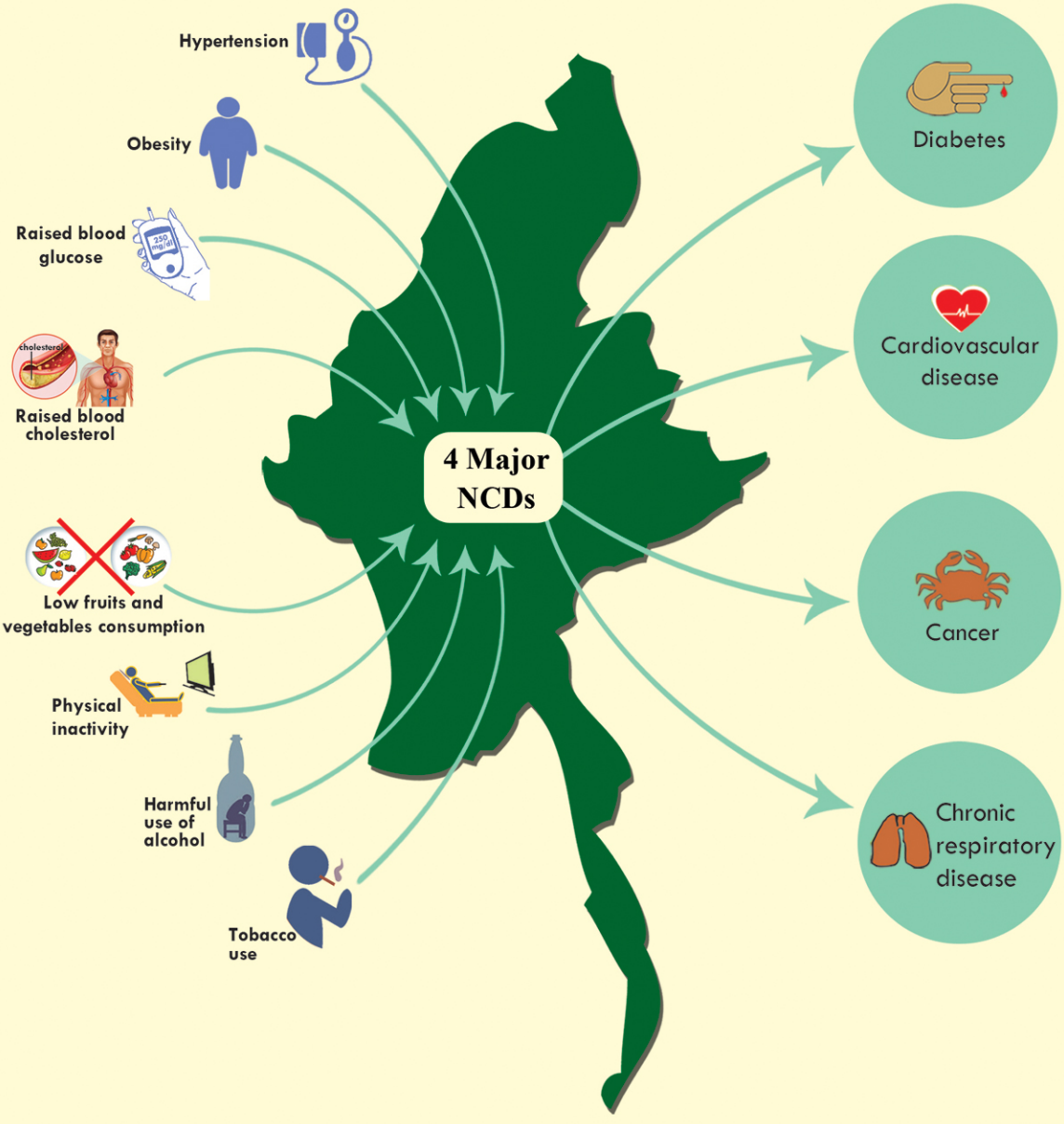
Report on National Survey of Diabetes Mellitus and Risk Factors for Non-communicable Diseases in Myanmar (2014)



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Message

Foreword

Abbreviations

BMI Body mass index
BP Blood pressure
CI Confidence interval
COPD Chronic obstructive pulmonary disease
CVD Cardiovascular disease
DBP Diastolic blood pressure
DPRK Democratic People's Republic of Korea
SHS Second-hand smoke
GATS Global Adult Tobacco Survey
GSPS Global School Professional Survey
GYTS Global Youth Tobacco Survey
HDL High-density Lipoprotein
HMIS Health management information system
ID Identification
LDL Low-density Lipoprotein
MCH Maternal and Child Health
MDG Millennium Development Goal
MET Metabolic equivalent
NCDs Noncommunicable diseases
PPS Probability proportionate to population size
PSU Primary sampling unit
SBP Systolic blood pressure
SEARO WHO Regional Office for South-East Asia
SES Socioeconomic status
SSU Secondary sampling unit
TFI Tobacco Free Initiative
WHO World Health Organization

National Diabetes and NCD Risk Factors Survey (2014)
Factsheet

The national survey of noncommunicable disease (NCD) risk factors in Myanmar was carried out from September to December in 2014. The survey was a population-based survey of adults aged 25-64. A multistage cluster sample design was used to produce representative data for that age range from 52 townships in Myanmar. A total of 8757 adults participated in the survey. The survey collected information on sociodemographic and behavioural characteristics, physical measurements such as height, weight and blood pressure and biochemical measurements (blood glucose-both fasting and 2-h PG, levels of total cholesterol, triglycerides, HDL and LDL. The overall response rate was 94% for risk factors, 91% for physical measurements and 90% for biochemical measurements.

Results for adults aged 25-64 years (incl. 95% CI)	**Both Sexes**	**Males**	**Females**
Tobacco Use			
Percentage who currently smoke tobacco	**26.1%** (23.8-28.4)	**43.8%** (40.8-46.7)	**8.4%** (6.4–10.3)
Percentage who currently smoke tobacco daily	**20.7%** (18.2-23.3)	**34.0%** (30.5–37.5)	**7.4%** (5.6-9.3)
For those who smoke tobacco daily			
Average age started smoking (years)	**19.8** (19.2-20.4)	**19.3** (18.7-19.8)	**22.3** (20.7-23.9)
Percentage of daily smokers smoking manufactured cigarettes	**28.1%** (21.6-34.5)	**33.4%** (26.2-40.7)	**3.5%** (1.1-5.9)
Mean number of manufactured cigarettes smoked per day (by smokers of manufactured cigarettes)	**1.5** (1.0-2.0)	**1.9** (1.3-2.4)	**0.1** (0.0-0.2)
Percentage who currently use any smokeless tobacco product	**43.2%** (39.2-47.1)	**62.2%** (58.3-66.1)	**24.1%** (19.5-28.7)
Percentage who currently use any smokeless tobacco product daily	**30.3%** (27.0-33.6)	**44.5%** (40.9-48.1)	**16.1%** (12.8-19.4)
Alcohol Consumption			
Percentage who are lifetime abstainers	**68.8%** (64.6-73.1)	**41.9%** (36.7-47.0)	**95.8%** (94.2-97.5)
Percentage who are past 12 month abstainers	**5.7%** (4.5-6.9)	**10.0%** (8.0-12.0)	**1.5%** (0.8-2.2)
Percentage who currently drink (drank alcohol in the past 30 days)	**19.8%** (16.8-22.8)	**38.1%** (33.9-42.2)	**1.5%** (0.7-2.3)
Percentage who engage in heavy episodic drinking (6 or more drinks on any occasion in the past 30 days)	**10.3%** (8.3-12.3)	**20.3%** (17.2-23.3)	**0.3%** (0.1-0.5)

Results for adults aged 25-64 years (incl. 95% CI)	**Both Sexes**	**Males**	**Females**
Diet			
Mean number of days fruit consumed in a typical week	**2.5** (2.2-2.7)	**2.3** (2.0-2.6)	**2.6** (2.3-2.9)
Mean number of servings of fruit consumed on average per day	**0.7** (0.6-0.8)	**0.7** (0.6-0.8)	**0.7** (0.6-0.8)
Mean number of days vegetables consumed in a typical week	**5.5** (5.2-5.8)	**5.4** (5.0-5.7)	**5.6** (5.4-5.8)
Mean number of servings of vegetables consumed on average per day	**2.1** (1.9-2.2)	**2.2** (2.0-2.4)	**2.0** (1.9-2.1)
Percentage who ate less than 5 servings of fruit and/or vegetables on average per day	**86.6%** (84.1-89.0)	**85.2%** (82.0-88.3)	**87.9%** (85.8-90.1)
Physical Activity			
Percentage with insufficient physical activity (defined as < 150 minutes of moderate-intensity activity per week, or equivalent)	**15.7%** (12.9-18.4)	**12.5%** (9.7-15.3)	**18.8%** (15.8-21.9)
Median time spent in physical activity on average per day (minutes) (presented with inter-quartile range)	**214** (57-416)	**274** (86-454)	**177** (30-360)
Percentage not engaging in vigorous activity	**74.5%** (69.5-79.5)	**61.1%** (54.9-67.4)	**87.9%** (83.8-92.1)
Cervical Cancer Screening			
Percentage of women aged 30-49 years who have ever had a screening test for cervical cancer	-	-	**4.4%** (2.7-6.0)
Physical Measurements			
Mean body mass index - BMI (kg/m^2)	**22.3** (22.0-22.6)	**21.5** (21.2-21.8)	**23.2** (22.8-23.5)
Percentage who are overweight (BMI ≥ 25 kg/m^2)	**22.4%** (19.3-25.4)	**14.1%** (11.5-16.7)	**30.8%** (27.5-34.1)
Percentage who are obese (BMI ≥ 30 kg/m^2)	**5.5%** (4.2-6.7)	**2.6%** (1.8-3.5)	**8.4%** (6.6-10.1)
Average waist circumference (cm)	-	**77.3** (76.0-78.6)	**76.9** (75.7-78.1)
Mean systolic blood pressure - SBP (mmHg), including those currently on medication for raised BP	**125** (123-126)	**126** (124-128)	**124** (122-126)
Mean diastolic blood pressure - DBP (mmHg), including those currently on medication for raised BP	**81** (80-82)	**81** (80-82)	**81** (80-83)
Percentage with raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)	**26.4%** (23.2-29.5)	**24.7%** (20.1-29.3)	**28.0%** (24.8-31.3)
Percentage with raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg) who were not currently on medication for raised BP	**90.8%** (87.3-94.3)	**93.2%** (90.1-96.3)	**88.7%** (84.5-92.9)

Results for adults aged 25-64 years (incl. 95% CI)	**Both Sexes**	**Males**	**Females**
Biochemical Measurement			
Mean fasting blood glucose, including those currently on medication for raised blood glucose	**92 mg/dl** (90-94)	**90 mg/dl** (89-93)	**93 mg/dl** (91-95)
Percentage with impaired fasting glycaemia as defined below • plasma-equivalent value of capillary whole blood ≥6.1 mmol/L (110 mg/dl) and <7.0 mmol/L (126 mg/dl)	**3.6%** (2.8-4.5)	**4.0%** (2.8-5.3)	**3.2%** (2.6-3.9)
Mean 2-hour blood glucose value after glucose load	**125 mg/dl** (120-130)	**119 mg/dl** (114-124)	**131 mg/dl** (126-135)
Percentage with impaired glucose tolerance as defined below • 2 hour plasma-equivalent value of capillary whole blood after glucose load ≥7.8 mmol/L (140 mg/dl) and <11.1 mmol/L (200 mg/dl)	**19.5%** (16.5-23.0)	**15.2%** (12.2-18.9)	**23.9%** (20.0-28.3)
Percentage with raised fasting blood glucose as defined below or currently on medication for raised blood glucose • plasma-equivalent glucose value of capillary whole blood ≥ 7.0 mmol/L (126 mg/dl)	**5.9%** (4.6-7.2)	**4.7%** (3.4-6.1)	**7.0%** (5.5-8.5)
Percentage with raised fasting blood glucose or raised 2-h blood glucose as defined below or currently on medication for raised blood glucose • *raised fasting blood glucose*= plasma-equivalent glucose value of capillary whole blood ≥7.0 mmol/L (126 mg/dl) • *raised 2-h blood glucose*= plasma-equivalent glucose value of capillary whole blood ≥11.1 mmol/L (200 mg/dl)	**10.5%** (8.3-13.1)	**9.1%** (6.9-11.8)	**11.8%** (9.6-14.6)
Mean total blood cholesterol, including those currently on medication for raised cholesterol [choose accordingly: mmol/L or mg/dl]	**178 mg/dl** (175-182)	**173 mg/dl** (169-177)	**184 mg/dl** (180-188)
Percentage with raised total cholesterol (≥5.0 mmol/L or ≥190 mg/dl or currently on medication for raised cholesterol)	**36.7%** (32.2-41.2)	**30.9%** (26.5-35.4)	**42.5%** (37.7-47.2)
Cardiovascular disease (CVD) risk			
Percentage aged 40-64 years with a 10-year CVD risk ≥30%, or with existing CVD*	**12.1%** (9.9-14.3)	**8.5%** (6.2-10.7)	**15.7%** (13.1-18.3)
Summary of combined risk factors • current daily smokers • less than 5 servings of fruits & vegetables per day • insufficient physical activity • overweight (BMI ≥25 kg/m^2) • raised BP (SBP ≥140 and/or DBP ≥90 mmHg or currently on medication for raised BP)			
Percentage with none of the above risk factors	**6.2%** (4.7-7.6)	**6.6%** (4.6-8.6)	**5.7%** (4.2-7.3)
Percentage with three or more of the above risk factors, aged 25 to 44 years	**14.6%** (12.1-17.2)	**13.6%** (10.2-17.1)	**15.7%** (13.0-18.5)
Percentage with three or more of the above risk factors, aged 45 to 64 years	**27.5%** (24.3-30.8)	**25.9%** (20.8-30.9)	**29.3%** (25.3-33.7)
Percentage with three or more of the above risk factors, aged 25 to 64 years	**19.6%** (16.9-22.2)	**18.3%** (14.4-22.3)	**20.9%** (18.1-23.6)

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

Executive summary

The National Survey of Diabetes and Risk Factors for Non-communicable Diseases in Myanmar was conducted in 2014 among a nationally representative sample of 8757 adults aged 25 to 64 years from 52 townships across the country. The survey methodology was heavily based on the WHO Step-wise approach to surveillance of noncommunicable disease (STEPS) methodology. The goal of the survey was to assess the major NCD risk factors in Myanmar, and to promote specific measures and interventions to reduce these risk factors.The survey covered 4 major behavioural risk factors (tobacco use, harmful use of alcohol, insufficient physical activity and low consumption of fruit and vegetable) and 4 major biological risk factors (obesity, hypertension, raised blood glucose and abnormal lipid levels). This survey also collected additional information on some aspects of implementation of tobacco control policies and cervical screening exposure. Of all estimated sample of 9360 respondents, 8757 respondents (94%) participated in assessment of 4 major behavioural risk factors (tobacco use, harmful use of alcohol, insufficient physical activity and low consumption of fruit and vegetable). Of all estimated sample of 9360 respondents, 8495 (91%) completed assessment of obesity and hypertension, which involved measurement of height, body weight and blood pressure measurement, 8429 (90%) completed assessment of raised blood glucose and abnormal lipid levels, which involved measurement of fasting blood glucose, 2 hour blood glucose after oral glucose load and total cholesterol, triglycerides, HDL and LDL.

Tobacco use:

The overall percentage of current smokers was 26.1%, the percentage for males being 43.8% and that for females, 8.4%. Nearly 80% of the current smokers were daily smokers. The average age when tobacco users started smoking was 19.8 years and the mean duration of smoking years among daily smokers was 24.2 years. Only 28.1% of daily smokers used manufactured cigarettes.

The overall prevalence of the use of smokeless tobacco was 43.2%, the figures being 62.2% for males and 24.1% for females. Nearly 49% of the smokeless tobacco users were daily users. Nearly 94% of smokeless tobacco users were using betel quid. The percentage of respondents who had been exposed to second-hand smoke (SHS) in the home on one or more of the past 30 days was 39.1% and that in the workplace, 27.5%.

Alcohol consumption:

The percentage of current drinkers (in past 30 days) was 19.8%, the figure for male respondents being 38.1% and that for females, 1.5%. About 41.9% of the male respondents and 95.8% of the female respondents were life-time abstainers. Among past year drinkers, 23.9% consumed alcohol on a daily basis (24.4% males and 14.9% females), and 28.9% drank alcohol less than once a month (27.1% males and 61% females). The average number of standard drinks per drinking occasion among male current drinkers was 5.3, whereas that among female drinkers was 3.2. On an average, current drinkers had consumed 5.2 drinks on one occasion in the past 30 days.

Fruit and vegetable consumption:

The average number of days per week that fruits were consumed by the respondents was two and half days a week. The average number of days that fruit was consumed by the female respondents was slightly higher than that by their male counterparts (2.6 days vs. 2.3 days). The average number of days per week that vegetables were consumed by the respondents was 5.5 days (5.4 days for males and 5.6 days for females). The overall mean number of servings of fruit and/or vegetables per day was 2.8 (males 2.8% and females 2.7%). About 86.6% of the respondents had less than five servings of fruit and/or vegetables on an average per day (85.2% for males and 87.9% for females).

Physical activity:

Around 15.7% of the respondents did not meet the WHO recommended level of physical activity ($\geq$150 minutes of moderate-intensity activity per week, or equivalent)

(12.5% for males and 18.8% for females). The mean duration of total physical activity on an average per day was 259 minutes (298 for males and 220 for females). Work-related activity, transport activity and recreation-related activity comprised 63%, 32% and 5% of the total physical activity among the all respondents. On an average, work-related activity, transport activity and recreation-related activity comprised 65%, 29% and 6% of the total physical activity among male respondents, and 60%, 36% and 4%of the total physical activity among female respondents.

History of hypertension, diabetes, raised total cholesterol and cardiovascular diseases:

The overall percentage of respondents with hypertension, previously diagnosed within one year, was 15.7%, while 5.3% had been diagnosed more than one year ago. Among all respondents, 36.9% of the respondents (43.6% of males and 30.3% of females) had never had their blood pressure measured. Among those with previously diagnosed hypertension, only 34.9% were taking blood pressure lowering drugs prescribed by a doctor or health worker (29.4% for males and 38.5% for females).

The overall percentage of respondents with diabetes, previously diagnosed within one year, was 2.9%, while 0.7% had been diagnosed more than one year ago. About 86% of the respondents (89.1% of the males and 82.4% of the females) had never had their blood sugar level measured by a doctor or other health worker. Among those respondents previously diagnosed with diabetes, 8.7% (13.8% of the men and 5.9% of the women) were taking insulin, while 76.3% (80.5% of the men and 73.9% of the women) were on oral anti-diabetic drugs prescribed by a doctor or health worker.

The overall percentage of respondents with raised total blood cholesterol, previously diagnosed within one year, was 0.5%, while 0.5% had been diagnosed more than one year ago. About 98% of the respondents (98.3% of the males and 97.6% of the females) had never had their total blood cholesterol measured by a doctor or other health worker. Among those respondents previously diagnosed with raised total blood

cholesterol, 27.2% (15.7% of the men and 34.9% of the women) were taking oral treatment.

The overall percentage of respondents who have ever had a heart attack or chest pain from heart disease (angina) or a stroke was 7.3% (males 5.4% and females 9.3%). Among all the respondents, 1.1% (0.8% of the men and 1.4% of the women) were currently taking aspirin regularly to prevent or treat heart disease, while 1% (0.7% of the men and 1.4% of the women) were currently taking aspirin regularly to prevent or treat heart disease.

Cervical screening:

This study shows that 4.4% of the female respondents aged 30-49 years had ever had a screening test for cervical cancer.

Physical measurements:

The mean body mass index (BMI) of the male respondents was 21.5 and that of the female respondents, 23.2. While 11.5% and 2.6% of the males had a BMI of 25–29 and $\geq$30, 22.4% and 8.4% of the females had a BMI of 25–29 and $\geq$30.The percentage of respondents classified as overweight (BMI>25), excluding pregnant women, was 22.4% (14.1% for the men and 30.8% for the females).

The mean waist circumference was 77.3 cm (95%CI= 76.0 to 78.6) for the men and 76.9 cm (95%CI=75.7 to 78.1) for the women. The mean waist-to-hip ratio was 0.9 for the male respondents and 0.8 for the female respondents.

The percentage of respondents with raised blood pressure (systolic blood pressure [SBP]$\geq$140 and/or diastolic blood pressure [DBP]$\geq$90 mmHg) or currently on medication for blood pressure was 26.4% (males 24.7% and females 28%).

Bio-chemical measurements:

Prevalence of raised fasting blood glucose or currently on medication for raised blood glucose was 5.9% (4.7% males and 7% females). Prevalence of raised fasting blood glucose or raised 2-h blood glucose or currently on medication for raised blood glucose 10.5% (9.1% males and 11.8% females).

Prevalence of raised total cholesterol (≥ 190 mg/dl) or currently on medication for raised cholesterol) was 36.7% (30.9% males and 42.5% females). Prevalence of low HDL (<40 mg/dl) was 41 % in the male respondents and 57% in the female respondents. Prevalence of high fasting triglycerides (≥ 150 mg/dl) was 31% (32% males and 29% females). Prevalence of high LDL (≥ 160 mg/dl) was 7% (6% males and 9% females).

10-year CVD risk and combined NCD risk factors:

In the people aged 40-64 years,12% had already had one kind of CVDs or a high level (i.e., ≥30%) of 10-year cardiovascular disease risk and that percentage was higher in the women than that in the men in the same age range (16% vs. 9%).

Almost all respondents (94%) have at least one NCD risk factor and 19.6% of the respondents had 3-5 risk factors in combination (14.6% in the 25-44 year and in 27.5% in the 45-64 year age group).

Conclusions

It can be concluded that almost every adult had at least one NCD risk factor; most of major NCD risk factors in Myanmar are high, notably smoking, smokeless tobacco use, exposure to second-hand smoke, current alcohol drinking (esp. in younger males), low consumption of fruit and vegetables, overweight and obesity (esp. in the women), hypertension, diabetes and abnormal lipid levels; 10-year CVD risk was also high; percentage with multiple NCD risk factors (3 or above risk factors) is even higher; in general, the women are at higher risk of NCDs than the men in Myanmar; and Myanmar was high in rank among South East Asia countries in terms of prevalence of many NCD risk factors access to cervical cancer screening, blood pressure screening

and blood sugar screening was low; the very low percentage of hypertensive people was receiving treatment.

Recommendations:

(1) Based on the results of the survey, policies and strategies should be tailored to effectively tackle the prevailing risk factors for NCDs in Myanmar, focusing on tobacco use, healthy diet, prevention and control of hypertension and diabetes.

(2) An integrated policy on NCD prevention and control should be developed and enacted to set up and boost essential NCD prevention and control activities.

(3) Comprehensive programmes for behaviour change communication targeting the major NCD risk factors in Myanmar should be developed.

(4) An attempt should be made to enforce the existing tobacco law and prevention of second-hand smoking.

(5) Great emphasis should be paid to prevention and control of smokeless tobacco use and betel chewing in policies and programs on NCD prevention and control.

(6) Comprehensive alcohol control strategies should be developed, focusing on reduction of alcohol consumption among younger citizens.

(7) Interventions should be introduced to increase the consumption of fruit and vegetable among the community.

(8) Action is required at the national level to develop community-based physical activity programmes which match the needs of the modern lifestyle.

(9) Since the study revealed that a high percentage of the respondents never had their blood pressure and blood sugar measured and a high percentage of the female respondents never had cervical screening, there is a need for policies and programmes for community screening of high blood pressure, high blood sugar and cervical cancer.

(10) Standard management of hypertension should be made widely and easily accessible to the communities.

Chapter 1: Introduction

1.1 Background

Communicable diseases were the major cause of death around the world for centuries. Life expectancy was often limited by uncontrolled epidemics. After the Second World War, with medical achievements in terms of vaccination, antibiotics and improvement of life conditions, NCDs started posing major challenges in industrialized countries[1]. Heart diseases, cancer, diabetes, and chronic pulmonary and mental diseases became a real burden for health systems in the developed countries and were seen as diseases of the rich. In recent decades, however, there has been an increasing trend of morbidity and mortality due to NCDs in the low and middle-income countries as well[2]. Of the 56 million global deaths in 2012, 38 million (68%) were attributed to NCDs, with almost three quarters (74%) of these deaths occurring in low and middle-income countries[3]. The World Health Organization (WHO) estimates that NCDs account for 59% of deaths in Myanmar in 2014[4]. These deaths were principally due to cardiovascular diseases, diabetes, cancer and chronic respiratory diseases[3]. Nowadays, many developing countries are suffering from a double or triple burden of diseases as they endure the impact of the rising trend of NCDs while tackling emerging and re-emerging infectious diseases with health-care systems that are inadequate[5]. Treatment for diabetes, cancer, cardiovascular diseases and chronic respiratory diseases is extremely expensive, and the costs involved force families into catastrophic spending and impoverishment. The costs to health-care systems from NCDs are high and it is projected that increasing costs would have enormous impacts on macroeconomic system of a country[6].

The main risk factors that cause major NCDs are well known and are common to all countries. Eight major risk factors (four behavioural and four biological) contribute most to the development of NCDs[7]. Tobacco use, harmful use of alcohol, unhealthy diets (high in salt, sugar and fat and low in fruits and vegetable) and physical inactivity are established modifiable behavioural risk factors for NCDs[7]. Globally, the leading risk for mortality is high blood pressure (13%), followed by tobacco use (9%), high blood glucose (6%), physical inactivity (6%), and overweight and obesity (5%), and these factors affect all income groups[8]. According to WHO estimates, at least 1.4 million people die annually in the South East Asia Region countries as a result of high blood pressure (hypertension)

and the use of tobacco use. Another 2.2 million deaths occur annually due to high cholesterol levels. A low intake of fruit and vegetable, as well as lack of physical activity, claim an additional 1.3 million lives every year[9].

The basic component of NCDs prevention is the identification of the common risk factors and their prevention and control. Surveillance of the prevalence trend of the risk factors plays a fundamental role in controlling these diseases. Systematic surveillance of risk factors offers comparable data trend to highlight the information in terms of levels and trends of major risk factors that predict NCD diseases[10].

The first WHO STEPS survey (2003–2004) of Myanmar was subnational in scope and conducted only in Yangon Region[11]. The STEPS survey for prevalence of NCD risk factors among persons aged 25-74 years in Yangon Region, Myanmar in 2003-2004 revealed that overall prevalence of diabetes was 12% with 11.7% in the men an 12.8% in the women.

