	28.7-46.2	53.0	45.1-60.9	5.9	2.9-9.0	3.6	1.2-6.1
TOTAL	**1928**	**42.4**	**38.9-45.8**	**50.4**	**47.3-53.6**	**5.5**	**2.4-8.5**	**1.8**	**0.7-2.9**

Number of servings of fruit and/or vegetables on average per day									
Both Sexes									
Age Group (years)	n	% no fruit and/or vegeta-bles	95% CI	% 1-2 servings	95% CI	% 3-4 serv-ings	95% CI	% ≥5 servings	95% CI
15-29	800	48.8	42.2-55.5	47.5	41.3-53.8	3.0	0.4-5.6	0.7	0.0-1.4
30-44	982	39.3	32.0-46.6	49.9	44.0-55.7	7.8	4.0-11.6	3.0	0.3-5.8
45-69	1008	39.8	30.1-49.6	52.5	44.1-60.9	5.1	2.6-7.6	2.6	0.9-4.3
TOTAL	**2790**	**44.3**	**39.1-49.4**	**49.2**	**45.0-53.3**	**4.8**	**2.1-7.6**	**1.7**	**1.0-2.5**

Table 54: Less than fi e servings of fruit or vegetable consumed per day

Mean number of servings of vegetables on average per day									
Male				Female			Both Sexes		
Age Group (years)	n	% < fi e servings per day	95% C	n	% < fi e servings per day	95% CI	n	% < fi e servings per day	95% CI
15-29	273	99.6	99.0-100.2	527	98.9	97.8-99.9	800	800	98.6-100.1
30-44	262	95.6	90.7-100.6	720	98.4	97.6-99.2	982	97.0	94.2-99.7
45-69	327	98.2	96.7-99.7	681	96.4	93.9-98.8	1008	97.4	95.7-99.1
Total	**862**	**98.3**	**97.4-99.2**	**1928**	**98.2**	**97.1-99.3**	**2790**	**98.3**	**97.5-99.0**

Salt consumption

As shown in the tables below, almost half of the younger population stated that they add salt before or during eating. A much smaller proportion of the people in the age groups above 30 years add salt before or while eating the food. It is interesting that more than 50% of the population add sauces to the food before or during eating. However, when asked about the frequency of adding salt or sauces, the majority of the respondents stated they never add them or only add salt or sauces rarely or sometimes. Less than 15% indicated that they consume processed food high in salt and most of the people stated that they do not consume too much salt.The majority of the respondents believe that reducing salt in the diet is important and believe that extra salt can cause health problems. However, less than 50% of the respondents indicated that they read the labels on processed food. While WHO recommendation is 5gm of salt per day, biochemical analysis of urine sodium indicates Maldivian population consumes on average 8.8gm per day.

Table 55: Add salt before eating

Add salt always or often before eating or when eating						
Male			Female		Both Sexes	
Age Group (years)	n	%	n	%	n	%
15-29	310	48.5	613	50.6	923	49.4
30-44	218	8.1	795	3.8	1076	6
45-69	351	5.2	737	3.5	1088	4.4
Total	**942**	**30.8**	**2145**	**28.4**	**3087**	**29.7**

Table 56: Add salty sauces before eating

Add sauces always or often before eating or when eating						
Male			Female		Both Sexes	
Age Group (years)	n	%	n	%	n	%
15-29	314	77.6	613	71.4	927	75.0
30-44	281	59.1	797	64.8	1078	61.9
45-69	353	52.7	741	56.1	1094	54.3
Total	**948**	**68,7**	**2151**	**66,8**	**3099**	**67.8**

Figure 15: Add salt before eating

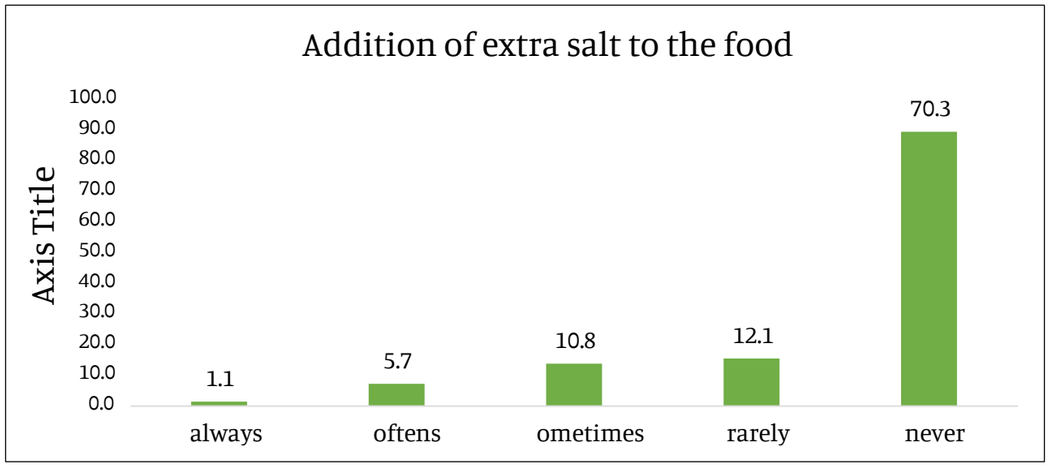


Figure 16: Add salty sauces before eating

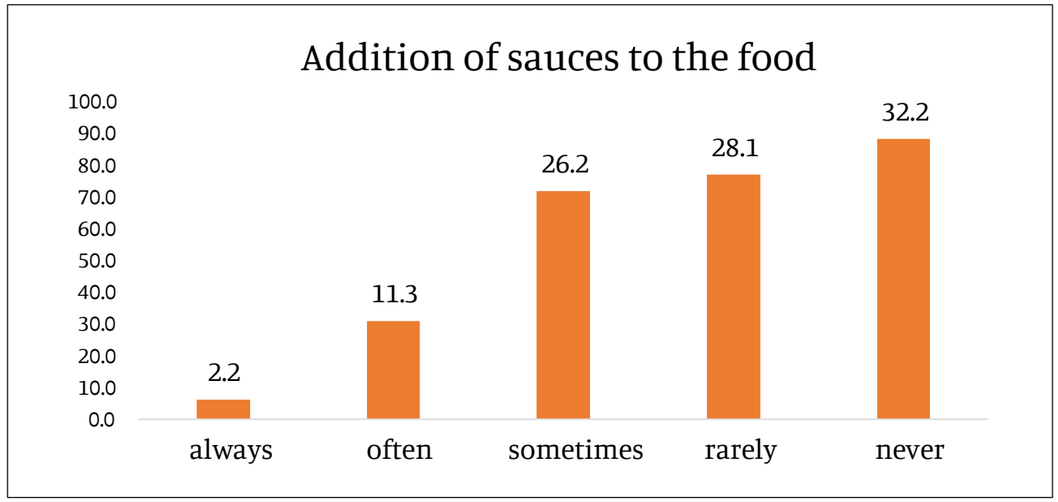


Table 57: consumption of processed food high in salt

Always or often consume processed food high in salt									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%<	95% CI	n	%	95% CI
15-29	314	11.8	2.6-20.9	612	17.6	7.1-28.1	926	14.2	4.6-23.8
30-44	279	16.9	9.9-23.8	792	9.3	5.3-13.3	1071	13.2	10.0-16.3
45-69	354	1.8	0.3-3.3	734	2.1	0.4-3.8	1088	1.9	0.7-3.2
Total	**947**	**11.3**	**5.2-17.4**	**2138**	**12.4**	**8.7-16.1**	**3085**	**11.8**	**6.9-16.7**

Figure 17: Consumption of processed food high in salt

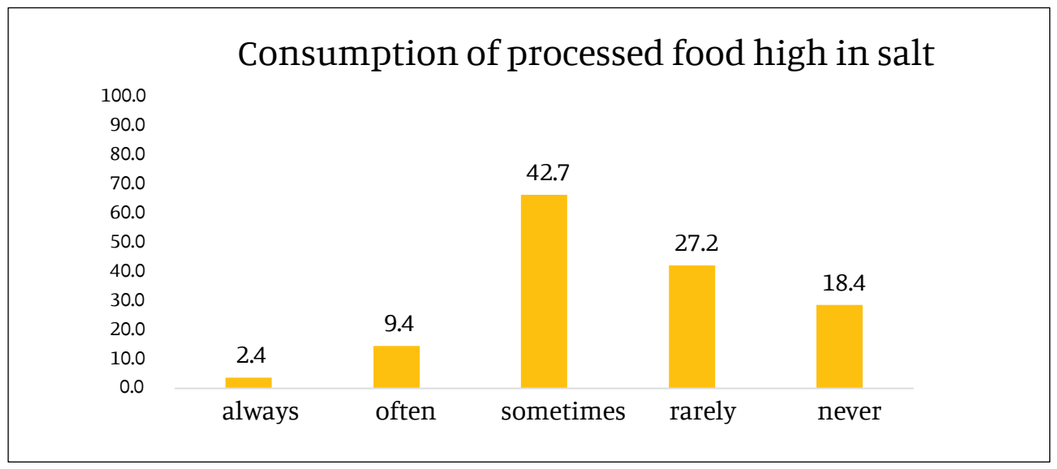


Table 58: Consume too much salt

Think they consume far too much or too much salt						
Male			Female		Both Sexes	
Age Group (years)	n	%	n	%	n	%
15-29	307	8.2%	600	11.0%	907	9.4%
30-44	269	8.6%	791	9.1%	1060	8.9%
45-69	346	8.1%	723	5.6%	1069	6.9%
15-69	**922**	**8.3%**	**2114**	**9.5%**	**3036**	**8.8%**

Table 59: Quantity of salt consumed

Self-reported quantity of salt consumed						
Male						
Age Group (years)	n	% Far too much	% Too much	% Just the right amount	% Too little	% Far too little
15-29	307	.6%	7.6%	83.0%	8.4%	.4%
30-44	269	.9%	7.8%	73.4%	16.5%	1.4%
45-69	346	.6%	7.5%	67.1%	22.0%	2.8%
Total	**922**	**.6%**	**7.6%**	**77.9%**	**12.7%**	**1.1%**

Self-reported quantity of salt consumed						
Female						
Age Group (years)	n	% Far too much	% Too much	% Just the right amount	% Too little	% Far too little
15-29	600	1.0%	10.0%	71.7%	14.7%	2.6%
30-44	791	1.3%	7.8%	70.2%	18.0%	2.6%
45-69	723	.3%	5.3%	59.3%	28.9%	6.2%
Total	**2114**	**1.0%**	**8.5%**	**69.1%**	**18.2%**	**3.2%**

Self-reported quantity of salt consumed						
Both Sexes						
Age Group (years)	n	% Far too much	% Too much	% Just the right amount	% Too little	% Far too little
15-29	907	.8%	8.6%	78.2%	11.1%	1.3%
30-44	1060	1.1%	7.8%	71.8%	17.3%	2.0%
45-69	1069	.4%	6.5%	63.6%	25.1%	4.3%
Total	**3036**	**.8%**	**8.0%**	**73.9%**	**15.2%**	**2.0%**

Figure 18: Perception on reducing salt in diet

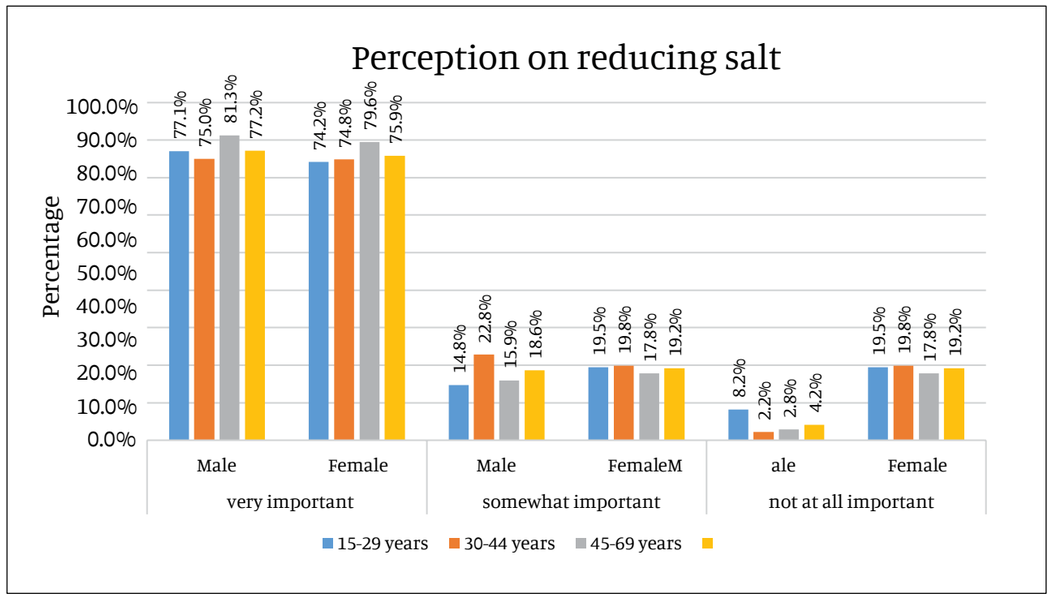


Table 60: Perception on too much salt causing increase in blood pressure

Think consuming too much salt could cause serious health problems- BP						
Male			Female		Both Sexes	
Age Group (years)	n	%	n	%	n	%
15-29	316	58.5%	614	61.0%	930	59.6%
30-44	282	56.7%	797	79.5%	1079	67.9%
45-69	354	73.9%	741	78.6%	1095	76.0%
Total	**952**	**60.7%**	**2152**	**69.6%**	**3104**	**64.7%**

Table 61: Perception on too much salt causing kidney diseases

Think consuming too much salt could cause serious health problem- kidney diseases						
Male			Female		Both Sexes	
Age Group (years)	n	%	n	%	n	%
15-29	316	31.5%	614	26.7%	930	29.5%
30-44	282	19.8%	797	21.6%	1079	20.7%
45-69	354	26.0%	741	25.7%	1095	25.8%
Total	**952**	**27.6%**	**2152**	**25.0%**	**3104**	**26.4%**

Table 62: Perception on too much salt causing cancer

Think consuming too much salt could cause serious health problem- cancer						
Male			Female		Both Sexes	
Age Group (years)	n	%	n	%	n	%
15-29	316	10.7%	614	6.5%	930	8.9%
30-44	282	3.8%	797	5.0%	1079	4.4%
45-69	354	5.9%	741	6.1%	1095	6.0%
15-69	**952**	**8.1%**	**2152**	**5.9%**	**3104**	**7.2%**

Table 63: Limit processed food consumption to reduce salt intake

Limit consumption of processed foods									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% C	n	%	95% C	n	%	95% C
15-29	12	15.5	0.0-41.2	23	65.8	58.7-72.8	35	43.9	37.2-50.7
30-44	20	65.5	48.1-83.0	63	60.1	38.3-81.8	83	62.5	48.3-76.6
45-69	39	72.0	53.5-90.6	96	61.8	42.4-81.3	135	66.1	52.3-80.0
Total	**71**	**47.9**	**24.5-71.3**	**182**	**62.8**	**57.6-67.9**	**253**	**56.4**	**45.9-66.9**

Table 64: Check food label sodium to reduce salt intake

Look at the salt or sodium content on food labels									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
15-29	12	60.7	13.7-107.6	23	28.0	13.9-42.1	35	42.2	33.4-51.0
30-44	20	47.0	29.5-64.6	63	26.9	9.0-44.8	83	35.6	18.0-53.3
45-69	39	46.5	15.0-78.0	96	23.8	13.3-34.3	135	33.4	18.0-48.8
15-69	**71**	**52.2**	**26.9-77.5**	**182**	**26.4**	**16.9-35.9**	**253**	**37.5**	**26.5-48.5**

Table 65: Buy low salt alternatives to reduce salt intake

Buy low salt/sodium alternatives									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
15-29	12	61.6	15.6-107.6	23	29.3	11.8-46.9	35	43.4	20.1-66.7
30-44	20	41.9	19.1-64.8	63	21.4	5.3-37.4	83	30.3	10.7-49.8
45-69	39	35.9	17.2-54.7	96	17.6	5.7-29.6	135	25.4	12.9-37.9
15-69	**71**	**47.9**	**21.9-73.8**	**182**	**23.3**	**9.3-37.4**	**253**	**33.9**	**17.1-50.7**

Table 66: Use spices other than salt to reduce salt consumption

Use spices other than salt when cooking									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
15-29	12	43.6	0.0-89.1	23	47.7	27.1-68.4	35	45.9	18.5-73.3
30-44	20	47.5	27.4-67.5	63	68.4	41.3-95.5	83	59.3	35.9-82.7
45-69	39	51.4	35.7-67.1	96	47.0	33.8-60.1	135	48.8	39.0-58.7
15-69	**71**	**47.1**	**28.8-65.3**	**182**	**54.2**	**41.3-67.2**	**253**	**51.1**	**38.2-64.1**

Table 67: Avoid eating food prepared outside to reduce salt consumption

Avoid eating foods prepared outside of a home									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
15-29	12	29.3	15.6-42.9	23	48.6	31.9-65.4	35	40.2	28.9-51.6
30-44	20	57.0	44.8-69.3	63	61.0	30.2-91.7	83	59.3	41.3-77.3
45-69	39	75.9	58.1-93.6	96	50.7	33.1-68.3	135	61.3	47.8-74.8
15-69	**71**	**51.5**	**40.1-63.0**	**182**	**53.2**	**38.4-68.1**	**253**	**52.5**	**38.4-66.6**

Table 68: Cook without salt to reduce salt consumption

Minimise salt by cooking without salt						
Male			Female		Both Sexes		
Age Group (years)	n	%	n	%	n	%	
15-29	12	14.7%	24	9.3%	36	11.6%	12
30-44	20	42.0%	63	66.0%	83	55.6%	20
45-69	39	51.0%	97	58.0%	136	55.1%	39
Total	**71**	**33.9%**	**184**	**41.5%**	**255**	**38.3%**	**71**

Table 69: Do other things to reduce salt consumption

Do other things specificall to control your salt intake						
Male			Female		Both Sexes	
Age Group (years)	n	%	n	%	n	%
15-29	12	18.7%	24	4.1%	36	10.2%
30-44	20		63	5.6%	83	3.2%
45-69	39	14.2%	97	5.0%	136	8.9%
Total	**71**	**8.2%**	**184**	**5.1%**	**255**	**6.5%**

Physical Activity

A population's physical activity (or inactivity) can be described in differen ways. The two most common ways are
(1) to estimate a population's mean or median physical activity using a continuous indicator such as Metabolic Equivalents (MET)-minutes per week or time spent in physical activity, and
(2) to classify certain percentages of a population in specific groups by setting up cut-points for a specifi amount of physical activity.
When analysing Global Physical Activity Questionnaire (GPAQ) data, both continuous as well as categorical indicators are used.

Metabolic Equivalent (MET)

METs are commonly used to express the intensity of physical activities and are also used for the analysis of GPAQ data.Applying MET values to activity levels allows us to calculate total physical activity. MET is the ratio of a person's working metabolic rate relative to the resting metabolic rate. One MET is define as the energy cost of sitting quietly and is equivalent to caloric consumption of 1 kcal/kg/hour. For the analysis of GPAQ data, existing guidelines have been adopted. 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. Therefore, for the calculation of a person's total physical activity using GPAQ data, the following MET values are used:

Domain	MET value
Work	• Moderate MET value = 4.0 • Vigorous MET value = 8.0
Transport	Cycling and walking MET value = 4.0
Recreation	• Moderate MET value = 4.0 • Vigorous MET value = 8.0

Former recommendations for comparison purposes

For the calculation of the categorical indicator on the recommended amount of physical activity for health, the total time spent in physical activity during a typical week and the intensity of the physical activity are considered.

Throughout a week, including activity for work, during transport and leisure time, adults should do at least

- 150 minutes of moderate-intensity physical activity 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.

Former recommendations for comparison purposes

For comparison purposes, tables presenting cut-off from former recommendations are also included in GPAQ data analysis.

The three levels of physical activity suggested for the classification of populations was low, moderate, and high. The criteria for these levels are shown below.

High

A person reaching any of the following criteria is classified in this category:- Vigorous-intensity activity on at least 3 days achieving a minimum of at least 1,500 MET-minutes/week OR
- 7 or more days of any combination of walking, moderate- or vigorous intensity activities achieving a minimum of at least 3,000 MET-minutes per week.

Moderate

A person not meeting the criteria for the "high" category, but meeting any of the following criteria is classified in this category:

- 3 or more days of vigorous-intensity activity of at least 20 minutes per day

OR

- 5 or more days of moderate-intensity activity or walking of at least 30 minutes per day OR
- 5 or more days of any combination of walking, moderate- or vigorousintensity activities achieving a minimum of at least 600 MET-minutes per week.

Low

A person not meeting any of the above criterion falls in this category.

The results show that only 23.6% of the respondents engage in vigorous physical activity and 65.1% engage in moderate physical activity. Seventy percent of the people do not walk or use bicycles to travel. The results when analysed against the WHO recommended level of physical activity show that 45.8% of the respondents do not meet the recommended level of physical activity (44.2% female and 47% male).