The second WHO STEPS survey (2009) was a national survey done among persons aged 15-64 years in Myanmar in 2009 but it did not include biochemical measurements[12]. It revealed that prevalence of current daily smoking and smokeless tobacco use was 17% and 22%; prevalence of current drinking (in the last 30 days) was 13%; percentage who ate less than 5 of combined servings of fruit & vegetable per day was 90%; Percentage with low levels of activity (defined as <600 MET-minutes/week) was 13%; prevalence of overweight and obesity was 25%; prevalence of hypertension (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP) was 30%[12].

Regarding tobacco consumption, the Ministry of Health had conducted the Global Youth Tobacco Survey (GYTS) in 2001, 2004, 2007 and 2011; and the Global School Personnel Survey (GSPS) in 2001 and 2007. These surveys were nationally representative but covered only students and school personnel. Global Health Professional Students Survey (GHPSS) in 2006 and 2009 assessed behaviour risk factors, such as tobacco and alcohol consumption among students. It was nationally representative, but covered only students. Sentinel Prevalence Survey on Tobacco Use was also done in selected townships in 2001, 2004 and 2007.

In 2013, Cardiovascular Disease Project conducted a cardiovascular survey among people aged 40 years and above in 4 townships in Myanmar to assess knowledge, attitude, risk factors and morbidities related to cardiovascular diseases. Family history of premature coronary event or stroke in first-degree relatives (parents or siblings or offspring) was present in 19% of the study population. Nine percent of the study population had suffered from angina according to Rose Angina Questionnaire. Prevalence of possible heart attack, stroke and heart failure was 7.5%, 1.5% and 2.8% in the last year. Prevalence of diabetes and raised total blood cholesterol (>190mg/dl) was 13% and 61%. Prevalence of hypertension and obesity was 51% and 21%. Knowledge on risk factors of CVDs and healthy lifestyles for prevention of CVDs is low[13].

1.2 Rationale

Having reliable, good quality prevalence data on the key NCD risk factors at national level for Myanmar will enable informed planning of NCD related policies and actions, and allow Myanmar to strengthen NCD prevention and control.

The first WHO STEPS survey on Non-communicable Disease (NCD) risk factors was conducted in Yangon Region in 2003-04, including measurement of lipid profile and oral glucose tolerance test. The second WHO STEPS survey was carried out nationwide in 2009 in Myanmar but did not include measurement of blood lipid and blood glucose. Now to follow up with another round of WHO STEPS survey with more comprehensive components (measurement of blood glucose and blood lipids), a National Survey on Diabetes Mellitus and Risk Factors for Non-communicable Diseases in Myanmar was carried out in 2014.

The data from this survey and previous surveys provide solid data base for designing, monitoring and evaluating strategies and activities of prevention and control of NCDs in Myanmar.

1.3 Goals

The general goal of the survey is to obtain data essential for planning and implementation of nation-wide interventions for the prevention and control of diabetes as

well as other major NCDs, which are responsible for the major morbidity and mortality in Myanmar.

1.4 Objective

1.4.1 *General objective*

- To measure the prevalence of diabetes and major NCD risk factors at the national level

1.4.2 *Specific objectives*

- To measure the national prevalence of diabetes
- To determine the levels of four major behavior risk factors of NCDs (tobacco use, harmful use of alcohol, insufficient physical activity and low consumption of fruit and vegetable)
- To determine the level of three biological risk factors of NCDs (obesity, hypertension and abnormal lipid levels)

Chapter 2: Methodology

2.1 Study design

The household-based cross-sectional design was utilized, based on the methodology of the WHO STEPwise approach to surveillance of major NCD risk factors (STEPS). The core and expanded indicators of Steps 1, 2 and 3 were included.

2.1.1 Study population

The study population is persons aged 25 to 64 years of both sexes residing in both urban and rural areas of the country.

The study excluded the following persons:

1. Mentally ill persons
2. Very ill persons

3. Institutionalized individuals (Armed forces, Hospitalized patients, Prisoners)
4. Temporary residents (living in a locality for less than 6 months)

2.1.2 Sample size

Sample size to estimate the number of households to be surveyed with 95% confidence was calculated using following formula and assumption.

Step 1

$$N = \frac{Z^2 1-\alpha\ P(1-P)}{d^2}$$

Where:

N= required sample size

Z= level of confidence measure and it represents the number of standard errors away from mean. This describes the uncertainty in the sample mean or prevalence as an estimate of the population mean (normal deviate if alpha equals 0.05, Z = 1.96, for 95% confidence level)

P= Baseline level of a main indicator. Level of diabetes mellitus is the main indicator. *P* is 0.118 because prevalence of diabetes mellitus is 11.8% according to STEPS Survey in Yangon Region 2003).

d = Margin of error. The expected half width of the confidence interval and taken 0.05 for this study

$$n = \frac{1.96^2 \times [0.118 \times (1-0.118)]}{0.05 \times 0.05}$$

N = 160

Step 2

Multiply by number of domains (32). The number of domains is decided by considering 2 sexes (male and female), 4 age groups (25-34, 35-44, 45-54 and 55-64 years), 4 geographical regions (Hilly, Coastal, Central Plain and Delta Regions).

Design effect of 1.5 is considered to address the issue of cluster sampling.

n= 160*2*4*4*1.5* = 7680

Step 3

Adjust for expected non-response to get the final sample size. An 85% response rate is expected. The above sample size is divided by the expected response rate.

n= 7680 x (1/0.85) = 9036~ (rounded up to 9,360 for logistical purposes)

2.2 Sampling procedure

To achieve a nationally representative sample, a multi-stage sampling method was used to select townships, wards and villages, households and eligible participants at each of the selected households.

Stage 1: Selection of primary sampling units (PSUs)

Administratively, Myanmar is divided into 330 townships. A township is subdivided into wards for urban settings and village tracts and then villages for rural settings. The list of townships has been used as the sampling frame at the first stage of sampling. Townships form the Primary Sampling Units (PSUs). Out of the total 330 PSUs, 52 PSUs were selected using Probability Proportionate to Size of population in each PSU (PPS).

Stage 2: Selection of Secondary Sampling Units (SSUs)

From each selected PSU (township), 6 SSUs (wards and villages) were chosen using probability proportionate to population size, totaling 312 SSUs for the whole country.

Stage 3: Selection of eligible participants at household level

From each selected SSU (ward/village), 30 households were selected using systematic random sampling. The sampling frame for this sampling is the list of households with unique identification number (ID) developed from a recent listing of households available from the Basic Health Staff.

Stage 4: Selection of eligible participants at household level

One eligible participant (aged between 25 and 64 years) in the selected households was recruited for the survey. The Kish sampling method was used to randomly select one eligible member of the household. Using the Kish Method, eligible participants (adults aged 25 to 64 years) in each household were ranked in order of

decreasing age, starting with males then females, then randomly selected using the automated program for Kish selection in the handheld PDA.

Each PSU (township) was estimated to contribute 180 participants, totaling **9,360** participants for 52 selected townships for the whole country. In actual study, the total sample size was 8757 participants.

2.3 Ethical considerations

The survey proposal was reviewed and approved by the Ethics Review Committee of Department of Medical Research.

The survey team member obtained the informed consent from each participant who agreed to participate in all steps of study after they were clearly and completely informed about the study nature. Interviews were conducted in a manner that ensure confidentiality and privacy of the survey respondents.

2.4 Data collection methods and instruments

The WHO STEPS Instrument (core and expanded) questionnaire version 3.0 was adapted for the survey. Expanded questions for alcohol consumptions were not included in the survey. Questions on tobacco policy, 2 hour blood glucose and HDL cholesterol were added to the questionnaire. The questionnaire in English translated into the Myanmar version based on the STEPS survey questionnaire used in 2009 STEPS Survey in Myanmar. The questionnaire in English was used by the STEPS Team at WHO Head Quarters to set up the questionnaire form in PDAs and the questionnaire in Myanmar version was used by the interviewers in the field data collection to ask the questions to the participants. The information on behavior risk factors was collected by face-to-face interviews. Body weight, height, waist and hip circumferences, blood pressure and heart rate were measured using Seca Digital Floor Scale with High Capacity (Model 813), Seca 217 portable stadiometer, Seca 201 measuring tape and Boso-Medicus automatic digital blood pressure monitor respectively. Fasting blood glucose, 2 hour blood glucose, total blood cholesterol, triglycerides, HDL and LDL cholesterol were determined using SD LipidoCare Analyzer.

2.5 Data collection teams

There were 18 data collection teams. In each data collection team, there were 6 members i.e. 1 team leader (medical doctor) for overall management and glucose loading and testing samples for blood glucose and lipids, 2 team members for face-face interview, 2 team members for measuring height and weight and 1 helper for registering and arranging participants. One team leader (medical doctor) and 2 team members for each team were recruited from Myanmar Medical Associations (Yangon and Mandalay) and make up a central core team. Each central core team worked together with two local team members (midwives or public health supervisors) and one local helper (local volunteer), who were recruited from each selected township for the survey to conduct the data collection in their local township. One local survey co-coordinator was recruited from township health staff for each selected township to contact local authorities, to compile the list of households for selected wards and villages and participants, to make

appointments for visits, to select households and to make travel arrangement for data collection team.

2.6 Training of data collection teams

A 5-day training workshop for the survey data collection teams was conducted at University of Medicine (2),Yangon on 11-15 August 2014. Fifty seven data collection team members (medical doctors) attended the training workshop, which was facilitated by a resource person from the STEPS Team of World Health Organization and 4 country resource persons from Department of Medical Research and Prevention and Control of Diabetes Project.

The training workshop included sessions on the overview of STEPwise approach to NCD risk factor surveillance, the plan of the National Survey on Diabetes Mellitus and Risk Factors for Non-communicable Diseases in Myanmar, how to approach selected households and individuals including use of Kish method, PDA-based data collection, interview skills, informed consent, detailed discussion on the survey instrument and how to use show cards, mock interviews, demonstration and practice on physical measurements, use of SD LipiddoCare Analyzer for blood glucose and lipids, emergency management and referral of critically high blood glucose level for medical doctors in the data collection teams and quality control of all field processes.

On the fifth day of the training, the pilot survey was conducted in the wards of North Okkalapa Township, Yangon to orient the survey team members to all steps of data collection in the field.

2.7 Data collection

Data collection was done from September to December, 2014. Each survey team was allocated to 2-3 townships for data collection. Each team were provided with a field kit containing: a carrier bag, letters to the relevant authorities, 2-3 PDAs for data collection/recording responses, charging cords for PDAs, feedback forms for participants, consent forms, checklist, list of the selected wards and villages and households and village maps, team field log book, interview tracking forms, operational manual, pens,

pencils, clipboards, notebooks, scales for weight and height measurements, tapes for girth, digitalized blood pressure monitors, devices and test strips for STEP 3 (plus lancets, swabs and sharp containers, gloves, pipettes) and glucose packs for oral glucose tolerance tests.

The flow of events was as follows: STEP 1 and 2 were conducted at the survey participant's household and STEP 3 was conducted on the morning of 2nd day of contact at the designated place (township or station hospital or MCH facility or urban health center or rural health center or sub-center or school).

Step 1: Questionnaire-based assessment:

The questionnaire consist of questions to assess basic socio-demographic information (age, sex, education, ethnicity, marital status ,occupation and household income) and behavioural risk factors (tobacco use, use of alcohol, dietary behaviors related to fruit and vegetable consumption, physical inactivity, history of raised blood pressure and raised blood glucose/diabetes, history of raised total cholesterol, history of cardiovascular diseases, lifestyle advice for reduction of NCD risk and cervical screening). A copy of the instrument in Myanmar language to be used was attached. Responses from participants were recorded by the survey team members using a handheld digital device (PDA).

Tobacco use: Information on both forms of tobacco use – smoking and smokeless – was collected. Questions were asked to identify current users (those who had smoked or used smokeless tobacco in the past 30 days), daily users and past users. Detailed information was taken from daily users regarding their age at starting tobacco use, frequency of use of tobacco products in a day or week, types of tobacco products used and so on. Information such as age at which the respondent stopped smoking was taken from past users. Information on passive smokers was also gathered. Pictorial cards showing different tobacco products were shown during data collection.

Alcohol consumption: Questions were asked to determine the percentage of lifetime abstainers, past 12 months abstainers, past 12 months drinker and current (past 30 days) drinkers of alcohol. Detailed information, such as the number of standard drinks

consumed and frequency of consuming standard drinks in the last 30 days, was obtained from current users. Pictorial cards showing different kinds of glasses and bowls most commonly used in Myanmar were used to help the participants recall the amount of alcohol consumed. The amount, as identified by the respondent, was then used to calculate the number of standard drinks of alcohol consumed (one standard drink contains 10 grams of pure ethanol).

Diet: Information was taken from respondents on the number of days that they consumed fruit and vegetable in a typical week and the number of servings of fruit and vegetable consumed on average per day. Measurement of the amount of fruit and vegetable was aided by pictorial show cards and measuring cups (one standard serving of fruit or vegetable equals 80 grams).

Physical activity: Physical activity related to work was categorized into vigorous, moderate and low levels of activity. Physical activity related to transport and recreation and time spent in sedentary behaviour were also assessed. Physical activity related to transport included travel to work or market by walking or using a bicycle. Recreational activity included two types of activities based on severity, i.e., vigorous and moderate.

History of raised blood pressure, blood glucose, raised total cholesterol and cardiovascular diseases and life style advice: Participants were asked about their history of raised blood pressure or blood glucose or raised total cholesterol or heart attack or chest pain from heart disease or a stroke and life style advice prescribed by a doctor or health care provider.

Cervical cancer screening: Participants were asked about ever having a screening test for cervical cancer.

Step 2: Physical measurements

Physical assessment included height, weight, waist and hip circumference measurements and blood pressure and heart rate.

Height was measured with a portable Seca stadiometer. For the height measurement, respondents were asked to remove footwear (shoes, slippers, sandals) and any hat or hair ties. Respondents stood on a flat surface facing the interviewer with their feet together and heels against the backboard with knees straight. They were asked to look straight ahead and not tilt their head up, making sure that their eyes were at the same level as their ears. Height measurements were taken to the nearest 0.1 cm.

Weight was measured with a pre-calibrated portable digital weighing scale (Seca). The instrument was placed on a firm, flat surface. Participants were requested to remove their footwear and socks, wear light clothes, stand on the scale with one foot on each side of the scale, face forward, place arms at their side and wait until asked to step off. Measurements were taken to the nearest 0.1 kg.

Waist and hip circumference were measured using a Seca measuring tape. A private area, such as a separate room within the house, was used and these measurements were taken over light clothing. The waist circumference measurement was made at the midpoint between the last palpable rib and the top of the iliac crest. Measurements were made to the nearest 0.1 cm. Hip measurement was also made using a Seca measuring tape placed horizontally at the point of maximum circumference over the buttocks. Measurements were taken to the nearest 0.1 cm.

Blood pressure measurements were taken using automatic digital blood pressure monitor (Boso Medicus) with universal cuff size. Before taking the measurements, participants were asked to sit quietly and rest for 15 minutes with legs uncrossed. The sphygmomanometer cuff was placed on the left arm while the participant rested their forearm on a table with the palm facing upward. Three readings were taken 5 minutes apart. During the analysis the average of the last two readings were taken.

Step 3: Biochemical assessment

On the day of the survey when STEP 1 and STEP 2 have been finished, participants were asked to fast overnight i.e. people were be asked not to consume any food or drinks after 10 p.m. at night, except water, until the morning of the following day. Participants were asked to go to the designated testing centre the next morning where

capillary blood was be taken by finger prick for rapid test. Those participants that complied with the fasting advice were eligible for blood sample collection. Blood glucose, cholesterol, triglycerides, HDL and LDL were measured using SD LipidoCare Analyzer onsite, which requires a finger-prick blood draw to measure glucose and blood lipids. Then participants were be given glucose drink of monohydrous glucose 82.5 g (equivalent of anhydrous glucose 75 g) dissolved in 100-150 ml of drinking water and the subjects were requested to remain in the survey site for two hours. Postprandial plasma glucose was tested two hours after the glucose drink. SD LipidoCare Analyzer gives the blood glucose result as plasma equivalent value although it used capillary whole blood.

2.8 Data management and analysis

Data recording was done using handheld PDAs. Each team carried 2-3 PDAs. In total, 53 PDAs were used by 18 survey teams. During data collection, data were entered into handheld PDAs by the survey team members to record the respondents' answers to the STEP 1 interview and the physical and biochemical results from STEP 2 and 3. These data were regularly backed up to a storage device card fitted in every PDA to ensure a backup copy of data is stored in case of any device failures.

Data from storage device cards of each PDA were downloaded into a mater computer at the Central Office of the survey after the completion of the fieldwork, using separate folders for survey questionnaire data and Kish data. Then the survey questionnaire data files (.rml files) were formatted into .xlsx files, using Excel 2010 software and all Kish data files were formatted into .csv files, using Excel 2010 software. All survey questionnaire data files in .xlsx format were appended into a single data set, using Stata software Version 13. All Kish data files in .csv format were compiled into a single Kish data set keeping only two variables (participant ID and household size), using Kish_Method_Data.xls file (macro file) provided by WHO. These two files (the combined questionnaire data file and the combined Kish data file) were merged into a single master dataset and transformed into .xlsx file, using Stata software. This master dataset was imported into .mdb file (Microsoft Access database format), using Microsoft Access 2010. Data checking and cleaning were done at every step from downloading data from PDA to importing into a single mater .mdb file. Final data checking and cleaning were done on data in the mater .mdb file.

Final analysis weights (the number of persons represented by a participant in the survey) were calculated by multiplying individual weight (inverse of the probability of selection for the participant) and population weight (adjustment for differences between the sample population and target population participant's age/sex group). Individual weights were calculated separately for Step 1, Step 2 and Step 3. Population weights were calculated, using data from the 2014 Myanmar Census. The non-response weights were not used in final analysis weights because the response rate in the survey was high (90% for all three steps of data collection). Final weights were integrated into the mater .mdb file in Microsoft Access 2010.

Data analysis was done in Epi-Info 3.5.4 using the analysis programs written by the WHO STEPS team along the tables in Data Book for WHO STEPS Noncommunicable Disease Risk Factor Surveillance. The variables which are not included in pre-written Epi-Info analysis programs were analyzed, using Stata software version 13. These variables included variables on tobacco policy, 2 hour postprandial blood glucose and HDL cholesterol. All analyses were conducted as weighted analyses using final analysis weights. Categorical variables were presented as percent and 95% confidence interval and numerical variables were presented as mean and 95% confidence interval. Almost all variables were presented for aggregate estimates as well as disaggregate estimates for both sexes and 4 age groups.

Operational definitions used in data analysis:

Current smoker is anyone who currently smokes any tobacco products.

Current user of smokeless tobacco use is anyone who currently uses any smokeless tobacco products

Current drinker is anyone who drinks any alcohol product (such as beer, wine, spirits or fermented toddy palm sac or *Khaung-yay*) in past 30 days.

One standard drink is approximately 10 grams of ethanol. Examples of one standard drink are 1 standard bottle of beer (285 ml), 1 single measure of spirit (30ml), and 1 medium size glass of wine.

Drinking at high-end level is drinking 60 grams or more of pure alcohol per occasion for a man (or) drinking 40 grams or more of pure alcohol per occasion for a woman.

Drinking at intermediate level is drinking **40-59.9 grams** of pure alcohol per occasion for a man (or) drinking **20-39.9** grams of pure alcohol per occasion for a woman.

Drinking at lower-end level is drinking less than 40 grams of pure alcohol per occasion for a man (or) drinking less than 20 grams of pure alcohol per occasion for a woman.

Unrecorded alcohol is homebrewed alcohol, alcohol brought over the border, not intended for drinking or other untaxed alcohol.

Low consumption of fruit and vegetable is eating less than five servings of fruit and/or vegetable on average per day

Insufficient physical activity is doing less than 150 minutes of moderate-intensity physical activity per week, or equivalent (75 minutes of vigorous-intensity physical activity or an equivalent combination of moderate- and vigorous-intensity physical activity achieving at least 600 MET-minutes). MET is the ratio of a person's working metabolic rate relative to the resting metabolic rate. One MET is defined as the energy cost of sitting quietly, and is equivalent to a caloric consumption of 1 kcal/kg/hour. It is estimated that, compared to sitting quietly, a person's caloric consumption is four times as high when being moderately active, and eight times as high when being vigorously active.

High level of physical activity is 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 level of physical activity is 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 vigorous-intensity activities achieving a minimum of at least 600 MET-minutes per week.

Low level of physical activity is not meeting any of the above mentioned criteria.

Vigorous physical activity is defined as any activity that causes large increases in breathing or heart rate like carrying or lifting heavy loads, digging or construction work or digging or ploughing fields for at least 10 minutes continuously.

Moderate physical activity is defined as any activity that causes small increases in breathing or heart rate, such as brisk walking or carrying light loads, domestic chores, gardening for at least 10 minutes continuously.

Vigorous recreational activity is defined as any vigorous-intensity sports, fitness or recreational (leisure) activities that cause large increases in breathing or heart rate like running or football for at least 10 minutes continuously.

Moderate recreational activity is defined as any moderate-intensity sports, fitness or recreational (leisure) activities that cause a small increase in breathing or heart rate such as brisk walking, cycling, swimming, volleyball for at least 10 minutes continuously.

Sedentary behaviour is defined as a behaviour where an individual spends time sitting or reclining at work, at home, getting to and from places, or with friends including time spent sitting at a desk, sitting with friends, traveling in car, bus, train, reading, playing cards or watching television, but do not include time spent sleeping.

Raised blood pressure or hypertension is defined as having systolic blood pressure ≥140 mm Hg and/or diastolic blood pressure ≥90 mm Hg during the study, or currently on medication for raised blood pressure.

Under-weight is defined as having BMI less than 18.5. **Normal weight** is defined as having BMI of 18.5-24.9. **Overweight** is defined as having BMI of 25.0-29.9. **Obesity** is defined as having BMI of 30 or higher.

Raised blood glucose is defined as plasma glucose value ≥7.0mmol/L (126 mg/dl).

Raised 2-hour blood glucose is defined as plasma glucose value ≥11.1mmol/L (200 mg/dl).

Impaired fasting glycaemia is defined as plasma glucose value ≥6.1mmol/L (110mg/dl) and <7.0mmol/L (126mg/dl)

Impaired glucose tolerance is defined as plasma 2-hour glucose value ≥7.8mmol/L (140mg/dl) and ≤11.0mmol/L (199 mg/dl).

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

Chapter 3: Results

3.1. Demographic Information Results

Table 1.1 Age group and sex of respondents

Age group and sex of respondents						
Age Group (years)	Men		Women		Both Sexes	
	n	%	n	%	n	%
25-34	656	21.3	1154	20.3	1810	20.7
35-44	796	25.9	1630	28.7	2426	27.7
45-54	882	28.6	1609	28.3	2491	28.4
55-64	745	24.2	1285	22.6	2030	23.2
25-64	**3079**	**100**	**5678**	**100**	**8757**	**100**

Table 1.1 presents the age group and sex distribution of the respondents in the study. The age group of 45–54 years formed the highest proportion in both sexes.

Table 1.2 Mean number of years of education

Mean number of years of education						
Age Group (years)	Men		Women		Both Sexes	
	n	Mean	n	Mean	n	Mean
25-34	656	6.9	1154	6.5	1810	6.7
35-44	796	5.9	1630	5.9	2426	5.9
45-54	882	6.0	1609	5.1	2491	5.5
55-64	745	5.9	1285	4.5	2030	5.0
25-64	**3079**	6.2	**5678**	5.5	**8757**	5.7

Table 1.2 presents the mean number of years of education of the respondents. The mean number of years of education was about 6 years and there was a difference of nearly one year between males and females.

Table 1.3 Highest level of education of men

Age Group (years)	Highest level of education: Men							
	n	1) % No formal schooling	2)% Preschool to 3rd standard	3)% 4th to 7th standard	4)% 8th to 9th standard	5)% 10th standard completed	6)% College/ University completed	7)% Post graduate degree
25-34	656	9.6	15.4	38.8	17.6	9.2	8.4	1.1
35-44	796	11.1	21.7	44.2	12.7	5.2	5.2	0.0
45-54	882	16.6	16.0	40.1	16.2	6.4	4.7	0.1
55-64	745	18.2	14.7	41.0	14.7	7.1	4.2	0.1
25-64	**3079**	**14.0**	**17.0**	**41.1**	**15.2**	**6.8**	**5.5**	**0.3**

Table 1.4 Highest level of education of women

Age Group (years)	Highest level of education: Women							
	n	1)% No formal schooling	2)% Preschool to 3rd standard	3)% 4th to 7th standard	4)% 8th to 9th standard	5)% 10th standard completed	6)% College/ University completed	7)% Post graduate degree
25-34	1154	6.8	24.6	36.1	12.6	8.4	10.9	0.6
35-44	1630	9.4	26.6	38.4	11.9	5.3	7.8	0.7
45-54	1609	17.4	26.3	35.3	10.8	5.6	4.6	0.1
55-64	1285	27.0	26.2	30.4	8.1	5.2	2.7	0.4
25-64	**5678**	**15.1**	**26.0**	**35.2**	**10.9**	**6.0**	**6.4**	**0.4**

Table 1.5 Highest level of education of both sexes

Age Group (years)	Highest level of education: Both Sexes							
	n	1)% No formal schooling	2)% Preschool to 3rd standard	3)% 4th to 7th standard	4)% 8th to 9th standard	5)% 10th standard completed	6)% College/ University completed	7)% Post graduate degree
25-34	1810	7.8	21.3	37.1	14.4	8.7	10.0	0.8
35-44	2426	9.9	25.0	40.3	12.1	5.2	6.9	0.5
45-54	2491	17.1	22.6	37.0	12.7	5.8	4.6	0.1
55-64	2030	23.8	22.0	34.3	10.5	5.9	3.3	0.3
25-64	**8757**	**14.7**	**22.9**	**37.3**	**12.4**	**6.3**	**6.1**	**0.4**

Tables 1.3, 1.4 and 1.5 present the highest level of education attained by

the respondents. The percentage of respondents with no formal education became higher with increasing age in both sexes.

Table 1.6 Ethnic groups of respondents

Ethnic groups of respondents										
Age Group (years)	Both Sexes									
	n	% Bamar	% Kachin	% Kayah	% Kayin	% Chin	% Mon	% Yakhine	% Shan	% Others
25-34	1810	70.7	0.6	1.0	3.5	3.4	2.4	5.7	6.4	6.5
35-44	2426	71.1	0.3	0.7	3.9	2.3	2.6	7.2	5.8	6.2
45-54	2491	70.1	0.4	0.6	4.1	2.2	2.3	6.0	6.7	7.6
55-64	2030	69.0	0.5	0.4	4.3	1.6	3.1	6.8	8.0	6.2
25-64	**8757**	**70.2**	**0.5**	**0.7**	**4.0**	**2.3**	**2.6**	**6.5**	**6.7**	**6.6**

Table 1.6 presents the percentage distribution of the ethnic groups of the respondents. The majority of the respondents were Bamar (70.2%).

Table 1.7 Marital status of men

Marital status							
Age Group (years)	Men						
	n	% Never married	% Currently married	% Separated	% Divorced	% Widowed	% Cohabiting
25-34	656	25.0	72.6	1.1	1.1	0.3	0.0
35-44	796	9.3	87.4	1.1	1.4	0.8	0.0
45-54	882	6.5	87.6	1.8	1.3	2.8	0.0
55-64	745	3.6	86.4	0.9	1.1	7.9	0.0
25-64	**3079**	**10.5**	**84.1**	**1.3**	**1.2**	**3.0**	**0.0**

Table 1.8 Marital status of women

Marital status							
Age Group (years)	Women						
	n	% Never married	% Currently married	% Separated	% Divorced	% Widowed	% Cohabiting
25-34	1154	24.0	71.2	1.8	2.0	1.0	0.0
35-44	1630	12.8	78.1	2.9	2.7	3.6	0.0
45-54	1609	9.1	74.8	1.4	2.0	12.7	0.0
55-64	1285	8.8	59.0	2.4	2.6	27.3	0.0
25-64	**5678**	**13.1**	**71.4**	**2.1**	**2.3**	**11.0**	**0.0**

Table 1.9 Marital status of both sexes

Age Group (years)	Marital status						
	Both Sexes						
	n	% Never married	% Currently married	% Separated	% Divorced	% Widowed	% Cohabiting
25-34	1810	24.4	71.7	1.5	1.7	0.7	0.0
35-44	2426	11.6	81.1	2.3	2.3	2.6	0.0
45-54	2491	8.1	79.4	1.5	1.7	9.2	0.0
55-64	2030	6.9	69.1	1.9	2.0	20.2	0.0
25-64	**8757**	**12.2**	**75.9**	**1.8**	**1.9**	**8.2**	**0.0**

Tables 1.7, 1.8 and 1.9 present the marital status of the respondents. About 84% of the men and 71% of the women in the study group were married. A little more than 10% of both male and female respondents were still single.

On an average, the percentages of divorced and separated people were very low among both sexes - 2.5% among males and 4.4% among females. The proportion of widowed women was much higher than that of widowed males in the two older age groups.

Table 1.10 Employment status of men

Employment status					
Age Group (years)	Men				
	n	% Government employee	% Non-government employee	% Self-employed	% Unpaid
25-34	656	5.0	11.7	73.8	9.5
35-44	796	2.9	10.9	80.4	5.8
45-54	882	5.9	7.5	75.7	10.9
55-64	745	5.1	6.8	63.6	24.4
25-64	**3079**	**4.7**	**9.1**	**73.6**	**12.5**

Table 1.11 Employment status of women

Employment status					
Age Group (years)	Women				
	n	% Government employee	% Non-government employee	% Self-employed	% Unpaid
25-34	1152	5.2	8.8	57.1	28.9
35-44	1628	4.3	5.4	60.3	30.0
45-54	1608	3.8	4.9	55.7	35.6
55-64	1285	3.0	3.0	38.5	55.6
25-64	**5673**	**4.0**	**5.4**	**53.4**	**37.2**

Table 1.12 Employment status of both sexes

Employment status					
Age Group (years)	Both Sexes				
	n	% Government employee	% Non-government employee	% Self-employed	% Unpaid
25-34	1808	5.1	9.8	63.2	21.8
35-44	2424	3.8	7.2	66.9	22.1
45-54	2490	4.5	5.8	62.8	26.8
55-64	2030	3.7	4.4	47.7	44.1
25-64	**8752**	**4.3**	**6.7**	**60.5**	**28.5**

Tables 1.10, 1.11 and 1.12 show the employment status of the respondents. The high percentage of both men and women were self-employed. The percentage of government employees was 4.7 among men and 4 among women.

Table 1.13 Distribution of types of unpaid work among unpaid men

Age Group (years)	Unpaid men						
	n	% Non-paid	% Student	%Home-maker	% Retired	Unemployed	
						% Able to work	% Not able to work
25-34	62	43.5	8.1	6.5	1.6	38.7	1.6
35-44	46	43.5	0.0	4.3	0.0	39.1	13.0
45-54	96	30.2	0.0	4.2	17.7	31.3	16.7
55-64	182	10.4	0.0	2.2	50.5	20.3	16.5
25-64	**386**	**24.6**	**1.3**	**3.6**	**28.5**	**28.2**	**13.7**

Table 1.14 Distribution of types of unpaid work among unpaid women

Age Group (years)	Unpaid women						
	n	% Non-paid	% Student	%Home-Maker	% Retired	Unemployed	
						% Able to work	% Not able to work
25-34	333	6.9	0.9	77.8	0.0	12.9	1.5
35-44	489	8.6	0.0	80.2	0.8	9.6	0.8
45-54	572	4.0	0.0	82.9	1.4	8.7	3.0
55-64	714	4.8	0.0	67.8	8.3	9.0	10.2
25-64	**2108**	**5.8**	**0.1**	**76.3**	**3.4**	**9.7**	**4.7**

Table 1.15 Distribution of types of unpaid work among unpaid respondents (both sexes)

Age Group (years)	unpaid respondents (both sexes)						
	n	% Non-paid	% Student	%Home-maker	% Retired	Unemployed	
						% Able to work	% Not able to work
25-34	395	12.7	2.0	66.6	0.3	17.0	1.5
35-44	535	11.6	0.0	73.6	0.7	12.1	1.9
45-54	668	7.8	0.0	71.6	3.7	12.0	4.9
55-64	896	5.9	0.0	54.5	16.9	11.3	11.5
25-64	**2494**	**8.7**	**0.3**	**65.1**	**7.3**	**12.6**	**6.1**

Tables 1.13, 1.14 1nd 1.15 show the distribution of types of unpaid work among unpaid men, women, and respondents (of both sexes). On an average, the highest percentage of men in unpaid work was retired, but this was so only in the age groups of 55–64 years. Among women, home-makers comprised the highest percentage of those engaged in unpaid work. The highest percentage of this group of women was in the age

group of 45–54 years. The proportion of unemployed women was lower than that of unemployed men.

Out of 8757 respondents, 7728 (88%) responded to the household income question. The median annual household income was 2,000,000 Kyats and the interquartile range (25^{th} and 75^{th} percentile) was 1,080,000 to 4,400,000 Kyats.

2. Tobacco Use

Tobacco use includes **smoking** and **smokeless tobacco use**. **Current smokers** are those who have smoked tobacco currently. Current smokers include **daily smokers** (those who smoke any tobacco products every day) and **non-daily smokers** (those who smoke currently but not every day). **Non-smokers** are those who have not smoked tobacco currently. Non-smokers include **former smokers** (those who have ever smoked any tobacco products but not currently) and **never smoker**s (those who have never smoked any tobacco products). **Current users of smokeless tobacco** are those who have used any smokeless tobacco product currently. Current user of smokeless tobacco includes **daily user of smokeless tobacco** (those who use any smokeless tobacco product every day) and **non-daily user of smokeless tobacco** (those who use any smokeless tobacco product currently but not every day). **Non-users of smokeless tobacco** are those who have not used any smokeless tobacco product currently. Non-user of smokeless tobacco includes **former user of smokeless tobacco** (those who have ever used any smokeless tobacco product but not currently) and **never user of smokeless tobacco** (those who have never used any smokeless tobacco product).

Table 2.1 Percentage of current smokers

Percentage of current smokers									
Age Group (years)	Men			Women			Both Sexes		
	n	% Current smoker	95% CI	N	% Current smoker	95% CI	n	% Current smoker	95% CI
25-34	656	41.4	35.8-47.1	1154	1.7	0.9-2.6	1810	21.6	18.2-25.1
35-44	796	45.7	40.7-50.7	1630	5.6	3.4-7.7	2426	25.7	21.7-29.6
45-54	882	45.1	39.8-50.3	1609	13.0	9.4-16.6	2491	29.0	25.8-32.3
55-64	745	43.7	38.5-49.0	1285	21.4	15.5-27.3	2030	32.5	27.3-37.8
25-64	**3079**	**43.8**	**40.8-46.7**	**5678**	**8.4**	**6.4-10.3**	**8757**	**26.1**	**23.8-28.4**

Table 2.1 presents the percentage distribution of current smokers. The percentage of current smokers among men was more than 40%. These percentages were significantly higher than those among women in the corresponding age groups, even though the prevalence of smoking became higher with increasing age among women. The current smoking prevalence rate among males was about 25 times that among females in the age group of 25–34 years. In general, nearly 26% of the respondents were current smokers and the current smoking prevalence rate among males was five times that among females.

Table 2.2 Smoking status of men

Smoking status									
	Men								
Age Group (years)	n	Current smoker				Non-smokers			
		% Daily	95% CI	% Non-daily	95% CI	% Former smoker	95% CI	% Never smoker	95% CI
25-34	656	28.1	22.8-33.4	13.3	7.4-19.1	8.6	5.4-11.8	50.0	44.4-55.6
35-44	796	36.3	30.6-42.0	9.4	7.1-11.7	9.8	6.9-12.8	44.5	38.4-50.5
45-54	882	38.2	32.2-44.3	6.9	4.1-9.6	13.2	9.4-17.1	41.7	36.4-47.0
55-64	745	37.2	28.7-45.6	6.6	1.8-11.3	19.5	14.5-24.6	36.7	30.8-42.7
25-64	**3079**	**34.0**	**30.5-37.5**	**9.8**	**7.2-12.4**	**11.7**	**9.4-14.0**	**44.6**	**40.6-48.6**

Table 2.3 Smoking status of women

Smoking status									
	Women								
Age Group (years)	n	Current smoker				Non-smokers			
		% Daily	95% CI	% Non-daily	95% CI	% Former smoker	95% CI	% Never smoker	95% CI
25-34	1154	1.5	0.7-2.3	0.3	0.0-0.6	0.8	0.2-1.4	97.4	96.2-98.6
35-44	1630	4.8	2.9-6.7	0.8	0.3-1.3	1.4	0.7-2.0	93.1	90.5-95.7
45-54	1609	11.9	8.6-15.2	1.1	0.4-1.8	3.6	2.0-5.2	83.4	79.3-87.5
55-64	1285	19.0	13.0-24.9	2.4	1.4-3.5	7.8	4.4-11.2	70.8	64.7-76.9
25-64	**5678**	**7.4**	**5.6-9.3**	**0.9**	**0.6-1.3**	**2.7**	**1.8-3.6**	**88.9**	**86.7-91.1**

Table 2.4 Smoking status of both sexes

Smoking status									
	Both Sexes								
Age Group (years)	n	Current smoker				Non-smokers			
		% Daily	95% CI	% Non-daily	95% CI	% Former smoker	95% CI	% Never smoker	95% CI
25-34	1810	14.8	11.5-18.2	6.8	3.9-9.6	4.7	3.1-6.3	73.6	70.2-77.1
35-44	2426	20.6	17.1-24.0	5.1	3.6-6.6	5.6	4.1-7.1	68.7	64.2-73.3
45-54	2491	25.0	21.9-28.1	4.0	2.5-5.5	8.4	6.0-10.8	62.6	59.4-65.8
55-64	2030	28.0	21.5-34.6	4.5	2.1-6.9	13.6	9.9-17.4	53.8	48.4-59.3
25-64	**8757**	**20.7**	**18.2-23.3**	**5.4**	**4.1-6.6**	**7.2**	**5.9-8.5**	**66.7**	**64.1-69.3**

Tables 2.2, 2.3 and 2.4 present the percentage distribution of the different level of smoking status of the respondents. Most of the female respondents did not smoke, but

the percentage of current female smokers increased with increasing age. Nearly 20% of the respondents were current daily smokers, while 5.4% were current occasional smokers.

Table 2.5 Current daily smokers among current smokers

Current daily smokers among current smokers									
Age Group (years)	Men			Women			Both Sexes		
	n	% Daily smokers	95% CI	n	% Daily smokers	95% CI	n	% Daily smokers	95% CI
25-34	272	67.9	55.8-80.1	28	84.0	66.7-100.0	300	68.6	56.7-80.5
35-44	362	79.4	73.7-85.1	100	86.1	78.5-93.7	462	80.1	74.9-85.3
45-54	400	84.8	78.3-91.2	218	91.5	86.8-96.1	618	86.3	81.4-91.1
55-64	324	84.9	73.2-96.7	267	88.7	83.0-94.4	591	86.2	77.7-94.7
25-64	**1358**	**77.7**	**71.9-83.5**	**613**	**88.8**	**84.9-92.8**	**1971**	**79.5**	**74.4-84.6**

Table 2.5 presents the percentage distribution of current daily smokers among current smokers. The percentage of current daily smokers increased with increasing age in men.

Table 2.6 Mean age started smoking among daily smokers

Mean age started smoking									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean age	95% CI	N	Mean age	95% CI	n	Mean age	95% CI
25-34	191	18.3	17.5-19.0	23	20.4	18.2-22.6	214	18.4	17.6-19.1
35-44	296	19.4	18.7-20.1	83	19.8	17.9-21.6	379	19.5	18.9-20.0
45-54	341	18.9	18.1-19.8	196	23.1	20.5-25.7	537	19.9	19.1-20.7
55-64	290	21.1	19.0-23.2	235	23.0	20.5-25.5	525	21.8	20.0-23.6
25-64	**1118**	**19.3**	**18.7-19.8**	**537**	**22.3**	**20.7-23.9**	**1655**	**19.8**	**19.2-20.4**

Table 2.6 presents the mean age at which daily smokers started smoking. In general, the mean age of starting smoking was 20 years. Except for the youngest age group, the mean age at which male daily smokers started smoking was around 20 years and the mean age of starting smoking among female daily smokers was 2 years later than male daily smokers.

Table 2.7 Mean duration of smoking among daily smokers

Mean duration of smoking (years)									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean duration	95% CI	N	Mean duration	95% CI	n	Mean duration	95% CI
25-34	191	11.6	10.6-12.6	23	11.3	9.2-13.4	214	11.6	10.6-12.5
35-44	296	20.2	19.4-21.0	83	20.1	18.1-22.1	379	20.2	19.5-20.9
45-54	341	30.3	29.3-31.3	196	26.8	24.2-29.4	537	29.5	28.5-30.4
55-64	290	38.5	37.1-39.8	235	35.8	33.2-38.3	525	37.6	36.1-39.0
25-64	**1118**	**23.3**	**21.7-25.0**	**537**	**28.2**	**26.4-30.0**	**1655**	**24.2**	**22.7-25.7**

Table 2.7 presents the mean duration of smoking years among daily smokers. On an average, by the age of 34 years, the smokers had already smoked for almost 11 years; by the age of 64 years, it became 38 years.

Table 2.8 Manufactured cigarette smokers among daily smokers

Manufactured cigarette smokers among daily smokers									
Age Group (years)	Men			Women			Both Sexes		
	n	% Manu-factured cigarette smoker	95% CI	n	% Manu-factured cigarette smoker	95% CI	n	% Manu-factured cigarette smoker	95% CI
25-34	188	48.7	37.3-60.2	23	0.0	0.0-0.0	211	46.3	35.5-57.1
35-44	299	28.8	17.9-39.6	83	3.5	0.0-7.0	382	25.8	15.9-35.8
45-54	342	24.4	16.2-32.5	196	3.9	0.5-7.2	538	19.5	13.3-25.7
55-64	291	28.7	20.7-36.7	235	3.7	0.3-7.1	526	20.2	14.1-26.3
25-64	**1120**	**33.4**	**26.2-40.7**	**537**	**3.5**	**1.1-5.9**	**1657**	**28.1**	**21.6-34.5**

Table 2.8 presents the percentage of smokers of manufactured cigarettes among daily smokers. Among males, the percentage of such smokers was high in the youngest age group. Among females, only a low percentage of daily smokers was smoking manufactured cigarettes, the highest percentage (approximately 4%) being observed in the age group of 45–55 years.

Table 2.9 Manufactured cigarette smokers among current smokers

Manufactured cigarette smokers among current smokers									
Age Group (years)	Men			Women			Both Sexes		
	n	% Manu-factured cigarette smoker	95% CI	n	% Manu-factured cigarette smoker	95% CI	n	% Manu-factured cigarette smoker	95% CI
25-34	265	54.4	44.9-63.8	28	4.3	0.0-12.9	293	52.3	43.1-61.6
35-44	357	33.5	23.7-43.4	100	8.4	2.4-14.5	457	30.8	21.6-40.0
45-54	396	31.1	20.4-41.8	218	3.7	0.7-6.8	614	24.9	16.7-33.1
55-64	324	27.3	19.3-35.4	267	3.6	0.2-7.0	591	19.5	13.4-25.6
25-64	**1342**	**38.9**	**32.0-45.7**	**613**	**4.6**	**1.9-7.2**	**1955**	**33.3**	**27.0-39.6**

Table 2.9 presents the percentage of smokers of manufactured cigarettes among current smokers. The percentage of smokers of manufactured cigarettes among male current smokers was 8 times that among female current smokers.

Table 2.10 Amount of tobacco used among male daily smokers by type

Mean amount of tobacco used by daily smokers by type									
Age Group (years)	Men								
	n	Mean # of manufactured cig.	95% CI	n	Mean # of hand-rolled cig.	95% CI	n	Mean # of pipes of tobacco	95% CI
25-34	188	1.9	1.0-2.7	190	0.6	0.3-0.9	191	0.0	0.0-0.1
35-44	298	1.6	0.8-2.4	299	0.8	0.4-1.2	299	0.2	0.0-0.4
45-54	341	1.7	0.9-2.5	342	0.8	0.4-1.3	342	0.0	0.0-0.1
55-64	291	2.5	1.4-3.5	291	0.9	0.3-1.5	291	0.1	0.0-0.2
25-64	**1118**	**1.9**	**1.3-2.4**	**1122**	**0.8**	**0.4-1.1**	**1123**	**0.1**	**0.0-0.2**

Table 2.10 Amount of tobacco used among male daily smokers by type (Contd.)

Mean amount of tobacco used by daily smokers by type						
Age Group (years)	Men					
	n	Mean # of cigars, cheroots, cigarillos	95% CI	n	Mean # of other type of tobacco	95% CI
25-34	190	2.5	1.6-3.4	190	0.2	0.0-0.7
35-44	298	3.0	2.2-3.9	293	0.7	0.0-1.5
45-54	341	3.2	2.1-4.3	338	0.6	0.0-1.3
55-64	290	2.7	1.8-3.6	290	0.2	0.0-0.5
25-64	**1119**	**2.9**	**2.3-3.5**	**1111**	**0.4**	**0.0-0.9**

Table 2.11 Amount of tobacco used among female daily smokers by type

Mean amount of tobacco used by daily smokers by type									
Age Group (years)	Women								
	n	Mean # of manufactured cig.	95% CI	n	Mean # of hand-rolled cig.	95% CI	n	Mean # of pipes of tobacco	95% CI
25-34	23	0.0	-	23	0.3	0.0-0.6	23	0.1	0.0-0.3
35-44	83	0.1	0.0-0.3	83	0.9	0.2-1.5	83	0.2	0.0-0.5
45-54	195	0.1	0.0-0.2	196	1.0	0.5-1.6	196	0.1	0.0-0.3
55-64	235	0.1	0.0-0.2	235	0.8	0.3-1.3	235	0.3	0.0-0.6
25-64	**536**	**0.1**	**0.0-0.2**	**537**	**0.9**	**0.4-1.3**	**537**	**0.2**	**0.0-0.4**

Table 2.11 Amount of tobacco used among female daily smokers by type (Contd.)

Mean amount of tobacco used by daily smokers by type						
Age Group (years)	Women					
	n	Mean # of cigars, cheroots, cigarillos	95% CI	n	Mean # of other type of tobacco	95% CI
25-34	23	1.9	1.4-2.4	23	0.0	-
35-44	83	1.8	1.2-2.4	82	0.5	0.0-1.5
45-54	196	1.7	1.1-2.3	195	0.6	0.0-1.5
55-64	235	2.8	1.1-4.5	230	1.3	0.0-3.3
25-64	**537**	**2.2**	**1.3-3.1**	**530**	**0.8**	**0.0-2.0**

Table 2.12 Amount of tobacco used among daily smokers of both sexes by type

Mean amount of tobacco used by daily smokers by type									
Age Group (years)	Both Sexes								
	n	Mean # of manufactured cig.	95% CI	n	Mean # of hand-rolled cig.	95% CI	n	Mean # of pipes of tobacco	95% CI
25-34	211	1.8	1.0-2.6	213	0.6	0.3-0.9	214	0.0	0.0-0.1
35-44	381	1.4	0.7-2.2	382	0.8	0.5-1.2	382	0.2	0.0-0.4
45-54	536	1.3	0.8-1.9	538	0.9	0.5-1.3	538	0.1	0.0-0.1
55-64	526	1.7	0.9-2.4	526	0.9	0.4-1.4	526	0.1	0.0-0.3
25-64	**1654**	**1.5**	**1.0-2.0**	**1659**	**0.8**	**0.5-1.1**	**1660**	**0.1**	**0.0-0.2**

Table 2.12 Amount of tobacco used among daily smokers of both sexes by type of tobacco (Contd.)

Mean amount of tobacco used by daily smokers by type						
Age Group (years)	Both Sexes					
	n	Mean # of cigars, cheroots, cigarillos	95% CI	n	Mean # of other type of tobacco	95% CI
25-34	213	2.5	1.6-3.4	213	0.2	0.0-0.7
35-44	381	2.9	2.2-3.6	375	0.7	0.0-1.5
45-54	537	2.8	1.9-3.8	533	0.6	0.0-1.3
55-64	525	2.7	2.0-3.5	520	0.6	0.0-1.5
25-64	**1656**	**2.7**	**2.2-3.3**	**1641**	**0.5**	**0.0-1.1**

Tables 2.10, 2.11 and 2.12 present the mean amount of tobacco used by daily smokers by types among males, females and both sexes. On an average, 3 sticks of cheroots and 2 sticks of manufactured cigarettes were consumed per day by male daily smokers. On an average, 2 sticks of cheroots and 1 stick of hand rolled cigarette were consumed by female daily smokers. The mean amount of manufactured cigarettes used by female daily smokers was low (0.1 stick per day).

Table 2.13 Smoked tobacco consumption of male current smokers

Percentage of current smokers smoking each of the following products							
Age Group (years)	Men						
	n	% Manuf. cigs.	95% CI	% Hand-rolled cigs.	95% CI	% Pipes of tobacco	95% CI
25-34	272	53.4	44.1-62.8	17.4	8.6-26.2	1.1	0.0-2.3
35-44	362	33.2	23.4-43.0	18.9	9.9-27.8	1.8	0.4-3.3
45-54	400	30.7	20.1-41.4	18.8	9.8-27.8	0.9	0.0-1.9
55-64	324	27.3	19.3-35.4	19.4	9.6-29.1	1.1	0.0-2.7
25-64	**1358**	**38.4**	**31.6-45.3**	**18.`4**	**10.9-26.0**	**1.3**	**0.4-2.1**

Table 2.13 Smoked tobacco consumption of male current smokers (Contd.)

Percentage of current smokers smoking each of the following products					
Age Group (years)	Men				
	n	% Cigars, cheroots, cigarillos	95% CI	% Other	95% CI
25-34	272	64.4	52.9-75.9	1.0	0.0-2.0
35-44	362	62.7	52.0-73.5	1.4	0.0-2.9
45-54	400	63.3	51.7-75.0	1.8	0.1-3.5
55-64	324	63.5	54.7-72.4	0.4	0.0-0.9
25-64	**1358**	**63.6**	**55.3-71.9**	**1.2**	**0.4-2.0**

Table 2.14 Smoked tobacco consumption of female current smokers

Percentage of current smokers smoking each of the following products							
Age Group (years)	Women						
	n	% Manuf. cigs.	95% CI	% Hand-rolled cigs.	95% CI	% Pipes of tobacco	95% CI
25-34	28	4.3	0.0-12.9	12.3	1.0-23.7	6.4	0.0-14.3
35-44	100	8.4	2.4-14.5	26.5	11.3-41.8	5.4	1.2-9.7
45-54	218	3.7	0.7-6.8	38.0	21.7-54.3	3.5	0.0-8.3
55-64	267	3.6	0.2-7.0	29.2	14.1-44.3	4.4	0.0-9.2
25-64	**613**	**4.6**	**1.9-7.2**	**30.5**	**17.6-43.4**	**4.4**	**0.0-8.9**

Table 2.14 Smoked tobacco consumption of female current smokers (Contd.)

Percentage of current smokers smoking each of the following products					
Age Group (years)	Women				
	n	% Cigars, cheroots, cigarillos	95% CI	% Other	95% CI
25-34	28	71.0	53.0-89.0	0.0	-
35-44	100	65.6	49.1-82.1	1.4	0.0-4.2
45-54	218	57.1	40.6-73.6	1.2	0.0-2.9
55-64	267	66.4	50.2-82.7	2.4	0.0-5.5
25-64	**613**	**63.5**	**50.2-76.7**	**1.6**	**0.0-3.8**

Table 2.15 Smoked tobacco consumption of current smokers of both Sexes

Percentage of current smokers smoking each of the following products							
Age Group (years)	Both Sexes						
	n	% Manuf. cigs.	95% CI	% Hand-rolled cigs.	95% CI	% Pipes of tobacco	95% CI
25-34	300	51.4	42.3-60.6	17.2	8.6-25.8	1.3	0.1-2.5
35-44	462	30.5	21.3-39.7	19.7	11.1-28.3	2.2	0.7-3.7
45-54	618	24.7	16.5-32.8	23.1	12.8-33.4	1.5	0.0-3.3
55-64	591	19.5	13.4-25.6	22.6	11.7-33.6	2.2	0.2-4.2
25-64	**1971**	**33.0**	**26.7-39.3**	**20.4**	**12.5-28.3**	**1.8**	**0.5-3.0**

Table 2.15 Smoked tobacco consumption of current smokers of both Sexes (Contd.)