Figure 19: Engage in vigorous physical activity

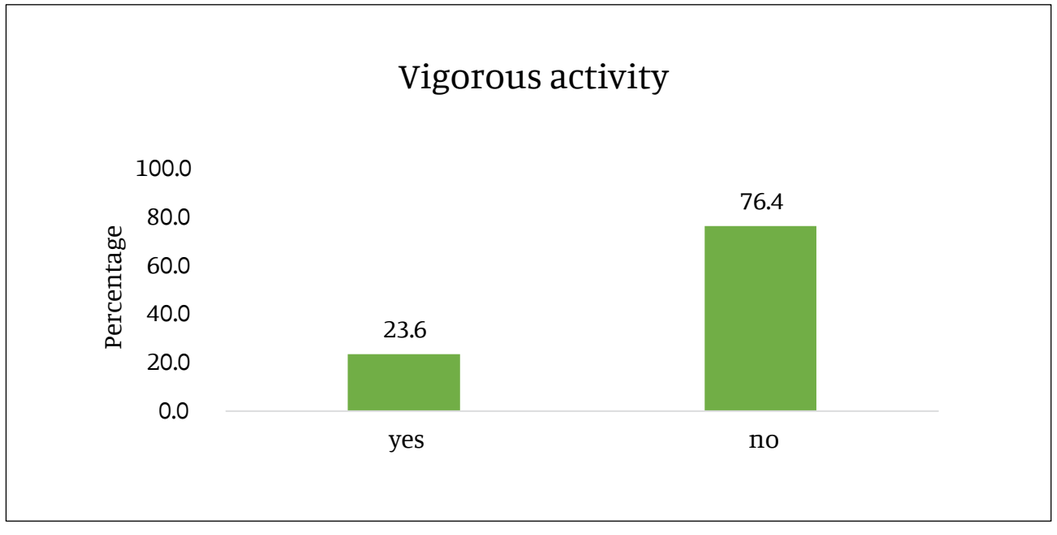


Figure 20: Engage in moderate physical activity

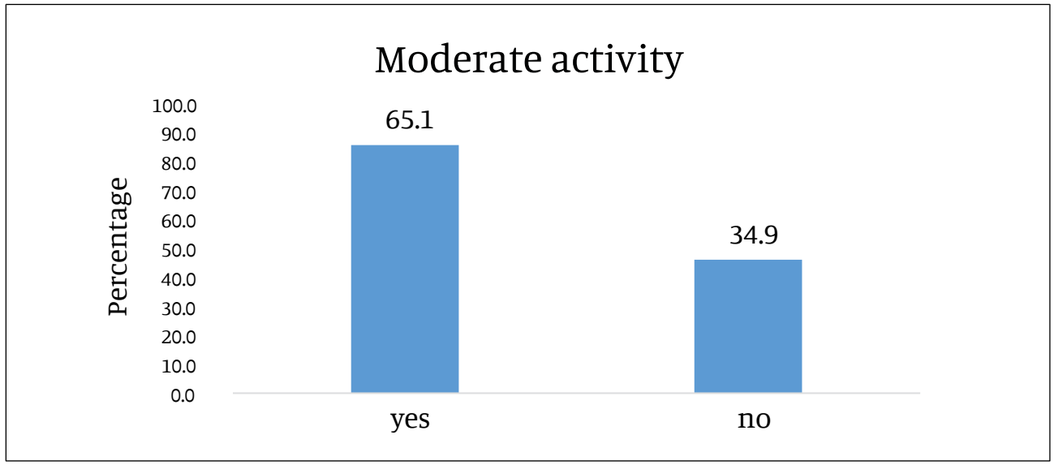


Figure 21: Travel by walking or bicycle

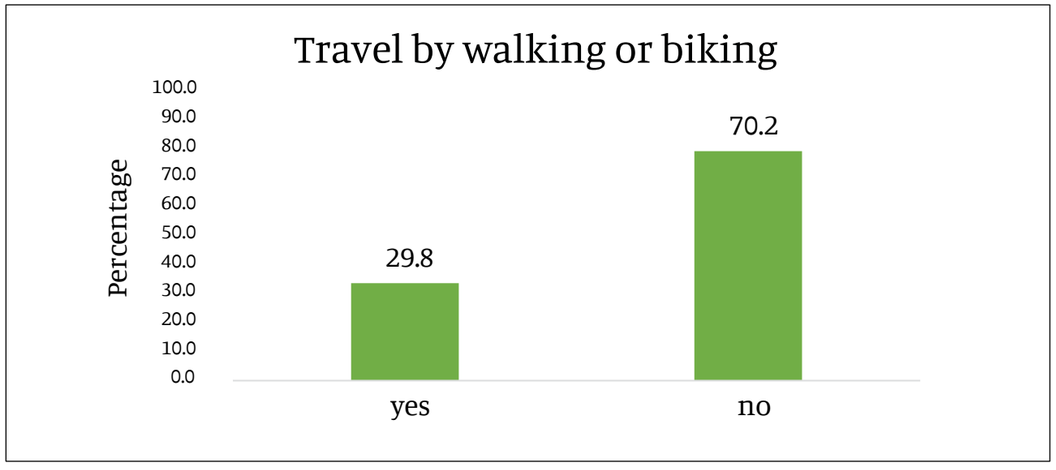


Table 70: Not meeting WHO recommended physical activity

Not meeting WHO recommendations on physical activity for health									
Male				Female			Both Sexes		
Age Group (years)	n	% not meeting recs	95% CI	n	% not meeting recs	95% CI	n	% not meeting recs	95% CI
15-29	191	20.6	9.9-31.3	426	30.0	15.4-44.5	617	24.8	13.1-36.5
30-44	269	15.6	8.7-22.6	761	16.7	7.4-26.0	1030	16.2	9.2-23.1
45-69	343	20.7	10.4-31.0	708	14.3	6.6-21.9	1051	17.8	9.3-26.4
Total	**803**	**18.7**	**11.0-26.4**	**1895**	**20.4**	**10.4-30.4**	**2698**	**19.5**	**11.1-27.9**

Table 71: Mean minutes of total physical activity per day

Mean minutes of total physical activity on average per day									
Male				Female			Both Sexes		
Age Group (years)	n	Mean minutes	95% CI	n	Mean minutes	95% CI	n	Mean minutes	95% CI
15-29	191	198.7	144.3-253.1	426	148.6	106.5-190.6	617	176.1	132.8-219.4
30-44	269	284.6	225.0-344.2	761	241.9	197.2-286.6	1030	263.6	223.8-303.3
45-69	343	310.7	251.6-369.8	708	253.9	213.0-294.7	1051	285.5	240.0-331.1
Total	**803**	**262.0**	**213.5-310.5**	**1895**	**214.5**	**173.1-256.0**	**2698**	**239.9**	**199.4-280.4**

Table 72: Mean minutes of work-related physical activity per day

Mean minutes of work-related physical activity on average per day									
Male				Female			Both Sexes		
Age Group (years)	n	Mean minutes	95% CI	n	Mean minutes	95% CI	n	Mean minutes	95% CI
15-29	153	50.3	38.6-62.0	324	67.4	56.0-78.8	477	57.7	48.3-67.1
30-44	223	68.9	62.1-75.7	659	84.1	79.7-88.6	882	76.4	70.6-82.2
45-69	271	76.8	72.3-81.3	619	80.1	75.3-85.0	890	78.3	74.6-82.1
TOTAL	**647**	**64.6**	**58.0-71.2**	**1602**	**78.1**	**73.0-83.2**	**2249**	**70.9**	**65.4-76.4**

Table 73: Mean minutes of transport-related physical activity per day

Mean minutes of transport-related physical activity on average per day									
Male				Female			Both Sexes		
Age Group (years)	n	Mean minutes	95% CI	n	Mean minutes	95% CI	n	Mean minutes	95% CI
15-29	153	40.7	30.2-51.2	324	11.1	5.8-16.5	477	9.9	6.7-13.2
30-44	223	21.5	14.4-28.6	659	6.0	4.1-8.0	882	7.8	5.2-10.5
45-69	271	11.8	8.7-15.0	619	8.2	6.3-10.0	890	9.9	7.9-11.8
TOTAL	**647**	**25.5**	**18.7-32.4**	**1602**	**8.1**	**5.9-10.3**	**2249**	**9.0**	**7.4-10.6**

Table 74: Mean minutes of recreation-related physical activity per day

Mean minutes of recreation-related physical activity on average per day									
Male				Female			Both Sexes		
Age Group (years)	n	Mean minutes	95% CI	n	Mean minutes	95% CI	n	Mean minutes	95% CI
15-29	153	40.7	30.2-51.2	324	21.5	14.7-28.3	477	32.4	24.5-40.2
30-44	223	21.5	14.4-28.6	659	9.8	6.7-13.0	882	15.8	10.7-20.9
45-69	271	11.8	8.7-15.0	619	11.7	8.3-15.2	890	11.8	8.9-14.7
TOTAL	**647**	**25.5**	**18.7-32.4**	**1602**	**13.8**	**10.4-17.2**	**2249**	**20.1**	**15.1-25.1**

Table 75: No work-related physical activity

No work-related physical activity									
Male				Female			Both Sexes		
Age Group (years)	n	% no activity at work	95% CI	n	% no activity at work	95% CI	n	% no activity at work	95% CI
15-29	191	42.0	24.5-59.5	426	34.2	20.3-48.1	617	38.5	23.5-53.5
30-44	269	26.8	17.5-36.1	761	17.4	7.2-27.7	1030	22.2	13.8-30.6
45-69	343	27.0	15.6-38.4	708	18.6	9.5-27.8	1051	23.3	13.5-33.1
TOTAL	**803**	**32.1**	**20.6-43.6**	**1895**	**23.2**	**12.4-33.9**	**2698**	**27.9**	**17.2-38.7**

Table 76: No transport-related physical activity

No transport-related physical activity									
Male				Female			Both Sexes		
Age Group (years)	n	% no activity for trans-port	95% CI	n	% no activity for trans-port	95% CI	n	% no activity for trans-port	95% CI
15-29	191	77.6	69.5-85.7	426	67.4	57.8-77.1	617	74.4	64.0-84.9
30-44	269	76.0	64.6-87.3	761	72.7	68.1-77.3	1030	74.5	66.5-82.4
45-69	343	66.2	55.2-77.1	708	64.6	58.1-71.0	1051	63.6	56.1-71.2
TOTAL	**803**	**73.9**	**67.3-80.5**	**1895**	**69.0**	**64.1-73.8**	**2698**	**71.7**	**65.0-78.3**

Table 77: No recreation-related physical activity

No recreation-related physical activity									
Male				Female			Both Sexes		
Age Group (years)	n	% no activity at recreation	95% CI	n	% no activity at recreation	95% CI	n	% no activity at recreation	95% CI
15-29	191	42.3	33.4-51.1	426	67.4	57.8-77.1	617	53.6	45.2-62.0
30-44	269	57.1	46.4-67.8	761	72.7	68.1-77.3	1030	64.8	57.4-72.2
45-69	343	68.8	59.8-77.8	708	64.6	58.1-71.0	1051	66.9	60.2-73.6
TOTAL	**803**	**55.1**	**48.0-62.2**	**1895**	**69.0**	**64.1-73.8**	**2698**	**61.6**	**56.2-66.9**

Table 78: Mean minutes spent in sedentary activities per day for men

Minutes spent in sedentary activities on average per day					
Male					
Age Group (years)	n	Mean minutes	95% CI	Median minutes	Inter-quartile range (P25-P75)
15-29	239	146.8	39.7-253.9	60	2-240
30-44	305	181.9	98.1-265.6	120	2-300
45-69	379	97.8	54.9-140.7	60	2-120
TOTAL	**923**	**145.8**	**66.3-225.2**	**60**	**2-240**

Table 79: Mean minutes spent in sedentary activities per day for women

Minutes spent in sedentary activities on average per day					
Female					
Age Group (years)	n	Mean minutes	95% CI	Median minutes	Inter-quartile range (P25-P75)
15-29	457	160.6	84.8-236.4	120	2-240
30-44	813	136.4	86.4-186.5	90	2-180
45-69	769	91.8	30.7-152.9	30	2-120
TOTAL	**2039**	**130.5**	**68.1-192.9**	**60**	**2-180**

Table 80: Mean minutes spent in sedentary activities per day for both sexes

Minutes spent in sedentary activities on average per day					
Both Sexes					
Age Group (years)	n	Mean minutes	95% CI	Median minutes	Inter-quartile range (P25-P75)
15-29	696	152.1	58.9-245.3	60	2-240
30-44	1118	160.2	96.4-224.0	120	2-240
45-69	1148	94.9	45.7-144.2	60	2-120
TOTAL	**2962**	**139.0**	**68.4-209.6**	**60**	**2-180**

NCDs

History of Raised Blood Pressure

Forty two percent of the respondents did not have their blood pressure measured ever and among those measured, 79.5% said they were not diagnosed to have raised blood pressure. Among those diagnosed, 44.5% reported that they were told in the past 12 months that they have raised blood pressure and 87.8% of the people diagnosed are currently taking medication. Nine percent of the respondents have seen a traditional healer and 3.4% are currently taking herbal medicines and 2.5% doing Hijama treatment for hypertension.

Table 81: Blood pressure measurement and diagnosis of hypertension

Blood pressure measurement and diagnosis									
Male									
Age Group (years)	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
15-29	292	63.5	46.8-80.3	32.8	16.6-49.1	1.7	0.0-4.1	1.9	0.8-3.1
30-44	280	27.0	18.2-35.8	68.5	61.2-75.8	3.0	0.0-7.4	1.6	0.0-3.6
45-69	354	7.9	4.4-11.5	66.4	55.9-76.9	21.1	10.9-31.4	4.5	1.9-7.1
TOTAL	**926**	**42.9**	**25.2-60.6**	**49.0**	**34.9-63.1**	**5.8**	**1.8-9.7**	**2.3**	**1.1-3.5**

Blood pressure measurement and diagnosis									
Female									
Age Group (years)	n	% Never mea-sured	95% CI	% mea-sured, not diag-nosed	95% CI	% diag-nosed, but not within past 12 months	95% CI	% diag-nosed within past 12 months	95% CI
15-29	578	55.6	29.8-81.4	38.3	11.8-64.9	2.0	1.0-3.1	4.0	1.9-6.2
30-44	793	17.5	10.8-24.1	77.1	70.8-83.3	4.0	2.3-5.7	1.5	0.7-2.2
45-69	736	5.9	3.1-8.7	55.8	51.2-60.5	28.1	22.5-33.7	10.2	5.6-14.8
TOTAL	**2107**	**33.7**	**12.8-54.6**	**54.3**	**35.4-73.1**	**7.6**	**5.2-10.0**	**4.4**	**2.3-6.5**

Blood pressure measurement and diagnosis									
Both sexes									
Age Group (years)	n	% Nev-er mea-sured	95% CI	% mea-sured, not diag-nosed	95% CI	% diag-nosed, but not within past 12 months	95% CI	% diag-nosed within past 12 months	95% CI
15-29	870	60.2	39.7-80.6	35.2	14.7-55.6	1.8	0.7-3.0	2.8	1.3-4.3
30-44	1073	22.3	15.2-29.4	72.7	66.6-78.8	3.5	1.2-5.8	1.5	0.4-2.7
45-69	1090	7.0	4.7-9.4	61.7	55.3-68.0	24.3	16.8-31.7	7.1	4.2-9.9
TOTAL	**3033**	**38.8**	**19.6-58.0**	**51.4**	**35.2-67.6**	**6.6**	**3.5-9.7**	**3.2**	**1.7-4.7**

Table 82: Currently taking medication for hypertension among diagnosed

Currently taking medication for raised blood pressure prescribed by doctor or health worker among those diagnosed									
Male				Female			Both Sexes		
Age Group (years)	n	% tak-ing meds	95% CI	n	% tak-ing meds	95% CI	n	% tak-ing meds	95% CI
15-29	8	96.9	90.7-100	14	97.7	94.2-100	22	97.3	93.9-100
30-44	4	60.0	50.0-70.0	24	77.6	55.5-99.6	28	68.1	50.9-85.3
45-69	70	90.9	80.4-100	204	99.5	98.9-100	274	96.1	91.9-100
Total	**82**	**88.6**	**79.1-98.2**	**242**	**97.3**	**94.8-99.9**	**324**	**93.6**	**88.8-98.3**

Table 83: Seen traditional healer for hypertension

Seen a traditional healer among those previously diagnosed									
Male				Female			Both Sexes		
Age Group (years)	n	% seen trad. healer	95% CI	n	% seen trad. healer	95% CI	n	% seen trad. healer	95% CI
15-29	11	2.3	0.0-7.2	35	12.3	0.0-29.5	46	7.8	0.0-18.5
30-44	10	0.0	0.0-0.0	57	2.2	0.0-5.2	67	1.2	0.0-2.9
45-69	83	3.7	0.0-7.8	238	3.2	0.0-7.4	321	3.4	0.3-6.5
Total	**104**	**2.8**	**0.1-5.5**	**330**	**5.3**	**0.4-10.2**	**434**	**4.1**	**1.1-7.2**

Table 84: Currently taking herbal medicine for hypertension

Currently taking herbal or traditional remedy for raised blood pressure among those previously diagnosed									
Male				Female			Both Sexes		
Age Group (years)	n	% tak-ing trad. meds	95% CI	n	% tak-ing trad. meds	95% CI	n	% tak-ing trad. meds	95% CI
15-29	11	2.3	0.0-7.2	35	11.3	0.0-28.8	46	7.2	0.0-17.9
30-44	10	0.0	0.0-0.0	57	0.0	0.0-0.0	67	0.0	0.0-0.0
45-69	83	0.9	0.0-2.2	238	2.6	0.0-6.5	321	1.8	0.0-0.0
Total	**104**	**1.1**	**0.0-2.4**	**330**	**4.3**	**0.0-9.1**	**434**	**2.9**	**0.0-5.7**

Table 85: Ever used Hijama for hypertension

Ever used Hijama among those previously diagnosed						
Male			Female		Both Sexes	
Age Group (years)	n	% used Hijama	n	% used Hijama	n	% used Hijama
15-29	23	1.6%	67	3.3%	90	2.5%
30-44	10	0.0%	57	0.0%	67	0.0%
45-69	83	3.0%	240	3.2%	323	3.1%
Total	**116**	**2.0%**	**364**	**2.9%**	**480**	**2.5%**

Table 86: Currently using Hijama for hypertension

Currently using Hijama for raised blood pressure among those previously diagnosed						
Mal			Female		Both Sexes	
Age Group (years)	n	% used Hijama	n	% used Hijama	n	% used Hijama
15-29	118	1.6%	203	3.3%	321	2.5%
30-44	10	0.0%	57	0.0%	67	0.0%
45-69	83	3.0%	240	3.2%	323	3.1%
Total	**211**	**2.0%**	**500**	**2.9%**	**711**	**2.5%**

History of Diabetes

Forty seven percent of the people did not have their blood sugar measured ever and among those measured, 94.7% said they were not diagnosed to have raised blood sugar. Among those diagnosed, 13.2% reported that they were told that they have raised blood sugar but not in the past 12 months, and 97.3% of the people diagnosed are currently taking medicines and 64.9% are taking insulin. Two percent of the respondents have seen a traditional healer, 4.1% are currently taking herbal medicines, and 54.5% doing Hijama treatment for diabetes.

Table 87: Blood sugar measurement and diagnosis of diabetes

Blood sugar measurement and diagnosis									
Male									
Age Group (years)	n	% Never mea-sured	95% CI	% me-sured, not diag-nosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diag-nosed within past 12 months	95% CI
15-29	284	78.1	59.7-96.6	19.3	2.3-36.3	2.0	0.0-4.5	0.5	0.0-1.7
30-44	280	40.4	28.0-52.8	54.0	41.4-66.7	3.5	0.0-8.4	2.0	0.0-4.1
45-69	354	13.9	9.9-18.0	73.9	68.5-79.4	7.9	4.6-11.3	4.2	2.6-5.9
TOTAL	**918**	**55.5**	**34.3-76.6**	**39.3**	**20.0-58.7**	**3.6**	**1.6-5.5**	**1.6**	**0.5-2.8**

Blood sugar measurement and diagnosis									
Female									
Age Group (years)	n	% Never mea-sured	95% CI	% mesured, not diag-nosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diag-nosed within past 12 months	95% CI
15-29	565	64.0	49.4-78.7	31.0	16.1-45.9	3.1	1.7-4.6	1.8	1.0-2.7
30-44	793	21.6	14.0-29.3	69.0	61.0-77.1	6.2	4.0-8.5	3.1	0.3-5.9
45-69	736	12.9	8.7-17.1	66.2	62.0-70.5	14.7	10.6-18.8	6.1	3.6-8.7
TOTAL	**2094**	**39.9**	**24.7-55.2**	**50.6**	**36.7-64.4**	**6.4**	**4.7-8.2**	**3.1**	**1.6-4.6**

Blood sugar measurement and diagnosis									
Both sexes									
Age Group (years)	n	% Never mea-sured	95% CI	% msured, not diag-nosed	95% CI	% diag-nosed, but not within past 12 months	95% CI	% diag-nosed within past 12 months	95% CI
15-29	849	72.3	55.3-89.3	24.1	8.0-40.3	2.5	0.6-4.3	1.1	0.3-1.8
30-44	1073	31.2	21.8-40.6	61.4	52.0-70.8	4.9	2.2-7.6	2.5	0.3-4.8
45-69	1090	13.5	10.8-16.2	70.5	67.6-73.3	11.0	8.1-13.9	5.1	3.5-6.6
TOTAL	**3012**	**48.6**	**29.7-67.4**	**44.3**	**27.2-61.4**	**4.8**	**3.2-6.5**	**2.3**	**1.1-3.5**

Table 88: Currently taking medications for diabetes

Currently taking medication prescribed for diabetes among those previously diagnosed									
Male				Female			Both Sexes		
Age Group (years)	n	% taking meds	95% CI	n	% taking meds	95% CI	n	% taking meds	95% CI
15-29	1	0.0	0.0-0.0	8	90.2	73.3-100	9	70.2	15.0-100
30-44	8	89.5	68.4-100	43	75.3	60.6-90.0	51	80.2	68.8-91.7
45-69	30	100.0	100-100	116	98.2	95.9-100	146	98.7	97.1-100
Total	**39**	**86.7**	**78.2-95.2**	**167**	**90.3**	**85.3-95.3**	**206**	**89.2**	**81.8-96.6**

Table 89: Currently taking insulin for diabetes

Currently taking insulin prescribed for diabetes among those previously diagnosed									
Male				Female			Both Sexes		
Age Group (years)	n	% taking meds	95% CI	n	% taking meds	95% CI	n	% taking meds	95% CI
15-29	6	100	100-100	12	81.7	55.3-100	18	90.0	75.0-100
30-44	8	40.1	0.0-82.1	36	18.9	0.0-40.6	44	26.8	3.5-50.1
45-69	25	37.9	5.3-70.5	101	15.2	5.6-24.8	126	22.0	8.0-36.0
Total	**39**	**62.2**	**38.6-85.9**	**149**	**33.8**	**19.8-47.9**	**188**	**44.2**	**31.1-57.3**

Table 90: Seen a traditional healer for diabetes

Seen a traditional healer for diabetes among those previously diagnosed									
Male				Female			Both Sexes		
Age Group (years)	n	% seen trad. healer	95% CI	n	% seen trad. healer	95% CI	n	% seen trad. healer	95% CI
15-29	8	0.0	0.0-0.0	22	14.4	0.0-37.0	30	8.4	0.0-24.9
30-44	11	0.0	0.0-0.0	63	0.7	0.0-1.8	74	0.5	0.0-1.1
45-69	46	0.6	0.0-2.0	138	1.3	0.0-2.8	184	1.0	0.0-2.1
Total	**65**	**0.3**	**0.0-0.9**	**223**	**4.4**	**0.0-11.6**	**288**	**2.7**	**0.0-7.1**

Table 91: Currently taking herbal medicines for diabetes

Currently taking herbal or traditional treatment for diabetes among those previously diagnosed									
Male				Female			Both Sexes		
Age Group (years)	n	% taking trad. meds	95% CI	n	% taking trad. meds	95% CI	n	% taking trad. meds	95% CI
15-29	8	0.0	0.0-0.0	22	0.0	0.0-0.0	30	0.0	0.0-0.0
30-44	11	0.0	0.0-0.0	63	2.4	0.0-5.6	74	1.5	0.0-3.5
45-69	46	1.0	0.0-3.2	138	4.7	0.3-9.0	184	3.1	0.6-5.7
Total	**65**	**0.5**	**0.0-1.4**	**223**	**2.8**	**0.9-4.7**	**288**	**1.8**	**0.6-3.1**

Table 92: Ever used Hijama for diabetes

Ever used Hijama treatment for diabetes among those previously diagnosed						
Male			Female		Both Sexes	
Age Group (years)	n	% using Hijaama	n	% using Hijaama	n	% using Hijaama
15-29	13	0.0	47	4.0%	60	2.9%
30-44	11	18.7%	63	10.3%	74	13.5%
45-69	46	0.0	138	7.6%	184	4.4%
Total	**70**	**4.4%**	**248**	**6.2%**	**318**	**5.6%**

Table 93: Currently using Hijama for diabetes

Currently using Hijama treatment for diabetes among those previously diagnosed						
Male			Female		Both Sexes	
Age Group (years)	n	% using Hijaama	n	% using Hijaama	n	% using Hijaama
15-29	13	54.3%	47	73.2%	60	62.3%
30-44	11	0.0	63	0.0	74	0.0
45-69	46	3.2%	138	0.0	184	1.3%
Total	**70**	**49.5%**	**248**	**60.7%**	**318**	**54.5%**

History of Raised Total Cholesterol

More than half of the respondents did not have their blood cholesterol measured ever and among those measured, 83.8.7% said they were not diagnosed to have raised blood cholesterol. Among those diagnosed, 33.4% reported that they were told that they have raised blood cholesterol in the past 12 months, and 93.7% of the people diagnosed are currently taking medicines. Among those diagnosed, 3.4% of the respondents haveseen a traditional healer and 7.4% are currently taking herbal medicines.