Percentage of current smokers smoking each of the following products					
Age Group (years)	Both Sexes				
	n	% Cigars, cheroots, cigarillos	95% CI	% Other	95% CI
25-34	300	64.7	53.3-76.0	1.0	0.0-1.9
35-44	462	63.0	52.6-73.5	1.4	0.0-3.0
45-54	618	62.0	51.3-72.6	1.6	0.1-3.2
55-64	591	64.5	55.0-74.0	1.0	0.0-2.4
25-64	**1971**	**63.5**	**55.0-72.0**	**1.3**	**0.3-2.3**

Tables 2.13, 2.14 and 2.15 present the different kinds of tobacco used by current smokers by types among males, females and both sexes. Among male current smokers, the most common kind of tobacco smoked was cheroot (64%), followed by manufactured cigarettes (38%) and hand rolled cigarette (18%). Among female current smokers, the most common kind of tobacco smoked was cheroot (64%), followed by hand rolled cigarette (31%) and manufactured cigarettes (5%).

Table 2.16 Frequency of daily cigarette smoking of men

Percentage of daily smokers smoking given quantities of manufactured or hand-rolled cigarettes per day											
	Men										
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
25-34	99	63.6	50.6-76.7	20.3	9.9-30.7	9.5	1.8-17.2	5.9	0.9-10.9	0.7	0.0-2.1
35-44	135	53.5	43.6-63.3	25.9	17.6-34.2	10.6	4.6-16.7	10.0	3.4-16.7	0.0	-
45-54	157	47.9	38.0-57.8	24.5	17.2-31.9	19.8	7.0-32.7	7.7	2.0-13.5	0.0	-
55-64	142	38.0	21.9-54.2	35.3	12.8-57.7	10.9	4.9-16.9	12.6	5.1-20.2	3.2	0.0-7.7
25-64	**533**	**53.1**	**45.8-60.4**	**25.3**	**18.0-32.6**	**12.3**	**8.7-16.0**	**8.6**	**4.7-12.4**	**0.8**	**0.0-1.7**

Table 2.17 Frequency of daily cigarette smoking of Women

Percentage of daily smokers smoking given quantities of manufactured or hand-rolled cigarettes per day											
	Women										
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
25-34	4	73.0	25.3-100.0	27.0	0.0-74.7	0.0	-	0.0	-	0.0	-
35-44	28	74.9	54.3-95.5	16.7	0.8-32.5	5.7	0.0-13.3	2.8	0.0-7.2	0.0	-
45-54	83	83.8	75.5-92.2	13.2	4.8-21.6	3.0	0.8-5.1	0.0	-	0.0	-
55-64	112	92.1	87.3-96.9	4.9	1.9-7.9	1.6	0.0-3.9	1.4	0.0-3.9	0.0	-
25-64	**227**	**85.5**	**79.6-91.4**	**10.7**	**5.4-16.0**	**2.8**	**1.0-4.6**	**1.0**	**0.0-2.0**	**0.0**	**-**

Table 2.18 Frequency of daily cigarette smoking of both sexes

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
25-34	103	63.7	50.9-76.6	20.4	10.0-30.7	9.4	1.8-17.0	5.8	0.9-10.8	0.7	0.0-2.1
35-44	163	55.4	46.0-64.7	25.1	17.5-32.6	10.2	4.5-15.9	9.4	3.2-15.5	0.0	-
45-54	240	56.4	46.9-65.9	21.8	15.9-27.8	15.8	5.5-26.2	5.9	1.5-10.3	0.0	-
55-64	254	53.3	37.4-69.3	26.7	8.5-44.8	8.3	4.0-12.6	9.5	4.0-14.9	2.3	0.0-5.5
25-64	**760**	**57.7**	**50.9-64.5**	**23.2**	**16.9-29.5**	**11.0**	**7.7-14.3**	**7.5**	**4.1-10.9**	**0.7**	**0.0-1.5**

Tables 2.16, 2.17 and 2.18 present the percent distribution of amount of manufactured or hand-rolled cigarettes smoked per day among daily smokers of male, female and both sex. Among male daily smokers, the majority (53%) smoked less than 5

manufactured or hand-rolled cigarettes per day and the one-fourth smoked 5-9 manufactured or hand-rolled cigarettes per day. Among female daily smokers, the great majority (85%) smoked less than 5 manufactured or hand-rolled cigarettes per day and about the one-tenth smoked 5-9 manufactured or hand-rolled cigarettes per day.

Table 2.19 Former daily smokers (among all respondents)

Former daily smokers (who don't smoke currently) among all respondents									
Age Group (years)	Men			Women			Both Sexes		
	n	% Former daily smokers	95% CI	n	% Former daily smokers	95% CI	n	% Former daily smokers	95% CI
25-34	656	4.5	2.8-6.2	1154	0.5	0.0-1.0	1810	2.5	1.7-3.4
35-44	796	6.5	4.1-8.9	1630	1.1	0.4-1.8	2426	3.8	2.5-5.1
45-54	882	12.9	9.6-16.1	1609	2.6	1.6-3.7	2491	7.7	5.9-9.6
55-64	745	20.1	12.1-28.2	1285	6.9	4.3-9.5	2030	13.5	8.7-18.3
25-64	**3079**	**9.3**	**7.4-11.3**	**5678**	**2.1**	**1.6-2.7**	**8757**	**5.7**	**4.7-6.8**

Table 2.19 presents the percentage of former daily smokers among all respondents. Nearly 10% of the male respondents quit smoking and this percentage increased with increase in age. A similar pattern was observed among females.

Table 2.20 Former daily smokers (among ever daily smokers)

Former daily smokers (who don't smoke currently) among ever daily smokers									
Age Group (years)	Men			Women			Both Sexes		
	n	% Former daily smokers	95% CI	n	% Former daily smokers	95% CI	n	% Former daily smokers	95% CI
25-34	225	13.8	8.5-19.1	30	25.4	6.4-44.5	255	14.5	9.5-19.4
35-44	362	15.1	10.5-19.8	108	18.3	11.5-25.1	470	15.5	11.3-19.7
45-54	450	25.2	18.5-31.8	246	18.1	12.3-23.9	696	23.6	18.0-29.2
55-64	416	35.1	22.1-48.2	309	26.6	15.7-37.5	725	32.5	21.2-43.8
25-64	**1453**	**21.6**	**17.1-26.0**	**693**	**22.4**	**16.8-27.9**	**2146**	**21.7**	**17.3-26.1**

Table 2.21 Mean years since cessation of smoking

Mean years since cessation of smoking									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean years	95% CI	n	Mean years	95% CI	n	Mean years	95% CI
25-34	57	7.2	4.9-9.4	11	4.1	0.3-7.9	68	6.9	4.8-9.0
35-44	88	10.8	8.2-13.4	28	8.1	4.9-11.2	116	10.5	8.1-12.9
45-54	115	15.6	11.5-19.7	56	12.9	8.9-16.9	171	15.1	11.3-18.8
55-64	147	17.3	12.9-21.7	85	16.5	9.6-23.5	232	17.1	13.5-20.7
25-64	**407**	**12.8**	**11.0-14.6**	**180**	**13.0**	**9.3-16.7**	**587**	**12.8**	**11.1-14.6**

Table 2.21 presents the mean years of cessation for former daily smokers. On an average, cessation of nearly 13 years was observed among both male and female former daily smokers. The mean number of years of cessation in each age group of males was higher than among females. The oldest age group had the highest mean years of cessation in the case of both males and females (17 years for both males and females).

Table 2.22 Attempted cessation of smoking among current smokers

Current smokers who have tried to stop smoking									
Age Group (years)	Men			Women			Both Sexes		
	n	% Tried to stop smoking	95% CI	n	% Tried to stop smoking	95% CI	n	%Tried to stop smoking	95% CI
25-34	272	47.5	36.9-58.2	28	40.4	22.0-58.7	300	47.2	37.1-57.4
35-44	362	33.8	24.2-43.3	100	62.0	47.4-76.5	462	36.8	27.7-45.9
45-54	400	46.0	36.6-55.4	218	42.5	32.7-52.4	618	45.2	37.7-52.8
55-64	324	39.4	31.6-47.2	267	58.7	51.0-66.4	591	45.8	41.4-50.1
25-64	**1358**	**42.0**	**35.2-48.7**	**613**	**52.5**	**46.4-58.6**	**1971**	**43.7**	**37.7-49.6**

Table 2.22 presents attempted cessation of smoking among current smokers. About 44% of current smokers tried to quit smoking. Attempted cessation of smoking among female current smokers was 10% higher than male current smokers.

Table 2.23 Advice to stop smoking among current smokers

Current smokers who have been advised by doctor to stop smoking									
Age Group (years)	Men			Women			Both Sexes		
	n	% Advised to stop smoking	95% CI	n	% Advised to stop smoking	95% CI	n	%Advised to stop smoking	95% CI
25-34	181	25.0	14.6-35.4	19	42.6	18.4-66.9	200	25.7	15.5-35.8
35-44	247	30.6	20.0-41.2	77	37.1	20.7-53.5	324	31.4	21.4-41.3
45-54	278	35.7	25.5-45.9	174	52.6	43.4-61.7	452	39.9	30.8-49.1
55-64	234	32.0	24.3-39.7	209	49.7	40.7-58.8	443	38.2	32.2-44.2
25-64	**940**	**30.2**	**23.6-36.9**	**479**	**48.1**	**39.3-56.8**	**1419**	**33.5**	**27.0-39.9**

Table 2.23 presents the percentage of current smokers who have been advised by a doctor or other health worker to stop smoking, among those smokers who have had a visit to a doctor or other health worker in the past 12 months. About 34% of current smokers who have had a visit to a doctor or other health worker in the past 12 months were advised by a doctor or other health worker to stop smoking.

Table 2.24 Current users of smokeless tobacco

Current users of smokeless tobacco									
Age Group (years)	Men			Women			Both Sexes		
	n	% Current users	95% CI	n	% Current users	95% CI	n	% Current users	95% CI
25-34	656	66.3	59.3-73.3	1154	17.1	12.1-22.0	1810	41.8	36.3-47.2
35-44	796	69.5	65.0-74.0	1630	28.3	23.0-33.6	2426	48.9	44.1-53.7
45-54	882	58.6	54.0-63.2	1609	30.0	22.6-37.4	2491	44.3	39.7-48.9
55-64	745	45.7	40.9-50.4	1285	24.2	18.2-30.1	2030	34.9	30.6-39.2
25-64	**3079**	**62.2**	**58.3-66.1**	**5678**	**24.1**	**19.5-28.7**	**8757**	**43.2**	**39.2-47.1**

Table 2.24 presents the percentage of current smokeless tobacco users. It was observed that high percentage (62%) of male respondents used smokeless tobacco and the use of smokeless tobacco was extremely high (66%) even among the age group of 25–34 years. The age group among which consumption was the highest was 35–44 years among the men and 45–54 years among the women.

Table 2.25 Status of smokeless tobacco use of men

Smokeless tobacco use									
	Men								
Age Group (years)	n	Current user				Non user			
		% Daily	95% CI	% Non-daily	95% CI	% Past user	95% CI	% Never used	95% CI
25-34	656	47.8	41.8-53.8	18.5	12.8-24.1	4.5	2.3-6.7	29.2	21.6-36.9
35-44	796	48.8	43.5-54.0	20.7	14.7-26.7	4.8	2.2-7.4	25.7	20.4-31.0
45-54	882	42.1	35.9-48.4	16.4	10.8-22.1	6.1	3.2-9.0	35.3	31.2-39.5
55-64	745	32.9	28.1-37.7	12.7	9.6-15.8	4.5	2.5-6.5	49.8	44.6-55.1
25-64	**3079**	**44.5**	**40.9-48.1**	**17.7**	**13.8-21.6**	**4.9**	**3.5-6.4**	**32.9**	**28.7-37.0**

Table 2.26 Status of smokeless tobacco use of women

Smokeless tobacco use									
	Women								
Age Group (years)	n	Current user				Non user			
		% Daily	95% CI	% Non-daily	95% CI	% Past user	95% CI	% Never used	95% CI
25-34	1154	10.9	7.0-14.8	6.2	3.6-8.7	2.3	0.8-3.7	80.7	75.2-86.1
35-44	1630	19.8	16.0-23.6	8.5	4.9-12.1	1.9	1.0-2.9	69.8	64.4-75.2
45-54	1609	18.4	13.4-23.4	11.6	3.8-19.4	3.0	1.7-4.2	67.0	59.8-74.2
55-64	1285	18.0	13.1-23.0	6.1	3.9-8.4	4.3	2.4-6.1	71.6	65.4-77.7
25-64	**5678**	**16.1**	**12.8-19.4**	**8.0**	**5.0-11.0**	**2.6**	**1.8-3.5**	**73.3**	**68.5-78.0**

Table 2.27 Status of smokeless tobacco use of both sexes

Smokeless tobacco use									
	Both Sexes								
Age Group (years)	n	Current user				Non user			
		% Daily	95% CI	% Non-daily	95% CI	% Past user	95% CI	% Never used	95% CI
25-34	1810	29.4	24.7-34.1	12.3	9.3-15.3	3.4	1.9-4.8	54.9	49.1-60.7
35-44	2426	34.3	30.9-37.7	14.6	10.9-18.2	3.4	1.9-4.8	47.7	42.3-53.1
45-54	2491	30.2	24.9-35.6	14.0	7.8-20.3	4.5	2.8-6.3	51.2	46.6-55.8
55-64	2030	25.4	21.8-29.1	9.4	7.2-11.7	4.4	3.1-5.7	60.7	56.0-65.4
25-64	**8757**	**30.3**	**27.0-33.6**	**12.9**	**9.9-15.8**	**3.8**	**2.8-4.8**	**53.1**	**48.8-57.3**

Tables 2.25, 2.26 and 2.27 present the percentage distribution of the use of smokeless tobacco among the respondents. The percentage of male respondents consuming smokeless tobacco daily was nearly 50% in the age groups of 25–34 years and 35–44 years, indicating an increase of smokeless tobacco consumption among the younger male population.

Table 2.28 Former daily users of smokeless tobacco (among all respondents)

Former daily smokeless tobacco users(who don't use tobacco currently) among all respondents									
Age Group (years)	Men			Women			Both Sexes		
	n	% Former daily users	95% CI	n	% Former daily users	95% CI	n	% Former daily users	95% CI
25-34	656	9.6	4.5-14.8	1154	2.2	0.8-3.6	1810	5.9	3.3-8.5
35-44	795	11.5	3.4-19.5	1630	3.2	0.9-5.5	2425	7.3	2.9-11.7
45-54	882	11.1	5.5-16.8	1609	7.2	0.0-15.6	2491	9.2	2.7-15.6
55-64	745	7.7	5.3-10.2	1285	3.5	1.6-5.4	2030	5.6	3.8-7.4
25-64	**3078**	**10.2**	**5.7-14.6**	**5678**	**3.8**	**1.3-6.3**	**8756**	**7.0**	**3.9-10.1**

Table 2.28 presents the percentage of former daily smokeless tobacco users among the respondents. Only a small percentage of respondents, both male and female, quit using smokeless tobacco, whereas the percentage of current smokeless tobacco users was high. Merely 7% of the respondents quit using smokeless tobacco, whereas nearly 30% were still using it at the time of the survey.

Table 2.29 Former daily users of smokeless tobacco (among ever daily users)

Former daily smokeless tobacco users (who don't use tobacco currently) among ever daily users									
Age Group (years)	Men			Women			Both Sexes		
	n	% Former daily users	95% CI	n	% Former daily users	95% CI	n	% Former daily users	95% CI
25-34	373	16.8	8.8-24.7	144	16.6	9.1-24.2	517	16.7	10.5-23.0
35-44	443	19.0	7.1-31.0	345	13.9	5.1-22.6	788	17.6	8.5-26.7
45-54	438	20.9	10.8-30.9	382	28.2	2.3-54.1	820	23.3	8.4-38.1
55-64	297	19.0	13.2-24.9	287	16.1	7.3-24.9	584	18.0	12.4-23.6
25-64	**1551**	**18.6**	**11.3-25.9**	**1158**	**18.9**	**8.4-29.4**	**2709**	**18.7**	**11.4-26.0**

Table 2.30 Amount of smokeless tobacco used among daily users by type

Mean times per day smokeless tobacco used by daily smokeless tobacco users by type									
Age Group (years)	Men								
	n	Snuff by mouth	95% CI	n	Snuff by nose	95% CI	n	Chewing tobacco	95% CI
25-34	322	0.2	0.0-0.6	322	0.1	0.0-0.2	322	3.0	1.4-4.7
35-44	374	0.4	0.0-0.9	374	0.4	0.0-0.9	374	3.7	1.8-5.6
45-55	369	0.4	0.0-1.0	369	0.0	0.0-0.0	369	2.8	1.3-4.3
55-64	237	0.2	0.0-0.6	237	0.3	0.0-0.7	237	2.1	1.1-3.0
25-64	**1302**	**0.3**	**0.0-0.6**	**1302**	**0.2**	**0.0-0.3**	**1302**	**3.1**	**1.8-4.3**

Table 2.30 Amount of smokeless tobacco used among daily users by type (Contd.)

Mean times per day smokeless tobacco used by daily smokeless tobacco users by type						
Age Group (years)	Men					
	n	Betel, quid	95% CI	n	Other	95% CI
25-34	322	12.7	10.7-14.6	322	0.2	0.0-0.7
35-44	374	11.9	10.5-13.3	374	0.2	0.0-0.6
45-54	369	9.4	8.3-10.5	369	0.3	0.0-0.7
55-64	237	8.8	7.5-10.1	237	0.4	0.0-1.0
25-64	**1302**	**11.3**	**10.3-12.3**	**1302**	**0.3**	**0.0-0.7**

Table 2.31 Amount of smokeless tobacco used among daily users by type

Mean times per day smokeless tobacco used by daily smokeless tobacco users by type									
Age Group (years)	Women								
	n	Snuff by mouth	95% CI	n	Snuff by nose	95% CI	n	Chewing tobacco	95% CI
25-34	121	0.3	0.0-0.7	121	0.2	0.0-0.5	121	1.7	0.4-3.0
35-44	301	0.4	0.0-0.8	301	0.1	0.0-0.2	301	1.8	0.9-2.7
45-54	326	0.2	0.0-0.5	326	0.1	0.0-0.3	326	1.8	1.1-2.6
55-64	244	0.2	0.0-0.6	244	0.1	0.0-0.3	244	1.6	0.7-2.5
25-64	**992**	**0.3**	**0.0-0.6**	**992**	**0.1**	**0.0-0.3**	**992**	**1.7**	**1.0-2.5**

Table 2.31 Amount of smokeless tobacco used among daily users by type (Contd.)

Mean times per day smokeless tobacco used by daily smokeless tobacco users by type						
Age Group (years)	Women					
	n	Betel, quid	95% CI	n	Other	95% CI
25-34	121	6.6	5.6-7.6	121	0.9	0.0-2.2
35-44	301	7.8	6.7-9.0	301	2.7	0.0-6.6
45-54	326	7.6	6.3-8.9	326	0.2	0.0-0.7
55-64	244	6.7	5.2-8.2	244	0.2	0.0-0.7
25-64	**992**	**7.3**	**6.5-8.0**	**992**	**1.2**	**0.0-2.7**

Table 2.32 Amount of smokeless tobacco used among daily users of both sexes by type

Mean times per day smokeless tobacco used by daily smokeless tobacco users by type									
Age Group (years)	Both Sexes								
	n	Snuff by mouth	95% CI	n	Snuff by nose	95% CI	n	Chewing tobacco	95% CI
25-34	443	0.2	0.0-0.6	443	0.1	0.0-0.2	443	2.8	1.4-4.1
35-44	675	0.4	0.0-0.7	675	0.3	0.0-0.6	675	3.2	1.6-4.7
45-54	695	0.4	0.0-0.8	695	0.0	0.0-0.1	695	2.5	1.4-3.6
55-64	481	0.2	0.0-0.5	481	0.2	0.0-0.6	481	1.9	1.1-2.7
25-64	**2294**	**0.3**	**0.0-0.6**	**2294**	**0.1**	**0.0-0.3**	**2294**	**2.7**	**1.7-3.8**

Table 2.32 Amount of smokeless tobacco used among daily users by type of Both Sexes (Contd.)

Mean times per day smokeless tobacco used by daily smokeless tobacco users by type						
Age Group (years)	Both Sexes					
	n	Betel, quid	95% CI	n	Other	95% CI
25-34	443	11.5	9.8-13.3	443	0.4	0.0-1.0
35-44	675	10.7	9.5-12.0	675	0.9	0.0-2.2
45-54	695	8.8	7.8-9.8	695	0.3	0.0-0.7
55-64	481	8.1	7.0-9.1	481	0.4	0.0-0.8
25-64	**2294**	**10.2**	**9.4-11.1**	**2294**	**0.5**	**0.0-1.1**

Tables 2.30, 2.31 and 2.32 present the mean times per day that smokeless tobacco was used by daily smokeless tobacco users by type. The majority of both male and female smokeless tobacco users were using betel quid. On an average, smokeless tobacco was consumed 13 times per day by daily smokeless tobacco users. The highest mean times for the use of betel quid by males was 10 times per day in the age group of

25–34 years. For females, it was 8 times in the age group of 35–44 years and 45-54 years. It can be assumed that not only the prevalence but also the frequency of the use of smokeless tobacco was high among the younger population, both males and females.

Table 2.33 Smokeless tobacco consumption of men

Percentage of current users of smokeless tobacco using each of the following products							
Age Group (years)	Men						
	n	% Snuff by mouth	95% CI	% Snuff by nose	95% CI	% Chewing tobacco	95% CI
25-34	436	2.2	0.0-4.5	0.8	0.0-2.0	23.3	12.9-33.8
35-44	529	2.7	0.8-4.5	1.5	0.0-3.0	24.7	13.7-35.6
45-54	510	2.8	0.7-4.9	1.2	0.0-2.7	23.6	12.3-34.8
55-64	345	0.8	0.0-1.8	0.8	0.0-1.7	18.2	10.7-25.8
25-64	**1820**	**2.3**	**0.7-4.0**	**1.1**	**0.2-2.0**	**23.2**	**13.9-32.5**

Table 2.33 Smokeless tobacco consumption of men (Contd.)

Percentage of current users of smokeless tobacco using each of the following products					
Age Group (years)	Men				
	n	% Betel, quid	95% CI	% Other	95% CI
25-34	436	94.4	90.7-98.2	0.7	0.0-1.6
35-44	529	94.2	89.8-98.5	0.7	0.0-1.6
45-54	510	92.6	88.5-96.8	0.9	0.0-2.1
55-64	345	93.5	90.3-96.6	1.2	0.1-2.2
25-64	**1820**	**93.9**	**90.6-97.1**	**0.8**	**0.0-1.6**

Table 2.34 Smokeless tobacco consumption of women

Percentage of current users of smokeless tobacco using each of the following products							
Age Group (years)	Women						
	n	% Snuff by mouth	95% CI	% Snuff by nose	95% CI	% Chewing tobacco	95% CI
25-34	192	2.8	0.3-5.2	1.6	0.0-3.6	19.9	7.1-32.7
35-44	433	2.0	0.0-4.0	0.5	0.0-1.0	17.6	9.1-26.0
45-54	440	2.8	0.0-5.8	1.7	0.0-4.6	18.0	8.4-27.6
55-64	334	0.8	0.0-1.6	0.2	0.0-0.5	20.7	10.6-30.8
25-64	**1399**	**2.2**	**0.7-3.7**	**1.0**	**0.1-2.0**	**18.8**	**10.1-27.5**

Table 2.34 Smokeless tobacco consumption of women (Contd.)

Percentage of current users of smokeless tobacco using each of the following products					
Age Group (years)	Women				
	n	% Betel, quid	95% CI	% Other	95% CI
25-34	192	94.1	88.2-99.9	7.4	0.0-16.1
35-44	433	92.6	87.5-97.7	4.4	0.0-9.9
45-54	440	94.2	89.5-98.8	2.5	0.0-6.4
55-64	334	93.6	88.7-98.4	0.9	0.0-2.1
25-64	**1399**	**93.5**	**89.4-97.6**	**4.1**	**0.0-9.0**

Table 2.35 Smokeless tobacco consumption of both sexes

Percentage of current users of smokeless tobacco using each of the following products							
Age Group (years)	Both Sexes						
	n	% Snuff by mouth	95% CI	% Snuff by nose	95% CI	% Chewing tobacco	95% CI
25-34	628	2.3	0.2-4.5	1.0	0.0-2.1	22.6	12.7-32.5
35-44	962	2.5	0.9-4.1	1.2	0.1-2.3	22.6	13.0-32.2
45-54	950	2.8	0.5-5.1	1.3	0.0-3.3	21.7	11.8-31.6
55-64	679	0.8	0.0-1.5	0.6	0.0-1.2	19.1	11.3-26.8
25-64	**3219**	**2.3**	**0.7-3.8**	**1.1**	**0.2-1.9**	**22.0**	**13.1-30.8**

Table 2.35 Smokeless tobacco consumption of both sexes (Contd.)

Percentage of current users of smokeless tobacco using each of the following products					
Age Group (years)	Both Sexes				
	n	% Betel, quid	95% CI	% Other	95% CI
25-34	628	94.4	90.8-98.0	2.0	0.0-4.2
35-44	962	93.7	89.4-98.0	1.8	0.0-3.6
45-54	950	93.2	89.4-96.9	1.5	0.0-3.0
55-64	679	93.5	90.1-96.9	1.1	0.0-2.1
25-64	**3219**	**93.8**	**90.5-97.0**	**1.7**	**0.0-3.4**

Table 2.36 Current tobacco users

Current tobacco users									
Age Group (years)	Men			Women			Both Sexes		
	n	% Current users	95% CI	n	% Current users	95% CI	n	% Current users	95% CI
25-34	656	80.4	75.3-85.6	1154	18.2	13.3-23.1	1810	49.4	44.5-54.3
35-44	796	83.3	80.5-86.1	1630	31.1	25.6-36.6	2426	57.2	52.6-61.9
45-54	882	79.4	74.9-84.0	1609	37.4	30.2-44.7	2491	58.4	53.4-63.4
55-64	745	72.6	67.7-77.5	1285	37.9	30.5-45.3	2030	55.2	48.9-61.5
25-64	**3079**	**79.8**	**77.1-82.4**	**5678**	**29.1**	**23.9-34.2**	**8757**	**54.4**	**50.4-58.4**

Table 2.36 presents the percentage distribution of current tobacco use. The percentage of current tobacco use was 54%. This percentage was considerably higher in men than those among women in the corresponding age groups, even though the prevalence of current tobacco use became higher with increasing age among women. The current tobacco use prevalence rate among males was about 4 times that among females in the age group of 25–34 years.