Table 94: Measurement of cholesterol and diagnosis of raised cholesterol

Total cholesterol measurement and diagnosis									
Male									
Age Group (years)	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% C	% diagnosed within past 12 months	95% CI
15-29	265	75.2	67.6-82.7	21.9	15.6-28.2	1.2	0.0-3.0	1.8	0.0-5.4
30-44	280	47.7	36.2-59.2	44.0	32.9-55.0	4.3	1.8-6.9	4.0	1.3-6.6
45-69	354	11.4	7.7-15.1	57.8	47.7-67.8	22.7	11.7-33.7	8.2	3.5-12.8
Total	**899**	**53.8**	**41.7-65.8**	**35.9**	**27.5-44.4**	**6.6**	**2.6-10.5**	**3.7**	**1.3-6.2**

Total cholesterol measurement and diagnosis									
Female									
Age Group (years)	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% C	% diagnosed within past 12 months	95% CI
15-29	537	68.7	58.1-79.4	25.9	15.2-36.6	2.5	0.9-4.2	2.8	1.4-4.3
30-44	793	30.9	23.4-38.5	56.6	48.4-64.9	5.0	3.3-6.8	7.4	3.9-10.9
45-69	736	10.7	8.1-13.3	50.8	43.9-57.8	26.7	20.9-32.4	11.8	7.1-16.5
Total	**2066**	**44.1**	**31.2-57.0**	**41.4**	**30.9-52.0**	**8.3**	**6.2-10.3**	**6.2**	**3.6-8.8**

Total cholesterol measurement and diagnosis									
Both sexes									
Age Group (years)	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% C	% diagnosed within past 12 months	95% CI
15-29	802	72.4	64.1-80.6	23.6	16.4-30.9	1.8	0.3-3.2	2.2	0.1-4.4
30-44	1073	39.5	30.2-48.7	50.2	41.4-59.0	4.7	2.9-6.5	5.7	3.1-8.2
45-69	1090	11.1	8.5-13.7	54.6	47.4-61.9	24.5	17.3-31.7	9.8	6.4-13.2
Total	**2965**	**49.3**	**37.1-61.6**	**38.4**	**29.4-47.5**	**7.4**	**4.6-10.1**	**4.9**	**2.9-6.8**

Table 95: Currently taking medications for raised cholesterol

Currently taking oral treatment (medication) prescribed for raised total cholesterol among those previously diagnosed									
Male				Female			Both Sexes		
Age Group (years)	n	% taking meds	95% CI	n	% taking meds	95% CI	n	% taking meds	95% CI
15-29	1	0.0	0.0-0.0	1	100	100-100	2	41.9	0.0-111.3
30-44	12	52.6	18.8-86.5	38	68.8	51.8-85.7	50	59.5	35.7-83.3
45-69	62	80.0	60.3-99.8	178	81.8	68.9-94.7	240	81.0	66.2-95.7
Total	**75**	**70.2**	**44.9-95.5**	**217**	**80.4**	**70.3-90.5**	**292**	**75.4**	**59.1-91.6**

Table 96: Seen a traditional healer for raised cholesterol

Seen a traditional healer for raised cholesterol among those previously diagnosed									
Male				Female			Both Sexes		
Age Group (years)	n	% seen traditional healer	95% CI	n	% seen traditional healer	95% CI	n	% seen traditional healer	95% CI
15-29	8	3.3	0.0-11.0	20	0.0	0.0-0.0	28	1.4	0.0-4.1
30-44	28	3.6	0.0-10.8	99	1.1	0.0-3.3	127	2.1	0.0-5.3
45-69	97	1.3	0.0-3.3	244	1.6	0.0-3.3	341	1.5	0.2-2.8
Total	**133**	**2.1**	**0.0-4.4**	**363**	**1.2**	**0.2-2.2**	**496**	**1.6**	**0.4-2.8**

Table 97: Currently taking herbal medicines for raised cholesterol

Seen a traditional healer for raised cholesterol among those previously diagnosed									
Male				Female			Both Sexes		
Age Group (years)	n	% taking traditional medicine	95% CI	n	% taking traditional medicine	95% CI	n	% taking traditional medicine	95% CI
15-29	8	3.3	0.0-11.0	20	0.0	0.0-0.0	28	1.4	0.0-4.1
30-44	28	3.6	0.0-10.8	99	1.1	0.0-3.3	127	2.1	0.0-5.3
45-69	97	1.7	0.0-4.3	244	1.5	0.0-2.9	341	1.6	0.0-3.1
Total	133	2.4	0.1-4.7	363	1.1	0.1-2.1	496	1.7	0.5-2.9

History of Cardiovascular Diseases

When asked about the history of a cardiovascular disease, 4.7% reported having had a heart attack, angina,or stroke. Among all respondents 3.5% are taking aspirin and 24.2% are taking statins for prevention or treatment of cardiovascular disease. When asked about advice by the doctor or health care worker a small percent of people indicated that had been given lifestyle advice; 17.5% advised to quit smoking or not to smoke, 28.2% to reduce salt in diet, 38.3% to eat five servings of fruits and/or vegetables daily, 32.4% to reduce fat in the diet, 39.95 to start or do more physical activity and 29.2% to maintain healthy body weight or lose weight.

Table 98: History of cardiovascular disease (CVD)

Having ever had a heart attack or chest pain from heart disease or a stroke									
Male				Female			Both Sexes		
Age Group (years)	n	% CVD histo-ry	95% CI	n	% CVD history	95% CI	n	% CVD history	95% CI
15-29	316	2.7	0.0-6.2	615	4.3	0.9-7.8	931	3.4	2.2-4.5
30-44	280	3.8	1.4-6.2	793	3.0	1.1-5.0	1073	3.4	1.9-5.0
45-69	354	11.8	7.2-16.5	736	9.4	6.2-12.7	1090	10.8	7.8-13.7
Total	950	4.5	1.6-7.4	2144	4.8	2.9-6.7	3094	4.7	3.3-6.0

Table 99: Currently taking aspirin

Currently taking aspirin regularly to prevent or treat heart disease									
Male				Female			Both Sexes		
Age Group (years)	n	% taking aspirin	95% CI	n	% taking aspirin	95% CI	n	% taking aspirin	95% CI
15-29	297	2.1	0.0-5.3	582	7.9	0.0-17.2	879	4.5	1.9-7.1
30-44	251	1.7	0.0-3.4	733	0.7	0.0-1.5	984	1.2	0.3-2.1
45-69	319	4.0	0.9-7.1	661	3.7	2.5-4.9	980	3.9	2.1-5.6
Total	867	2.3	0.3-4.3	1976	5.0	0.0-11.1	2843	3.5	1.5-5.5

Table 100: Currently taking statins

Currently taking statins regularly to prevent or treat heart disease									
Male				Female			Both Sexes		
Age Group (years)	n	% taking statins	95% CI	n	% taking statins	95% CI	n	% taking statins	95% CI
15-29	298	41.9	23.3-60.5	591	39.0	16.5-61.4	889	40.7	20.4-60.9
30-44	256	1.6	0.2-3.0	735	0.6	0.0-1.2	991	1.1	0.2-1.9
45-69	318	4.5	1.5-7.5	670	6.8	3.6-9.9	988	5.5	3.4-7.7
Total	872	25.9	7.1-44.6	1996	22.2	2.5-41.9	2868	24.2	5.0-43.5

Lifestyle Advice

Table 101: Advised to quit smoking

Currently taking statins regularly to prevent or treat heart disease									
Male				Female			Both Sexes		
Age Group (years)	n	% advised	95% CI	n	% advised	95% CI	n	% advised	95% CI
15-29	203	18.3	9.1-27.6	426	17.9	9.6-26.1	629	18.1	12.1-24.2
30-44	170	23.4	10.2-36.5	543	4.9	0.0-9.8	713	14.1	6.4-21.9
45-69	251	27.4	15.4-39.5	583	12.1	7.5-16.7	834	20.2	12.8-27.6
Total	624	21.3	16.4-26.2	1552	13.0	6.1-19.8	2176	17.5	14.0-20.9

Table 102: Advised to reduce salt intake

Advised by doctor or health worker to reduce salt in the diet									
Male				Female			Both Sexes		
Age Group (years)	n	% advised	95% CI	n	% advised	95% CI	n	% advised	95% CI
15-29	203	24.5	16.9-32.1	426	33.6	20.5-46.6	629	28.5	19.1-37.8
30-44	170	16.8	9.5-24.1	543	19.3	8.9-29.7	713	18.1	10.6-25.5
45-69	251	38.6	25.6-51.5	583	45.1	36.7-53.5	834	41.7	32.0-51.3
Total	624	25.2	19.8-30.6	1552	31.7	21.9-41.5	2176	28.2	21.2-35.2

Table 103: Advised to eat fi e servings of fruit and/or vegetables daily

Advised by doctor or health worker to eat at least fi e servings of fruit and/or vegetables each day									
Male				Female			Both Sexes		
Age Group (years)	n	% advised	95% CI	n	% advised	95% CI	n	% advised	95% CI
15-29	203	22.9	11.5-34.3	426	41.2	29.1-53.3	629	30.9	19.6-42.3
30-44	170	40.9	33.4-48.3	543	46.8	38.7-54.9	713	43.8	37.4-50.3
45-69	251	45.7	33.0-58.4	583	57.3	48.5-66.0	834	51.1	43.2-59.1
Total	624	31.7	21.7-41.6	1552	46.0	36.5-55.4	2176	38.3	28.5-48.0

Table 104: Advised to reduce fat in the diet

Advised by doctor or health worker to reduce fat in the diet									
Male				Female			Both Sexes		
Age Group (years)	n	% advised	95% CI	n	% advised	95% CI	n	% advised	95% CI
15-29	203	21.9	15.8-28.0	426	33.0	21.5-44.4	629	26.7	20.7-32.8
30-44	170	26.4	13.3-39.4	543	34.0	25.2-42.9	713	30.2	21.7-38.7
45-69	251	47.7	32.2-63.2	583	55.3	47.7-62.8	834	51.3	41.9-60.7
Total	624	27.9	23.7-32.0	1552	37.7	31.3-44.1	2176	32.4	27.9-36.8

Table 105: Advised to start or do more physical activity

Advised by doctor or health worker to start or do more physical activity									
Male				Female			Both Sexes		
Age Group (years)	n	% advised	95% CI	n	% advised	95% CI	n	% advised	95% CI
15-29	203	24.9	14.0-35.8	426	34.8	25.9-43.7	629	29.2	22.7-35.8
30-44	170	31.6	21.7-41.4	543	53.5	43.2-63.9	713	42.5	33.2-51.9
45-69	251	67.5	57.6-77.5	583	65.0	56.1-73.9	834	66.3	58.1-74.6
Total	624	34.6	22.4-46.8	1552	46.2	38.5-53.8	2176	39.9	30.3-49.5

Table 106: Advised to maintain healthy body weight or lose weight

Advised by doctor or health worker to maintain a healthy body weight or to lose weight									
Male				Female			Both Sexes		
Age Group (years)	n	% advised	95% CI	n	% advised	95% CI	n	% advised	95% CI
15-29	203	17.5	10.3-24.8	426	27.2	18.0-36.3	629	21.8	18.8-24.7
30-44	170	23.1	13.4-32.9	543	39.7	28.9-50.6	713	31.4	21.4-41.5
45-69	251	47.9	34.3-61.5	583	46.2	36.6-55.9	834	47.1	37.5-56.8
Total	624	24.7	16.5-32.8	1552	34.5	27.1-42.0	2176	29.2	22.2-36.2

Cervical Cancer Screening

When asked about screening for cervical cancer, 11.2% of female respondents reported having ever beentested by any method and in the age group 30-49 years, 11.7% reported ever being tested.

Table 107: Women ever tested for cervical cancer

Female			
Age Group (years)	n	% ever tested	95% C
15-29	426	2.5	0.8-4.2
30-44	786	10.7	6.7-14.7
45-69	724	23.2	17.2-29.2
15-69	1936	11.2	7.7-14.7
30-49	**975**	**11.7**	**7.5-16.0**

NCD risk factor measures

Physical Measurements

Blood pressure measurements show that 23.9% of the respondents have hypertension (SBP ≥140 and/or DBP ≥ 90 mmHg). Among those diagnosed and on treatment, 53.9% had their blood pressure controlled at the time of the study and in 46.1% of the respondents, blood pressure was not controlled. The mean systolic and diastolic pressure are 115/80 mmHg and mean heart rate is 80 beats per minute.

Table 108: Mean systolic blood pressure

Mean systolic blood pressure (mmHg)									
Male				Female			Both Sexes		
Age Group (years)	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
15-29	197	98.2	86.5-109.9	416	97.2	87.5-106.9	613	97.8	87.2-108.4
30-44	276	124.2	122.2-126.2	788	123.9	120.7-127.1	1064	124.0	122.0-126.0
45-69	351	137.3	134.0-140.6	732	139.9	134.7-145.1	1083	138.5	136.4-140.6
Total	**824**	**114.8**	**102.4-127.1**	**1936**	**115.3**	**104.1-126.6**	**2760**	**115.0**	**103.2-126.8**

Table 109: Mean diastolic blood pressure

Mean diastolic blood pressure (mmHg)									
Male				Female			Both Sexes		
Age Group (years)	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
15-29	199	77.6	76.8-78.4	412	78.2	76.4-80.0	611	77.9	77.1-78.6
30-44	273	80.0	78.3-81.7	779	82.7	81.2-84.3	1052	81.3	80.0-82.7
45-69	346	84.5	82.8-86.2	723	86.7	83.8-89.6	1069	85.5	84.1-86.9
Total	**818**	**79.8**	**78.3-81.3**	**1914**	**81.5**	**80.5-82.6**	**2732**	**80.6**	**79.4-81.8**

Figure 22: Mean systolic blood pressure

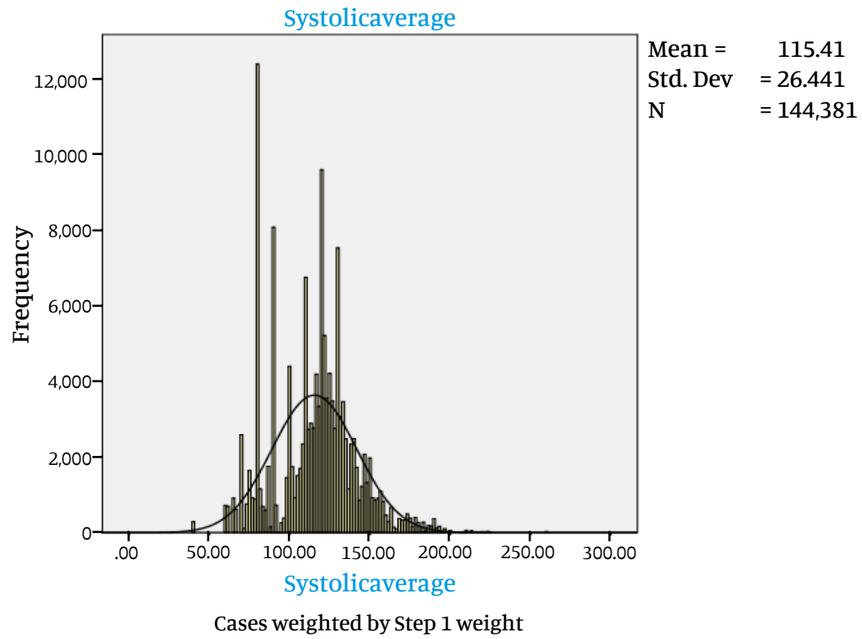


Figure 23; Mean diastolic blood pressure

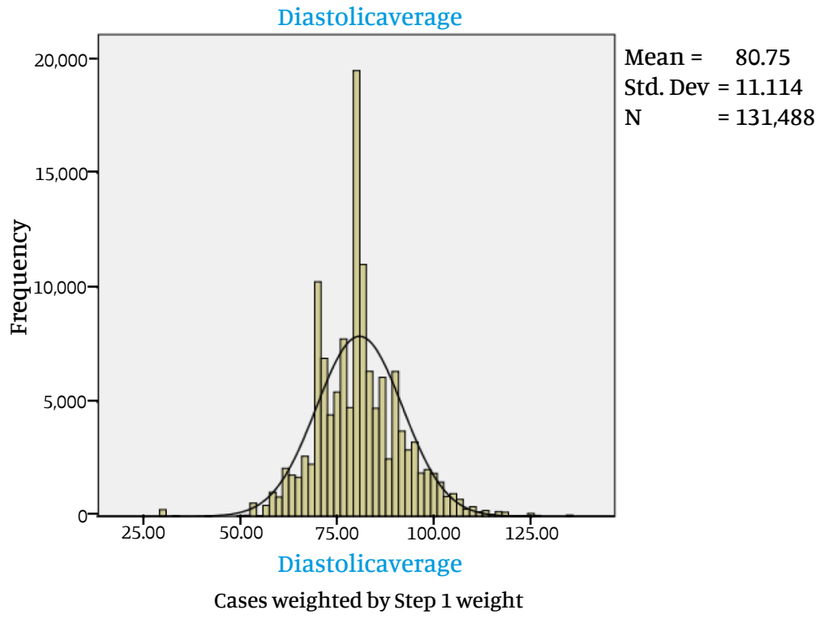


Table 110: Raised blood pressure (SBP ≥140 and/or DBP ≥ 90 mmHg)

SBP ≥140 and/or DBP ≥ 90 mmHg									
Male				Female			Both Sexes		
Age Group (years)	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
15-29	188	9.0	4.8-13.2	364	9.4	3.2-15.6	552	9.2	6.7-11.6
30-44	262	20.7	12.3-29.1	762	31.0	22.9-39.0	1024	25.8	19.5-32.2
45-69	333	47.3	37.7-57.0	699	52.1	46.8-57.5	1032	49.5	44.2-54.8
Total	**783**	**20.9**	**12.6-29.3**	**1825**	**27.1**	**21.8-32.3**	**2608**	**23.7**	**16.7-30.7**

Table 111: Raised blood pressure (SBP ≥160 and/or DBP ≥ 100 mmHg)

SBP ≥160 and/or DBP ≥ 100 mmHg									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
15-29	188	0.7	0.0-1.8	364	0.8	0.0-1.7	552	0.7	0.0 -1.5
30-44	262	4.0	1.6-6.4	762	9.4	5.9-12.9	1024	6.7	4.7-8.7
45-69	333	15.9	11.9-20.0	699	23.1	19.0-27.2	1032	19.2	16.0-22.4
Total	**783**	**5.0**	**2.6-7.4**	**1825**	**9.0**	**6.0-12.0**	**2608**	**6.8**	**4.2-9.4**

Table 112: Raised blood pressure (SBP ≥140 and/or DBP ≥ 90 mmHg) on medica-

SBP ≥140 and/or DBP ≥ 90 mmHg or currently on medication for raised blood pressure									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
15-29	188	12.0	5.6-18.4	364	12.9	7.8-18.1	552	12.4	8.7-16.1
30-44	262	20.9	12.4-29.3	762	31.5	23.6-39.4	1024	26.2	19.9-32.5
45-69	333	54.9	45.9-63.9	699	64.6	58.8-70.4	1032	59.4	53.2-65.5
Total	**783**	**24.0**	**15.2-32.9**	**1825**	**31.4**	**25.4-37.5**	**2608**	**27.4**	**19.7-35.1**

Table 113: Raised blood pressure (SBP ≥160 and/or DBP ≥ 100 mmHg)

SBP ≥160 and/or DBP ≥ 100 mmHg or currently on medication for raised blood pressure									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
15-29	262	5.4	2.3-8.6	762	10.8	7.6-14.0	552	5.5	2.9-8.0
30-44	333	34.5	24.8-44.1	699	47.3	42.2-52.3	1024	8.1	6.2-10.1
45-69	783	11.2	6.3-16.1	1825	17.3	13.8-20.7	1032	40.4	33.9-46.8
Total	**188**	**4.5**	**1.3-7.6**	**364**	**6.9**	**4.0-9.8**	**2608**	**14.0**	**9.7-18.2**

Table 114: Blood pressure (SBP ≥ 140 and/or DBP ≥ 90 mmHg) diagnosis, treatment, and control

Raised blood pressure diagnosis, treatment, and control among those with raised blood pressure (SBP ≥ 140 and/or DBP ≥ 90 mmHg) or on medication for raised blood pressure									
Male									
Age Group (years)	n	% with raised blood pressure, not previously diagnosed	95% CI	% with previously diagnosed raised blood pressure, not on medication	95% CI	% with previously diagnosed raised blood pressure, on medication but not controlled	95% CI	% with previously diagnosed raised blood pressure, on medication and blood pressure controlled	95% CI
15-29	27	66.2	47.2-85.2	1.8	0.0-5.5	6.8	0.0-19.1	25.3	2.4-48.1
30-44	54	86.0	65.0-107.0	6.5	0.0-15.9	6.9	0.0-18.6	0.7	0.0-2.0
45-69	172	49.9	36.3-63.6	8.0	1.2-14.7	28.3	11.8-44.8	13.8	6.6-21.0
Total	**253**	**63.6**	**53.2-74.0**	**6.1**	**1.8-10.5**	**17.4**	**8.6-26.2**	**12.8**	**5.1-20.6**

Raised blood pressure diagnosis, treatment, and control among those with raised blood pressure (SBP ≥ 140 and/or DBP ≥ 90 mmHg) or on medication for raised blood pressure									
Female									
Age Group (years)	n	% with raised blood pressure, not previously diagnosed	95% CI	% with previously diagnosed raised blood pressure, not on medication	95% CI	% with previously diagnosed raised blood pressure, on medication but not controlled	95% CI	% with previously diagnosed raised blood pressure, on medication and blood pressure controlled	95% CI
15-29	43	52.5	40.1-64.9	0.8	0.0-2.1	43	19.5	27.3	0.0-56.8
30-44	221	85.9	81.2-90.5	8.5	4.3-12.7	221	3.9	1.8	0.0-3.8
45-69	433	40.0	34.2-45.8	5.3	2.9-7.8	433	35.4	19.3	12.9-25.7
Total	**697**	**59.5**	**52.8-66.2**	**5.8**	**2.9-8.7**	**697**	**20.8**	**13.9**	**8.4-19.4**

Raised blood pressure diagnosis, treatment, and control among those with raised blood pressure (SBP ≥ 140 and/or DBP ≥ 90 mmHg) or on medication for raised blood pressure									
Both Sexes									
Age Group (years)	n	% with raised blood pressure, not previously diagnosed	95% CI	% with previously diagnosed raised blood pressure, not on medication	95% CI	% with previously diagnosed raised blood pressure, on medication but not controlled	95% CI	% with previously diagnosed raised blood pressure, on medication and blood pressure controlled	95% CI
15-29	70	60.2	44.8-75.7	1.3	0.0-3.6	12.3	0.0-31.2	26.1	1.8-50.5
30-44	275	85.9	76.4-95.4	7.7	3.1-12.2	5.1	0.0-10.9	1.3	0.0-2.6
45-69	605	44.9	37.4-52.5	6.7	3.2-10.1	31.9	25.0-38.7	16.5	12.0-21.1
Total	**950**	**61.5**	**55.0-68.0**	**5.9**	**3.5-8.4**	**19.2**	**16.3-22.1**	**13.4**	**7.4-19.4**

Table 115: Mean heart rate

Mean heart rate (beats per minute)									
Male				Female			Both Sexes		
Age Group (years)	n	mean	95% CI	n	mean	95% CI	n	mean	95% CI
15-29	197	109.2	88.1-130.3	417	112.7	88.8-136.6	614	110.8	88.6-133.0
30-44	275	75.2	73.3-77.0	786	79.8	78.8-80.8	1061	77.5	75.9-79.0
45-69	348	75.3	74.1-76.6	732	78.8	76.5-81.0	1080	76.9	75.4-78.4
Total	**820**	**91.4**	**74.5-108.2**	**1935**	**94.2**	**76.5-111.9**	**2755**	**92.7**	**75.5-109.8**

The BMI shows the population is overweight with a mean BMI of 25.5, with 52.5% of the respondents having BMI >=25 and 17.9% having BMI>=30.