Table 2.37 Daily tobacco users

Daily tobacco users									
Age Group (years)	Men			Women			Both Sexes		
	n	% Daily users	95% CI	n	% Daily users	95% CI	n	% Daily users	95% CI
25-34	656	64.6	57.8-71.3	1154	12.0	8.1-16.0	1810	38.4	33.0-43.7
35-44	796	72.1	67.5-76.8	1630	23.0	18.8-27.1	2426	47.6	43.1-52.0
45-54	882	70.8	66.6-75.1	1609	26.8	20.8-32.8	2491	48.8	44.2-53.4
55-64	745	63.5	57.1-69.9	1285	32.9	26.5-39.3	2030	48.2	42.0-54.3
25-64	**3079**	**67.8**	**64.0-71.6**	**5678**	**21.6**	**17.9-25.2**	**8757**	**44.7**	**40.9-48.6**

Table 2.38 Exposure to second-hand smoke in home in past 30 days

Exposed to second-hand smoke in home during the past 30 days									
Age Group (years)	Men			Women			Both Sexes		
	n	% Exposed	95% CI	n	% Exposed	95% CI	n	% Exposed	95% CI
25-34	656	33.4	27.0-39.8	1154	50.6	45.3-55.8	1810	41.9	37.0-46.8
35-44	796	28.7	23.5-33.9	1630	42.5	37.2-47.8	2426	35.6	31.3-39.9
45-54	882	32.5	24.4-40.7	1609	44.6	40.7-48.5	2491	38.6	33.4-43.8
55-64	745	34.6	28.5-40.7	1285	43.9	38.6-49.3	2030	39.3	35.1-43.5
25-64	**3079**	**32.1**	**27.5-36.8**	**5678**	**46.0**	**42.5-49.5**	**8757**	**39.1**	**35.7-42.5**

Table 2.38 presents the percentage of respondents who were exposed to second-hand smoke (SHS) in the home on one or more days in the past 30 days. About 32% of male respondents and 46% of female respondents were currently exposed to tobacco smoke in their home. The prevalence of exposure to tobacco smoke was higher among female respondents for all age groups.

Table 2.39 Exposure to second-hand smoke in the workplace in past 30 days

Exposed to second-hand smoke in the workplace during the past 30 days									
Age Group (years)	Men			Women			Both Sexes		
	n	% Exposed	95% CI	n	% Exposed	95% CI	n	% Exposed	95% CI
25-34	433	33.5	23.9-43.2	820	26.4	19.5-33.3	1253	29.8	22.9-36.8
35-44	553	34.8	25.7-43.8	1209	23.5	16.3-30.8	1762	28.9	21.7-36.1
45-54	623	35.3	23.6-46.9	1237	22.3	15.9-28.7	1860	28.5	20.1-36.9
55-64	525	19.2	10.5-27.8	987	19.2	12.4-26.0	1512	19.2	12.0-26.4
25-64	**2134**	**31.8**	**23.5-40.1**	**4253**	**23.6**	**17.5-29.6**	**6387**	**27.5**	**20.9-34.2**

Table 2.39 presents the percentage of respondents who were exposed to SHS in the workplace on one or more days in the past 30 days. Nearly 32% of male respondents and 24% of female respondents were exposed to tobacco smoke in their workplace.

3. Alcohol Consumption

Table 3.1 Alcohol consumption status of men

Alcohol consumption status									
	Men								
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
25-34	656	47.8	40.9-54.7	9.3	6.2-12.4	7.2	4.7-9.8	35.7	28.6-42.8
35-44	796	42.3	35.5-49.1	14.1	9.5-18.6	7.5	5.0-10.0	36.1	29.9-42.3
45-54	882	32.5	26.1-39.0	8.9	5.9-11.9	13.5	9.4-17.7	45.0	38.2-51.8
55-64	745	17.1	10.8-23.4	6.4	2.2-10.5	15.5	11.5-19.4	61.1	55.5-66.6
25-64	**3079**	**38.1**	**33.9-42.2**	**10.1**	**8.0-12.1**	**10.0**	**8.0-12.0**	**41.9**	**36.7-47.0**

Table 3.2 Alcohol consumption status of women

Alcohol consumption status									
	Women								
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
25-34	1154	2.2	1.1-3.3	1.7	0.5-2.9	1.8	0.7-2.8	94.4	92.1-96.6
35-44	1630	1.4	0.5-2.2	0.9	0.4-1.3	1.5	0.7-2.3	96.3	94.8-97.8
45-54	1609	1.3	0.1-2.5	1.1	0.4-1.8	1.1	0.4-1.8	96.5	94.6-98.4
55-64	1285	0.5	0.0-1.3	0.8	0.1-1.5	1.3	0.4-2.2	97.4	96.0-98.8
25-64	**5678**	**1.5**	**0.7-2.3**	**1.2**	**0.6-1.8**	**1.5**	**0.8-2.2**	**95.8**	**94.2-97.5**

Table 3.3 Alcohol consumption status of both sexes

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
25-34	1810	25.1	20.3-29.9	5.5	3.9-7.1	4.5	2.9-6.1	64.9	59.4-70.5
35-44	2426	21.9	18.4-25.3	7.5	4.6-10.4	4.5	3.1-5.9	66.2	61.1-71.3
45-54	2491	16.9	12.9-20.8	5.0	3.3-6.7	7.3	5.0-9.6	70.8	65.5-76.0
55-64	2030	8.8	5.6-12.0	3.6	1.5-5.6	8.4	6.0-10.7	79.3	76.2-82.3
25-64	**8757**	**19.8**	**16.8-22.8**	**5.6**	**4.3-6.9**	**5.7**	**4.5-6.9**	**68.8**	**64.6-73.1**

Tables 3.1, 3.2 and 3.3 present the percentage of alcohol consumption among the respondents. Nearly 38% of the male respondents were current drinkers, while nearly 42% were lifetime abstainers. On the other hand, only 1.5% of the female respondents were current drinkers and nearly 96% were lifetime abstainers. The highest percentage of male drinkers was in the age group of 25–34 years and that of female drinkers also in the age group of 25–34 years.

Table 3.4 Stopping drinking due to health reasons

Stopping drinking due to health reasons									
	Men			Women			Both Sexes		
Age Group (years)	n	% stopping due to health reasons	95% CI	n	% stopping due to health reasons	95% CI	n	% stopping due to health reasons	95% CI
25-34	56	20.3	7.8-32.9	24	24.8	0.0-49.7	80	21.2	10.7-31.6
35-44	68	44.9	30.9-58.8	31	27.1	3.1-51.0	99	41.9	29.5-54.4
45-54	125	59.9	45.9-73.9	24	26.4	2.6-50.2	149	57.4	43.4-71.3
55-64	122	39.7	31.4-47.9	19	17.7	3.3-32.1	141	38.0	30.0-45.9
25-64	**371**	**41.8**	**33.5-50.0**	**98**	**24.7**	**8.1-41.3**	**469**	**39.6**	**31.8-47.4**

Table 3.5 Frequency of alcohol consumption of men in the past 12 months

Frequency of alcohol consumption in the past 12 months													
	Men												
Age Group (years)	n	% Daily	95% CI	% 5-6 days/ week	95% CI	% 3-4 days/ week	95% CI	% 1-2 days/ week	95% CI	% 1-3 days/ month	95% CI	% < once a month	95% CI
25-34	356	18.5	11.5-25.5	2.7	1.2-4.2	11.1	4.9-17.3	17.3	9.2-25.4	19.6	13.3-25.8	30.8	20.8-40.9
35-44	425	24.0	19.1-28.8	4.0	1.3-6.8	12.0	7.3-16.7	16.3	11.0-21.7	18.6	11.9-25.3	25.1	16.5-33.6
45-54	385	33.5	26.0-41.0	4.7	1.9-7.6	11.2	7.6-14.8	14.8	10.4-19.2	13.9	10.7-17.2	21.8	15.9-27.6
55-64	193	35.6	20.7-50.4	2.9	0.8-5.0	7.5	3.8-11.1	10.9	4.3-17.4	14.6	8.2-20.9	28.6	17.1-40.2
25-64	**1359**	**24.4**	**18.8-29.9**	**3.5**	**2.5-4.6**	**11.1**	**8.6-13.7**	**16.0**	**11.6-20.4**	**17.8**	**13.9-21.7**	**27.1**	**19.6-34.7**

Table 3.6 Frequency of alcohol consumption of women in the past 12 months

Frequency of alcohol consumption in the past 12 months													
	Women												
Age Group (years)	n	% Daily	95% CI	% 5-6 days/ week	95% CI	% 3-4 days/ week	95% CI	% 1-2 days/ week	95% CI	% 1-3 days/ month	95% CI	% < once a month	95% CI
25-34	46	17.5	3.4-31.6	0.0	0.0-0.0	0.9	0.0-2.5	9.2	1.7-16.7	14.5	1.6-27.4	57.9	33.5-82.4
35-44	43	6.5	0.0-14.4	2.4	0.0-6.7	0.0	0.0-0.0	8.5	1.0-16.0	18.5	4.9-32.2	64.1	47.2-80.9
45-54	39	13.1	1.9-24.2	0.0	0.0-0.0	2.2	0.0-6.9	8.6	0.0-19.1	10.6	0.0-24.0	65.5	47.6-83.5
55-64	18	26.0	0.0-55.2	0.0	0.0-0.0	0.0	0.0-0.0	7.5	0.0-22.1	6.8	0.0-17.3	59.7	22.1-97.3
25-64	**146**	**14.9**	**6.2-23.6**	**0.5**	**0.0-1.5**	**0.9**	**0.0-2.5**	**8.8**	**3.8-13.8**	**14.0**	**4.5-23.5**	**61.0**	**43.0-78.9**

Table 3.7 Frequency of alcohol consumption of both sexes in the past 12 months

Frequency of alcohol consumption in the past 12 months													
	Both Sexes												
Age Group (years)	n	% Daily	95% CI	% 5-6 days/ week	95 % CI	% 3-4 days/ week	95% CI	% 1-2 days/ week	95% CI	% 1-3 days/ month	95% CI	% < once a month	95% CI
25-34	402	18.4	11.7-25.2	2.5	1.1-3.9	10.5	4.6-16.4	16.8	9.3-24.3	19.3	13.6-24.9	32.5	23.3-41.7
35-44	468	23.3	18.7-28.0	4.0	1.4-6.6	11.6	7.1-16.0	16.0	10.9-21.2	18.6	12.0-25.2	26.5	18.3-34.7
45-54	424	32.4	25.2-39.6	4.5	1.8-7.2	10.8	7.3-14.2	14.5	10.3-18.6	13.7	10.4-17.1	24.2	18.7-29.6
55-64	211	35.0	21.0-49.1	2.7	0.7-4.7	7.1	3.7-10.5	10.7	4.1-17.3	14.1	8.1-20.1	30.3	19.4-41.2
25-64	**1505**	**23.9**	**18.6-29.2**	**3.4**	**2.4-4.4**	**10.6**	**8.1-13.1**	**15.7**	**11.6-19.7**	**17.6**	**13.9-21.3**	**28.9**	**21.9-35.9**

Tables 3.5, 3.6 and 3.7 present the percentage for the frequency of alcohol

consumption in the past 12 months among drinkers. Nearly 25% of male drinkers drank alcohol daily, while about 27% drank less than once a month. About 15% of female drinkers had alcohol daily and 61% drank less than once a month. The percentage of daily male drinkers rose with increasing age. Among the female daily drinkers, the percentage of daily drinkers was high (26%) among the age group of 55–64 years compared to other age groups.

Table 3.8 Drinking occasions in the past 30 days

Mean number of drinking occasions in the past 30 days among current (past 30 days) drinkers									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	289	10.4	8.4-12.3	26	6.8	1.5-12.2	315	10.2	8.3-12.1
35-44	328	11.8	9.8-13.8	29	4.3	2.0-6.5	357	11.6	9.7-13.5
45-54	304	14.8	12.4-17.2	21	8.5	0.8-16.1	325	14.5	12.2-16.9
55-64	151	11.0	7.9-14.2	9	18.5	12.4-24.7	160	11.3	8.0-14.5
25-64	**1072**	**11.7**	**10.4-12.9**	**85**	**7.2**	**3.7-10.6**	**1157**	**11.5**	**10.3-12.7**

Table 3.8 presents the mean number of drinking occasions in the past 30 days among current (past 30 days) drinkers. Among male drinkers, all of the age groups drank on more than 10 occasions in a month. The mean number of drinking occasions among female drinkers rose with increasing age group except 35-44 age group.

Table 3.9 Standard drinks per drinking occasion

Mean number of standard drinks per drinking occasion among current (past 30 days) drinkers									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	291	4.8	4.0-5.6	25	2.0	1.6-2.5	316	4.7	4.0-5.5
35-44	330	5.9	4.9-6.8	28	4.4	0.0-9.1	358	5.8	4.9-6.7
45-54	307	5.8	4.6-7.0	21	4.9	0.0-11.2	328	5.8	4.6-6.9
55-64	151	4.8	3.0-6.6	9	2.1	1.2-3.1	160	4.7	3.0-6.4
25-64	**1079**	**5.3**	**4.7-6.0**	**83**	**3.2**	**0.8-5.6**	**1162**	**5.2**	**4.6-5.9**

Table 3.9 presents the mean number of standard drinks per drinking occasion among current (past 30 days) drinkers. The average number of standard drinks per drinking occasion among male drinkers ranged from 5 to 6, while that among female drinkers was ranged from 2 to 5. The highest average number of standard drinks for men

was nearly 6 in the age group of 35–44 years, and that for women was 5 in the age group of 45-54 years.

Table 3.10 Average volume drinking at high-end level among all respondents

Drinking at high-end level among all respondents (≥60g of pure alcohol on average per occasion among men and ≥40g of pure alcohol on average per occasion among women)									
Age Group (years)	Men			Women			Both Sexes		
	n	% ≥60g	95% CI	n	% ≥40g	95% CI	n	% high-end level	95% CI
25-34	650	5.4	3.1-7.8	1153	0.1	0.0-0.3	1803	2.8	1.6-3.9
35-44	786	6.6	4.8-8.4	1629	0.0	0.0-0.0	2415	3.3	2.3-4.3
45-54	877	5.2	3.1-7.4	1609	0.3	0.0-0.6	2486	2.7	1.5-4.0
55-64	744	2.0	0.6-3.5	1285	0.1	0.0-0.3	2029	1.1	0.3-1.8
25-64	**3057**	**5.2**	**3.7-6.6**	**5676**	**0.1**	**0.0-0.2**	**8733**	**2.6**	**1.9-3.4**

Table 3.10 presents the percentage of drinking at high-end level among all respondents (i.e. those who drank ≥60g of pure alcohol on an average per occasion in the case of men and ≥40g in the case of women). The highest percentage of drinking at high-end level among male drinkers was nearly 7 in the age group of 35–44 years, followed by about 5 in the age group of 25–34 years. There was only a small percentage (0.1 %) of female drinker drinking at high-end level. Only 2.6% of the overall respondents were drinking at high-end level.

Table 3.11 Average volume drinking at intermediate level among all respondents

Drinking at intermediate level among all respondents (40-59.9g of pure alcohol on average per occasion among men and 20-39.9g of pure alcohol on average per occasion among women)									
Age Group (years)	Men			Women			Both Sexes		
	n	% 40-59.9g	95% CI	n	% 20-39.9g	95% CI	n	% intermediate level	95% CI
25-34	650	3.0	1.6-4.5	1153	0.2	0.0-0.6	1803	1.6	0.8-2.4
35-44	786	3.6	1.6-5.5	1629	0.1	0.0-0.3	2415	1.8	0.8-2.9
45-54	877	2.3	1.1-3.4	1609	0.0	0.0-0.0	2486	1.1	0.6-1.7
55-64	744	0.9	0.2-1.5	1285	0.1	0.0-0.3	2029	0.5	0.2-0.8
25-64	**3057**	**2.7**	**1.9-3.4**	**5676**	**0.1**	**0.0-0.2**	**8733**	**1.4**	**1.0-1.8**

Table 3.11 presents the percentage of drinking at intermediate level among all respondents (i.e. those who drank 40.0g–59.9g of pure alcohol on an average per occasion in the case of men and 20.0g–39.9g in the case of women). Only less than 2% of the overall respondents were drinking at intermediate level. The highest percentage drinking at intermediate level among male drinkers was nearly 4 in the age group of 35–44 years, followed by 3 in the age group of 25–34 years. There was only a small percentage (nearly 0.1) of female drinking at intermediate level in the all age groups.

Table 3.12 Average volume drinking at lower-end level among all respondents

Drinking at lower-end level among all respondents (<40g of pure alcohol on average per occasion among men and <20g of pure alcohol on average per occasion among women)									
Age Group (years)	Men			Women			Both Sexes		
	n	% <40g	95% CI	n	% <20g	95% CI	n	% lower-end level	95% CI
25-34	650	38.7	31.3-46.1	1153	1.8	0.8-2.7	1803	20.2	15.4-24.9
35-44	786	31.6	25.5-37.7	1629	1.2	0.4-2.0	2415	16.4	13.5-19.2
45-54	877	24.7	19.9-29.5	1609	1.0	0.0-2.1	2486	12.8	9.9-15.7
55-64	744	14.1	8.3-19.9	1285	0.4	0.0-0.8	2029	7.2	4.3-10.1
25-64	**3057**	**29.8**	**26.5-33.0**	**5676**	**1.2**	**0.5-1.9**	**8733**	**15.4**	**13.1-17.8**

Table 3.12 presents the percentage of drinking at lower-end level among all respondents (i.e. those who drank <40g of pure alcohol on an average per occasion in the case of men and <20g in the case of women). The highest percentage of drinking at lower-end level among male drinkers was nearly 40 in the age group of 25–34 years,

followed by about 30 in the age group of 35–44 years. There was about 1% of female drinker drinking at lower-end level. About 15% of the overall respondents were drinking at lower-end level.

Table 3.13 Average volume drinking levels among current (past 30 days) drinkers of men

High-end, intermediate, and lower-end level drinking among current (past 30 days) drinkers							
	Men						
Age Group (years)	n	% high-end (≥60g)	95% CI	% intermediate (40-59.9g)	95% CI	% lower-end (<40g)	95% CI
25-34	287	11.5	6.5-16.5	6.5	3.3-9.7	82.0	75.3-88.8
35-44	326	15.9	11.6-20.2	8.5	4.1-12.9	75.6	69.4-81.8
45-54	303	16.3	11.0-21.5	7.1	3.8-10.4	76.7	71.0-82.4
55-64	151	12.1	4.1-20.0	5.1	1.3-8.9	82.9	73.0-92.7
25-64	**1067**	**13.8**	**10.7-16.8**	**7.1**	**5.2-9.0**	**79.1**	**75.3-83.0**

Table 3.14 Average volume drinking levels among current (past 30 days) drinkers of women

High-end, intermediate, and lower-end level drinking among current (past 30 days) drinkers							
	Women						
Age Group (years)	n	% high-end (≥40g)	95% CI	% intermediate (20-39.9g)	95% CI	% lower-end (<20g)	95% CI
25-34	25	5.0	0.0-15.4	9.2	0.0-26.9	85.9	66.3-100.0
35-44	28	0.0	0.0-0.0	9.6	1.7-17.4	90.4	82.6-98.3
45-54	21	21.4	0.0-49.6	0.0	0.0-0.0	78.6	50.4-100.0
55-64	9	16.3	3.3-29.3	16.3	3.3-29.3	67.4	41.4-93.4
25-64	**83**	**7.5**	**0.8-14.3**	**7.9**	**0.0-16.6**	**84.5**	**74.0-95.0**

Table 3.15 Average volume drinking levels among current (past 30 days) drinkers of both sexes

High-end, intermediate, and lower-end level drinking among current (past 30 days) drinkers							
Age Group (years)	Both sexes						
	n	% high-end	95% CI	% intermediate	95% CI	% lower-end	95% CI
25-34	312	11.2	6.4-16.0	6.6	3.2-9.9	82.2	75.7-88.8
35-44	354	15.4	11.2-19.5	8.6	4.3-12.8	76.1	70.0-82.1
45-54	324	16.5	11.1-21.8	6.8	3.6-10.0	76.8	71.0-82.5
55-64	160	12.2	4.3-20.1	5.4	1.7-9.2	82.4	72.4-92.4
25-64	**1150**	**13.5**	**10.6-16.5**	**7.1**	**5.2-9.0**	**79.3**	**75.6-83.1**

Tables 3.13, 3.14 and 3.15 present the percentage for high-end, intermediate, and lower-end level drinking among current (past 30 days) drinkers in males, females and both sexes. Among male drinkers, high-end level drinking was the highest in the age group of 45–54 years, while intermediate level drinking was the highest in the age group of 35–44 years. Among female drinkers, high-end level drinking was the highest in the age group of 45–54 years while intermediate level drinking was the highest in the age group of 55–64 years. Nearly 80% of male and 85% of female drinkers were lower-end level drinking.

Table 3.16 Largest number of drinks in the past 30 days among current (past 30 days) drinkers

Mean maximum number of standard drinks consumed on one occasion in the past 30 days									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean maximum number	95% CI	n	Mean maximum number	95% CI	n	Mean maximum number	95% CI
25-34	286	6.9	5.9-7.9	25	4.0	1.1-6.8	311	6.8	5.8-7.7
35-44	330	7.9	6.7-9.1	28	4.6	0.0-9.4	358	7.8	6.6-9.0
45-54	306	7.2	5.5-8.8	21	7.4	0.0-15.6	327	7.2	5.5-8.9
55-64	151	6.6	4.7-8.5	9	4.3	2.6-5.9	160	6.5	4.7-8.4
25-64	**1073**	**7.2**	**6.4-8.1**	**83**	**4.8**	**2.0-7.6**	**1156**	**7.1**	**6.3-8.0**

Table 3.16 presents the mean maximum number of standard drinks consumed on one occasion in the past 30 days among current drinkers. The highest mean maximum number of drinks consumed by male current drinkers was nearly 8 in the age group of

35–44 years and that consumed by female current drinkers was 7.4, in the age group of 45–54 years. On an average, current drinkers had consumed about 7 drinks on one occasion in the past 30 days.

Table 3.17 Six or more drinks on a single occasion

Six or more drinks on a single occasion at least once during the past 30 days among total population									
Age Group (years)	Men			Women			Both Sexes		
	n	% ≥ 6 drinks	95% CI	n	% ≥ 6 drinks	95% CI	n	% ≥ 6 drinks	95% CI
25-34	656	26.2	19.5-32.8	1154	0.3	0.0-0.6	1810	13.3	9.5-17.1
35-44	796	23.9	19.9-28.0	1630	0.2	0.0-0.4	2426	12.1	9.6-14.6
45-54	882	15.6	11.2-20.0	1609	0.5	0.0-1.0	2491	8.0	5.5-10.6
55-64	745	7.2	4.4-10.0	1285	0.3	0.0-0.7	2030	3.7	2.4-5.1
25-64	**3079**	**20.3**	**17.2-23.3**	**5678**	**0.3**	**0.1-0.5**	**8757**	**10.3**	**8.3-12.3**

Table 3.17 presents the percentage of respondents who had more than 6 drinks on a single occasion at least once during the past 30 days. About 20% of male respondents drank more than 6 drinks on a single occasion. The highest percentage among the male respondents (26%) was observed in the age group of 25–34 years. The lowest percentage was seen in the age group of 55–64 years of males. Less than 1% of female respondents drank more than 6 drinks on a single occasion.

Table 3.18 Six or more drinks on a single occasion among current (past 30 days) drinkers

Mean number of times with six or more drinks during a single occasion in the past 30 days among current drinkers									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean number of times	95% CI	n	Mean number of times	95% CI	n	Mean number of times	95% CI
25-34	280	3.9	2.8-5.0	24	0.8	0.0-2.1	304	3.8	2.7-4.9
35-44	323	4.9	3.8-6.1	29	0.2	0.1-0.3	352	4.8	3.7-5.9
45-54	289	4.7	3.2-6.3	19	4.1	1.4-6.8	308	4.7	3.2-6.2
55-64	149	4.0	2.0-6.0	9	2.0	1.2-2.7	158	4.0	2.0-5.9
25-64	**1041**	**4.4**	**3.6-5.1**	**81**	**1.3**	**0.5-2.2**	**1122**	**4.3**	**3.5-5.0**

Table 3.18 presents the mean number of times that the current drinkers had consumed six or more drinks during a single occasion in the past 30 days. Among

males, the highest average number of occasions of heavy drinking in the past 30 days was nearly 5 in the age group of 35–44 years. That among women was about 4 in the age group of 45–54 years. The lowest average number of times of binge drinking was observed in the youngest age group in male and 35-44 age group in female.

Table 3.19 Past 7 days drinking among male current (past 30 days) drinkers

Frequency of alcohol consumption in the past 7 days											
Age Group (years)	Men										
	n	% Daily	95% CI	% 5-6 days	95% CI	% 3-4 days	95% CI	% 1-2 days	95% CI	% 0 days	95% CI
25-34	258	27.3	20.6-34.0	5.6	1.8-9.3	13.5	5.4-21.6	29.3	18.7-39.8	24.3	12.2-36.5
35-44	276	39.0	31.2-46.7	3.8	1.8-5.8	12.0	6.9-17.0	33.9	25.0-42.8	11.4	7.0-15.7
45-54	267	44.2	35.2-53.2	6.0	1.7-10.3	11.3	6.3-16.3	26.2	20.2-32.3	12.3	7.4-17.2
55-64	136	35.5	21.9-49.0	1.8	0.0-3.7	11.7	4.1-19.3	24.3	16.6-32.1	26.7	8.0-45.4
25-64	**937**	**34.5**	**29.1-39.9**	**4.9**	**2.8-6.9**	**12.5**	**8.7-16.3**	**29.6**	**23.0-36.3**	**18.5**	**12.3-24.7**

Table 3.20 Past 7 days drinking among female current (past 30 days) drinkers

Frequency of alcohol consumption in the past 7 days											
Age Group (years)	Women										
	n	% Daily	95% CI	% 5-6 days	95% CI	% 3-4 days	95% CI	% 1-2 days	95% CI	% 0 days	95% CI
25-34	24	12.4	0.0-25.7	0.0	0.0-0.0	15.2	0.0-32.0	34.0	14.1-53.9	38.4	20.4-56.5
35-44	26	6.5	0.0-16.4	4.1	0.0-10.9	4.1	0.0-10.9	37.2	15.6-58.8	48.1	25.6-70.7
45-54	20	27.7	5.5-50.0	0.0	0.0-0.0	0.0	0.0-0.0	41.9	28.7-55.1	30.4	18.9-42.0
55-64	8	64.7	54.1-75.4	0.0	0.0-0.0	11.1	0.0-22.1	24.2	18.4-30.0	0.0	0.0-0.0
25-64	**78**	**16.8**	**8.6-25.0**	**1.0**	**0.0-2.8**	**9.3**	**0.0-19.4**	**35.7**	**28.3-43.2**	**37.1**	**27.9-46.3**

Table 3.21 Past 7 days drinking among current (past 30 days) drinkers of both sexes

Frequency of alcohol consumption in the past 7 days											
Age Group (years)	Both Sexes										
	n	% Daily	95% CI	% 5-6 days	95% CI	% 3-4 days	95% CI	% 1-2 days	95% CI	% 0 days	95% CI
25-34	282	26.6	20.2-33.0	5.3	1.7-8.9	13.6	5.9-21.3	29.5	19.3-39.8	25.0	13.6-36.4
35-44	302	37.8	30.5-45.2	3.8	1.9-5.7	11.7	6.8-16.6	34.0	25.4-42.7	12.7	8.1-17.3
45-54	287	43.5	34.6-52.4	5.7	1.6-9.9	10.8	6.2-15.5	26.9	21.2-32.5	13.0	8.2-17.9
55-64	144	36.4	22.8-50.0	1.7	0.0-3.6	11.7	4.3-19.1	24.3	16.8-31.8	25.9	7.6-44.1
25-64	**1015**	**33.8**	**28.6-38.9**	**4.7**	**2.7-6.7**	**12.4**	**8.8-15.9**	**29.9**	**23.5-36.3**	**19.3**	**13.4-25.1**

Tables 3.19, 3.20 and 3.21 present the frequency with which drinks were consumed and the quantity of drinks consumed by current (past 30 days) drinkers in the past 7 days. Among male current drinkers, nearly half in the age group of 45–54 years drank daily. These were followed by the 35-44 age group. The lowest percentage of male drinkers who drank daily was observed in the youngest age group. Among current female drinkers, the percentage of drinking daily was 17.

Table 3.22 Standard drinks per day in the past 7 days among current drinkers

Mean number of standard drinks consumed on average per day in the past 7 days among current drinkers									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean number	95% CI	n	Mean Number	95% CI	n	Mean number	95% CI
25-34	258	4.5	2.5-6.5	24	0.8	0.2-1.5	282	4.3	2.4-6.2
35-44	276	7.5	4.6-10.3	26	2.1	0.0-4.9	302	7.3	4.5-10.0
45-54	267	4.9	3.7-6.2	20	4.2	0.0-9.5	287	4.9	3.6-6.1
55-64	136	4.4	2.2-6.7	8	1.9	1.3-2.6	144	4.3	2.2-6.5
25-64	**937**	**5.4**	**4.0-6.8**	**78**	**1.8**	**0.5-3.1**	**1015**	**5.3**	**3.9-6.6**

Table 3.23 Consumption of unrecorded alcohol in the past 7 days among current drinkers

Consumption of unrecorded alcohol									
Age Group (years)	Men			Women			Both Sexes		
	n	% consuming unrecorded alcohol	95% CI	n	% consuming unrecorded alcohol	95% CI	n	% consuming unrecorded alcohol	95% CI
25-34	290	9.4	3.9-14.9	26	8.5	0.0-22.0	316	9.4	3.9-14.8
35-44	335	15.2	5.3-25.0	26	4.6	0.0-15.2	361	14.9	5.2-24.5
45-54	306	12.1	5.2-19.1	21	15.2	0.0-30.6	327	12.3	5.5-19.0
55-64	150	15.7	8.6-22.9	9	6.7	0.0-24.4	159	15.5	8.3-22.6
25-64	**1081**	**12.1**	**6.9-17.3**	**82**	**8.7**	**0.0-18.6**	**1163**	**12.0**	**6.8-17.1**

Table 3.23 presents the percentage of current drinkers that consumed unrecorded alcohol (homebrewed alcohol, alcohol brought over the border, not intended for drinking or other untaxed alcohol) in the past 7 days. Twelve percent of current drinkers drank unrecorded alcohol in the past 7 days.

Table 3.24 Standard drinks of unrecorded alcohol per day in the past 7 days among current drinkers

Mean number of standard drinks of unrecorded alcohol consumed on average per day in the past 7 days among current drinkers									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean number	95% CI	n	Mean number	95% CI	n	Mean number	95% CI
25-34	34	1.5	0.8-2.2	2	0.1	-	36	1.5	0.8-2.2
35-44	35	1.3	0.7-1.9	2	0.9	-	37	1.3	0.7-1.8
45-54	38	2.7	0.6-4.8	3	0.6	-	41	2.6	0.6-4.6
55-64	20	2.2	0.7-3.6	1	1.0	-	21	2.1	0.7-3.5
25-64	**127**	**1.7**	**1.0-2.5**	**8**	**0.5**	-	**135**	**1.7**	**1.0-2.4**

Table 3.24 presents the mean number of standard drinks of unrecorded alcohol consumed on average per day in the past 7 days among current (past 30 days) drinkers. The current drinkers drank 1.7 standard drinks per day of unrecorded alcohol on average during the past 7days. (One standard drink is about 10 grams of pure alcohol).

4. Fruit and Vegetable Consumption

Table 4.1 Mean number of days fruit consumed in a typical week

Mean number of days fruit consumed in a typical week									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean number of days	95% CI	n	Mean number of days	95% CI	n	Mean number of days	95% CI
25-34	623	2.3	1.9-2.7	1095	2.6	2.3-3.0	1718	2.4	2.1-2.8
35-44	763	2.3	2.0-2.6	1567	2.6	2.2-2.9	2330	2.4	2.2-2.7
45-54	844	2.3	2.0-2.6	1548	2.7	2.4-2.9	2392	2.5	2.3-2.7
55-64	712	2.3	2.0-2.7	1236	2.6	2.4-2.8	1948	2.5	2.2-2.7
25-64	**2942**	**2.3**	**2.0-2.6**	**5446**	**2.6**	**2.3-2.9**	**8388**	**2.5**	**2.2-2.7**

Table 4.1 presents the mean number of days fruit was consumed in a typical week by men, women and both sexes. Every age group, regardless of sex, had fruit two to three days a week. The average number of days fruit was consumed by the female respondents was slightly higher than that for their male respondents.

Table 4.2 Mean number of days vegetable consumed in a typical week

Mean number of days vegetable consumed in a typical week									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean number of days	95% CI	n	Mean number of days	95% CI	n	Mean number of days	95% CI
25-34	656	5.4	5.0-5.8	1150	5.7	5.5-6.0	1806	5.6	5.3-5.9
35-44	794	5.2	4.8-5.6	1629	5.5	5.2-5.8	2423	5.4	5.0-5.7
45-54	881	5.4	5.1-5.8	1603	5.6	5.3-5.9	2484	5.5	5.3-5.8
55-64	741	5.5	5.0-5.9	1283	5.6	5.3-5.9	2024	5.5	5.3-5.8
25-64	**3072**	**5.4**	**5.0-5.7**	**5665**	**5.6**	**5.4-5.8**	**8737**	**5.5**	**5.2-5.8**

Table 4.2 presents the mean number of days vegetable were consumed in a typical week by men, women and both sexes. Every age group, regardless of sex, had vegetable five to six days a week. The average number of days vegetable were consumed by the female respondents was slightly higher than that for their male counterparts. The highest mean number of days that vegetable were consumed by the male respondents was observed in the age group of 55–64 years, while the highest mean number in the case of females was observed in the age group of 25–34 years.

Table 4.3 Mean number of servings of fruit on average per day

Mean number of servings of fruit on average per day									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI
25-34	623	0.7	0.6-0.8	1095	0.7	0.6-0.8	1718	0.7	0.6-0.8
35-44	763	0.8	0.6-0.9	1567	0.8	0.6-1.0	2330	0.8	0.6-0.9
45-54	844	0.7	0.6-0.8	1548	0.7	0.6-0.8	2392	0.7	0.6-0.8
55-64	712	0.7	0.6-0.8	1236	0.6	0.5-0.7	1948	0.7	0.6-0.8
25-64	**2942**	**0.7**	**0.6-0.8**	**5446**	**0.7**	**0.6-0.8**	**8388**	**0.7**	**0.6-0.8**

Table 4.3 presents the mean number of servings of fruit on an average per day for men, women and both sexes. The average number of fruit servings consumed by both sexes per day was less than one. A similar distribution was observed among the all respondents.

Table 4.4 Mean number of servings of vegetable on average per day

Mean number of servings of vegetable on average per day									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI
25-34	653	2.2	2.0-2.4	1146	2.1	1.9-2.2	1799	2.1	1.9-2.3
35-44	788	2.1	1.9-2.3	1627	2.0	1.8-2.1	2415	2.0	1.9-2.2
45-54	880	2.2	1.9-2.5	1601	2.0	1.9-2.2	2481	2.1	1.9-2.3
55-64	738	2.2	1.8-2.5	1279	1.9	1.7-2.0	2017	2.0	1.8-2.2
25-64	**3059**	**2.2**	**2.0-2.4**	**5653**	**2.0**	**1.9-2.1**	**8712**	**2.1**	**1.9-2.2**

Table 4.4 presents the mean number of servings of vegetable consumed per day by men, women and both sexes. On an average, every age group, regardless of sex, consumed two servings of vegetable per day. The average numbers of servings of vegetable consumed by the male respondents were slightly higher than those for their female counterparts in every age group.

Table 4.5 Mean number of servings of fruit and/or vegetable on average per day

Mean number of servings of fruit and/or vegetable on average per day									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI
25-34	654	2.8	2.6-3.0	1149	2.7	2.5-2.9	1803	2.8	2.6-3.0
35-44	795	2.8	2.5-3.1	1628	2.7	2.4-3.0	2423	2.8	2.5-3.0
45-54	881	2.8	2.5-3.2	1605	2.7	2.6-2.9	2486	2.8	2.6-3.0
55-64	742	2.9	2.6-3.1	1283	2.5	2.2-2.7	2025	2.7	2.5-2.9
25-64	**3072**	**2.8**	**2.6-3.0**	**5665**	**2.7**	**2.5-2.8**	**8737**	**2.8**	**2.6-2.9**

Table 4.5 presents the mean number of servings of fruit and/or vegetable consumed on an average per day by men, women and both sexes. The overall mean number of servings of fruit and/or vegetable consumed per day was nearly 3. The average number of days that fruit and/or vegetable were consumed by the male respondents was slightly higher than that for their female counterparts.

Table 4.6 Fruit and vegetable consumption per day of men

Number of servings of fruit and/or vegetable on average per day									
Age Group (years)	Men								
	n	% no fruit and/or vegetable	95% CI	% 1-2 servings	95% CI	% 3-4 servings	95% CI	% ≥5 servings	95% CI
25-34	654	13.2	8.4-18.1	47.6	40.8-54.4	24.7	17.9-31.5	14.5	9.6-19.4
35-44	795	12.4	8.8-16.0	49.1	42.0-56.1	22.7	19.1-26.3	15.8	10.4-21.2
45-54	881	11.6	8.3-14.9	50.9	44.6-57.1	24.6	20.8-28.4	12.9	8.4-17.5
55-64	742	13.5	9.9-17.2	48.4	42.3-54.5	21.6	16.2-26.9	16.4	11.8-21.1
25-64	**3072**	**12.7**	**10.1-15.3**	**48.8**	**44.4-53.3**	**23.6**	**19.8-27.5**	**14.8**	**11.7-18.0**

Table 4.7 Fruit and vegetable consumption per day of women

Number of servings of fruit and/or vegetable on average per day									
Age Group (years)	Women								
	n	% no fruit and/or vegetable	95% CI	% 1-2 servings	95% CI	% 3-4 servings	95% CI	% ≥5 servings	95% CI
25-34	1149	12.4	8.5-16.3	50.9	45.0-56.8	23.4	18.8-27.9	13.3	9.8-16.9
35-44	1628	13.9	10.3-17.5	52.7	48.8-56.6	21.4	17.5-25.2	12.0	8.7-15.3
45-54	1605	11.5	8.8-14.3	52.4	48.5-56.2	23.4	20.3-26.5	12.7	9.3-16.2
55-64	1283	14.2	10.3-18.1	54.1	48.5-59.7	23.3	19.5-27.1	8.4	5.4-11.4
25-64	**5665**	**12.9**	**10.0-15.8**	**52.2**	**48.5-56.0**	**22.8**	**19.9-25.8**	**12.1**	**9.9-14.2**

Table 4.8 Fruit and vegetable consumption per day of both sexes

Number of servings of fruit and/or vegetable on average per day									
Age Group (years)	Both Sexes								
	n	% no fruit and/or vegetable	95% CI	% 1-2 servings	95% CI	% 3-4 servings	95% CI	% ≥5 servings	95% CI
25-34	1803	12.8	9.4-16.2	49.2	44.2-54.3	24.0	20.2-27.9	13.9	10.7-17.2
35-44	2423	13.2	9.9-16.4	50.9	46.4-55.4	22.0	18.7-25.3	13.9	10.5-17.3
45-54	2486	11.6	9.4-13.7	51.6	48.0-55.2	24.0	21.3-26.7	12.8	9.7-16.0
55-64	2025	13.9	10.8-16.9	51.3	46.0-56.5	22.4	18.4-26.5	12.4	9.7-15.1
25-64	**8737**	**12.8**	**10.4-15.2**	**50.5**	**46.8-54.2**	**23.2**	**20.3-26.1**	**13.4**	**11.0-15.9**

Tables 4.6, 4.7 and 4.8 present the percentage of respondents—males, females and both sexes—by the number of servings of fruit and/or vegetable consumed on an

average per day. Among men, nearly 13%, did not consume any fruit or vegetable in a day. Nearly half of the male respondents consumed one to two servings of fruit or vegetable in a day and 15% consumed five or more than five servings a day in every age group. The variation in fruit and vegetable servings between the different age groups was not very pronounced among the male respondents. Among the female respondents, 13% did not consume any fruit or vegetable in a day. More than 50% consumed one to two servings of fruit or vegetable in a day. About 12% had five or more than five servings a day in every female age group, except for the oldest one. In general, nearly 13% of the respondents had no fruit or vegetable and round about 13% had five or more than five servings.

Table 4.9 Fruit and vegetable consumption per day (Less than five serving)

Less than five servings of fruit and/or vegetable on average per day									
Age Group (years)	Men			Women			Both Sexes		
	n	% < five servings per day	95% CI	n	% < five servings per day	95% CI	n	% < five servings per day	95% CI
25-34	654	85.5	80.6-90.4	1149	86.7	83.1-90.2	1803	86.1	82.8-89.3
35-44	795	84.2	78.8-89.6	1628	88.0	84.7-91.3	2423	86.1	82.7-89.5
45-54	881	87.1	82.5-91.6	1605	87.3	83.8-90.7	2486	87.2	84.0-90.3
55-64	742	83.6	78.9-88.2	1283	91.6	88.6-94.6	2025	87.6	84.9-90.3
25-64	**3072**	**85.2**	**82.0-88.3**	**5665**	**87.9**	**85.8-90.1**	**8737**	**86.6**	**84.1-89.0**

Table 4.9 presents the percentage of respondents who had less than five servings of fruit and/or vegetable on an average per day. On an average, 87% of all respondents consumed less than five servings of fruit and/or vegetable. About 85% of the male respondents and 88% of the female respondents had less than five servings on average per day.

Table 4.10 Type of oil used most frequently

Type of oil or fat most often used for meal preparation in household								
n (house-holds)	% Groundnut oil	95% CI	% Palm oil	95% CI	% Groundnut oil and Palm oil	95% CI	% Sesame oil	95% CI
8757	**45.3**	**38.2-52.5**	**19.2**	**13.4-26.7**	**19.8**	**14.8-25.9**	**6.6**	**4.1-10.6**

Table 4.10 Type of oil used most frequently (Contd.)

Type of oil or fat most often used for meal preparation in household						
n (house-holds)	% Other	95% CI	% none in particular	95% CI	None used %	95% CI
8757	**5.2**	**3.4-7.8**	**3.8**	**2.3-6.1**	**0.13**	**0.06-0.28**

Table 4.10 presents the percentage of households by type of oil or fat used the most often for the preparation of meals in the household. About 45% of the households in the study responded that groundnut oil was often used for the preparation of meals. This was followed by mixed oil of groundnut oil and palm oil (20%) and palm oil (about 19%).

Table 4.11 Eating outside home per week

Mean number of meals eaten outside home per week									
Age Group (years)	**Men**			**Women**			**Both Sexes**		
	n	mean	95% CI	n	mean	95% CI	n	mean	95% CI
25-34	652	1.1	0.8-1.5	1135	0.8	0.5-1.1	1787	1.0	0.7-1.2
35-44	789	0.8	0.4-1.2	1606	0.7	0.4-0.9	2395	0.7	0.5-1.0
45-54	870	0.7	0.4-1.0	1589	0.5	0.3-0.7	2459	0.6	0.4-0.8
55-64	741	0.6	0.3-1.0	1260	0.5	0.2-0.8	2001	0.6	0.3-0.9
25-64	**3052**	**0.9**	**0.6-1.2**	**5590**	**0.6**	**0.4-0.8**	**8642**	**0.8**	**0.5-1.0**

Table 4.11 presents the mean number of meals eaten outside home per week among the respondents who remembered the average number of meals eaten outside home per week (Out of 8757 respondents, 8642 respondents remembered the average number of meals eaten outside home per week). Among the respondents, on an average, very few meals (less than one) had been eaten outside in a week. In the case of women, the mean number of meals eaten outside home per week was nearly 0.6. Men had eaten meals outside more frequently than women.

5. Physical Activity

Table 5.1 Not meeting WHO recommendations on physical activity for health

Not meeting WHO recommendations on physical activity for health									
Age Group (years)	Men			Women			Both Sexes		
	n	% not meeting recs	95% CI	n	% not meeting recs	95% CI	n	% not meeting recs	95% CI
25-34	655	10.6	6.2-15.1	1154	18.5	14.6-22.4	1809	14.6	11.3-17.9
35-44	794	11.6	6.8-16.4	1625	15.7	12.3-19.1	2419	13.7	10.3-17.1
45-54	882	13.8	9.3-18.3	1605	19.2	14.6-23.8	2487	16.5	12.3-20.6
55-64	744	16.3	10.8-21.8	1283	24.3	20.7-28.0	2027	20.3	16.7-24.0
25-64	**3075**	**12.5**	**9.7-15.3**	**5 667**	**18.8**	**15.8-21.9**	**8742**	**15.7**	**12.9-18.4**

Table 5.2 Levels of total physical activity according to former recommendations of men

Level of total physical activity according to former recommendations							
Age Group (years)	Men						
	n	% Low	95% CI	% Moderate	95% CI	% High	95% CI
25-34	655	11.4	7.1-15.8	9.2	5.8-12.6	79.3	72.9-85.7
35-44	794	13.3	8.8-17.7	11.7	8.5-14.9	75.0	69.1-80.9
45-54	882	15.4	10.2-20.6	17.8	13.6-22.0	66.8	59.7-74.0
55-64	744	20.6	14.1-27.1	21.7	17.1-26.4	57.6	50.7-64.5
25-64	**3075**	**14.3**	**11.2-17.4**	**13.8**	**11.5-16.1**	**72.0**	**67.9-76.0**

Table 5.3 Levels of total physical activity according to former recommendations of women

Level of total physical activity according to former recommendations							
Age Group (years)	Women						
	n	% Low	95% CI	% Moderate	95% CI	% High	95% CI
25-34	1154	21.4	17.3-25.6	18.7	14.8-22.5	59.9	53.7-66.1
35-44	1625	18.0	14.3-21.7	20.8	17.6-24.1	61.2	55.6-66.7
45-54	1605	20.8	15.9-25.8	17.8	14.0-21.5	61.4	54.9-67.9
55-64	1283	26.3	22.2-30.4	28.5	23.9-33.1	45.2	41.2-49.2
25-64	**5667**	**21.1**	**17.9-24.4**	**20.6**	**18.0-23.2**	**58.2**	**53.9-62.6**

Table 5.4 Levels of total physical activity according to former recommendations of both sexes

Level of total physical activity according to former recommendation							
Age Group (years)	Both Sexes						
	n	% Low	95% CI	% Moderate	95% CI	% High	95% CI
25-34	1809	16.4	13.0-19.9	13.9	11.2-16.7	69.6	64.4-74.8
35-44	2419	15.6	12.4-18.9	16.3	13.4-19.2	68.1	63.0-73.2
45-54	2487	18.1	13.5-22.8	17.8	14.3-21.2	64.1	58.0-70.2
55-64	2027	23.5	19.4-27.5	25.1	21.1-29.1	51.4	46.4-56.5
25-64	**8742**	**17.6**	**14.6-20.6**	**17.2**	**14.8-19.5**	**65.2**	**61.1-69.3**

Table 5.1 presents the percentage of respondents not meeting WHO recommendations on physical activity for health (respondents doing less than 150 minutes of moderate-intensity physical activity per week, or equivalent). The overall percentage of respondents not meeting WHO recommended level was 16% with the percentage among the women higher than that among the men (19% vs. 13%).

Tables 5.2, 5.3 and 5.4 present the percentage of respondents—male, female and both sexes—by the level of total physical activity. The three levels of physical activity were classified as low, moderate, and high, as described in the methodology. The level of physical activity was low among nearly 14% of the men, moderate among 14% of the men and high among 72% of the men. The percentage of high physical activity was the highest in the age group of 25–34 years and it decreased with increasing age. Nearly 21% of women engaged in low physical activity, while 21% engaged in moderate physical activity and 58% in high physical activity. The highest percentage of women engaged in high physical activity was in the age group of 45–54 years.

Table 5.5 Mean minutes of total physical activity

Mean minutes of total physical activity on average per day									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean minutes	95% CI	n	Mean minutes	95% CI	n	Mean minutes	95% CI
25-34	655	341.9	296.6-387.2	1154	243.8	206.4-281.2	1809	292.9	255.2-330.5
35-44	794	323.0	288.9-357.1	1625	234.7	202.5-267.0	2419	278.9	247.6-310.2
45-54	882	265.7	235.3-296.2	1605	211.3	189.0-233.5	2487	238.5	214.3-262.7
55-64	744	206.7	180.6-232.8	1283	155.7	139.8-171.5	2027	181.2	162.2-200.2
25-64	**3075**	**298.6**	**269.6-327.6**	**5667**	**220.2**	**193.1-247.2**	**8742**	**259.4**	**231.9-286.9**

Table 5.5 presents the mean minutes of total physical activity (activity at work, travel to and from places and recreational activities) on average per day. Among the male respondents, the highest number of mean minutes of total physical activity was observed in the age group of 25–34 years and it decreased as the age increased. Similarly, in the case of females, the highest number of mean minutes of total physical activity was observed in the age group of 25–34 years and it decreased as the age increased.

Table 5.6 Median minutes of total physical activity

Median minutes of total physical activity on average per day									
Age Group (years)	Men			Women			Both Sexes		
	n	Median minutes	Interquartile range (P25-P75)	n	Median minutes	Interquartile range (P25-P75)	n	Median minutes	Interquartile range (P25-P75)
25-34	655	329	150-480	1154	180	30-373	1809	270	60-446
35-44	794	317	120-480	1625	180	43-360	2419	249	60-431
45-54	882	240	60-420	1605	180	36-313	2487	190	51-360
55-64	744	150	43-300	1283	90	21-240	2027	120	30-300
25-64	**3075**	**274**	**86-454**	**5667**	**177**	**30-360**	**8742**	**214**	**57-416**

Table 5.6 presents the median minutes of total physical activity per day. For the male respondents, the highest number of median minutes of total physical activity was observed in the age group of 25–34 years. The number decreased as the age increased. In the case of the female respondents, the median minutes of total physical activity was the same in the age group of 25–34 years, 35-44 years and 45-54 years and the lowest in the oldest age group.

Table 5.7 Mean minutes of domain-specific physical activity (work-related physical activity)

Mean minutes of work-related physical activity on average per day									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean minutes	95% CI	n	Mean minutes	95% CI	n	Mean minutes	95% CI
25-34	655	256.2	226.2-286.3	1154	188.9	161.2-216.5	1809	222.6	197.1-248.1
35-44	794	255.5	223.0-288.0	1625	181.8	159.1-204.5	2419	218.7	192.9-244.4
45-54	882	202.1	177.4-226.8	1605	160.2	142.5-177.8	2487	181.1	162.1-200.1
55-64	744	153.0	129.2-176.9	1283	114.0	101.7-126.3	2027	133.5	117.0-150.0
25-64	**3075**	**227.8**	**207.5-248.2**	**5667**	**168.7**	**150.1-187.4**	**8742**	**198.3**	**179.1-217.5**

Table 5.7 presents the mean minutes of work-related physical activity on average per day. The highest number of mean minutes of work-related physical activity for male respondents was observed in the age group of 25–34 years. The number decreased as the age increased. In women, the highest number of mean minutes was observed in the age group of 25–34 years and the lowest in that of 55–64 years.

Table 5.8 Mean minutes of domain-specific physical activity (transport-related physical activity)

Mean minutes of transport-related physical activity on average per day									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean minutes	95% CI	n	Mean minutes	95% CI	n	Mean minutes	95% CI
25-34	655	66.0	44.7-87.4	1154	43.8	35.9-51.8	1809	54.9	41.2-68.7
35-44	794	56.1	42.9-69.2	1625	45.6	35.8-55.5	2419	50.9	40.1-61.7
45-54	882	54.9	40.9-69.0	1605	43.8	35.0-52.5	2487	49.3	38.6-60.1
55-64	744	48.5	38.8-58.2	1283	37.1	28.5-45.7	2027	42.8	34.4-51.2
25-64	**3075**	**58.1**	**43.4-72.8**	**5667**	**43.2**	**35.5-50.9**	**8742**	**50.7**	**39.8-61.5**

Table 5.8 presents the mean minutes of transport-related physical activity on an average per day. For male respondents, the highest number of mean minutes of such activity was observed in the youngest age group and the lowest in the age group of 55–64 years. For the female respondents, the highest mean number of minutes of such activity was observed in the age group of 35–44 year and the lowest in that of 55–64 years.

Table 5.9 Mean minutes of domain-specific physical activity (recreation-related physical activity)

Mean minutes of recreation-related physical activity on average per day									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean minutes	95% CI	n	Mean minutes	95% CI	n	Mean minutes	95% CI
25-34	655	19.6	4.1-35.1	1154	11.1	0.0-22.7	1809	15.3	3.2-27.5
35-44	794	11.4	5.7-17.2	1625	7.3	0.0-16.5	2419	9.4	2.7-16.1
45-54	882	8.7	3.9-13.5	1605	7.3	0.3-14.4	2487	8.0	2.3-13.8
55-64	744	5.2	2.0-8.4	1283	4.7	2.1-7.3	2027	4.9	2.4-7.4
25-64	**3075**	**12.7**	**5.0-20.4**	**5667**	**8.2**	**0.0-16.6**	**8742**	**10.5**	**3.2-17.8**

Table 5.9 presents the mean minutes of recreation-related physical activity on an average per day. The number of mean minutes of recreation-related physical activity was comparatively high among the youngest age group of men. The lowest number of mean minutes of such activity for male respondents was observed in the oldest age group. Mean minutes of recreation-related physical activity was lower among the female respondents and even the highest mean number, in the age group of 25–34 years, was only about 10 minutes. For females, the lowest number of mean minutes of such activity was observed in the age group of 55–64 years.