Table 116: Mean height and weight

Mean height (cm)						
Male				Female		
Age Group (years)	n	mean	95% CI	n	mean	95% CI
15-29	188	165.8	164.2-167.5	408	155.0	154.2-155.8
30-44	269	163.7	162.6-164.8	763	153.8	153.0-154.5
45-69)	347	160.9	159.6-162.3	730	150.6	149.7-151.4
Total	**804**	**163.7**	**162.6-164.7**	**1901**	**153.3**	**152.6-154.1**

Mean weight (kg)						
Male				Female		
Age Group (years)	n	mean	95% CI	n	mean	95% CI
15-29	290	75.4	66.6-84.1	543	72.3	61.8-82.9
30-44)	275	65.1	62.4-67.9	755	63.4	62.2-64.5
45-69	345	68.0	66.1-69.8	730	62.1	60.2-64.1
Total	**910**	**71.3**	**65.2-77.4**	**2028**	**67.6**	**60.6-74.6**

Table 117: Mean BMI

Mean BMI (kg/m2)									
Male				Female			Both Sexes		
Age Group (years)	n	mean	95% CI	n	mean	95% CI	n	mean	95% CI
15-29	180	24.1	22.9-25.3	401	25.2	24.4-26.0	581	24.6	23.8-25.4
30-44	267	24.3	23.2-25.5	753	26.9	26.3-27.4	1020	25.6	24.8-26.3
45-69	341	26.3	25.7-26.9	725	27.5	26.5-28.4	1066	26.8	26.2-27.5
Total	**788**	**24.8**	**24.4-25.2**	**1879**	**26.5**	**25.8-27.2**	**2667**	**25.6**	**25.2-26.0**

Figure 24: Distribution of BMI

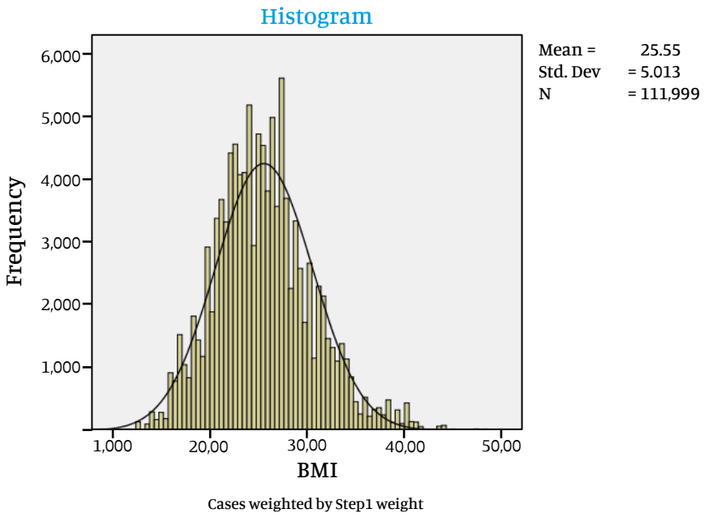


Figure 25: Overweight

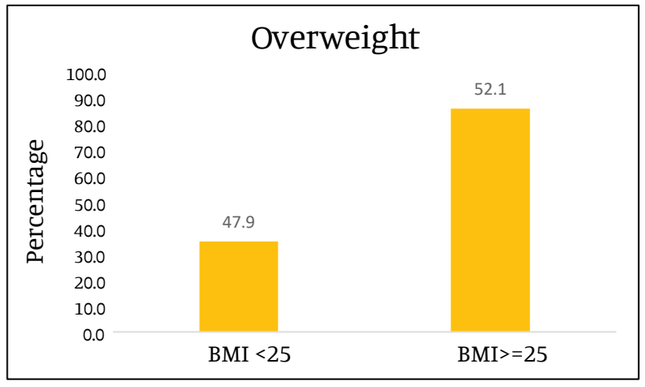


Figure 26: Obesity

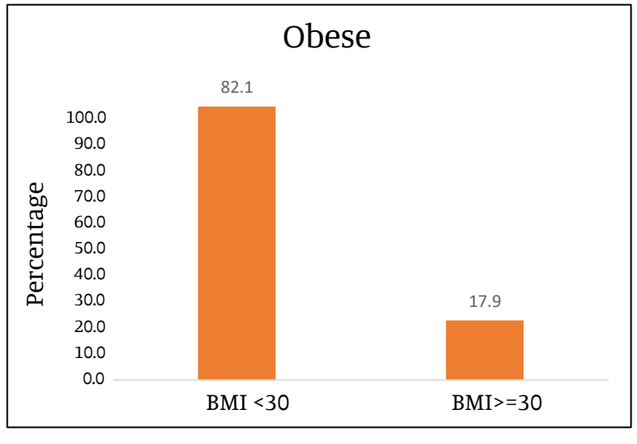


Figure 27: Overweight by sex

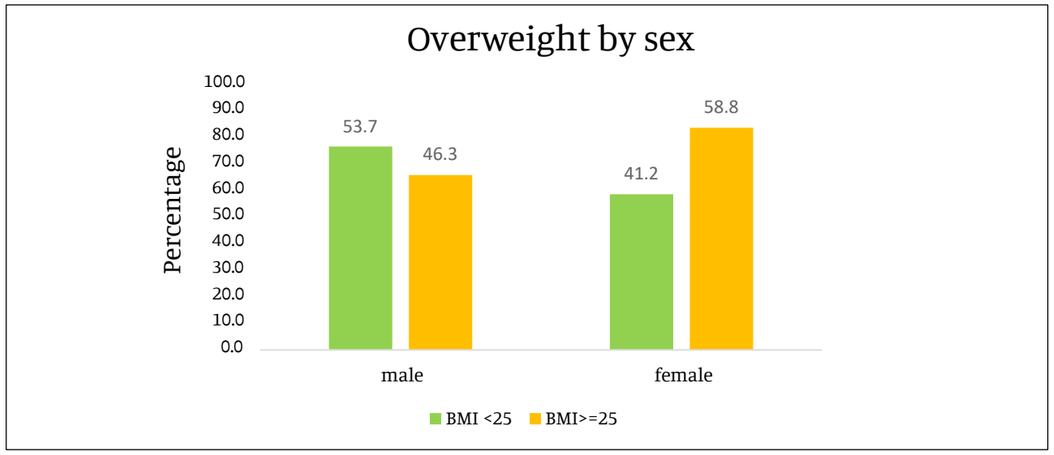


Figure 28: Obesity by sex

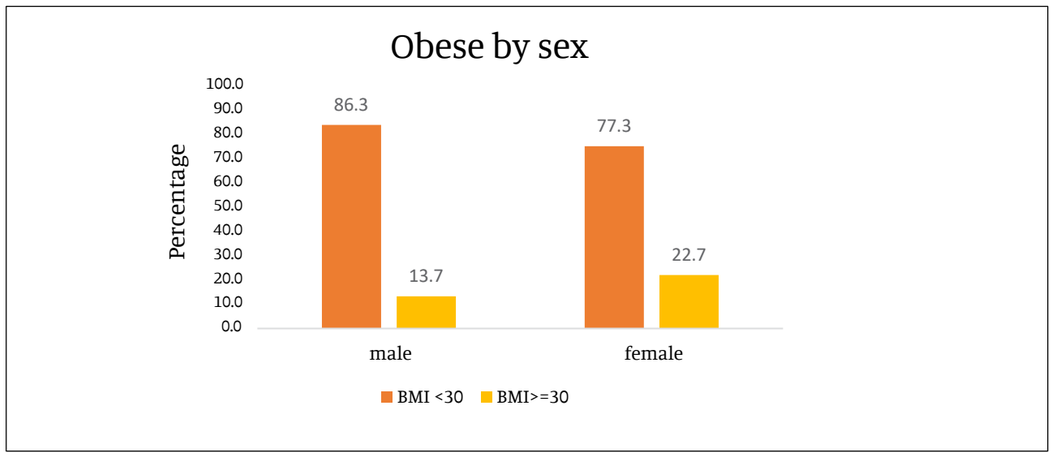


Figure 29: Overweight by age group

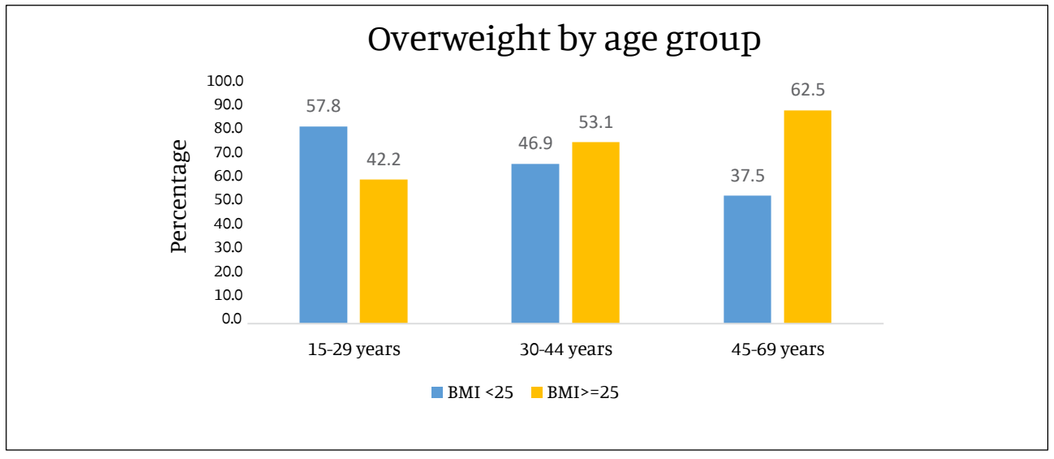


Figure 30: Obesity by age group

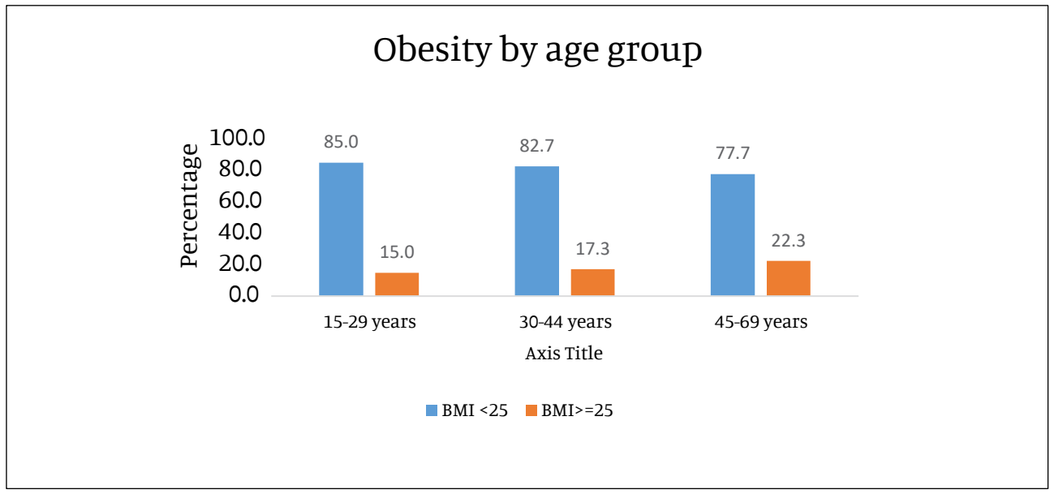


Table 118: BMI classification

BMI classification									
Male									
Age Group (years)	n	% Under-weight <18.5	95% CI	% Nor-mal weight 18.5-24.9	95% CI	% Over-weight 25.0-29.9	95% CI	% Obese ≥30.0	95% CI
15-29	180	7.5	3.3-11.6	52.6	42.9-62.2	26.6	20.4-32.8	13.4	4.7-22.1
30-44	267	9.1	1.6-16.6	48.0	37.4-58.6	31.2	25.5-36.8	11.7	4.2-19.3
45-69	341	1.4	0.4-2.5	39.1	30.7-47.4	41.3	34.8-47.8	18.2	13.1-23.2
Total	**788**	**6.4**	**3.5-9.4**	**47.1**	**41.8-52.3**	**32.4**	**28.0-36.8**	**14.1**	**10.8-17.3**

BMI classification									
Female									
Age Group (years)	n	% Under-weight <18.5	95% CI	% Nor-mal weight 18.5-24.9	95% CI	% Over-weight 25.0-29.9	95% CI	% Obese ≥30.0	95% CI
15-29	401	8.3	5.6-11.1	44.6	37.5-51.7	27.4	22.9-31.9	19.6	12.7-26.6
30-44	753	1.8	0.6-3.1	34.4	29.3-39.4	41.6	37.4-45.7	22.3	19.0-25.5
45-69	725	2.2	1.3-3.2	31.1	23.4-38.8	39.3	35.6-43.0	27.4	19.6-35.1
Total	1879	4.0	2.6-5.3	36.7	32.0-41.5	36.5	34.2-38.9	22.8	18.4-27.1

BMI classification									
Both Sexes									
Age Group (years)	n	% Under-weight <18.5	95% CI	% Nor-mal weight 18.5-24.9	95% CI	% Over-weight 25.0-29.9	95% CI	% Obese ≥30.0	95% CI
15-29	581	7.9	5.0-10.8	49.0	41.8-56.2	26.9	23.1-30.8	16.2	10.5-21.9
30-44	1020	5.5	1.4-9.6	41.3	35.6-47.1	36.2	32.1-40.4	16.9	12.3-21.5
45-69	1066	1.8	1.0-2.6	35.5	28.7-42.2	40.4	36.7-44.1	22.3	17.7-27.0
Total	**2667**	**5.3**	**3.6-7.0**	**42.2**	**38.9-45.5**	**34.3**	**31.6-37.1**	**18.1**	**16.5-19.8**

Table 119: Overweight (BMI≥25)

BMI≥25									
Male				Female			Both Sexes		
Age Group (years)	n	% BMI≥25	95% CI	n	% BMI≥25	95% CI	n	% BMI≥25	95% CI
15-29	180	40.0	30.2-49.7	401	47.0	39.6-54.5	581	43.2	36.0-50.3
30-44	267	42.9	33.2-52.6	753	63.8	58.5-69.2	1020	53.1	46.5-59.7
45-69	341	59.5	51.5-67.5	725	66.7	58.5-74.8	1066	62.7	56.0-69.5
Total	**788**	**46.5**	**41.8-51.1**	**1879**	**59.0**	**53.8-64.8**	**2667**	**52.1**	**49.0-56.0**

Table 120: Mean waist circumference

Waist circumference (cm)						
Male				Female		
Age Group (years)	n	mean	95% CI	n	mean	95% CI
15-29	293	89.9	81.6-98.2	549	91.5	84.6-98.5
30-44	266	84.2	81.4-87.0	724	88.5	87.0-90.1
45-69	330	89.5	87.1-91.8	706	91.8	89.6-94.0
Total	889	88.4	82.9-93.8	1979	90.7	86.8-94.6

Table 121: Mean hip circumference

Hip circumference (cm)						
Male				Female		
Age Group (years)	n	mean	95% CI	n	mean	95% CI
15-29	191	95.0	90.8-99.1	397	97.1	95.5-98.6
30-44	269	93.0	90.6-95.4	742	99.3	97.3-101.2
45-69	336	94.1	92.1-96.1	710	99.1	97.0-101.2
Total	796	94.0	91.9-96.1	1849	98.5	96.9-100.1

Table 122: Mean waist/hip ratio

Hip circumference (cm)						
Male				Female		
Age Group (years)	n	mean	95% CI	n	mean	95% CI
15-29	178	0.9	0.9-0.9	382	0.9	0.8-0.9
30-44	258	0.9	0.9-0.9	706	0.9	0.9-0.9
45-69	317	1.0	0.9-1.0	684	0.9	0.9-0.9
Total	753	0.9	0.9-0.9	1772	0.9	0.9-0.9

Biochemical Measurements

Biochemical measurements show that 5.3% of the respondents (4.2% male and 6.7% female) have impaired fasting glycaemia and 8.7% (6.5% male and 11.3% female) have either impaired fasting glycaemia or are on treatment for diabetes. The mean fasting blood sugar is 87.02 mg/dl.The mean cholesterol is 165.5mg/dl. Cholesterol measurements show 25.6% of the respondents have raised total cholesterol ≥ 5.0 mmol/L or ≥ 190 mg/dl (24.6% male and 26.7% female). In addition, 30.2% (27.9% male and 32.9% female) are either on medication for raised cholesterol or were found to have raised cholesterol. Mean HDL is 36.8mg/dl (34mg/dl for male 40.1mg/dl for female). Daily salt intake is much higher than the recommended 2.3g/day with a mean of 8.8g/day (9.6g/day for maleand 7.9g/day for female).

Table 123: Mean fasting blood glucose (mmol/L)

Mean fasting blood glucose (mmol/L)									
Male				Female			Both Sexes		
Age Group (years)	n	mean	95% CI	n	mean	95% CI	n	mean	95% CI
15-29	221	4.4	(4.4-4.4)	437	4.7	(4.7-4.7)	658	4.5	(4.5-4.5)
30-44	218	4.9	(4.9-5.0)	653	4.9	(4.8-4.9)	871	4.9	(4.9-4.9)
45-69	291	5.5	(5.5-5.5)	641	5.4	(5.4-5.4)	932	5.5	(5.4-5.5)
Total	**730**	**4.8**	**(4.8-4.8)**	**1731**	**4.9**	**(4.9-4.9)**	**2461**	**4.8**	**(4.8-4.8)**

Table 124: Mean fasting blood glucose (mg/dl)

Mean fasting blood glucose (mg/dl)									
Male				Female			Both Sexes		
Age Group (years)	n	mean	95% CI	n	mean	95% CI	n	mean	95% CI
15-29	221	79.6	(79.5-79.8)	437	84.3	(84.0-84.7)	658	81.7	(81.5-81.9)
30-44	218	88.9	(88.4-89.4)	653	87.4	(87.0-87.8)	871	88.1	(87.8-88.4)
45-69	291	99.3	(99.7-99.9)	641	97.5	(97.0-98.1)	932	98.4	(98.0-98.9)
Total	**730**	**86.1**	**(85.9-86.3)**	**1731**	**88.1**	**(87.8-88.3)**	**2461**	**86.1**	**(86.0-86.3)**

Table 125: Impaired fasting glycaemia

Impaired Fasting Glycaemia*v						
Male			Female		Both Sexes	
Age Group (years)	n	%	n	%	n	%
15-29	221	0.5	437	4.8	658	2.4
30-44	218	5.2	653	5.5	871	5.4
45-69	291	12.2	641	12.7	932	12.4
Total	**730**	**4.2**	**1731**	**6.7**	**2461**	**5.3**

Table 126: Raised blood sugar or currently on medication for diabetes

Raised blood glucose or currently on medication for diabetes**						
Male			Female		Both Sexes	
Age Group (years)	n	%	n	%	n	%
15-29	221	2.9	437	8.3	658	5.3
30-44	218	6.5	653	8.2	871	7.4
45-69	291	16.0	641	23.0	932	19.3
Total	**730**	**6.5**	**1731**	**11.3**	**2461**	**8.7**

Table 127: Currently on medication for diabetes

Currently on medication for diabetes						
Male			Female		Both Sexes	
Age Group (years)	n	%	n	%	n	%
15-29	221	2.4	437	3.5	658	2.9
30-44	218	1.3	653	2.7	871	2.0
45-69	291	3.8	641	10.3	932	6.9
Total	**730**	**2.3**	**1731**	**4.6**	**2461**	**3.4**

* Impaired fasting glycaemia is define as either
  - plasma venous value: ≥6.1mmol/L (110mg/dl) and <7.0mmol/L (126mg/dl)
  - capillary whole blood value: ≥5.6mmol/L (100mg/dl) and <6.1mmol/L (110mg/dl)

** Raised blood glucose is define as either
  - plasma venous value: ≥ 7.0 mmol/L (126 mg/dl)
  - capillary whole blood value: ≥ 6.1 mmol/L (110 mg/dl)

Figure 31: Mean fasting blood sugar

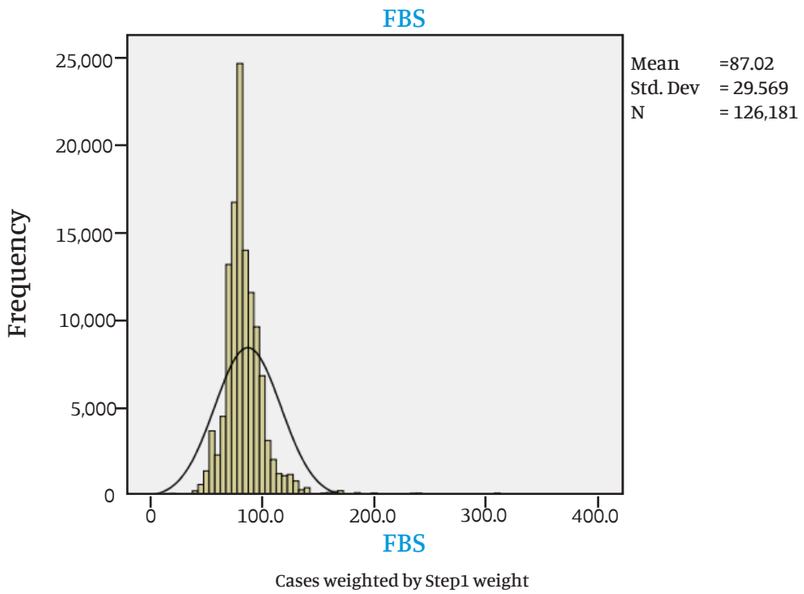


Figure 32; Raised blood sugar

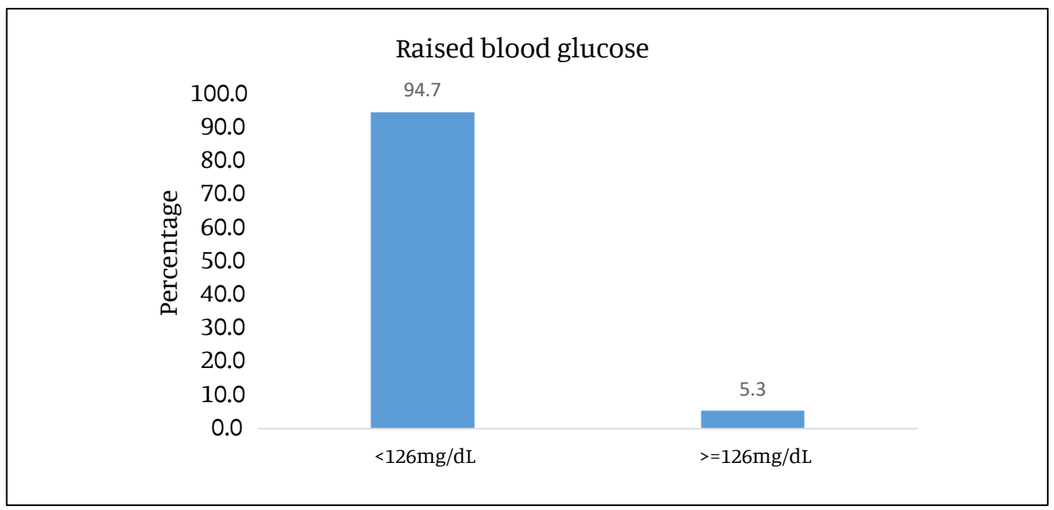


Table 128: Mean cholesterol (mg/dl)

Mean total cholesterol (mg/dl)									
Male				Female			Both Sexes		
Age Group (years)	n	mean		n	mean		n	mean	
15-29)	231	161.2	(160.9-161.6)	461	160.4	(160.1-160.7)	692	160.8	(160.6-161.2
30-44	236	170.2	(169.6-170.7)	695	178.9	(178.4-179.4)	931	174.6	(174.2-175.0)
45-69	307	170.0	(169.3-170.7)	665	177.2	(176.4-177.9)	972	173.5	(172.9-174.0)
Total	**774**	**165.5**	**(165.2-165.8)**	**1821**	**170.0**	**(169.6-170.2)**	**2595**	**167.6**	**(167.3-167.8)**