Table 5.10 Median minutes of domain-specific physical activity (work-related physical activity)

Median minutes of work-related physical activity on average per day									
Age Group (years)	Men			Women			Both Sexes		
	n	Median minutes	Interquartile range (P25-P75)	n	Median minutes	Interquartile range (P25-P75)	n	Median minutes	Interquartile range (P25-P75)
25-34	655	240	60-420	1154	120	0-360	1809	189	0-360
35-44	794	274	39-411	1625	120	0-300	2419	189	10-360
45-54	882	180	4-360	1605	120	0-257	2487	141	0-300
55-64	744	120	0-240	1283	30	0-180	2027	60	0-240
25-64	**3075**	**206**	**15-360**	**5667**	**120**	**0-300**	**8742**	171	**0-360**

Table 5.10 presents the median minutes of work-related physical activity per day. For male respondents, the highest median number of minutes of work- related physical activity was observed in the age group of 35–44 years, followed by that of 25–34 years. The lowest was in the age group of 55–64 years. For female respondents, the

median number of minutes of such activity was 120 in most age groups, except for the age group of 55–64 years.

Table 5.11 Median minutes of domain-specific physical activity (transport-related physical activity)

Median minutes of transport-related physical activity on average per day									
Age Group (years)	Men			Women			Both Sexes		
	n	Median minutes	Inter-quartile range (P25-P75)	n	Median minutes	Inter-quartile range (P25-P75)	n	Median minutes	Inter-quartile range (P25-P75)
25-34	655	30	0-69	1154	30	0-60	1809	30	0-60
35-44	794	30	0-60	1625	26	0-60	2419	30	0-60
45-54	882	30	0-60	1605	20	0-60	2487	26	0-60
55-64	744	26	0-60	1283	20	0-45	2027	21	0-60
25-64	**3075**	**30**	**0-60**	**5667**	**26**	**0-60**	**8742**	**30**	**0-60**

Table 5.11 presents the median minutes of transport-related physical activity per day. For male respondents, the median number of minutes of such activity was 30 in most age groups, except for the age group of 55–64 years. The highest median minutes of transport-related physical activity for the female respondents was observed in the age group of 25–34 years.

Table 5.12 Median minutes of domain-specific physical activity (recreation-related physical activity)

Median minutes of recreation-related physical activity on average per day									
Age Group (years)	Men			Women			Both Sexes		
	n	Median minutes	Inter-quartile range (P25-P75)	n	Median minutes	Inter-quartile range (P25-P75)	n	Median minutes	Inter-quartile range (P25-P75)
25-34	655	0	0	1154	0	0	1809	0	0
35-44	794	0	0	1625	0	0	2419	0	0
45-54	882	0	0	1605	0	0	2487	0	0
55-64	744	0	0	1283	0	0	2027	0	0
25-64	**3075**	0	0	**5667**	0	0	**8742**	0	0

Table 5.12 presents the median number of minutes of recreation-related physical activity on an average per day. Alarmingly, there were no median minutes of recreation–related physical activity among all age groups of both males and females.

Table 5.13 No work-related physical activity

No work-related physical activity									
Age Group (years)	Men			Women			Both Sexes		
	n	% no activity at work	95% CI	n	% no activity at work	95% CI	n	% no activity at work	95% CI
25-34	655	18.8	12.9-24.6	1154	33.1	27.0-39.2	1809	25.9	20.7-31.1
35-44	794	18.5	11.4-25.6	1625	28.7	23.3-34.2	2419	23.6	17.7-29.6
45-54	882	23.9	17.9-29.9	1605	30.3	24.3-36.3	2487	27.1	21.6-32.5
55-64	744	33.5	26.8-40.1	1283	43.9	38.7-49.1	2027	38.7	33.5-43.9
25-64	**3075**	**22.2**	**17.9-26.4**	**5667**	**33.0**	**28.1-37.9**	**8742**	**27.6**	**23.1-32.1**

Table 5.13 presents the percentage of respondents who engaged in no work related physical activity. Overall, about 28% of the respondents were engaged in no work related physical activity. For both the male and female respondents, the percentage of no work-related physical activity was the highest in the 55-64 age group and the lowest in the age group of 35-44 years. The percentages of respondents engaged in no work-related physical activity were higher in females.

Table 5.14 No transport-related physical activity

No transport-related physical activity									
Age Group (years)	Men			Women			Both Sexes		
	n	% no activity for transport	95% CI	n	% no activity for transport	95% CI	n	% no activity for transport	95% CI
25-34	655	26.1	17.1-35.0	1154	27.1	20.6-33.6	1809	26.6	19.4-33.7
35-44	794	27.5	19.2-35.7	1625	28.9	21.6-36.2	2419	28.2	21.2-35.1
45-54	882	27.3	19.7-34.8	1605	31.5	22.2-40.9	2487	29.4	21.6-37.3
55-64	744	29.2	20.7-37.7	1283	32.7	24.5-40.8	2027	30.9	23.1-38.7
25-64	**3075**	**27.2**	**20.1-34.3**	**5667**	**29.4**	**23.7-35.2**	**8742**	**28.3**	**22.1-34.6**

Table 5.14 presents the percentage of respondents who were not engaged in any transport-related physical activity. Overall, about 28% of the respondents were engaged in transport related physical activity. Among males, the percentage of no transport-related physical activity was the lowest in the 25-34 age group and the highest in the oldest age group for the male respondents. Similarly, among females, the lowest percentage was observed in the 25-34 age group, while the highest percentage was in the age group of oldest. The percentages of respondents engaged in no transport-related physical activity were higher in females.

Table 5.15 No recreation-related physical activity

No recreation-related physical activity									
Age Group (years)	Men			Women			Both Sexes		
	n	% no activity at recreation	95% CI	n	% no activity at recreation	95% CI	n	% no activity at recreation	95% CI
25-34	655	70.2	62.8-77.5	1154	91.1	86.8-95.3	1809	80.6	75.8-85.4
35-44	794	81.6	75.6-87.5	1625	93.4	90.9-95.9	2419	87.5	83.8-91.2
45-54	882	85.0	80.1-90.0	1605	91.8	88.5-95.1	2487	88.4	84.6-92.2
55-64	744	87.9	83.1-92.6	1283	88.1	83.1-93.1	2027	88	84.6-91.3
25-64	**3075**	**79.3**	**74.7-84.0**	**5667**	**91.4**	**88.3-94.4**	**8742**	**85.4**	**82.1-88.6**

Table 5.15 presents the percentage of respondents who engaged in no recreation related physical activity on an average per day. Overall, about 85% of the respondents were engaged in no recreation related physical activity. Among the men, the highest percentage of no recreation-related physical activity was observed in the oldest age group. Among the women, the highest percentage of no recreation-related physical activity was observed in the 35-44 age group. The percentages of respondents engaged in no recreation-related physical activity were higher in females.

Table 5.16 Composition of total physical activity of men

Composition of total physical activity							
	Men						
Age Group (years)	n	% Activity from work	95% CI	% Activity from transport	95% CI	% Activity during leisure time	95% CI
25-34	619	66.4	61.5-71.3	26.1	21.1-31.1	7.5	5.1-9.9
35-44	745	70.4	64.4-76.4	24.8	19.1-30.5	4.8	3.2-6.4
45-54	817	63.7	57.5-69.8	31.5	26.1-36.8	4.9	3.2-6.6
55-64	693	55.4	48.8-62.0	38.0	29.7-46.4	6.6	3.0-10.2
25-64	**2874**	**65.1**	**60.8-69.4**	**28.8**	**24.6-33.1**	**6.0**	**4.6-7.5**

Table 5.17 Composition of total physical activity of women

Composition of total physical activity							
	Women						
Age Group (years)	n	% Activity from work	95% CI	% Activity from transport	95% CI	% Activity during leisure time	95% CI
25-34	1034	60.1	55.1-65.1	35.3	29.7-40.9	4.6	2.6-6.6
35-44	1470	63.5	58.4-68.6	33.7	28.8-38.5	2.8	1.4-4.3
45-54	1421	62.2	56.6-67.7	34.7	29.4-39.9	3.2	1.7-4.6
55-64	1125	52.0	46.3-57.7	43.7	38.2-49.2	4.3	2.2-6.4
25-64	**5050**	**60.2**	**56.0-64.4**	**36.0**	**31.8-40.2**	**3.8**	**2.4-5.1**

Table 5.18 Composition of total physical activity of both sexes

Composition of total physical activity							
Age Group (years)	Both Sexes						
	n	% Activity from work	95% CI	% Activity from transport	95% CI	% Activity during leisure time	95% CI
25-34	1653	63.3	59.4-67.2	30.6	26.4-34.8	6.1	4.2-7.9
35-44	2215	67.0	61.9-72.1	29.2	24.2-34.1	3.8	2.5-5.1
45-54	2238	62.9	57.5-68.3	33.0	28.2-37.9	4.0	2.7-5.4
55-64	1818	53.7	47.9-59.6	40.7	34.1-47.4	5.5	3.3-7.7
25-64	**7924**	**62.7**	**58.7-66.8**	**32.3**	**28.3-36.4**	**4.9**	**3.6-6.2**

Tables 5.16, 5.17 and 5.18 present the percentage of respondents—male, female and both sexes—by the composition of total physical activity. The three areas of physical activity were classified as work, transport and recreation. More than 60% of physical activity among the respondents was from work-related activity followed by transport activity (32%). Recreation activity formed less than 10% of the total physical activity among all age group of the male respondents and even less than 5% in two age groups (35–44 years and 45–54 years). The composition of total physical activity was very similar among all the age groups of women. Nearly 60% of physical activity was from work-related activity and about 36% from transport-related activity. Recreation-related physical activity formed less than 10% of total physical activity among all age groups of the respondents.

Table 5.19 No vigorous physical activity

No vigorous physical activity									
Age Group (years)	Men			Women			Both Sexes		
	n	% no vigorous activity	95% CI	n	% no vigorous activity	95% CI	n	% no vigorous activity	95% CI
25-34	655	50.2	43.2-57.1	1154	83.8	77.7-89.9	1809	67.0	61.1-72.9
35-44	794	56.3	49.1-63.4	1625	86.6	81.4-91.8	2419	71.4	65.0-77.9
45-54	882	68.4	61.3-75.4	1605	90.7	87.5-93.8	2487	79.5	74.7-84.3
55-64	744	83.7	77.1-90.3	1283	95.3	92.3-98.3	2027	89.5	86.4-92.7
25-64	**3075**	**61.1**	**54.9-67.4**	**5667**	**87.9**	**83.8-92.1**	**8742**	**74.5**	**69.5-79.5**

Table 5.19 presents the percentage of respondents who engaged in no vigorous physical activity. Overall, three-fourths of the respondents were engaged in no vigorous physical activity with the women more likely to be engaged in no vigorous physical activity than the men (88% vs. 61%). The percentage of engaging in no vigorous physical activity was the highest in the oldest age group among both males (84%) and females (95%).

Table 5.20 Minutes spent in sedentary activities on average per day (men)

Minutes spent in sedentary activities on average per day					
Age Group (years)	Men				
	n	Mean minutes	95% CI	Median minutes	Interquartile range (P25-P75)
25-34	656	187.6	160.3-214.9	120	90-240
35-44	796	203.9	175.5-232.3	180	90-240
45-54	882	198.3	179.1-217.5	180	120-240
55-64	745	216.2	186.3-246.2	180	120-300
25-64	**3079**	**198.9**	**180.9-217.0**	**180**	**120-240**

Table 5.21 Minutes spent in sedentary activities on average per day (women)

Minutes spent in sedentary activities on average per day					
Age Group (years)	Women				
	n	Mean minutes	95% CI	Median minutes	Interquartile range (P25-P75)
25-34	1154	207.8	188.0-227.7	180	120-300
35-44	1630	212.7	192.6-232.8	180	120-300
45-54	1609	208.2	185.1-231.3	180	120-300
55-64	1285	236.3	213.0-259.7	180	120-300
25-64	**5678**	**213.8**	**195.5-232.1**	**180**	**120-300**

Table 5.22 Minutes spent in sedentary activities on average per day (Both Sexes)

Minutes spent in sedentary activities on average per day					
Age Group (years)	Both Sexes				
	n	Mean minutes	95% CI	Median minutes	Interquartile range (P25-P75)
25-34	1810	197.7	176.9-218.4	180	90-270
35-44	2426	208.3	187.0-229.6	180	90-300
45-54	2491	203.3	184.0-222.5	180	120-300
55-64	2030	226.3	202.5-250.1	180	120-300
25-64	**8757**	**206.4**	**188.8-223.9**	**180**	**120-300**

Tables 5.20, 5.21 and 5.22 present the mean and median minutes spent on sedentary activities on an average per day among males, females and both sexes. The highest mean number of minutes of sedentary activities was observed in the oldest age group and the lowest in the age group of 25–34 years of both male and female respondents. The median minutes spent on sedentary activities per day among males, females and both sexes were about 180 in each age group.

6. History of raised blood pressure

Table 6.1 Blood pressure measurement and diagnosis of men

Blood pressure measurement and diagnosis									
	Men								
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
25-34	656	51.3	42.9-59.7	41.3	33.2-49.3	2.1	1.1-3.1	5.4	3.3-7.4
35-44	796	44.8	39.2-50.4	41.7	36.7-46.6	3.7	1.6-5.8	9.9	6.8-12.9
45-54	882	38.5	32.3-44.7	40.5	36.2-44.9	6.6	4.1-9.0	14.4	10.4-18.4
55-64	745	30.9	23.6-38.2	35.1	29.9-40.3	6.5	2.8-10.2	27.6	17.4-37.8
25-64	**3079**	**43.5**	**38.3-48.7**	**40.2**	**35.8-44.6**	**4.2**	**3.0-5.4**	**12.1**	**9.2-15.0**

Table 6.2 Blood pressure measurement and diagnosis of women

Blood pressure measurement and diagnosis									
	Women								
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
25-34	1154	37.8	31.2-44.3	50.7	44.7-56.7	3.1	2.0-4.3	8.4	6.6-10.2
35-44	1630	28.7	24.4-33.1	47.5	43.0-52.1	6.8	4.9-8.6	17.0	12.4-21.5
45-54	1609	26.9	22.0-31.7	37.6	32.0-43.2	7.6	5.3-9.8	27.9	24.2-31.6
55-64	1285	21.3	17.9-24.6	31.8	25.4-38.3	11.0	6.5-15.5	35.9	29.1-42.7
25-64	**5678**	**30.3**	**26.4-34.2**	**44.0**	**39.7-48.3**	**6.4**	**5.2-7.5**	**19.4**	**16.0-22.7**

Table 6.3 Blood pressure measurement and diagnosis of both sexes

Blood pressure 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% CI	% diagnosed within past 12 months	95% CI
25-34	1810	44.5	38.3-50.8	46.0	40.2-51.7	2.6	1.8-3.4	6.9	5.7-8.1
35-44	2426	36.8	32.8-40.8	44.6	40.8-48.4	5.2	3.6-6.8	13.4	10.0-16.9
45-54	2491	32.7	27.6-37.7	39.1	35.3-42.9	7.1	5.0-9.2	21.2	18.1-24.2
55-64	2030	26.1	21.9-30.2	33.5	29.0-37.9	8.7	4.7-12.8	31.7	24.0-39.4
25-64	**8757**	**36.9**	**33.0-40.8**	**42.1**	**38.2-45.9**	**5.3**	**4.2-6.4**	**15.7**	**12.7-18.7**

Tables 6.1, 6.2 and 6.3 present the percentage of respondents—male, female and both sexes—by their blood pressure measuring habit and diagnosis status of hypertension. Overall, about 21% of the respondents were diagnosed as hypertensive. On an average, 44% of male respondents never had their blood pressure measured by a doctor or other health worker. About 31% of the oldest age group never had their blood pressure measured. About 40% of the male respondents had their blood pressure measured but were not diagnosed as hypertensive. Combining the categories of recent (within one year) and old (more than one year), nearly 16% of male adults had been diagnosed as hypertensive. About 30% of the female respondents never had their blood pressure measured and about 26% of female adults were diagnosed as hypertensive, both new and old cases.

Table 6.4 Blood pressure treatment among those previously diagnosed hypertensive respondents

Currently taking drugs (medication) for raised blood pressure prescribed by doctor or health worker among those previously diagnosed									
Age Group (years)	Men			Women			Both Sexes		
	n	% taking meds	95% CI	n	% taking meds	95% CI	n	% taking meds	95% CI
25-34	62	12.1	2.9-21.3	151	20.2	11.9-28.4	213	17.0	10.9-23.1
35-44	115	36.9	21.3-52.6	403	38.1	28.9-47.2	518	37.7	28.2-47.1
45-54	209	29.3	21.4-37.1	572	43.2	34.7-51.6	781	38.0	31.5-44.6
55-64	225	32.6	16.0-49.1	562	43.9	36.2-51.5	787	39.1	27.6-50.6
25-64	**611**	**29.4**	**24.0-34.7**	**1688**	**38.5**	**32.8-44.1**	**2299**	**34.9**	**29.9-40.0**

There were 2299 respondents who were diagnosed as hypertensive previously by a health care provider. Table 6.4 presents the percentage of previously diagnosed hypertensive respondents who revealed that they were currently taking blood pressure lowering drugs prescribed by a doctor or health worker. About 35% of all diagnosed male and female respondents were taking medicines, but the percentage in some age groups was lower than this figure (12% in the youngest age group among males and 20% in the youngest age group among females). On an average, only 29% of men diagnosed and 38% of women diagnosed were taking blood pressure lowering drugs prescribed by health workers. About 43% of the females in the age groups of 45–54 years and about 44% in the age groups of 55–64 years were taking drugs prescribed for hypertension.

Table 6.5 Blood pressure advice by a traditional healer among those previously diagnosed hypertensive respondents

Seen a traditional healer among those previously diagnosed									
Age Group (years)	Men			Women			Both Sexes		
	n	% seen trad. healer	95% CI	n	% seen trad. healer	95% CI	n	% seen trad. healer	95% CI
25-34	62	17.5	0.6-34.3	151	7.6	2.1-13.1	213	11.5	3.8-19.2
35-44	115	14.5	0.0-30.1	403	13.0	6.0-20.1	518	13.6	3.9-23.3
45-54	209	7.7	3.7-11.6	572	12.0	8.5-15.5	781	10.4	7.7-13.1
55-64	225	21.1	9.7-32.4	562	16.1	8.0-24.2	787	18.2	8.9-27.5
25-64	**611**	**15.2**	**4.9-25.6**	**1688**	**12.8**	**8.2-17.4**	**2299**	**13.7**	**7.2-20.3**

Table 6.5 presents the percentage of previously diagnosed hypertensive respondents who were seen by a traditional healer. Nearly 15% of diagnosed men and 13% of diagnosed women consulted a traditional healer for treatment of hypertension.

Table 6.6 Currently taking herbal or traditional remedy for raised blood pressure among those previously diagnosed hypertensive respondents

Currently taking herbal or traditional remedy for raised blood pressure among those previously diagnosed									
Age Group (years)	Men			Women			Both Sexes		
	n	%taking trad. meds	95% CI	n	% taking trad. meds	95% CI	n	% taking trad. meds	95% CI
25-34	62	12.7	0.0-28.7	151	5.3	0.7-9.9	213	8.2	1.3-15.2
35-44	115	11.9	2.1-21.8	403	14.8	10.5-19.0	518	13.7	9.4-18.1
45-54	209	9.9	3.4-16.4	572	18.9	14.6-23.3	781	15.6	12.3-18.9
55-64	225	23.8	16.1-31.5	562	19.3	12.8-25.8	787	21.2	14.7-27.7
25-64	**611**	**15.4**	**9.0-21.9**	**1688**	**15.9**	**13.0-18.7**	**2299**	**15.7**	**12.2-19.2**

Table 6.6 presents the percentage of previously diagnosed hypertensive respondents who revealed that they were currently taking a herbal or traditional remedy for high blood pressure. On an average, about 16% of both males and females who had been diagnosed were currently taking a herbal or traditional remedy. Nearly 20% in the oldest age group, both among men and women, were taking a herbal or traditional remedy.

7. History of Diabetes

Table 7.1 Blood sugar measurement and diagnosis of men

Blood sugar measurement and diagnosis									
	Men								
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
25-34	656	94.3	91.8-96.8	5.5	3.1-8.0	0.0	0.0-0.0	0.2	0.0-0.4
35-44	796	91.4	88.8-94.0	6.6	4.2-9.1	0.6	0.1-1.1	1.4	0.5-2.3
45-54	882	84.6	80.5-88.7	9.6	6.6-12.6	1.0	0.2-1.8	4.9	2.0-7.8
55-64	745	80.0	75.1-84.9	15.8	12.0-19.5	1.0	0.1-1.8	3.2	1.1-5.4
25-64	**3079**	**89.1**	**86.8-91.5**	**8.3**	**6.4-10.3**	**0.5**	**0.2-0.8**	**2.0**	**1.2-2.8**

Table 7.2 Blood sugar measurement and diagnosis of women

Blood sugar measurement and diagnosis									
	Women								
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
25-34	1154	91.1	89.1-93.0	8.1	6.3-9.9	0.1	0.0-0.4	0.7	0.1-1.3
35-44	1630	84.2	81.1-87.4	13.0	10.4-15.6	0.5	0.2-0.9	2.2	1.1-3.3
45-54	1609	75.5	71.1-79.9	17.2	13.6-20.8	1.4	0.6-2.3	5.9	3.8-8.0
55-64	1285	70.0	63.7-76.4	17.7	13.1-22.3	2.5	1.1-3.8	9.8	6.8-12.8
25-64	**5678**	**82.4**	**79.7-85.2**	**13.0**	**10.8-15.1**	**0.9**	**0.5-1.3**	**3.7**	**2.5-4.9**

Table 7.3 Blood sugar measurement and diagnosis of both sexes

Blood sugar 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% CI	% diagnosed within past 12 months	95% CI
25-34	1810	92.7	91.1-94.3	6.8	5.4-8.3	0.1	0.0-0.2	0.4	0.1-0.7
35-44	2426	87.8	85.6-90.1	9.8	7.9-11.7	0.5	0.2-0.9	1.8	1.0-2.5
45-54	2491	80.0	76.5-83.6	13.4	10.7-16.0	1.2	0.6-1.8	5.4	3.7-7.1
55-64	2030	75.0	69.6-80.5	16.7	13.2-20.3	1.7	0.9-2.6	6.5	4.2-8.9
25-64	**8757**	**85.8**	**83.4-88.1**	**10.6**	**8.9-12.4**	**0.7**	**0.4-1.0**	**2.9**	**2.1-3.6**

Tables 7.1, 7.2 and 7.3 present the percentage of respondents by diagnosis status of raised blood sugar or diabetes and whether they had had their blood sugar measured. A small percentage of men (2.5%) was previously diagnosed with raised blood sugar or diabetes while 4.6 % of female respondents diagnosed previously with raised blood sugar or diabetes. Most of the male respondents (nearly 90%) had never had their blood sugar level measured by a doctor or other health worker. Even among men in the oldest age group, 80% had never had their blood sugar level measured. Similarly, nearly 82% of the female respondents (70% in the oldest age group) had never had their blood sugar level measured.

Table 7.4 Treatment with oral drugs for diabetes those previously diagnosed diabetic respondents

Currently taking drugs (medication) prescribed for diabetes among those previously diagnosed									
Age Group (years)	Men			Women			Both Sexes		
	n	% taking meds	95% CI	n	% taking meds	95% CI	n	% taking meds	95% CI
25-34	3	100.0	-	10	45.9	10.9-81.0	13	54.2	22.0-86.4
35-44	19	68.8	45.4-92.2	65	72.8	61.1-84.6	84	71.2	59.6-82.7
45-54	40	81.7	65.2-98.2	142	72.6	62.4-82.7	182	76.6	67.2-86.0
55-64	41	86.1	76.3-95.9	175	79.7	72.3-87.1	216	81.3	74.8-87.8
25-64	**103**	**80.5**	**71.0-90.1**	**392**	**73.9**	**67.6-80.3**	**495**	**76.3**	**70.5-82.1**

There were 495 respondents who were diagnosed previously by a health care provider as diabetic. Table 7.4 presents the percentage of previously diagnosed diabetic respondents who revealed that they were taking oral drugs prescribed for diabetes. 76% of diagnosed persons were taking oral anti-diabetic drugs, with 81% of previously diagnosed men and 74% of previously diagnosed women doing so. Except the 35-44 year age group, more than 80% of previously diagnosed diabetic male respondents were being treated with oral medication. Except the youngest age group, more than 70 % of previously diagnosed diabetic female respondents were being treated with oral medication.

Table 7.5 Treatment with insulin injection for diabetes treatment among those previously diagnosed diabetic respondents

Currently taking insulin prescribed for diabetes among those previously diagnosed									
Age Group (years)	Men			Women			Both Sexes		
	n	% taking insulin	95% CI	n	% taking insulin	95% CI	n	% taking insulin	95% CI
25-34	3	64.7	24.0-100.0	10	8.2	0.0-24.6	13	16.9	0.0-35.4
35-44	19	13.0	0.0-27.7	65	6.5	0.0-14.1	84	9.2	2.1-16.3
45-54	40	19.2	0.0-46.6	142	8.0	1.2-14.9	182	13.0	0.0-27.5
55-64	41	0.0	0.0-0.0	175	3.5	0.4-6.7	216	2.6	0.3-4.9
25-64	**103**	**13.8**	**0.0-28.4**	**392**	**5.9**	**2.3-9.4**	**495**	**8.7**	**2.1-15.2**

Table 7.5 presents the percentage of previously diagnosed diabetic respondents who were currently taking insulin prescribed for diabetes by a doctor or health worker. On an average, 9% of previously diagnosed diabetic respondents were taking insulin, with 14% of previously diagnosed men and 6% of previously diagnosed women doing so. None of diagnosed men in the oldest age group was taking any insulin injection.