Figure 33: Distribution of total cholesterol

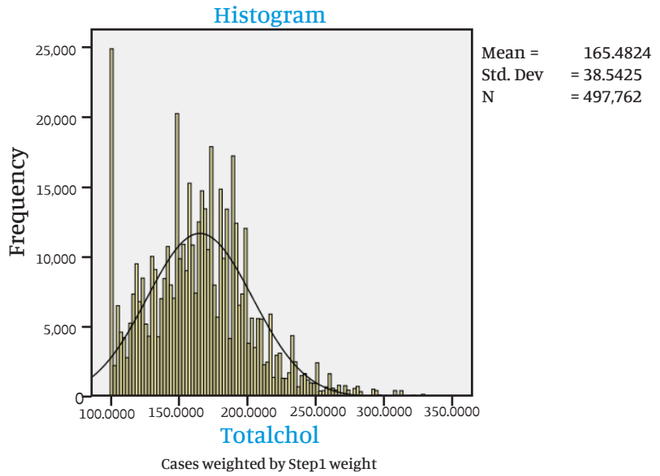


Table 129: Total cholesterol ≥ 5.0 mmol/L or ≥ 190 mg/dl

Total cholesterol ≥ 5.0 mmol/L or ≥ 190 mg/dl									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
15-29	169	18.0	9.4-26.6	328	13.8	6.5-21.1	497	16.3	10.8-21.9
30-44	214	28.5	20.4-36.6	626	34.1	25.2-42.9	840	31.3	24.3-38.4
45-69	296	29.3	23.7-35.0	631	29.7	22.6-36.8	927	29.5	24.4-34.6
TOTAL	**679**	**24.6**	**20.5-28.7**	**1585**	**26.7**	**23.0-30.4**	**2264**	**25.6**	**22.4-28.7**

Table 130: Total cholesterol ≥ 6.2 mmol/L or ≥ 240 mg/dl

Total cholesterol ≥ 6.2 mmol/L or ≥ 240 mg/dl									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
15-29	169	1.8	0.0-5.0	328	1.7	0.6-2.9	497	1.8	0.0-3.7
30-44	214	7.6	3.7-11.6	626	7.4	2.3-12.4	840	7.5	3.6-11.3
45-69	296	3.8	0.8-6.7	631	7.9	5.3-10.4	927	5.8	3.3-8.3
TOTAL	**679**	**4.3**	**1.8-6.7**	**1585**	**5.8**	**3.4-8.2**	**2264**	**5.0**	**3.1-6.8**

Table 131: Total cholesterol ≥ 5.0 mmol/L or ≥ 190 mg/dl or currently on medication for raised cholesterol

Total cholesterol ≥ 5.0 mmol/L or ≥ 190 mg/dl or currently on medication for raised cholesterol									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
15-29	169	18.0	9.4-26.6	328	14.4	6.9-21.9	497	16.6	11.1-22.1
30-44	214	31.1	23.2-39.1	626	35.3	26.4-44.1	840	33.2	26.5-39.9
45-69	296	38.4	31.7-45.1	631	47.8	41.8-53.9	927	43.0	39.3-46.7
TOTAL	**679**	**27.9**	**24.3-31.5**	**1585**	**32.9**	**28.2-37.5**	**2264**	**30.2**	**26.7-33.7**

Table 132: Total cholesterol ≥ 6.2 mmol/L or ≥ 240 mg/dl or on medication for raised cholesterol

Total cholesterol ≥ 6.2 mmol/L or ≥ 240 mg/dl or currently on medication for raised cholesterol									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
15-29	169	1.8	0.0-5.0	328	2.3	1.0-3.6	497	2.0	0.1-3.9
30-44	214	10.2	5.9-14.6	626	9.1	4.3-13.9	840	9.6	6.1-13.2
45-69	296	17.3	7.2-27.3	631	28.0	19.8-36.3	927	22.5	19.3-25.8
TOTAL	**679**	**8.8**	**5.1-12.5**	**1585**	**12.8**	**7.8-17.8**	**2264**	**10.7**	**8.7-12.6**

Table 133: Mean HDL (mmol/L)

Mean HDL (mmol/L)									
Male				Female			Both Sexes		
Age Group (years)	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
15-29	170	0.9	0.9-1.0	331	1.0	1.0-1.0	501	1.0	0.9-1.0
30-44	214	0.8	0.8-0.9	630	1.0	0.9-1.1	844	0.9	0.9-1.0
45-69	297	0.9	0.8-0.9	638	1.1	1.0-1.2	935	1.0	1.0-1.0
TOTAL	**681**	**0.9**	**0.8-0.9**	**1599**	**1.0**	**1.0-1.1**	**2280**	**1.0**	**0.9-1.0**

Table 134: Mean HDL (mg/dl)

Mean HDL (mg/dl)									
Male				Female			Both Sexes		
Age Group (years)	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
15-29	170	35.9	34.0-37.8	331	38.9	37.8-40.1	501	37.1	35.7-38.5
30-44	214	31.6	29.8-33.5	630	38.8	36.3-41.3	844	35.3	33.3-37.2
45-69	297	34.2	32.5-36.0	638	43.0	40.4-45.6	935	38.5	36.8-40.3
TOTAL	**681**	**34.0**	**32.4-35.7**	**1599**	**40.1**	**38.3-42.0**	**2280**	**36.9**	**35.4-38.4**

Table 135: HDL at risk levels

Percentage of respondents with HDL <1.03mmol/L or <40 mg/dl				Percentage of respondents with HDL <1.29mmol/L or <50 vmg/dl		
Male				Female		
Age Group (years)	n	Mean	95% CI	n	Mean	95% CI
15-29	170	65.5	58.0-73.0	331	86.7	81.6-91.8
30-44	214	78.3	68.8-87.8	630	84.2	80.4-87.9
45-69	297	72.0	62.2-81.8	638	72.9	67.8-77.9
TOTAL	**681**	**71.5**	**66.4-76.6**	**1599**	**81.5**	**79.3-83.6**

Table 136: Mean salt intake per day

Mean salt intake (g/day)									
Male				Female			Both Sexes		
Age Group (years)	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
15-29	62	9.1	8.6-9.6	123	7.7	7.4-8.1	185	8.5	8.1-9.0
30-44	78	9.5	8.8-10.1	271	8.2	7.9-8.5	349	8.8	8.5-9.1
45-69	96	10.5	10.1-10.9	216	7.5	7.3-7.8	312	9.1	8.7-9.4
TOTAL	**236**	**9.6**	**9.3-9.8**	**610**	**7.9**	**7.7-8.0**	**846**	**8.8**	**8.6-8.9**

Cardiovascular disease risk

Analysis of 10-year cardiovascular risk among people aged 40-69 years shows that 2.3% of the respondents have ≥20% risk of CVD (3% male and 1.4% female) and 7.7% of the people have a 10-20% risk of CVD (7.5% male and 7.9% female). When those that have ≥20% risk of CVD and people with existing disease are analysed 13.6% are at risk (16.2% male and 10.5% female). Applying this risk, it is estimated that 61.8% (50.4% male and 82.7% female) require drug therapy and counselling to prevent heart attacks and strokes.

Table 137: Ten-year CVD risk

Percentage of respondents by level of 10-year CVD risk							
Male							
Age Group(years)	n	<10%	95% CI	10-20%	95% CI	≥20%	95% CI
40-54	195	96.6	92.5-98.5	3.4	1.5-7.5	0	-
55-69	173	80.5	72.2-86.7	12.7	9.1-17.5	6.8	3.4-13.2
40-69	368	89.6	84.8-93.0	7.5	5.2-10.6	3.0	1.5-5.9

Percentage of respondents by level of 10-year CVD risk							
Female							
Age Group(years)	n	<10%	95% CI	10-20%	95% CI	≥20%	95% CI
40-54	476	98.1	95.7-99.2	1.9	0.8-4.3	0	-
55-69	310	81.1	68.8-89.3	15.7	9.0-26.0	3.2	1.2-8.1
40-69	786	90.7	86.7-93.6	7.9	5.4-11.5	1.4	0.6-3.0

Percentage of respondents by level of 10-year CVD risk							
Both Sexes							
Age Group(years)	n	<10%	95% CI	10-20%	95% CI	≥20%	95% CI
40-54	671	97.3	95.4-98.4	2.7	1.6-4.6	0	-
55-69	483	80.8	71.3-87.6	14.1	9.1-21.2	5.2	2.7-9.8
40-69	1154	90.1	86.5-92.8	7.7	5.6-10.4	2.3	1.2-4.0

* 10-year CVD risk is defined according to age, sex, smoking status, blood pressure, history of diabetes, total cholesterol, and body mass index.

Table 138: Ten-year CVD risk ≥20%

Percentage of respondents with a 10-year CVD risk ≥20% or with existing CVD									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
40-54	195	10.8	5.6-19.9	477	6.1	3.7-10.0	672	8.7	5.2-14.2
55-69	174	23.1	15.6-32.9	313	16.3	12.0-21.7	487	20.0	15.3-25.7
40-69	**369**	**16.2**	**10.8-23.7**	**790**	**10.5**	**7.8-14.1**	**159**	**13.6**	**10.2-17.9**

* A 10-year CVD risk of ≥20% is defined according to age, sex, smoking status, blood pressure, history of diabetes, total cholesterol, and body mass index.

Table 139: Persons with CVD risk level requiring drug therapy and counselling

Percentage of eligible persons receiving drug therapy and counselling to prevent heart attacks and strokes									
Male				Female			Both Sexes		
Age Group (years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
40-54	14	24.1	5.4-63.9	32	66.3	43.083.7	46	37.7	19.4-60.3
55-69	34	66.2	34.8-87.8	38	90.6	78.4-96.3	72	75.3	53.6-88.9
40-69	**48**	**50.4**	**24.4-76.2**	**70**	**82.7**	**63.5-92.9**	**118**	**61.8**	**43.6-77.2**

Mental health

When asked about self-harm, 1.9% of the respondents affirming having attempted self-harm, 4.3% reported considering self-harm, and 1.95% planned self-harm. When asked about signs of depression 17.7% reported feeling down and 17.1% reported difficulty in sleeping and 7.45 reported the feeling that it is better to be dead.

Table 140: Depression classification of men

Depression classification													
Male													
Age Group (years)	n	% No depression	95 % CI	% Minimal depression	95 % CI	% Mild depression	95 % CI	% Moderate depression	95 % CI	% Moderately severe depression	95 % CI	% Severe depression	95% CI
15-29	248	69.1	53.7-84.5	21.4	13.5-29.3	7.8	0.0-15.7	1.6	0.0-4.2	0.2	0.0-0.4	--	--
30-44	315	65.1	58.0-72.1	25.6	18.7-32.5	5.3	2.4-8.1	2.4	0.0-4.7	1.8	0.0-4.5	--	--
45-69	389	80.4	71.3-89.5	15.0	8.3-21.7	3.2	0.5-5.8	0.5	0.0-1.2	0.9	0.0-2.3	--	--
TOTAL	952	70.6	61.4-79.8	21.1	16.2-26.1	5.7	1.7-9.8	1.6	0.0-3.2	0.9	0.0-1.9	--	--

Table 141: Depression classification of women

Depression classification													
Female													
Age Group (years)	n	% No depression	95% CI	% Minimal depression	95 % CI	% Mild depression	95 % CI	% Moderate depression	95 % CI	% Moderately severe depression	95 % CI	% Severe depression	95% CI
15-29	479	48.0	36.2-59.9	18.4	9.5-27.3	24.9	6.5-43.3	4.8	0.3-9.3	2.7	1.0-4.4	1.1	0.0-2.2
30-44	863	61.5	52.5-70.6	26.7	18.4-35.0	8.4	5.4-11.4	2.0	0.8-3.2	1.3	0.0-3.1	0.0	0.0-0.1
45-69	801	61.8	55.1-68.5	24.7	20.4-28.9	9.2	7.4-10.9	1.3	0.0-2.8	2.8	0.0-6.3	0.2	0.0-0.6
TOTAL	2143	57.4	50.5-64.2	23.5	17.5-29.5	13.8	7.5-20.1	2.7	1.0-4.4	2.2	1.1-3.2	0.4	0.0-0.8

Table 142: Depression classification both sexes

Depression classification													
Both sexes													
Age Group (years)	n	% No depression	95% CI	% Minimal depression	95 % CI	% Mild depression	95 % CI	% Moderate depression	95 % CI	% Moderately severe depression	95 % CI	% Severe depression	95% CI
15-29	727	61.0	50.3-71.8	20.2	13.0-27.5	14.3	10.5-18.1	2.9	0.0-5.7	1.2	0.5-1.8	0.4	0.0-0.9
30-44	1178	63.4	55.8-71.0	26.1	19.9-32.3	6.8	4.9-8.6	2.2	1.3-3.1	1.5	0.0-3.3	0.0	0.0-0.1
45-69	1190	71.4	66.5-76.2	19.7	16.2-23.2	6.1	4.5-7.7	0.9	0.0-1.8	1.8	0.0-3.6	0.1	0.0-0.3
TOTAL	3095	64.7	57.9-71.6	22.2	17.0-27.4	9.3	7.6-11.1	2.1	0.7-3.4	1.5	0.9-2.0	0.2	0.0-0.4

Figure 34: Self-harm

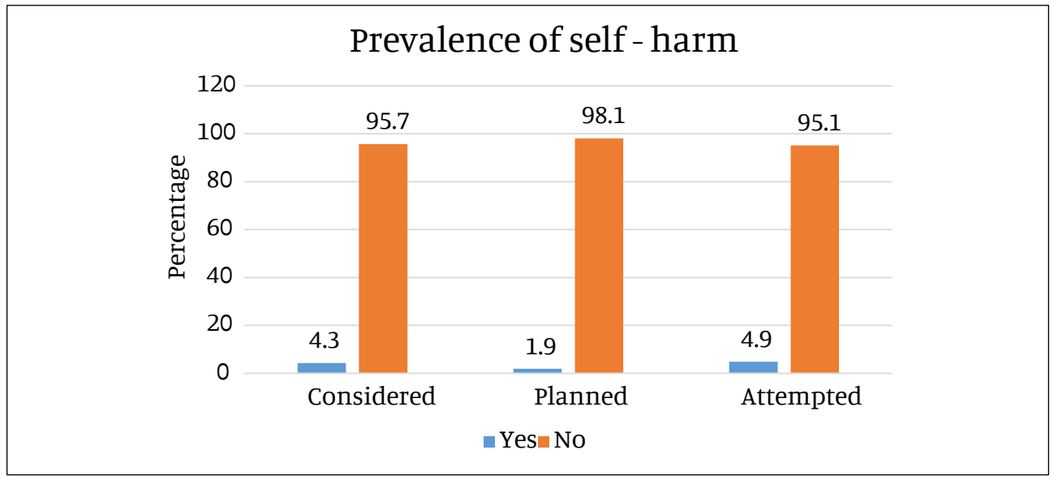


Figure 35: Feeling down

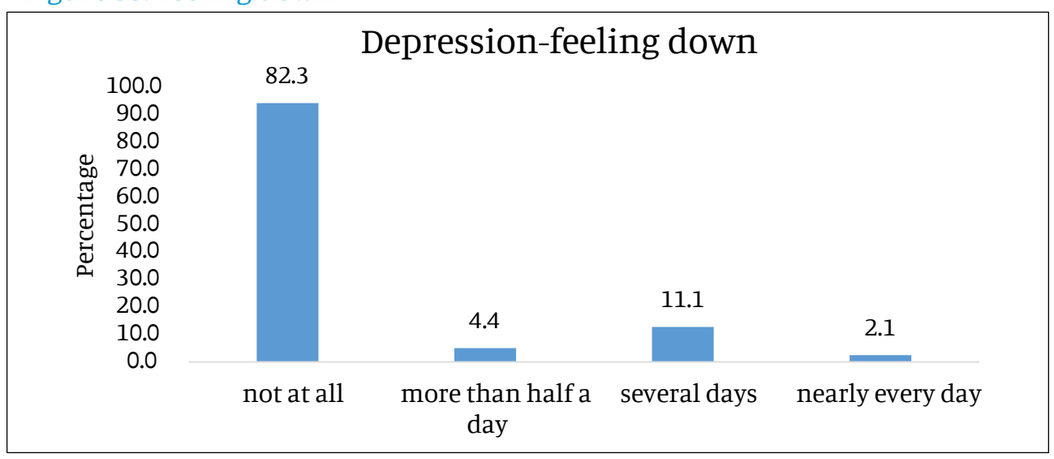


Figure 36: Difficulty in sleeping

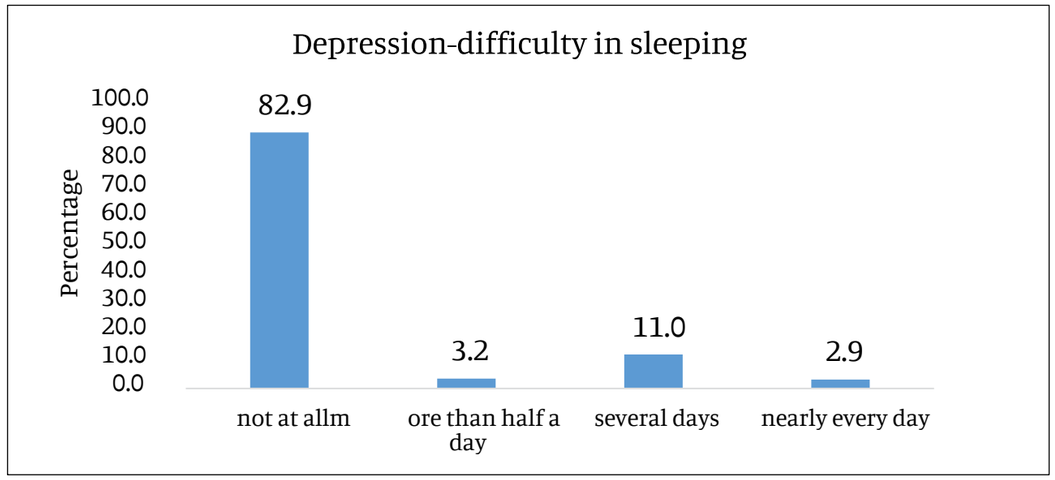
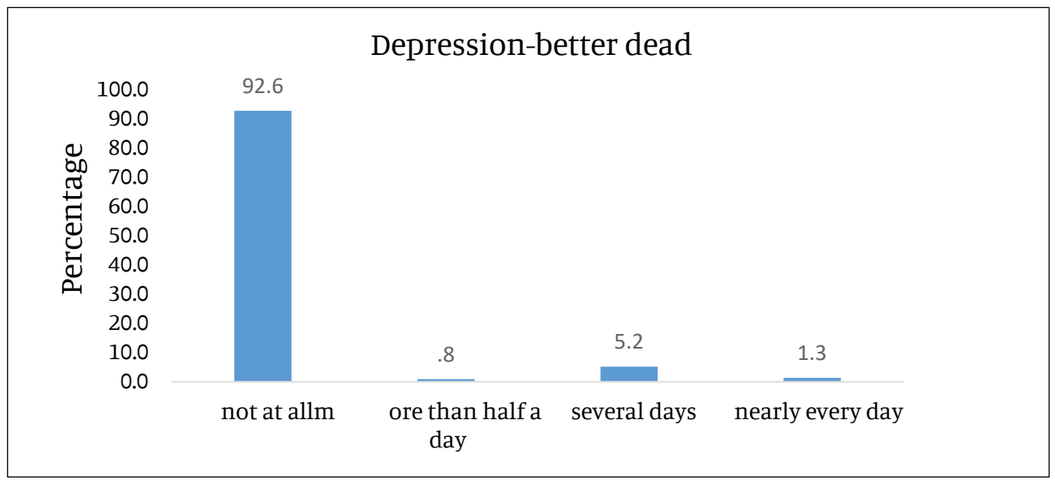


Figure 37: Feeling better to be dead



Injury

When asked about road traffic injury 21.4% reported ever having a road traffi injury. Amongst those who had injury that required medical care, the most common was as a driver of a two-wheeler with 6.4% affirming this.

In addition, when asked about injuries other than road traffi accidents that required medical care, 58.6% reported the type of accident was fall followed by cuts.

Figure 38: Percentage of people who had road traffi accidents

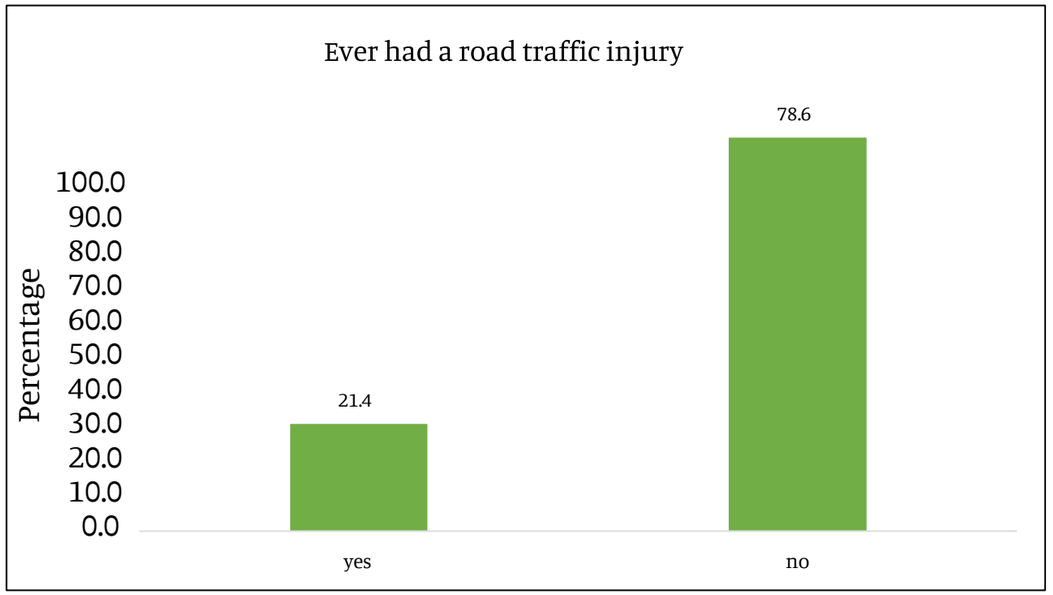


Figure 39: Type of road traffic accidents

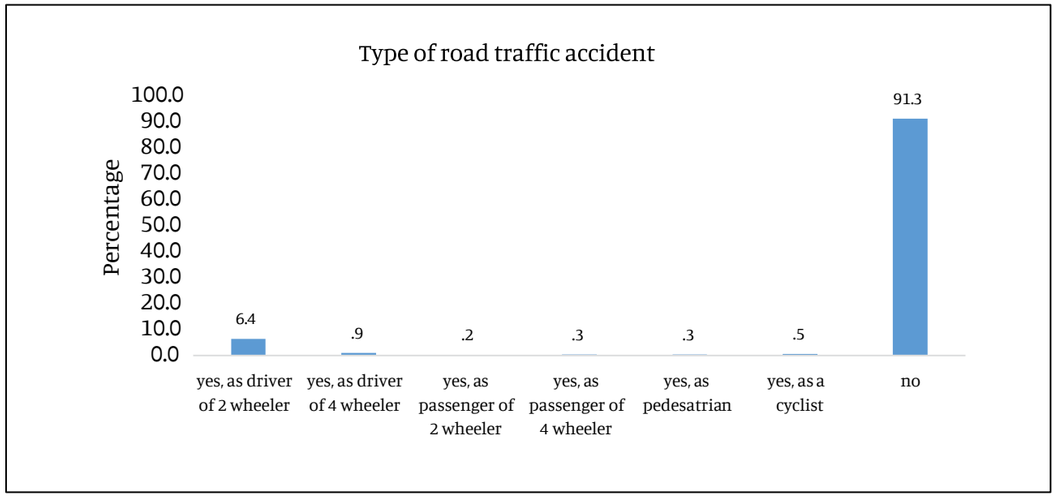
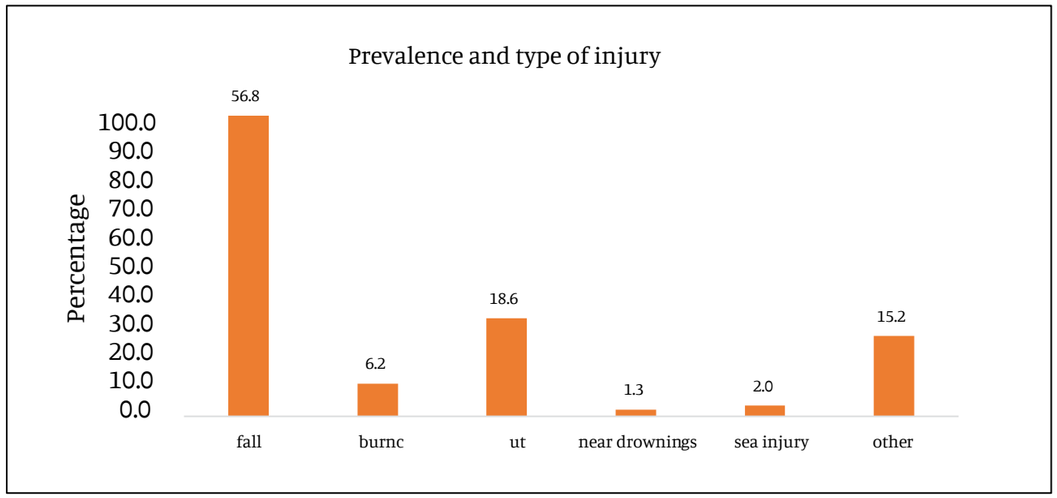


Figure 40: Prevalence and type of injury



Conclusions and Recommendations

Findings show that the percentage of the Maldivian population with raised fasting blood sugar, elevated blood pressure and elevated cholesterol levels are at levels of public health concern. More than half of the population is overweight and more than 20% of the population is obese and 26% of the people smoke and 22% are daily smokers. This study showed that sedentary lifestyle, eating habits and smoking are some major risk factors that contribute to NCDs. The proportion of the population who does not meet WHO recommendation for physical activity and fruit and vegetable intake is high. This translates to 13.6% of the population at CVD risk of >=20% over 10 years.Public policies and actions are required to provide a supportive environment for the public to practise healthy lifestyles. Smoking rate is very high in the Maldives despite several policy and legislative measures in place to reduce smoking. Interventions need to be implemented with a PHC approach to empower the community to minimise risk factors which contribute to the NCDs. Policies and strategies on smoking need to be reviewed and further studies are required to explore the reason behind retained high smoking rates.

Specific recommendations are to:

1. Strengthen Implementation of "Best buys" for prevention and control of NCDs
2. Work together across sectors to committed to accelerate implementation of the FCTC by enforcing tobacco control act and its regulations across the country.
3. Conduct targeted awareness to foster positive attitudes to adopt healthy practices with regard to physical activity and eating habits across life stages.
4. Conduct interventions to increase mental resilience and coping strategies customized to the life stages to reduce mental disorders and substance abuse.
5. Establish formal and informal partnerships with civil society organizations and informal groups to maximize outreach and ensure that vulnerable groups are not left behind.
6. Update the multi sectoral action plan on NCDs in accordance with the evidence form this study to work towards WHO Global Action Plan on NCDs.
7. Conduct a follow-up STEPS survey in the year 2026 to measure progress made and towards the achievement of SDG indicators 2.2, 3.4, 3.5, 3.6.
8. Integrate routine NCD screening, and management services into the primary health care setting including a PHC based information system to track NCDs
9. Conduct multidimensional health education interventions to build awareness on NCD risk factors.
10. Promote effective strategies to increase accessibility and availability of healthy food options.
11. Promote enabling environment for physical activity in both urban and rural settings
12. Address the wider social and economic determinants of health targeting the NCDs and its known risk factors in a whole of government and whole of society approach

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Appendix 1: Survey instrument

Noncommunicable Disease Risk Factors STEPS Survey, Maldives 2020-2021

STEPS

SURVEY INSTRUMENT

(Core and Expanded)

Ver 6.0 — 12 Feb 2020

Ver	Date	Particulars
01	15-Oct-2019	Draft prepared by WHO-SEARO
2.0	23-Nov-2019	Draft revised by SEARO after Maldives inputs
2.1	27-Nov-2019	Discussion with enumerators in the workshop
2.2	02-Dec-2019	Revised after discussion with MOH, MNU, WCO and WHO SEARO
3.0	13-Jan-2020	Revised after comments with MOH and HPA
4.0	27-Jan-2020	Final check after translation
5.0	28-Jan-2020	Changes suggested in the training
6.0	12-Feb-2020	Final check by WCO, Maldives

The WHO STEP wise approach to noncommunicable disease risk factor surveillance (STEPS) 2020

World Health Organization
Maldives

WHO STEPS Instrument

For Noncommunicable Disease Risk Factor Surveillance, Maldives, 2020

Survey Information		
Location and Date	Response	Code
Interviewer ID Must be between 1 to20.	⌊_⌊_⌊_⌋	I3
Cluster/Atoll/Island/PSU ID Must be in 5 digits	⌊_⌊_⌊_⌊_⌊_⌋	I1
Date of completion of the instrument Fill automatically	⌊_⌋ ⌊_⌋ ⌊_⌊_⌊_⌋ dd mm year	I4
Time of interview (24-hour clock) Fill automatically.	⌊_⌋ ⌊_⌋ hrs mins	I7
Family Surname It will fil automatically, please check before editing		I8
First Name It will fil automatically, please check before editing		I9
Contact number of respondents Must be in 7 digits; Put zero before number if it is less then 7 digits.	⌊_⌊_⌊_⌊_⌊_⌊_⌊_⌋ Enter 88, if refused and 99, if not available	I10
Consent has been read and obtained	Yes 1 No 2 If NO, END	I5
Interview Language	English 1 Dhivehi 2	I6

Step 1 Demographic Information		
Question	Response	Code
Sex (Record Male / Female as observed) It will fil automatically, please check before editing	Male 1 Female 2	C1
What is your date of birth? Don't Know 77 77 7777	⌊_⌋ ⌊_⌋ ⌊_⌊_⌊_⌋ dd mm year If known, go to C4	C2
How old are you?	Years ⌊_⌋	C3

In total, how many years have you spent at school/ university and in full-time study (excluding pre-school) [COUNT FROM GRADE 1]? Should be between 0 - 25 years	Years ⌊_⌋	
What is the highest level of education you have completed?	No formal schooling 1 Less than primary school 2 Primary school completed 3 Secondary school completed 4 Higher secondary school completed 5 College/university completed 6 Post graduate degree 7 Refused 88	C5
What is your marital status?	Never married 1 Currently married 2 Separated 3 Divorced 4 Widowed 5 Refused 88	C7
Which of the following best describes yourmain work status over the past 12 months?	Government employee 1 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 Other (specify)	C8
Is any woman in the house currently pregnant?	Yes 1 No 2 Don't' know 77 Refused 88	C10x

Please ask/ observe - whether this household or any person who lives in the household has the following items: Observe first then ask, if necessary.			
a. Radio	Yes 1	No 2	C11xa
b. Television	Yes 1	No 2	C11xb
c. Landline/Non-mobile phone	Yes 1	No 2	C11xc
d. Mobile phone	Yes 1	No 2	C11xd
e. Computer / Laptop	Yes 1	No 2	C11xe
f. Refrigerator	Yes 1	No 2	C11xf
g. Air conditioner	Yes 1	No 2	C11xg
h. Washing machine	Yes 1	No 2	C11xh
i. Sofa	Yes 1	No 2	C11xi
j. Table	Yes 1	No 2	C11xj
k. Internet broadband connection (other than mobile data)	Yes 1	No 2	C11xk
l. Chair	Yes 1	No 2	C11xl
m. Watch / Clock	Yes 1	No 2	C11xm
n. Bicycle	Yes 1	No 2	C11xn
o. Motor cycle / Scooter	Yes 1	No 2	C11xo
p. Car / Truck	Yes 1	No 2	C11xp
q. Pickup / Lorry	Yes 1	No 2	C11xq
r. A fishing boat	Yes 1	No 2	C11xr
s. Any other boat	Yes 1	No 2	C11xs

Step 1 Behavioural Measurements

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, bidis, cigars, pipes or hooka/ shishah? (USE SHOWCARDS 1a)	Yes 1 No 2 If No, go to T8	T1
Do you **currently smoke** tobacco products daily?	Yes 1 No 2	T2
How old were you when you first started smoking?	Age (years) ⌊_⌋⌊_⌋ If Known, go to T5a/ T5aw Don't know enter 77, go to T4	T3
Do you remember how long ago it was? Leave blank if not known; otherwise, answer must be between 1 and 61 for Years, 1 to 11 for Months, or 1 to 3 for Weeks.	Numbers ⌊_⌋⌊_⌋	T4
	Years 1 Months 2 Weeks 3	T4 type
On average, how many of the following products do you smoke each day/ week? (For cigarettes, interviewer need to verify this is the number of cigarettes' not packs) (record either daily or weekly, but not both, if less than daily, record weekly)	DAILY↓ WEEKLY↓	
	Manufactured cigarettes ⌊_⌋⌊_⌋⌊_⌋⌊_⌋ ⌊_⌋⌊_⌋⌊_⌋⌊_⌋	T5a/T5aw
	Hand-rolled cigarettes ⌊_⌋⌊_⌋⌊_⌋⌊_⌋ ⌊_⌋⌊_⌋⌊_⌋⌊_⌋	T5b/T5bw
	Bidis ⌊_⌋⌊_⌋⌊_⌋⌊_⌋ ⌊_⌋⌊_⌋⌊_⌋⌊_⌋	T5c/T5cw
	Cigars, ch roots, cigarillos ⌊_⌋⌊_⌋⌊_⌋⌊_⌋ ⌊_⌋⌊_⌋⌊_⌋⌊_⌋	T5d/T5dw

(Record for each type) (USE SHOWCARDS 1a) Don't Know 77	Pipes full of tobacco ⌊⌋⌊⌋⌊⌋⌊⌋ ⌊⌋⌊⌋⌊⌋⌊⌋	T5e/T5ew
	Number of water pipe/shishah/gud-guddasessions ⌊⌋⌊⌋⌊⌋⌊⌋ ⌊⌋⌊⌋⌊⌋⌊⌋	T5f/T5fw
	Other ⌊⌋⌊⌋⌊⌋⌊⌋ ⌊⌋⌊⌋⌊⌋⌊⌋	T5g/T5gw
	Other (please specify): ⌊⌋⌊⌋⌊⌋⌊⌋ ⌊⌋⌊⌋⌊⌋⌊⌋	T5other/ T5otherw
During the past 12 months, have you tried to stop smoking?	Yes 1 No 2	T6
During any visit to a doctor or other health professional in the past 12 months, were you advised to quit smoking tobacco?	No visit during the past 12months 3 If T2=Yes, go to T12; if T2=No, go to T9 Yes 1 If T2=Yes, go to T12; if T2=No, go to T9 No 2 If T2=Yes, go to T12; if T2=No, go to T9	T7

n the past, did you **ever smoke** any tobacco products? (USE SHOWCARDS 1a)	Yes 1 No 2 If No, go to T12	T8

In the past, did you **ever smoke daily?**	Yes 1 If T1=Yes, go to T12, else go to T10 No 2 2 If T1=Yes, go to T12, else go to T10	T9
How old were you when you **stopped** smoking?	Age(years) ⌊⌋⌊⌋ If Known, go to T12 Don't Know 77	T10

How old were you when you stopped smoking? Leave blank if not known; otherwise, answer must be between 1 and 61 for Years, 1 to 11 for Months, or 1 to 30 for Weeks.	Numbers ⌊⌋⌊⌋	T11
	Years 1 Months 2 Weeks 3	T11type
Do you currently use any smokeless tobacco products such as snuff, chewing tobacco, nasal snuffs, khaini (ganesh), or guthka or paan paraag? (USE SHOWCARDS 1b)	Yes 1 No 2 go to T15	T12
Do you currently use smokeless tobacco products such as snuff, chewing tobacco, nasal snuffs, khaini, Ganesh,or Guthka or paan paraag	Yes 1 go to T14a No 2 go to T14a	T13

On average, how many times a day/week do you use (Record either daily or weekly, but not both, if less than daily, record weekly) (Record for each type) (USE SHOWCARDS 1b) Don't Know 77	DAILY↓ WEEKLY↓	
	Snuff, by mouth ⌊⌋⌊⌋⌊⌋⌊⌋ ⌊⌋⌊⌋⌊⌋⌊⌋	T14a/ T14aw
	Snuff, by nose ⌊⌋⌊⌋⌊⌋⌊⌋ ⌊⌋⌊⌋⌊⌋⌊⌋	T14b/ T14bw
	Chewing tobacco ⌊⌋⌊⌋⌊⌋⌊⌋ ⌊⌋⌊⌋⌊⌋⌊⌋	T14c/ T14cw
	Betel leaves with tobacco ⌊⌋⌊⌋⌊⌋⌊⌋ ⌊⌋⌊⌋⌊⌋⌊⌋	T14d/ T14dw
	Khaini Ganesh ⌊⌋⌊⌋⌊⌋⌊⌋ ⌊⌋⌊⌋⌊⌋⌊⌋	T14e/ T14ew
	Other ⌊⌋⌊⌋⌊⌋⌊⌋ ⌊⌋⌊⌋⌊⌋⌊⌋ If Other, go to T14other, if T13=No, go to T16, else go to T17	T14f/ T14fw
	Other (please specify): ⌊⌋⌊⌋⌊⌋⌊⌋⌊⌋⌊⌋ If T13=No, go to T16, else go to T17	T14f/ T14fw

In the past, did you ever use smokeless tobacco products such as snuff, chewing tobacco, nasal snuffs, khaini (ganesh) or gutkha?	Yes 1 No 2 If No, go to T17	T15
n the past, did you ever use smokeless tobacco products such as snuff, chewing tobacco, nasal snuffs, khaini (ganesh) or gutkha daily?	Yes 1 No 2	T16
During the **past 12 months,** have you tried to **stop using smokeless tobacco products?**	Yes 1 No 2	Tx1
During any visit to a doctor or other health professional in the past 12 months, were you advised to quit smokeless tobacco?	No visit during the past 12 months 2 Yes 1 No 2	Tx2

During the past 12 months, what did you do to try and stop smoking tobacco or use of smokeless tobacco? [Multiple answer] If T6=yes or Tx1=yes	Counseling by any health care workers 1 Special cessation clinic 2 Cessation service/Clinic under government insurance scheme (Husnuvaa Aasandha) 3 Nicotine replacement therapy, such as the patch or gum 4 Traditional medicine likeHijama, ayurvedic etc 5 A quit line or telephone support line or m-cessation Mobile or online cessation advisory 6 apps. including aps linked to fitness 7 tracking gadgets like (Fitbit) Try to quit without assistance 8 Other (Specify)	Tx3
During the past 30 days, did someone smoke in your home in your presence?	Yes 1 if yes, then go to T17x No 2	T17
How often does anyone smoke in your home?	Daily 1 Weekly 2 Monthly 3 Less than monthly 4 Don't know 5	T17x
During the past 30 days, did someone smoke in closed areas where you work (in the building, in a work area or a specific office)?	Don't work in a closed area 3 Yes 1 No 2	T18

In the past 30 days, did anyone smoke inside followingplaces when you visited those places?		
Restaurants / Canteens / Hotel / Sai Hota / Cafes	Didn't visit 77 Yes 1 No 2	Tx5a
Public transport such as bus / taxi / ferries / ferry terminals / jet-ties/ bus stops / ticket counters	Didn't use public transport 77 Yes 1 No 2	Tx5b
School/College/Univer-sity/hostels	Didn't visit 77 Yes 1 No 2	Tx5c
Health care facilities (Hospitals/HealthPost/ PrimaryHealth Care Centers/ clinics)	Didn't visit 77 Yes 1 No 2	Tx5d
n the past 30 days, did anyone smoke following places when you visited those places?		
Fish market/Local market	Didn't visit 77 Yes 1 No 2	Tx6a
Street	Didn't visit 77 Yes 1 No 2	Tx6b
Parks	Didn't visit 77 Yes 1 No 2	Tx6c
Public Beaches, night markets, entertain-mentshows, demonstration services	Didn't visit 77 Yes 1 No 2	Tx6d

Electronic Cigarettes

The next questions are about using electronic cigarettes. Electronic cigarettes include any product that uses batteries or other methods to produce a vapor which contains nicotine. They have various other names such as e-cigarette, vape-pen, e-shisha, e-pipes.

Question	Response		Code
Before today, have you ever heard of electronic cigarettes?	Yes No Refused	1 2 go to B1 88 go to B1	EC1
Which one of the following is an electronic cigarette? [USE SHOWCARDS 1c	Option 1 Options 2 Option 3 Options 4 Don't know	1 2 (Correct answer) 3 4 77	EC2
Do you currently use electronic cigarettes?	Yes, Daily Less than daily Not at all Refused	1 go to ECx1 2 go to ECx1 3 88	EC3
Have you ever, even once, used an electronic cigarette?	Yes No Refused	1 go to ECx1 2 go to B1 88 go to B1	EC4
Last time when you used the e-cigarette, where did you get the e-cigarette/refill [if EC3=1 or EC3=2 or EC4 =1]	From local shop Online From other country From a friend/relative At airport/duty free shop Someone's house Café/restaurants Others (specify)	1 2 3 4 5 6 7	ECx1

Betel or areca nut

Do you currently use betel or areca nut or supari products daily?	Yes, Daily 1 go to B2 Yes, non-daily 2 go to B2 No 3 go to B3	B1
What type of betel nut/areca nut do you use mostly?	Plain 1 Flavored 2 Don't know 77	B2
Do you currently use paan masala	Yes 1 No 2	B3

Tobacco Control Policy

You have been asked questions on tobacco consumption before. The next questions ask about selected tobacco control policies. They include questions on your exposure to the media and advertisement, on tobacco advertising promotion and sponsorships, health warnings and purchase of tobacco products.

Question	Response	Code
During the past 30 days, have you noticed information about the dangers of smoking cigarettes, shishah, bidis or other tobacco products, and that encourages quitting, through the following media?		
Newspapers or magazines	Yes 1 No 2 Don't know 77	TP1a
Television/Cinema	Yes 1 No 2 Don't know / Did not watch TV 77	TP1b
Radio	Yes 1 No 2 Don't know / Did not listen to radio 77	TP1c
Billboards/posters/wall painting, including notices placed in shops, cafes and health facilities	Yes 1 No 2 Don't know 77	TP1d
Internet/Websites including social media platforms	Yes 1 No 2 Don't use internet 77	TP1e

In the last 30 days, have you seen any advertisements or signs promoting the cigarettes/ bidis or any other smokeless tobacco products such as chewing tobacco, khaini (ganesh) on following media?

Newspapers or magazines	Yes 1 No 2 Don't know 77	TPx1
Television/cinema	Yes 1 No 2 Don't know / Did not watch TV 77	TPx2
Radio	Yes 1 No 2 Don't know / Did not listen to radio 77	TPx3
Billboards/posters/wall painting	Yes 1 No 2 Don't know 77	TPx4
Internet / Websites including social media platforms	Yes 1 No 2 Don't use internet 77	TPx5

During the past 30 days, have you noticed any **advertisements or signs promoting** cigarettes/ shisha or bidis or any other tobacco products in stores or cafes where these products are sold or consumed?	Yes 1 No 2 Don't know 77	TP2
During the past 30 days, have you noticed any of the following types of **tobacco promotions?**		
Free samples of tobacco products	Yes 1 No 2 Don't know 77	TP3a
tobacco products at sale prices	Yes 1 No 2 Don't know 77	TP3b
Discounted or actual value Coupons for tobacco products	Yes 1 No 2 Don't know 77	TP3c
Free gifts or special discount offer on other products when buying cigarettes	Yes 1 No 2 Don't know 77	TP3d
Clothing or other items with a tobacco brand name or logo	Yes 1 No 2 Don't know 77	TP3e
tobacco promotions in the mail or direct messaging	Yes 1 No 2 Don't know 77	TP3f

During the past 30 days, did you notice any health warnings on cigarette/ bidis/smokeless tobacco product packages?	Yes (Text only) 1	
	Yes (Picture only) 2	
	Yes (Text and Picture both) 3 No 4 go to TP6 Did not see any tobacco packages 5 go to TP6 Don't know 77 go to TP6	TP4
The next questions TP5 — TP7 are to be asked for current smokers or current users of smokeless tobacco products		
During the past 30 days, have warning labels on cigarette/bidis/smokeless tobacco product packages led you to think about quitting?	Yes 1 No 2 Don't know 77	TP5
The last time you bought manufactured cigarettes for yourself, how many cigarettes did you buy in total?	Number of cigarettes ____ Don't know or Don't smoke or purchase manuf. Cigarettes enter 77 If selected, end section	TP6
In total, how much money did you pay for this purchase?	Amount ____ Don't know 77 Refused 88	TP7
Last time you bought cigarette for yourself, did you buy loose cigarettes, packets or something else how did you buy it?	Loose Cigarettes 1 Packet 2 Others specify	TPx6/ TPx6others

Drug use

The next questions ask about drug use. This includes using marijuana, amphetamines, cocaine, ecstasy, and heroin.

During your life, how many times have you used marijuana, amphetamines, cocaine, ecstasy, and heroin?	0 times 1 go to A1 1 or 2 times 2 3 to 9 times 3 10 to 19 times 4 20 or more times 5 Refused 88 go to A1	Dr1
During the past 30 days, how many times have you used marijuana, amphetamines, cocaine, ecstasy, and heroin?	0 times 1 1 or 2 times 2 3 to 9 times 3 10 to 19 times 4 20 or more times 5	Dr2

Alcohol Consumption

The next questions ask about the consumption of alcohol.

Question	Response	Code
Have you ever consumed an alcoholic drink such as beer, wine, spirits, fermented cider, homebrewed etc.? (USE SHOWCARDS 2a)	Yes 1 No 2 If No, go to AP1	A1
	Refused 88 , go to AP1	
Have you consumed an alcoholic drink within the past 12 months?	Yes 1 If Yes, go to A4 No 2	A2
What are the reasons you stopped alcohol during the past 12 months? (MULTIPLE RESPONSE)	Health reason 1 go to AP1 Family Pressure 2 go to AP1 Can't afford/No money to buy 3 go to AP1 Just wanted to stop 4 go to AP1 Spiritual/religious reasons 5 go to AP1 Advice of your doctor or other health worker 6 go to AP1 Because of legal ban 7 go to AP1 Not available 8 go to AP1 Other (Specify) go to AP1	A3x/ A3xothers
During the past 12 months, how frequently have you had at least one standard alcoholic drink? (READ RESPONSES) (USE SHOWCARDS 2b)	Daily 1 5-6 days per week 2 3-4 days per week 3 1-2 days per week 4 1-3 days per month 5 Less than once a month 6	A4
Have you consumed any alcohol within the past 30 days?	Yes 1 No 2 If No, go to AP1	A5
What is the type of alcohol do you usually or most oftendrink?	Beer 1 Wine 2 Spirit (Whiskey / Vodka / Gin) 3 Homebrewed 4 Alcohol not intended for drinking, like alcohol-based medicines, like cough syrup, perfumes, after shaves,cologne 5 Other (Specify)	A5x/ A5xother

During the past 30 days, on how many occasions did you have at least one standard alcoholic drink? (USE SHOWCARDS 2b)	Number Don't know 77 if ~~A6=0~~ goto AP1	A6
During the past 30 days, when you drank alcohol, how many standard drinks on average did you have during one drinking occasion? (USE SHOWCARDS 2b)	Number Don't Know 77 ⌊_⌋⌊_⌋	A7
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 Don't Know 77 ⌊_⌋⌊_⌋	A8
During the past 30 days, how many times did you have six or more Standard drinks in a single drinking occasion?	Number of times Don't Know 77 ⌊_⌋⌊_⌋	A9
During each of the past 7 days, how many standard drinks did you have each day? (USE SHOWCARDS 2b) Don't Know 77	Monday ⌊_⌋⌊_⌋	A10a
	Tuesday ⌊_⌋⌊_⌋	A10b
	Wednesday ⌊_⌋⌊_⌋	A10c
	Thursday ⌊_⌋⌊_⌋	A10d
	Friday ⌊_⌋⌊_⌋	A10e
	Saturday ⌊_⌋⌊_⌋	A10f
	Sunday ⌊_⌋⌊_⌋	A10g

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 homebrewed alcohol, alcohol brought over the border/from another resort/country, any alcohol not intended for drinking or other untaxed alcohol. Please only think about these types of alcohol when answering the next questions

During the past 7 days, did you consume any homebrewed alcohol, any alcohol brought over the border/from another resort/ country, any alcohol not intended for drinking such as cough syrup, perfumes, after shaves, cologne, confectionaries like liquor chocolate or other untaxed alcohol?	Yes 1 No 2 If No, go to AP13	A11
On average, how many standard drinks of the following did you consume during the past 7 days? Don't Know 77	Homebrewed spirits ⌊_⌋⌊_⌋	A12a
	Homebrewed beer or wine ⌊_⌋⌊_⌋	A12b
	Alcohol brought over the border/from another resort/country ⌊_⌋⌊_⌋	A12c
	Alcohol not intended for drinking, like alcohol-based medicines, like cough syrup, perfumes, after shaves, cologne, liquor chocolate ⌊_⌋⌊_⌋	A12d
	Others untaxed alcohol in the country Specify	A12e

You have been asked questions on alcohol consumption before. The next questions ask about alcohol control policies and programs. They include questions on restricting physical availability and other countermeasures

How easy or difficul it is for someone to obtain alcohol for drinking in Maldives? (It will be asked to all participants)	Very easy 1 Easy 2 Difficult 3 Very difficult 4 Don't know / Don't drink alcohol 77	AP1
During last 12 months, have you been stopped/ checked by traffi police for alcohol while driving/riding?	I don't drive 77 Yes 1 No 2 Refused 88	AP4

Diet

The next questions ask about the fruits and vegetables that you usually eat. I have a nutrition card 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.

In a **typical week**, on how many **days** do you **eat fruit?** (USE SHOWCARDS 3a)	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 SHOWCARDS 3b)	Number of servings ⌊_⌋⌊_⌋ Don't Know 77	D2
In a **typical week**, on how many **days** do you **eat vegetables?** (USE SHOWCARDS 3c)	Number of days ⌊_⌋⌊_⌋ Don't Know 77 If Zero days, go to Dx1	D3
How many **servings** of vegetables do you eat on **one** of those days? (USE SHOWCARDS 3d)	Number of servings ⌊_⌋⌊_⌋ Don't know 77	D4
What do you think is the desirable or recommended number of ruit and vegetable servings one should eat every day to be healthier?	Number of servings ⌊_⌋⌊_⌋ Don't know 77	Dx1

Dietary salt

The next questions ask about your knowledge, attitudes and behaviour towards dietary salt. Dietary salt includes ordinary table salt, unrefine salt such as sea salt, iodised salt and salty sauces such as rihaakuru, soya sauce. fis sauce or oyster sauce, ajinamoto. The following questions are on adding salt to food right before you eat it, how food is prepared in your home, eating processed foods that are high in salt such as instant noodles, salted potato chips, salty biscuits, canned fish dry meat, smoked/dried tuna (hikimas, preserved pickle, papad etc. and 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 to your food right before you eat it or as you are eating it (adding extra salt from the table)? (SELECT ONLY ONE) (USE SHOWCARDS 4a)	Always 1 Often 2 Sometimes 3 Rarely 4 Neve 5 Don't know 77	D5a
How often do you add salty sauce such as rihaakuru, soya sauce, fis sauce, oyster sauce or other sauces to your food right before you eat it or as you are eating? (SELECT ONLY ONE) (USE SHOWCARDS 4b)	Always 1 Often 2 Sometimes 3 Rarely 4 Never 5 Don't know 77	D5b
How often do you eat processed food high in salt? Processed food high in salt means foods that have been altered from their natural state, such as packaged salty snacks (such as instant noodles, salty buscuits, lays, kurkure, namkeen, chips), pappad canned salty food including aachar and preservatives, salty food prepared at a fast food restaurant, cheese, processed meat (sausage/luncheon meat, salami), dried fish salty fis etc. (USE SHOWCARDS 4c)	Always 1 Often 2 Sometimes 3 Rarely 4 Never 5 Don't know 77	D7

How much salt do you think you consume?	Far too much 1 Too much 2 Just the right amount 3 Too little 4 Far too little 5 Don't know 77	D8a
How much salty sauce such as rihaakuru, soya sauce. fis sauce, oyster sauce soya sauce or other sauces do you think you consume?	Far too much 1 Too much 2 Just the right amount 3 Too little 4 Far too little 5 Don't know 77	D8b
What is the maximum amount of salt do you think a person should take in a day from all sources?	Teaspoon _____	D8x
How important is it to you to lower salt in your diet?	Very important 1 Somewhat important 2 Not at all important 3 Don't know 77	D9
What do you think 'too much' salt in your diet can do to our health? [Multiple response]	Nothing, more salt is good for your health 1 Increase blood pressure 2 Kidney disease 3 Asthma 4 Cancer 5 Tuberculosis 6 Other specify Don't know 77	D10x
Currently are you doing anything on regular basis to control salt intake?	Yes 1 No 2 go to D12x Don't know 77 go to D12x	D11x

Do you do any of the following on a regular basis to control your salt intake? (RECORD FOR EACH)		
Avoid /minimize consumption of processed foods such as rihaakuru, salted fish etc.	Yes 1 No 2	D11a
Look at the salt or sodium content on food labels	Yes 1 No 2	D11b
Buy low salt/sodium alternatives	Yes 1 No 2	D11c
Use spices other than salt when cooking	Yes 1 No 2	D11d
Avoid eating foods prepared outside of home.	Yes 1 No 2	D11e
Eat meals without adding extra salt at the table	Yes 1 No 2	D11f
Cook meals such as rice or bread without adding salt	Yes 1 No 2	D11g
Others	Yes 1 No 2	D11h
Other (please specify)		
The next questions ask about the oil or fat that is most often used for meal preparation in your household.		

What types of oil or fat is most often used for meals preparation in your household?	Vegetable oil 1 Sunflower oil 2 Olive oil 3 Corn oil 4 Butter or ghee 5 Margarine 6 Coconut oil 7 Nothing in particular 8 Not used 9 Don't know 77 Other (specify)	D12x/ D12xo-ther
Do you check the nutritional labelling for sugar/fats/ salt of the food products before buying?	Yes 1 go to, D14xa No 2 go to D15x	D14x
Which nutritional label do you check before buying? [Multiple response]	Yes for Fat 1 Yes for Sugar 2 Yes for Salt 3	D14xa
If you are not checking nutritional labelling, then choose **appropriate reason(s)**. [Multiple response]	I don't have time 1 Difficult to understand 2 Did not feel the need to check 3 it Can't read/understand as the label is 4 not in my language I can't read any language 5 Others (specify)	D15x

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 (personal trainers/gym instructors/sports coaches), household chores, harvesting food/crops, fishing, 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.

Work

Does your work involve vigorous-intensity activity that causes large increases in breathing or heart rate like carrying or lifting heavy loads, digging, fishing cycling or construction work for at least 10 minutes continuously? (USE SHOWCARDS 5a)	Yes 1 No 2 If No, go to P 4	P1
In a typical week, on how many days do you do vigorousintensity activities as part of your work?	Number of days ⌊_⌋ Enter 77, if not known	P2
How much time do you spend doing vigorous-intensity activities at work on a typical day?	Hours: minutes ⌊_⌋⌊_⌋ hrs ⌊_⌋⌊_⌋ mins Enter 77, if not known	P3 (a-b)
Does your work involve moderate-intensity activity that causes small increases in breathing or heart rate such as brisk walking, carrying light loads, manual washing clothes, mopping of floor, gardening at home for at least 10 minutes continuously? (USE SHOWCARDS 5b)	Yes 1 No 2 If No, go to P 7	P4
n a typical week, on how many days do you do moderateintensity activities as part of your work?	Number of days ⌊_⌋ Enter 77, if not known	P5
How much time do you spend doing moderate-intensity activities at work on a typical day?	Hours: minutes ⌊_⌋⌊_⌋ hrs ⌊_⌋⌊_⌋ mins Enter 77, if not known	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 place 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 No 2 If No, go to P 10	P7
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 ⌊_⌋ Enter 77, if not known	P8
How much time do you spend walking or bicycling for travel on a typical day?	Hours: minutes ⌊_⌋⌊_⌋ hrs ⌊_⌋⌊_⌋ mins Enter 77, if not known	P9 (a-b)

Recreational activities

Recreational activitiesThe 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).

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Do you do any vigorous-intensity sports, fitness or recreational (leisure) activities that cause large increases in breathing or heart rate like running, football, basketball, volley ball, badminton, skipping, bashi, dodge ball, surfing, diving etc. for at least 10 minutes continuously? (USE SHOWCARDS 5c)	Yes 1 No 2 If No, go to P 13	P10
In a typical week, on how many days do you do vigorousintensity sports, fitness or recreational (leisure) activities?	Number of days ⌊_⌋ Enter 77, if not known	P11
How much time do you spend doing vigorous-intensity sports, fitness or recreational activities on a typical day?	Hours: minutes ⌊_⌋⌊_⌋ hrs ⌊_⌋⌊_⌋ mins Enter 77, if not known	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 like brisk walking, cycling, swimming, volleyball, badminton, yoga, snorkeling etc. for at least 10 minutes continuously? (USE SHOWCARDS 5d)	Yes 1 No 2 If No, go to P 16	P13
n a typical week, on how many days do you do moderateintensity sports, fitness or recreatio	Number of days ⌊_⌋ Enter 77, if not known	P14
How much time do you spend doing moderate-intensity sports, fitness or recreational (leisure) activities on a typical day?	Hours: minutes ⌊_⌋⌊_⌋ hrs ⌊_⌋⌊_⌋ mins Enter 77, if not known	P15 (a-b)

Sedentary behaviour		
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, sittingwith friends, travelling in car or bus, reading, playing cards, watching television or playing computer games but does not include time spent sleeping (USESHOWCARDS 5e)		
How much time do you usually spend sitting or reclining on a typical day?	Hours: minutes ⌊_⌋⌊_⌋ hrs ⌊_⌋⌊_⌋ mins Enter 77, if not known	P16 (a-b)

Outdoor gym and sea swimming		
Now, I am going to ask you about the uses of open gyms and sea swimming		
Have you ever used outdoor gyms (Open gyms)?	Yes 1 go to P19x No 2 go to P18x	P17x
What was the reason having not used outdoor gyms?	Not available 1 No time 2 Feel shy 3 Instrument broken 4 Not interested 5 Didn't know about open gyms 6 I am disabled and can't use gym 7	P18x
In the past 12 months, how often did you use outdoor gyms?	Daily or almost daily 1 Weekly 2 Monthly 3 Less than monthly 4	P19x
Have you ever used sea/swimming?	Yes 1 go to P22x No 2 go to P21x	P20x
What was the reason having not used sea/swimming?	Not available 1 No time 2 Feel shy 3 Sea was not clean 4 Not interested 5	P21x

In the past 12 months, how often did you go to sea/swimming?	Daily or almost daily 1 Weekly 2 Monthly 3 Less than monthly 4	P22x

History of Raised Blood Pressure

Now, I am going to ask you some question about blood pressure

Have you ever had your blood pressure measured by a doctor or other health professional?	Yes 1 No 2 If No, go to H6	H1
Have you ever been told by a doctor or other health professional that you have raised blood pressure or hypertension?	Yes 1 No 2 If No, go to H6	H2a
Have you been told for the first time in the past 12 months?	Yes 1 No 2	H2b
Have you ever been told (prescribed) to take a medicine by a doctor or health professional for raised blood pressure? [Appear only if H2a=yes]	Yes 1 No 2 go to Hx2	H2c
Have you ever taken drugs/medications for raised blood pressure prescribed by a doctor/ health professional? [Appear only if H2a=yes]	Yes 1 No 2 [If No, go to Hx2]	H2d
n the past two weeks, have you taken any drugs (medication) for raised blood pressure prescribed by a doctor or other health professional? [Appear only if H2a= yes and H2d=yes]	Yes 1 No 2	H3

Where do you usually go for treatment or advice for your raised blood pressure? [Multiple Response] [Appear only If H2a=yes]	Indira Gandhi memorial hospital 1 Government Health Facility in the island 2 Government health facility 3 in another island 4 Mobile testing camps 5 Private hospital 6 Private clinic 7 Hijama or Ayurvedic 8 NGOs 9 Abroad 77 Don't know Other (specify)	Hx2 Hx2other
Where do you usually get your drugs/medicines for raised blood pressure? [Multiple Response] [Appear only If H2d=yes or H3=yes]	Pharmacy attached to a government hospital/clinic or standalone govt pharmacy from the same island Pharmacy attached to a government hospital/clinic or standalone govt pharmacy from another island Pharmacy attached to a private hospital/ clinic or standalone private pharmacy in the same island Pharmacy attached to a private hospital/ clinic or standalone private pharmacy from another island 1 Hijama or Ayurvedic From abroad Don't know Other (specify)	Hx3/Hx3Other

What is the most important reason for which you are not currently taking medications for raised blood pressure or hypertension? [Appear only if H2a=yes and (H2d=-no or H3=no)]	Don't think drug is necessary 1 Got side effects 2 Afraid of side effects 3 Too expensive 4 Blood pressure got normal 5 Medicine not available 6 Medicine not advised by doctor 7 Other (specify)	Hx4/ Hx4other
Have you ever seen traditional medicine healers for raised blood pressure or hypertension? [Appear only if, H2a = yes]	Yes 1 No 2	H4
Are you currently taking any other herbal or traditional remedy for your raised blood pressure?[Appear only if, H2a = yes]	Yes 1 No 2	H5
Have you ever seen a hijama healer for raisedblood pressure or hypertension?[Appear only if, H2a = yes]	Yes 1 No 2	H4x
Are you currently taking any hijama for your raisedblood pressure or hypertension? [Appear only if, H2a = yes]	Yes 1 No 2	H5x

History of Diabetes

Now, I am going to ask you some question about blood sugar (Diabetes)

Have you ever had your blood sugar (Diabetes) measured by a doctor or other health professional?	Yes 1 No 2 If No, go to H12	H6

Have you ever been told by a doctor or other health professional that you have raised blood sugar or diabetes?	Yes 1 No 2 If No, go to H12	H7a
Have you been told for the first time in the past 12 months?	Yes 1 No 2	H7b
Have you ever been told to take (prescribed) a medicine by a doctor or health professionals for raised blood sugar or diabetes?[Appear only if H7a=yes]	Yes 1 No 2 go to H9x1	H7c
Have you ever taken drugs/medications for diabetes prescribed by a doctor/health professional? [Appear only if H7a=yes]	Yes 1 No 2 ([If No, go to H9x1]	H7d
n the past two weeks, have you taken any drugs (medication) for diabetes prescribed by a doctor or other health worker? [Appear only if H7a=yes and H7c=yes]	Yes 1 No 2 go to H9x1	H8
Are you currently taking insulin for diabetes prescribed by a doctor or other health professional? [Appear only if H7a=yes]	Yes 1 No 2	H9

Where do you usually go for treatment or advice for diabetes? [Multiple Response] [Appear only If H7a=yes]	Indira Gandhi memorial hospital 1 Government Health Facility in the island 2 Government health facility in another island 3 Mobile testing camps 4 Private hospital 5 Private clinic 6 Hijama or 7 NGOs 8 Abroad 9 Don't know 77 Other (specify)	H9x1/ H9x1 other

Where do you usually get your drugs/medicines for diabetes? [Multiple Response] [Appear only If Hx5a = yes or H8 = yes or H9 = yes]	Pharmacy attached to a government hospital/clinic or standalone govt pharmacy from the same island 1 Pharmacy attached to a government hospital/clinic or standalone govt pharmacy from another island 2 Pharmacy attached to a private hospital/clinic or standalone private pharmacy in the same island 3 Pharmacy attached to a private hospital/clinic or standalone private pharmacy from another island 4 Hijama or Ayurvedic 5 From abroad 6 Don't know 77 Other (specify)	H9x2/ H9x 2other
What is the most important reason for which you are not currently taking medications for raised blood sugar or diabetes? [Appear only if, H7a = yes and (H7d=no or H8)]	Don't think drug is necessary 1 Got side effects 2 Afraid of side effects 3 Too expensive 4 Diabetes got normal 5 Medicine not available 6 Medicine not advised 7 Other (specify) 8	H9x3/ Hx8other

Have you ever seen a traditional healer for diabetes or raised blood sugar? [Appear only if, H7a = yes]	Yes 1 No 2	H10
Are you currently taking any herbal or traditional remedy for your diabetes? [Appear only if, H7a = yes]	Yes 1 No 2	H11
Have you ever seen a hijama healer for diabetes or raised blood sugar? [Appear only if, H7a = yes]	Yes 1 No 2	H10x
Are you currently taking any hijama for your diabetes or raised blood sugar? [Appear only if, H7a = yes]	Yes 1 No 1	H11x

History of Raised Total Cholesterol

Now, I am going to ask you some question about cholesterol/fat level.

Have you ever had your cholesterol (fat levels in your blood) measured by a doctor or other health professional?	Yes 1 No 2 If No, go to H17	H12
Have you ever been told by a doctor or other health professional that you have raised cholesterol?	Yes 1 No 2 If No, go to H17	H13a
Have you been told for the first time in the past 12 months?	Yes 1 No 2	H13b

Have you ever been told to take (prescribed) a medicine by a doctor or health professionals for raised cholesterol?	Yes 1 No 2	H13c
Have you ever taken drugs/ medications for raised blood cholesterol prescribed by a doctor/health professional?	Yes 1 No 2	H13d
In the past two weeks, have you taken any oral treatment (medication) for raised total cholesterol prescribed by a doctor or other health professional?	Yes 1 No 2	H14
What is the most important reason for which you are not currently taking medications for raised blood cholesterol? Appear only if, [H13a = yes and H14 = no]	Don't think drug is necessary 1 Got side effects 2 Afraid of side effects 3 Too expensive 4 Cholesterol got normal 5 Medicine not available 6 Medicine not advised 7 Other (specify) 8	Hx13/ Hx13o-ther
Have you ever seen a traditional healer like Hijama healers or traditional medicine healers for raised cholesterol? [Appear only if, H13a = yes]	Yes 1 No 2	H15
Are you currently taking any herbal or traditional remedy for your raised cholesterol? [Appear only if, H13a = yes]	Yes 1 No 2	H16

History of Cardiovascular Diseases		
Now, I am going to ask you some question about 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 No 2	H17
Are you currently taking aspirin regularly to prevent or treat heart disease?	Yes 1 No 2 Don't' know 77	H18
Are you currently taking statins (Lovastatin/Simvastatin/Atorvastatin or any other statin) regularly to prevent or treat heart disease?	Yes 1 No 2 Don't' know 77	H19

Lifestyle Advice		
Now, I am going to ask you about the advices on the lifestyle by your Doctor / Health professional.		
During the past 12 months, have you visited a doctor or other health professional?	Yes 1 No 2If No and C1=1, go to HSa If No and C1=2, go to CX1	H20
During any of your visits to a doctor or other health professional in the past 12 months, were you advised to do any of the following? (RECORD FOR EACH)		
Quit using tobacco or don't start	Yes 1 No 2	H20a
Reduce salt in your diet	Yes 1 No 2	H20a

Eat at least five servings of fruit and/or vegetables each day	Yes 1 No 2	H20c
Reduce fat in your diet	Yes 1 No 2	H20d
Start or do more physical activity	Yes 1 No 2	H20e
Maintain a healthy body weight or lose weight	Yes 1 No 2	H20f
Reduce sugary beverages in your diet	Yes 1 If C1=1 go to HS1 and C1=2 go to Cx1 No 2 If C1=1 go to HS1 and C1=2 go to Cx1	H20g

Cervical Cancer Screening (for women only)		
The next question asks about cervical cancer prevention. Screening tests for cervical cancer prevention can be done in different ways, including Visual Inspection with Acetic Acid/vinegar (VIA), pap smear and Human Papillomavirus (HPV) test. VIA is an inspection of the surface of the uterine cervix after acetic acid (or vinegar) has been applied to it. For both pap smear and HPV test, a doctor or nurse uses a swab to wipe from inside your vagina, take a sample and send it to a laboratory. It is even possible that you were given the swab yourself and asked to swab the inside of your vagina. The laboratory checks for abnormal cell changes if a pap smear is done, and for the HP virus if an HPV test is done.		
Have you ever had a test for cervical cancer, using any of these methods described above?	Yes 1 go to CX2 No 2 go to CX11 Don't know 77	CX1
At what age were you first tested for cervical cancer?	Age ⌊_⌊_⌋ Don't know 77 Refused 88	CX2

When was your last (most recent) test for cervical cancer?	Less than 1 year ago 1 1-2 years ago 2 3-5 years ago 3 More than 5 years ago 4 Don't know 77 Refused 88	CX3
Did you pay for the cervical cancer test?	No, as done in Govt. facility 1 No, as covered under Govt. insurance scheme 2 Yes 3	CX3a
What is the main reason you had your last test for cervical cancer?	Part of a routine exam 1 Following up on abnormal or inconclusive result 2 Recommended by healthcare provider 3 Recommended by other source 4 Experiencing pain or other symptoms 5 Medical camps 6 Don't know 77 Refused 88 Other (Specify)	CX4/ CX4other

Where did you receive your last test for cervical cancer?	Indira Gandhi memorial hospital 1 Government Health Facility in the 2 Government health facility in 3 Mobile testing camps 4 Private hospital 5 Private clinic 6 Hijama, Ayurvedic or naturopathic 7 NGOs 8 Abroad 9 Don't know 77 Other (specify)	CX5/ CX5other
What was the result of your last (most recent) test for cervical	Did not receive result 1 go to HS1 Normal / Negative 2 go to HS1 Abnormal /Positive 3 Suspect cancer 4 Inconclusive 5 Don't know 77 Refused 88	CX6
Did you have any follow-up visits because of your test results?	Yes 1 No 2 Don't kno 77 Refused 88	CX7
Did you receive any treatment to your cervix because of your test results?	Yes 1 No 2 go to CX10 Don't kno 77 go to HS1 Refused 88 go to HS1	CX8
Did you receive any treatment during the same visit as your last test for cervical cancer?	Yes 1 go to HS1 No 2 go to HS1 Don't kno 77 go to HS1 Refused 88 go to HS1	CX9

Injury

The next questions ask related to road traffic injuries.

In the past 12 months, have you been involved in a road traffic crash as a driver, passenger, pedestrian, or cyclist?	Yes (as driver of 2-wheeler) 1 Yes (as driver of 4-wheeler) 2 Yes (as passenger of 2-wheeler) 3 Yes (as passenger of 4-wheeler) Yes 4 Yes (as pedestrian) 5 Yes Yes (as a cyclist) 6 No 7 go to V5 Don't know 77 go to V5 Refused 88 go to V5	V3
Did you have any injuries in this road traffic crash which required medical attention?	Yes 1 No 2 Don't know 77 Refused 88	V4
The next questions ask about the most serious accidental injury you have had in the past 12 months.		
In the past 12 months, were you injured accidentally, other than the road traffic crashes which required medical attention?	Yes 1 No 2 If No, go to V7 Don't know 77 go to V7 Refused 88 go to V7	V5

Please indicate which of the following was the cause of this injury.	Fall 1 Burn 2 Poisoning 3 Cut 4 Near-drowning 5 Animal bite 6 Sea injury 7 Other (specify) 8 Don't know 77 Refused 88	V6/ V6other
Where were you when you had this injury?	Home 1 School 2 Workplace 3 Road/Street/Highway 4 Farm 5 Sports/athletic area 6 Sea 7 Other (specify) 8 Don't know 77 Refused 88	V7 / V7other

Mental health / Suicide / self-harm

The next questions ask about thoughts, plans, and attempts of suicide/self-harm. Please answer the questions even if no one usually talks about these issues.

During the past 12 months, have you seriously considered attempting suicide/self-harm?	Yes 1 go to MH2 No 2 Refused 88	MH1
Did you seek professional help for these thoughts?	Yes 1 No 2 Refused 88	MH2
During the past 12 months, have you made a plan about how you would attempt suicide/self-harm?	Yes 1 No 2 Refused 88	MH3
Have you ever attempted suicide/self-harm?	Yes 1 No 2 go to MH9 Refused 88	MH4
During the past 12 months, have you attempted suicide/self-harm?	Yes 1 No 2 Refused 88	MH5

What was the main method you used the last time you attempted suicide/self-harm? (SELECT ONLY ONE)	Razor, knife or other sharp instrument1 1 Overdose of medication (e. g. prescribed, over-the-counter) 2 Overdose of other substance (e.g. heroin, crack, alcohol) 3 Poisoning with pesticides (e.g. rat poison, insecticide, weedkiller) 4 Other poisoning (e.g. plant/seed, household 5 Poisonous gases from charcoal 6 Hanging 7 Jumping from a height 8 Drowning in deep water Other (specify) 9 Refused 88	MH6 / MH6other
Did you seek medical care for this attempt?	Yes 1 No 2 If No, go to MH9 Refused 88 go to MH9	MH7
Were you admitted to hospital overnight because of this attempt?	Yes 1 No 2 Refused 88	MH8
Has anyone in your close family (mother, father, brother, sister or children) ever attempted suicide?	Yes 1 No 2 Refused 88 Refused 88	MH9

Has anyone in your close family (mother, father, brother, sister or children) ever died from suicide?	Yes 1 No 2 Refused 88	MH10

Depression

Over the past 2 weeks, how often have you been bothered by any of the following problems

Little interest or pleasure in doing things	Not at all 1 Several Days 2 More than half a day 3 Nearly Every day 4	MH11
Feeling down, depressed or hopeless	Not at all 1 Several Days 2 More than half a day 3 Nearly Every day 4	MH12
Trouble falling or staying asleep, or sleeping too much	Not at all 1 Several Days 2 More than half a day 3 Nearly Every day 4	MH13
Feeling tired or having little energy	Not at all 1 Several Days 2 More than half a day 3 Nearly Every day 4	MH14
Poor appetite or overeating	Not at all 1 Several Days 2 More than half a day 3 Nearly Every day 4	MH15
Feeling bad about yourself or that you are a failure or have let yourself or your family down	Not at all 1 Several Days 2 More than half a day 3 Nearly Every day 4	MH16
Trouble concentrating on things, such as reading the newspaper or watching television	Not at all 1 Several Days 2 More than half a day 3 Nearly Every day 4	MH17
Moving or speaking so slowly that other people could have noticed? Or the opposite being so fidgety or restless that you have been moving around a lot more than usual	Not at all 1 Several Days 2 More than half a day 3 Nearly Every day 4	MH18
Thoughts that you would be better off dead or of hurting yourself in some way	Not at all 1 Several Days 2 More than half a day 3 Nearly Every day 4	MH19

Anxiety

Over the past 2 weeks, how often have you been bothered by any of the following problems

Feeling nervous, anxious, or on edge	Not at all 1 Several Days 2 More than half a day 3 Nearly Every day 4	MH20
Worrying too much about different things	Not at all 1 Several Days 2 More than half a day 3 Nearly Every day 4	MH21

Not being able to stop or control worrying	Not at all 1 Several Days 2 More than half a day 3 Nearly Every day 4	MH22
Trouble relaxing	Not at all 1 Several Days 2 More than half a day 3 Nearly Every day 4	MH23
Being so restless that it is hard to stand still	Not at all 1 Several Days 2 More than half a day 3 Nearly Every day 4	MH24
Becoming easily annoyed	Not at all 1 Several Days 2 More than half a day 3 Nearly Every day 4	MH25
Feeling afraid as if something awful might happen	Not at all 1 Several Days 2 More than half a day 3 Nearly Every day 4	MH26

The next questions ask about suicide problem and reasons in your community. Please answer the questions even if no one usually talks about these issues.

Do you think suicide is a problem (or relatively common) in your community?	Not at all 1 go to MH1 Somewhat 2 go to MHx2 Very much 3 go to MHx2 Don't know 77 go to MH1	MHx1

What do you think are the main reasons people in your community/Region commit suicide? [Select all those apply, multiple response]	Lack of employment 1 Too much pressure 2 Poverty 3 Family issues 4 Loneliness 5 Relationship issue 6 Chronic disease 7 Extramarital affair 8 Pregnancy 9 Psychological or psychiatric condition 10 Abuse-physical 11 Emotional 12 Financial 13 Work related problem 14 Other(specify)	MHx2 / MHx2Other

Health System

Now, I am going to ask you some question about health insurance and medical expenditures

In the past 12 months have you been ill and needed treatment but did not receive treatment?	Yes 1 go to HS3 No 2 go to HS2	HS1
If no, What was the main reason for not receiving treatment?	Could not afford treatment 1 Could not afford travel costs to receive treatment 2 Long wait time 3 Difficulty traveling / Living far away from facilities 4 No time to go get treatment 5 Don't trust or feel confident with facilities or providers 6 Did not know where to go receive treatment 7 No one was able to take me to get treatment 8 Any other (specify)	HS2

Thinking of last three month, how much money (in Rufiyaa) did you spend out of your pocket on treatment and care of your raised blood pressure or diabetes or heart disease, which was NOT covered or paid under Aasandha, in all the three months? [if H2a = 1 or H7a = 1 or H13a = 1]	On medicines ⌊_⌋⌊_⌋ On doctor's consultation ⌊_⌋⌊_⌋ On laboratory tests ⌊_⌋⌊_⌋ On transport to and from health facility ⌊_⌋⌊_⌋ On Hijama treatment ⌊_⌋⌊_⌋ Any other ⌊_⌋⌊_⌋ Other (specify) _____	HS3a HS3b HS3c HS3d HS3e HS3f HS3fother
In the past 12 months have you been ill and needed to/ were recommended by providers to receive in-patient treatment but did not receive in-patient treatment?	Yes 1 No 2 go to HS5	HS4
If no, what was the main reason for not receiving treatment?	Could not afford treatment 1 Could not afford travel costs to receive treatment 2 Long wait time 3 Difficulty traveling / Living far away from facilities 4 No time to go get treatment 5 Don't trust or feel confident with facilities or providers 6 Did not know where to go receive treatment 7 No one was able to take me to get treatment 8 Any other (specify)	HS5

Thank you for participating in the survey!!

Step 2 Physical Measurements

Blood Pressure

Interviewer ID	⌊_⌊_⌊_⌋	M1
Reading 1	Systolic (mmHg) ⌊_⌊_⌊_⌋	M4a
	Diastolic (mmHg) ⌊_⌊_⌊_⌋	M4b
	Beats per minute ⌊_⌊_⌊_⌋	M16a
Reading 2	Systolic (mmHg) ⌊_⌊_⌊_⌋	M5a
	Diastolic (mmHg) ⌊_⌊_⌊_⌋	M5b
	Beats per minute ⌊_⌊_⌊_⌋	M16b
Reading 3	Systolic (mmHg) ⌊_⌊_⌊_⌋	M6a
	Diastolic (mmHg) ⌊_⌊_⌊_⌋	M6b
	Beats per minute ⌊_⌊_⌊_⌋	M16c
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 No 2	M7

Height, Weight, Waist and Hip Circumference

For women: Are you pregnant?	Yes 1 If Yes, go to End No 2	M8
Height	in Centimetres (cm) ⌊_⌊_⌊_⌋	M11
Weight If too large for scale 666.6	n Kilograms (kg) ⌊_⌊_⌊_⌋	M12
Waist circumference	in Centimeters (cm) ⌊_⌊_⌊_⌋	M14
Hip circumference	in Centimeters (cm) ⌊_⌊_⌊_⌋	M15

Step 3 Biochemical Measurements

CORE: Blood Glucose

Question	Response	Code
Enter participant's ID (generated in Step 1 and QR code)	⌊_⌋	PID-3
During the past 12 hours have you had anything to eat or drink, other than water?	Yes 1 No 2	B1
Technician ID	⌊_⌊_⌋	B2
Device ID	⌊_⌋	B3
Time of day blood specimen taken (24hour clock)	Hours: minutes ⌊_⌋ hrs ⌊_⌋ mins	B4
Fasting blood glucose	mg/dl ⌊_⌊_⌊_⌋	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 No 2	B6

WHO STEP wise approach to surveillance- Instrument **Maldives v6.0, 12th**

CORE: Blood Lipids		
Total cholesterol	mg/dl ⌊_⌊_⌊_⌊_⌋	B8
HDL Cholesterol	mg/dl ⌊_⌊_⌊_⌊_⌋	B17
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 No 2	B9
Had you been fasting prior to the urine collection?	Yes 1 No 2	B10
Time of day urine sample taken (24hour clock)	Hours: minutes ⌊_⌊_ hrs ⌊_⌊_ mins	B13

Data will be key-in in the laboratory

Urinary sodium and creatinine		
Enter participant's ID (generated in Step 1) and QR code	⌊_⌊_⌋	PID-4
Lab ID	⌊_⌊_⌊_⌋	B11
Urinary sodium	mmol/l ⌊_⌊_⌊_⌊_⌋	B14
Urinary creatinine	mmol/l ⌊_⌊_⌊_⌊_⌋	B15

Appendix 2: Ethics approval letter

بسم الله الرحمن الرحيم

National Health Research Council
Ministry of Health
Male'
Republic Of Maldives

30th January 2020

Raheema Abdul Raheem
Male'
Republic of Maldives

Approval of Research Proposal

Title of Study Proposal: National STEPS Survey, 2019-20, Maldives

Researcher: Raheema Abdul Raheem (Principal Investigator), Maldives National University

Dear Raheema,

The members of the National Health Research Council have reviewed your research proposal "National STEPS Survey, 2019-20, Maldives". Following the review, the proposed study has been approved by the council.

It is requested that the final report of the research and research abstract be forwarded to the Ministry of Health for future reference and use. Please also note that researchers are required to submit a "Yearly Monitoring Form" to NHRC for review by NHRC on progress of researches conducted in Maldives.

For the Chair of National Health Research Council (NHRC)
Aminath Shafia

MINISTRY OF HEALTH
Male', Republic of Maldives

Tel: (960) 3328887, Fax: (960) 3330699, Email: ppd@health.gov.mv

Appendix 3: Fact sheets

The STEPS survey of noncommunicable disease (NCD) risk factors in Maldives was carried out from December 2020 to December 2021. Maldives carried out Step 1, Step 2, and Step 3. Socio demographic and behavioural information was 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 adults aged 15-69. A Multi-cluster sample design was used to produce representative data for that age range in the Maldives. A total of 3104 adults participated in the survey. The overall response rate was 65%. A repeat survey is planned for 2028 if funds permit.

Results for adults aged 18-69 years (incl. 95% CI) (adjust if necessary)	Both Sexes	Males	Females
Step 1 Tobacco Use			
Percentage who currently smoke tobacco	**23.1% (20.8-25.5)**	**35.6% (29.2-42.0)**	**7.6% (1.2-14.0)**
Percentage who currently smoke tobacco daily	**20.1% (18.0-22.3)**	**33.5% (28.4-38.7)**	**3.5% (1.6-5.4)**
For those who smoke tobacco daily			
Average age started smoking (years)	**18.0 (16.8-19.1)**	**17.9 (16.7-19.1)**	**18.6 (- -)**
Percentage of daily smokers smoking manufactured cigarettes	**92.5% (90.2-94.7)**	**96.1% (94.0-98.3)**	**46.8% (23.9-69.7)**
Mean number of manufactured cigarettes smoked per day (by smokers of manufactured cigarettes)	**13.0 (11.5-4.4)**	**13.7 (12.3-15.1)**	**3.5 (2.5-4.5)**
Step 1 Alcohol Consumption			
Percentage who are lifetime abstainers	**96.1% (93.7-98.5)**	**92.8% (88.7-96.9)**	**99.9% (99.8-100.0)**
Percentage who are past 12 month abstainers	**2.5% (0.7-4.3)**	**4.6% (1.5-7.7)**	**0.0% (0.0-0.1)**
Percentage who currently drink (drank alcohol in the past 30 days)	**0.6% (0.1-1.1)**	**1.1% (0.1-2.0)**	**0.0% (0.0-0.1)**
PPercentage who engages in heavy episodic drinking (6 or more drinks on any occasion in the past 30 days)	**0.3% (-0.1-0.7)**	**0.5% (-0.3-1.3)**	-
Step 1 Diet			
Mean number of days fruit consumed in a typical week	**2.97 (2.95-2.99)**	**2.93 (2.91-2.94)**	**2.89 (2.87-2.91)**
Mean number of servings of fruit consumed on average per day	**2.41 (2.40-2.42)**	**2.55 (2.53-2.57)**	**2.24 (2.22-2.25)**
Mean number of days vegetables consumed in a typical week	**3.13 (3.12-3.14)**	**2.97 (2.95-2.98)**	**3.34 (3.32-3.36)**
Mean number of servings of vegetables consumed on average per day	**1.21 (1.21-1.22)**	**1.23 (1.22-1.23)**	**1.20 (1.20-1.20)**
Percentage who ate less than 5 servings of fruit and/or vegetables on average per day	**54.5%**	**54.6%**	**54.3%**
Percentage who always or often add salt to their food before eating or as they are eating	**29.7%**	**30.8%**	**28.4%**
Percentage who always or often add salty sauce to their food before eating or as they are eating	**67.8%**	**68.7%**	**66.8%**
Percentage who always or often eat processed foods high in salt	**11.8% (6.9-16.7)**	**11.3% (5.2-17.4)**	**12.4% (8.7-16.1)**
Step 1 Physical Activity			
Percentage with insufficien physical activity (define as < 150 minutes of moderate-intensity activity per week, or equivalent) *	45.8%	47.0%	44.2%
Median time spent in physical activity on average per day (minutes)(presented with inter-quartile range)	152.1 (42.9-360.0)	141.4 (49.3-394.3)	171.4 (42.9-330)
Percentage not engaging in vigorous activity	61.2% (54.5-67.8)	45.3% (36.6-54.0)	45.3% (36.6-54.0)

* For complete definition of insufficien 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)

MALDIVES STEPS SURVEY 2020-21
CCO FACT SHEET

The WHO STEPwise approach to surveillance (STEPS) is a simple, standardized method for collecting, analysing, 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, insufficien physical activity, overweight and obesity, raised blood pressure, raised blood glucose, and abnormal blood lipids. Data from STEPS surveys can be used by countries to help monitor progress in meeting the global voluntary targets related to specifi 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 Maldives was carried out from December 2020 to December 2021. The STEPS survey in the Maldives was a population-based survey of adults aged 15-69. A multi stage cluster sample design was used to produce representative data for that age range in the Maldives. Survey information was collected electronically using handheld devices. The survey was implemented by the Maldives National University. A total of 3233 adults participated in the Maldives STEPS survey. The overall response rate was 65%.

Highlights

TOBACCO USE
- 37.7% of men, 10.8% of women, and 25.7% overall were current users of tobacco.
- 35.6% of men, 7.6% of women, and 23.1% overall were current smokers of tobacco.

SMOKELESS TOBACCO
- 3.4% of men, 4.2% of women, and 3.8% overall were current users of smokeless tobac co.
- 84.9% of men, 67.7% of women, and 76.5 % overall current users of smokeless tobacco use betel quid

CESSATION

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

SECONDHAND SMOKE
- 10.4% of adults were exposed to tobacco smoke at the workplace.
- 34 % of adults were exposed to tobacco smoke at home.

MEDIA
- 4 in 10 adults noticed anti-cigarette smoking information on the television.
- 8 in 10 current smokers thought about quitting because of warning labels on cigarette packages.
- 1 in 10 adults noticed cigarette promotions.

Data presented in this fact sheet relate only to select tobacco indicators produced from this study.

Results for adults aged 15-69 years	Overall % (95% CI)	Males % (95% CI)	Females % (95% CI)
Tobacco Use			
Current tobacco users (smoked and/or smokeless)1			
Current tobacco users	25.7 (23.4-28.0)	37.7 (31.3-44.1)	10.8 (5.1-16.5)
Current daily tobacco users	22.6 (20.2-24.9)	35.5 (30.5-40.6)	6.4 (4.5-8.4)
Current tobacco smokers			
Current tobacco smokers	23.1 (20.8-25.5)	35.6 (29.2-42.0)	7.6 (1.2-14.0)
Current cigarette smokers 2 (among current tobacco smokers)	84.6 (63.8-100)	97.5 (93.4-100)	19.6 (5.2-34.0)
Current daily tobacco smokers	19.6 (5.2-34.0)	33.5% (28.4-38.7)	3.5% (1.6-5.4)
Current daily cigarette smokers	92.5 (90.2-94.7)	96.1 (94.0-98.3)	46.8 (23.9-69.7)
Average age started tobacco smoking (years)	17.9 (16.8-19.1)	18.0 (16.8-19.1)	18.6 (----------)
Average number of cigarettes smoked per day (among daily cigarette smokers)	13.0 (11.5-14.4)	13.7 (12.3-15.1)	3.5 (2.5-4.5)
Current smokeless tobacco users			
Current smokeless tobacco users	3.8 (2.8-4.7)	3.4 (2.1-4.8)	4.2 (2.6-5.8)
Current daily smokeless tobacco users	3.3 (2.4-4.2)	2.8 (1.9-3.7)	3.9 (2.0-5.7)
Current non-users (smoked and/or smokeless)1			
Former tobacco users3	10.8 (8.6-13.0)	16.0 (12.2-19.7)	4.4 (3.0-5.8)
Former tobacco smokers4	11.6 (8.7-14.6)	17.2 (12.9-21.5)	4.8 (3.4-6.1)
Never users	65.2 (60.9-69.5)	47.2 (42.0-52.4)	87.6 (80.4-94.9)
Exposure to Second-hand smoke			
Adults exposed to second-hand smoke at home*	34.0 (29.0-39.0)	39.4 (32.5-46.2)	27.3 (22.4-32.2)
Adults exposed to second-hand smoke in the closed areas in their workplace*	10.4 (3.6-17.2)	15.4 (4.4-26.3)	4.3 (1.1-7.4)
Tobacco Cessation			
Current smokers who tried to stop smoking in past 12 months	40 (27.2-52.8)	42.3 (29.6-55.0)	26.6 (18.7-34.4)

Current smokers advised by a health care provider to stop smoking in past 12 months 5	19.9 (14.2-25.6)	20.1 (13.8-26.5)	18.2 (10.8-25.7)
Health Warnings			
Current smokers who thought about quitting because of a warning label*	87.9 (82.1-93.6)	64.1 (22.8-	–
Adults who noticed anti-cigarette smoking information on the television or radio *	39.1 (19.7-58.5)	36.7 (14.9-58.5)	42.1 (25.5-58.8)
Adults who noticed anti-cigarette smoking information in newspapers or magazines*	31.7 (19.3-44.1)	29.4 (15.5-43.4)	34.6 (23.3-45.9)
Tobacco Advertisement and Promotion			
Adults who noticed cigarette marketing in stores where cigarettes are sold*	4.4 (1.0-7.9)	5.6 (0.9-10.3)	3.0 (0.6-5.4)
Adults who noticed any cigarette promotions*	6.2 (3.4-9.1)	6.2 (3.1-9.3)	6.3 (0.5-12.1)

1 Current use refers to daily and less than daily use. 2 Includes manufactured cigarettes and hand-rolled cigarettes.
Adapted for other products as per country situation.

3 Current non-users.

4 Current non-smokers.

5 Among those who visited a health care provider in past 12 months.

6 [Source and year for per capita GDP].

* 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 aged 18-69 years. Data have been weighted to be nationally representative of all men and women aged 18-69 years. Technical assistance for the survey was provided by the World

STEPS

MALDIVES STEPS SURVEY 2020-21
Fact Sheet

Results for adults aged 18-69 years (incl. 95% CI) (adjust if necessary)	Both Sexes	Males	Females
Step 1 Cervical Cancer Screening			
Percentage of women aged 30-49 years who have ever had a screening test for cervical cancer			11.7% (7.5-15.9)
Step 2 Physical Measurements			
Mean body mass index - BMI (kg/m2)	25.6 (25.2-26.0)	24.8 (24.4-25.2)	26.5 (25.8-27.2)
Percentage who are overweight (BMI ≥ 25 kg/m2)	52.5% (49.0-56.0)	46.5% (41.8-51.1)	59.3% (53.8-64.8)
Percentage who are obese (BMI ≥ 30 kg/m2)	18.1% (16.5-19.8)	14.1% (10.8-17.3)	22.8% (18.4-27.1)
Average waist circumference (cm)		88.4 (82.9-93.8)	90.8 (86.8-94.8)
Mean systolic blood pressure - SBP (mmHg), including those currently on medication for raised BP	115.4 (115.3-115.5)	114.9 (114.8-115.1)	116.0 (115.7-116.2)
Mean diastolic blood pressure - DBP (mmHg), including those currently on medication for raised BP	80.8 (80.7-80.8)	79.79 (79.7-79.9)	81.87 (81.8-82.0)
Percentage with raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)	27.4% (19.7-35.1)	24.0% (15.2-32.9)	31.4% (25.4-37.5)
Percentage with raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP) who are not currently on medication for raised BP	67.5% (62.2-72.8)	69.8% (61.0-78.7)	65.3% (57.3-73.3)
Step 3 Biochemical Measurement			
Mean fasting blood glucose, including those currently on medication for raised blood glucose [choose accordingly: mmol/L or mg/dl]	86.1 (86.0-86.3)	86.1 (85.9-86.3)	88.1 (87.8-88.3)
Percentage with impaired fasting glycaemia as define 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)	5.3% (5.6-6.0)	4.2% (4.1-4.3)	6.7% (6.4-6.9)
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)	8.7%	6.5%	11.3%

Mean total blood cholesterol, including those currently on medication for raised cholesterol [choose accordingly: mmol/L or mg/dl]	167.6 (167.3-167.8)	165.5 (165.2-165.8)	170.0 (169.6-170.2)
Percentage with raised total cholesterol (≥ 5.0 mmol/L or ≥ 190 mg/dl or currently on medication for raised cholesterol)	30.2% (26.7-33.7)	27.9% (24.3-31.5)	32.9% (28.2-37.5
Mean intake of salt per day (in grams)	8.8 (8.6-8.9)	9.6 (9.3-9.8)	7.9 (7.7-8.0)
Cardiovascular disease (CVD) risk			
Percentage aged 40-69 years with a 10-year CVD risk ≥ 20%, or with existing CVD**	13.6 (10.2-17.9)	16.2 (10.8-23.7)	10.5 (7.8-14.1)
Summary of combined risk factors • current daily smokers • less than 5 servings of fruits & 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	0.5% (0.1-0.8)	0.4% (-0.1-0.9)	0.5% (0.1-0.9)
Percentage with three or more of the above risk factors, aged 18 to 44 years	31.0% (25.8-36.3)	35.0% (26.9-43.1)	26.7% (21.9-31.4)
Percentage with three or more of the above risk factors, aged 45 to 69 years	53.1% (47.1-59.0)	53.8% (44.0-63.6)	52.1% (47.5-56.8)
Percentage with three or more of the above risk factors, aged 18 to 69 years	37.7% (33.4-42.0)	40.8% (33.5-48.2)	34.1% (30.1-38.1)

** A 10-year CVD risk of ≥20% 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 STEPS Survey Coordinator [research@mnu.edu.mv