Table 7.6 Diabetes advice by traditional healer among those previously diagnosed diabetic respondents

Seen a traditional healer for diabetes among those previously diagnosed									
Age Group (years)	Men			Women			Both Sexes		
	n	% seen trad. healer	95% CI	n	% seen trad. healer	95% CI	n	% seen trad. healer	95% CI
25-34	3	0.0	0.0-0.0	10	5.1	0.0-15.6	13	4.3	0.0-13.1
35-44	19	11.7	0.0-26.1	65	7.3	0.9-13.8	84	9.1	1.9-16.4
45-54	40	22.0	0.0-49.9	142	21.7	13.3-30.0	182	21.8	10.1-33.5
55-64	41	7.6	0.0-17.8	175	24.1	11.5-36.6	216	19.9	9.0-30.8
25-64	**103**	**15.5**	**0.0-32.1**	**392**	**19.3**	**12.0-26.7**	**495**	**18.0**	**10.2-25.7**

Table 7.6 presents the percentage of previously diagnosed diabetic respondents who were seen by a traditional healer for diabetes. Generally, less than 20% of diagnosed men and women consulted a traditional healer for diabetes. The percentages of previously diagnosed women who consulted a tradition healer were a little higher than those of men.

Table 7.7 Currently taking herbal or traditional treatment for diabetes among those previously diagnosed diabetic respondents

Currently taking herbal or traditional treatment for diabetes among those previously diagnosed									
Age Group (years)	Men			Women			Both Sexes		
	n	% taking trad. meds	95% CI	n	%taking trad. meds	95% CI	n	% taking trad. meds	95% CI
25-34	3	0.0	0.0-0.0	10	27.4	0.0-60.2	13	23.2	0.0-51.5
35-44	19	14.2	0.0-29.5	65	40.4	26.4-54.4	84	29.5	17.2-41.9
45-54	40	9.0	0.0-18.8	142	26.2	16.7-35.8	182	18.6	9.7-27.5
55-64	41	25.9	11.8-40.0	175	34.6	22.8-46.4	216	32.4	21.9-42.9
25-64	**103**	**14.4**	**6.9-21.9**	**392**	**32.2**	**24.8-39.5**	**495**	**25.9**	**19.4-32.4**

Table 7.7 presents the percentage of previously diagnosed diabetic respondents who were taking herbal or traditional treatment for diabetes. Nearly 26% of previously diagnosed respondents were taking herbal or traditional treatment for diabetes. Previously diagnosed female respondents were more likely than male counterparts to take herbal or traditional treatment for diabetes (32% vs. 14%). The percentage of diagnosed women taking herbal or traditional treatment was the highest (40%) in the age group of 35–44 years.

8. History of Raised Total Cholesterol

Table 8.1 Cholesterol measurement and diagnosis of men by a doctor or health worker

Total cholesterol measurement and diagnosis									
	Men								
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
25-34	656	98.7	97.6-99.9	1.0	0.0-2.1	0.3	0.0-0.7	0.0	-
35-44	796	98.6	97.7-99.6	0.8	0.0-1.6	0.5	0.0-0.9	0.1	0.0-0.3
45-54	882	99.1	98.6-99.6	0.4	0.0-0.7	0.2	0.0-0.4	0.4	0.0-0.7
55-64	745	95.6	91.3-99.8	1.6	0.1-3.1	0.6	0.0-1.2	2.2	0.0-5.1
25-64	**3079**	**98.3**	**97.5-99.1**	**0.9**	**0.4-1.4**	**0.4**	**0.1-0.6**	**0.5**	**0.0-1.0**

Table 8.2 Cholesterol measurement and diagnosis of women by a doctor or health worker

Total cholesterol measurement and diagnosis									
	Women								
Age Group (years)	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	%diagnos-ed within past 12 months	95% CI
25-34	1154	99.3	98.7-99.9	0.3	0.0-0.6	0.3	0.0-0.6	0.2	0.0-0.4
35-44	1630	96.1	94.3-97.9	2.2	1.2-3.2	0.7	0.2-1.2	1.0	0.0-2.0
45-54	1609	97.0	95.6-98.4	1.3	0.6-2.1	0.7	0.3-1.2	0.9	0.4-1.5
55-64	1285	97.0	95.5-98.5	1.5	0.5-2.5	0.9	0.3-1.5	0.6	0.2-0.9
25-64	**5678**	**97.6**	**96.9-98.2**	**1.2**	**0.9-1.6**	**0.6**	**0.4-0.8**	**0.6**	**0.3-0.9**

Table 8.3 Cholesterol measurement and diagnosis of both sexes by a doctor or health worker

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% CI	% diagnos-ed within past 12 months	95% CI
25-34	1810	99.0	98.4-99.7	0.6	0.1-1.2	0.3	0.0-0.6	0.1	0.0-0.2
35-44	2426	97.4	96.2-98.5	1.5	0.7-2.2	0.6	0.2-0.9	0.6	0.0-1.1
45-54	2491	98.1	97.2-98.9	0.8	0.4-1.3	0.5	0.2-0.7	0.6	0.3-1.0
55-64	2030	96.3	94.1-98.5	1.5	0.6-2.4	0.8	0.3-1.3	1.4	0.0-2.8
25-64	**8757**	**97.9**	**97.4-98.5**	**1.1**	**0.7-1.4**	**0.5**	**0.3-0.7**	**0.5**	**0.3-0.8**

Tables 8.1, 8.2 and 8.3 present the percentage of respondents by previous diagnosis status of raised total blood cholesterol by a doctor or health worker and whether they had their total blood cholesterol measured. A very small percentage of men (0.9%) and women (1.2%) was previously diagnosed with raised total blood cholesterol. Most of the male respondents and female respondents (both 98%) had never had their total blood cholesterol level measured by a doctor or other health worker.

Table 8.4 Cholesterol treatment among those previously diagnosed with raised total blood cholesterol

Currently taking oral treatment (medication) prescribed for raised total cholesterol among those previously diagnosed									
	Men			Women			Both Sexes		
Age Group (years)	n	% taking meds	95% CI	n	% taking meds	95% CI	n	% taking meds	95% CI
25-34	2	0.0	-	7	21.3	0.0-60.2	9	13.3	0.0-39.3
35-44	6	17.4	0.0-53.3	23	40.0	9.0-71.0	29	34.3	6.2-62.3
45-54	9	3.8	0.0-12.0	50	34.0	14.9-53.1	59	26.5	12.4-40.6
55-64	13	21.5	0.0-52.2	30	35.5	14.2-56.7	43	26.3	4.0-48.6
25-64	**30**	**15.7**	**0.0-33.6**	**110**	**34.9**	**19.1-50.8**	**140**	**27.2**	**13.9-40.5**

There were 140 respondents who were diagnosed previously by a health care provider as raised total blood cholesterol. Table 8.4 presents the percentage of previously diagnosed respondents who revealed that they were taking oral medication prescribed for raised total cholesterol. On an average, 27% of diagnosed persons were taking oral medication prescribed for raised total cholesterol, with 16% of previously diagnosed men and 35% of previously diagnosed women doing so.

Table 8.5 Cholesterol advice by traditional healer among those previously diagnosed with raised total blood cholesterol

Seen a traditional healer for raised total cholesterol among those previously diagnosed									
Age Group (years)	Men			Women			Both Sexes		
	n	% seen trad. healer	95% CI	n	% seen trad. healer	95% CI	n	%seen trad. healer	95% CI
25-34	2	0.0	-	7	0.0	-	9	0.0	-
35-44	6	0.0	-	23	0.0	-	29	0.0	-
45-54	9	7.5	0.0-24.1	50	7.0	0.0-18.2	59	7.2	0.0-16.4
55-64	13	3.4	0.0-12.0	30	4.5	0.0-14.0	43	3.8	0.0-12.0
25-64	**30**	**2.9**	**0.0-8.2**	**110**	**3.0**	**0.0-7.4**	**140**	**3.0**	**0.0-6.8**

Table 8.5 presents the percentage of respondents previously diagnosed with raised total blood cholesterol who were seen by a traditional healer for raised total blood cholesterol. Only 3% of diagnosed men and women consulted a traditional healer for raised total blood cholesterol.

Table 8.6 Currently taking herbal or traditional treatment for raised cholesterol among those previously diagnosed with raised total blood cholesterol

Currently taking herbal or traditional treatment for raised total cholesterol among those previously diagnosed									
Age Group (years)	Men			Women			Both Sexes		
	n	%taking trad.meds	95% CI	n	% taking trad.meds	95% CI	n	% taking trad. meds	95% CI
25-34	2	0.0	-	7	0.0	-	9	0.0	-
35-44	6	0.0	-	23	0.0	-	29	0.0	-
45-54	9	0.0	-	50	7.1	0.0-15.7	59	5.3	0.0-11.7
55-64	13	0.0	-	30	0.0	-	43	0.0	-
25-64	**30**	**0.0**	**0.0-0.0**	**110**	**2.1**	**0.0-4.7**	**140**	**1.3**	**0.0-2.7**

Table 8.6 presents the percentage of respondents previously diagnosed with raised blood total cholesterol who were taking herbal or traditional treatment for raised total cholesterol. Only 2% of diagnosed women were taking herbal or traditional treatment for raised total cholesterol and of none of diagnosed men were doing so.

9. History of Cardiovascular Diseases

Table 9.1 History of cardiovascular diseases among the respondents

Having ever had a heart attack or chest pain from heart disease or a stroke									
	Men			Women			Both Sexes		
Age Group (years)	n	% CVD history	95% CI	n	% CVD history	95% CI	n	% CVD history	95% CI
25-34	656	3.8	1.4-6.3	1154	6.2	3.4-9.1	1810	5.0	2.6-7.5
35-44	796	4.4	2.1-6.7	1630	9.7	6.8-12.5	2426	7.0	5.1-9.0
45-54	882	7.3	3.9-10.6	1609	11.8	8.3-15.3	2491	9.5	6.4-12.7
55-64	745	8.0	4.7-11.4	1285	11.9	8.0-15.8	2030	10.0	6.9-13.1
25-64	**3079**	**5.4**	**3.7-7.1**	**5678**	**9.3**	**7.2-11.4**	**8757**	**7.3**	**5.6-9.1**

Table 9.1 presents the percentage of respondents who have ever had a heart attack or chest pain from heart disease (angina) or a stroke among all respondents. Some 7% of the respondents have ever had a heart attack or chest pain from heart disease (angina) or a stroke. The women had a higher prevalence of ever having a heart attack or chest pain from heart disease (angina) or a stroke than men (9% vs. 5%). This prevalence increased with increasing age in both the men and the women.

Table 9.2 Prevention and treatment of heart disease (Currently taking aspirin regularly) among the respondents

Currently taking aspirin regularly to prevent or treat heart disease									
	Men			Women			Both Sexes		
Age Group (years)	n	% taking aspirin	95% CI	n	% taking aspirin	95% CI	n	% taking aspirin	95% CI
25-34	656	0.1	0.0-0.4	1154	0.6	0.1-1.2	1810	0.4	0.0-0.8
35-44	796	0.5	0.0-1.0	1630	2.0	1.0-3.0	2426	1.2	0.6-1.8
45-54	882	1.7	0.3-3.0	1609	1.6	0.9-2.3	2491	1.6	0.9-2.4
55-64	745	1.3	0.3-2.4	1285	1.9	0.9-2.9	2030	1.6	0.7-2.5
25-64	**3079**	**0.8**	**0.4-1.1**	**5678**	**1.4**	**1.0-1.9**	**8757**	**1.1**	**0.7-1.5**

Table 9.2 presents the percentage of the respondents who are currently taking aspirin regularly to prevent or treat heart disease. Only 1.1% of all respondents were currently taking aspirin regularly to prevent or treat heart disease.

Table 9.3 Prevention and treatment of heart disease (Currently taking statins regularly)

Currently taking statins regularly to prevent or treat heart disease									
Age Group (years)	Men			Women			Both Sexes		
	n	% taking statins	95% CI	n	% taking statins	95% CI	n	% taking statins	95% CI
25-34	656	0.2	0.0-0.6	1154	0.6	0.0-1.1	1810	0.4	0.0-0.7
35-44	796	0.5	0.0-1.0	1630	1.7	0.8-2.7	2426	1.1	0.5-1.7
45-54	882	1.0	0.0-2.1	1609	1.7	0.9-2.6	2491	1.4	0.8-1.9
55-64	745	1.9	0.0-3.8	1285	2.1	0.9-3.3	2030	2.0	0.9-3.0
25-64	**3079**	**0.7**	**0.2-1.2**	**5678**	**1.4**	**0.9-1.8**	**8757**	**1.0**	**0.7-1.4**

Table 9.3 presents the percentage of the respondents who are currently taking statins (Lovostatin/Simvastatin/Atorvastatin or any other statin) regularly to prevent or treat heart disease. Only 1% of all respondents are currently taking statins regularly to prevent or treat heart disease.

10. Lifestyle Advice

Table 10.1 Lifestyle advice during the past three years to quit using tobacco or don't start among the respondents

Advised by doctor or health worker to quit using tobacco or don't start									
Age Group (years)	Men			Women			Both Sexes		
	n	% advised	95% CI	n	% advised	95% CI	n	% advised	95% CI
25-34	656	23.4	17.0-29.8	1154	21.5	16.4-26.5	1810	22.4	17.8-27.1
35-44	796	32.0	24.1-39.8	1630	22.4	17.4-27.4	2426	27.2	21.2-33.1
45-55	882	32.8	27.5-38.2	1609	26.1	19.8-32.4	2491	29.5	24.5-34.4
55-64	745	33.7	27.0-40.3	1285	32.4	27.4-37.3	2030	33.0	28.4-37.6
25-64	**3079**	**29.4**	**24.6-34.2**	**5678**	**24.5**	**19.9-29.0**	**8757**	**26.9**	**22.5-31.4**

Table 10.1 presents the percentage of respondents who received lifestyle advice to quit using tobacco or don't start from a doctor or health worker during the past three years among all respondents. During the past three years, 27% of all the respondents were advised by a doctor or health worker to stop or don't start using tobacco. Generally, the women were less advised to stop using tobacco compared to the men.

Table 10.2 Lifestyle advice during the past three years to reduce salt in the diet among the respondents

Advised by doctor or health worker to reduce salt in the diet									
Age Group (years)	Men			Women			Both Sexes		
	n	% advised	95% CI	n	% advised	95% CI	n	% advised	95% CI
25-34	656	25.8	18.1-33.5	1154	40.6	34.8-46.4	1810	33.2	27.5-38.8
35-44	796	36.2	30.6-41.7	1630	42.9	36.8-48.9	2426	39.5	34.9-44.1
45-54	882	37.9	31.4-44.4	1609	48.1	39.5-56.8	2491	43.0	36.6-49.5
55-64	745	42.3	30.2-54.4	1285	54.5	46.7-62.4	2030	48.4	38.5-58.4
25-64	**3079**	**33.9**	**28.5-39.2**	**5678**	**45.1**	**39.8-50.4**	**8757**	**39.5**	**34.6-44.3**

Table 10.2 presents the percentage of respondents who received lifestyle advice to reduce salt in the diet from a doctor or health worker during the past three years among all respondents. During the past three years, 40% of all the respondents were advised by a doctor or health worker to reduce salt in the diet. Generally, the women were more advised to reduce salt in the diet compared to the men. About 35% of men in

almost all age groups had been advised to reduce their salt intake, an exception being the age group of 25–34 years (26%). As for the females, 45% had been advised to reduce their salt intake.

Table 10.3 Lifestyle advice during the past three years to eat at least five servings of fruit and/or vegetable each day among the respondents

Advised by doctor or health worker to eat at least five servings of fruit and/or vegetable each day									
Age Group (years)	Men			Women			Both Sexes		
	n	% advised	95% CI	n	% advised	95% CI	n	% advised	95% CI
25-34	656	22.1	14.8-29.3	1154	36.0	30.2-41.8	1810	29.0	23.4-34.6
35-44	796	31.4	23.0-39.9	1630	38.7	31.8-45.5	2426	35.0	28.6-41.4
45-54	882	33.9	28.2-39.5	1609	42.7	33.8-51.6	2491	38.3	31.8-44.8
55-64	745	35.3	24.3-46.2	1285	44.7	36.7-52.7	2030	40.0	31.1-48.9
25-64	**3079**	**29.3**	**24.0-34.6**	**5678**	**39.6**	**33.7-45.4**	**8757**	**34.4**	**29.1-39.7**

Table 10.3 presents the percentage of respondents who received lifestyle advice to eat at least five servings of fruit and/or vegetable each day from a doctor or health worker during the past three years among all respondents. During the past three years, 34% of all the respondents were advised by a doctor or health worker to eat at least five servings of fruit and/or vegetable each day. Generally, the women were more advised to eat at least five servings of fruit and/or vegetable each day compared to the men.

Table 10.4 Lifestyle advice during the past three years to reduce fat in the diet among the respondents

Advised by doctor or health worker to reduce fat in the diet									
Age Group (years)	Men			Women			Both Sexes		
	n	% advised	95% CI	n	% advised	95% CI	n	% advised	95% CI
25-34	656	25.8	18.3-33.3	1154	38.7	32.8-44.6	1810	32.3	26.7-37.8
35-44	796	35.8	29.9-41.6	1630	43.1	36.5-49.8	2426	39.4	34.5-44.4
45-54	882	36.8	30.0-43.5	1609	48.9	40.3-57.5	2491	42.8	36.4-49.3
55-64	745	40.5	28.5-52.5	1285	51.5	44.3-58.7	2030	46.0	36.5-55.5
25-64	**3079**	**33.2**	**27.9-38.6**	**5678**	**44.2**	**38.3-50.0**	**8757**	**38.7**	**33.6-43.9**

Table 10.4 presents the percentage of respondents who received lifestyle advice to reduce fat in the diet from a doctor or health worker during the past three years among all respondents. During the past three years, 39% of all the respondents were advised by

a doctor or health worker to reduce fat in the diet. Generally, the women were more advised to reduce fat in the diet compared to the men.

Table 10.5 Lifestyle advice during the past three years to start or do more physical activity among the respondents

Advised by doctor or health worker to start or do more physical activity									
Age Group (years)	Men			Women			Both Sexes		
	n	% advised	95% CI	n	% advised	95% CI	n	% advised	95% CI
25-34	656	18.8	12.2-25.3	1154	28.9	23.2-34.5	1810	23.8	18.6-29.1
35-44	796	25.2	19.6-30.8	1630	29.4	23.6-35.1	2426	27.3	22.3-32.3
45-54	882	28.0	21.5-34.5	1609	33.1	25.1-41.1	2491	30.5	24.0-37.1
55-64	745	31.0	21.3-40.7	1285	37.8	30.4-45.2	2030	34.4	25.9-42.9
25-64	**3079**	**24.5**	**19.3-29.6**	**5678**	**31.4**	**25.8-36.9**	**8757**	**27.9**	**22.9-32.9**

Table 10.5 presents the percentage of respondents who received lifestyle advice to start or do more physical activity from a doctor or health worker during the past three years among all respondents. During the past three years, 28% of all the respondents were advised by a doctor or health worker to start or do more physical activity. Generally, the women were more advised to start or do more physical activity compared to the men. Nearly 25% of men and 31% of women were advised to start or do more exercise.

Table 10.6 Lifestyle advice during the past three years to maintain a healthy body weight or to lose weight among the respondents

Advised by doctor or health worker to maintain a healthy body weight or to lose weight									
Age Group (years)	Men			Women			Both Sexes		
	n	% advised	95% CI	n	% advised	95% CI	n	% advised	95% CI
25-34	656	13.3	8.0-18.7	1154	23.7	18.6-28.8	1810	18.5	13.9-23.1
35-44	796	20.4	14.7-26.2	1630	24.6	18.8-30.4	2426	22.5	17.4-27.6
45-54	882	20.4	14.8-26.1	1609	26.5	19.4-33.7	2491	23.5	17.7-29.2
55-64	745	21.4	13.6-29.2	1285	26.5	18.6-34.5	2030	24.0	16.3-31.7
25-64	**3079**	**18.1**	**13.4-22.8**	**5678**	**25.0**	**19.6-30.5**	**8757**	**21.5**	**16.7-26.4**

Table 10.6 presents the percentage of respondents who received lifestyle advice to maintain healthy body weight or lose weight from a doctor or health worker during the past three years among all respondents. During the past three years, 22% of all the respondents (18% of males and 25% of females) were advised by a doctor or health

worker to maintain healthy body weight or lose weight. Generally, the women were more advised to maintain healthy body weight or lose weight compared to the men.

11. Cervical Cancer Screening

Table 11. 1 Cervical cancer screening among all female respondents

Age Group (years)	Women		
	n	% ever tested	95% CI
25-34	955	3.2	1.4-4.9
35-44	1392	4.5	2.5-6.5
45-54	1337	4.0	2.2-5.7
55-64	1061	2.8	1.0-4.6
25-64	**4745**	**3.7**	**2.2-5.1**

Table 11.1 presents the percentage of female respondents who have ever had a screening test for cervical cancer among all female respondents. Nearly 4% of female respondents have ever had a screening test for cervical cancer, the highest percentage in 35-44 year age group (4.5%).

Table 11.2 Cervical cancer screening among women aged 30-49 years

Age Group (years)	Women		
	n	% ever tested	95% CI
30-49	2578	4.4	2.7-6.0

Table 11.2 presents the percentage of female respondents aged 30-49 years who have ever had a screening test for cervical cancer among all female respondents aged 30-49 years. Among the female respondents aged 30-49 years, 4.4 % have ever had a screening test for cervical cancer.

12. Physical Measurements

Table 12.1 Mean systolic blood pressure of the respondents

Mean systolic blood pressure (mmHg)									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	627	120.6	118.7-122.5	1122	114.5	112.7-116.2	1749	117.5	115.9-119.1
35-44	756	124.5	122.1-127.0	1589	122.9	120.5-125.2	2345	123.7	121.6-125.8
45-54	847	128.9	126.8-131.0	1565	129.5	126.8-132.2	2412	129.2	127.3-131.1
55-64	718	134.4	132.2-136.7	1259	136.5	133.5-139.5	1977	135.5	133.4-137.6
25-64	**2948**	**125.8**	**124.0-127.5**	**5535**	**123.6**	**121.6-125.6**	**8483**	**124.7**	**123.0-126.3**

Table 12.1 presents the mean systolic blood pressure (mmHg) among all respondents. The mean systolic blood pressure of men was 126 mmHg and that of women, 124 mmHg. Among both the men and the women, the mean systolic blood pressure increased as age increased.

Table 12.2 Mean diastolic blood pressure of the respondents

Mean diastolic blood pressure (mmHg)									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	627	77.4	76.0-78.7	1122	77.4	76.1-78.6	1749	77.4	76.2-78.5
35-44	756	80.9	79.4-82.5	1589	82.7	81.0-84.5	2345	81.8	80.4-83.3
45-54	847	83.6	82.3-85.0	1565	83.7	82.5-84.9	2412	83.7	82.6-84.7
55-64	718	83.6	81.4-85.7	1259	84.3	83.0-85.7	1977	83.9	82.5-85.3
25-64	**2948**	**80.8**	**79.6-81.9**	**5535**	**81.3**	**80.2-82.5**	**8483**	**81.0**	**80.0-82.1**

Table 12.2 presents the mean diastolic blood pressure (mmHg) among all the respondents. The mean diastolic blood pressure of both men and women was 81 mmHg. Among both the men and the women, it increased with age, reaching up to 84 mmHg in the 55-64 years age group.

Table 12.3 Raised blood pressure (SBP ≥140 and/or DBP ≥ 90 mmHg, excluding those on medication for raised blood pressure) among the respondents

SBP ≥140 and/or DBP ≥ 90 mmHg, excluding those on medication for raised blood pressure									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	625	12.2	8.7-15.7	1116	11.4	8.3-14.5	1741	11.8	9.3-14.3
35-44	744	22.0	14.1-29.8	1533	28.6	23.0-34.2	2277	25.2	19.0-31.5
45-54	818	31.7	26.4-37.0	1481	34.7	30.5-38.8	2299	33.2	29.5-36.8
55-64	686	38.9	29.3-48.5	1159	41.1	36.2-45.9	1845	40.0	34.3-45.6
25-64	**2873**	**23.4**	**18.9-27.9**	**5289**	**25.7**	**22.5-28.9**	**8162**	**24.6**	**21.3-27.8**

Table 12.3 presents the percentage of respondents with raised blood pressure (SBP ≥140 and/or DBP ≥90 mmHg), excluding those on medication for raised blood pressure. Overall prevalence of raised blood pressure (SBP ≥140 and/or DBP ≥90 mmHg), excluding those on medication for raised blood pressure was 25 % with 23% in the men and 26% in the women. The percentage of both the men and the women with the risk of high blood pressure increased with age from 11-12% in 25-34 year age group to 39-41% in 55-64 year age group.

Table 12.4 Raised blood pressure (SBP ≥140 and/or DBP ≥90 mmHg or currently on medication for raised blood pressure) among the respondents

SBP ≥140 and/or DBP ≥90 mmHg or currently on medication for raised blood pressure									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	627	12.3	8.8-15.8	1122	11.7	8.6-14.9	1749	12.0	9.4-14.6
35-44	756	23.0	15.1-30.9	1589	30.7	25.2-36.1	2345	26.8	20.7-32.9
45-54	847	33.8	28.7-38.8	1565	37.9	33.8-42.0	2412	35.8	32.4-39.2
55-64	718	41.1	32.2-50.0	1259	45.3	40.5-50.1	1977	43.2	38.2-48.2
25-64	**2948**	**24.7**	**20.1-29.3**	**5535**	**28.0**	**24.8-31.3**	**8483**	**26.4**	**23.2-29.5**

Table 12.4 presents the percentage of all respondents who had raised blood pressure (SBP ≥140 and/or DBP ≥90 mmHg) or were on medication for raised blood pressure. Overall prevalence of raised blood pressure (SBP ≥140 and/or DBP ≥90 mmHg) or medication for raised blood pressure was 26 % with 25% in the men and 28% in the women. The percentage of the men with high blood pressure (SBP ≥140 and/or DBP ≥90 mmHg) or on medication increased with age from 12% in 25-34 year age group

to 41% in 55-64 year age group. The percentage of the women with high blood pressure (SBP ≥140 and/or DBP ≥90 mmHg) or on medication increased with age from 12% in 25-34 year age group to 45% in 55-64 year age group.

Table 12.5 Raised blood pressure (SBP ≥160 and/or DBP ≥100 mmHg, excluding those on medication for raised blood pressure)

SBP ≥160 and/or DBP ≥100 mmHg, excluding those on medication for raised blood pressure									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	N	%	95% CI
25-34	625	3.6	1.3-5.9	1116	2.4	1.2-3.6	1741	3.0	1.8-4.2
35-44	744	7.0	4.6-9.4	1533	11.5	6.1-16.8	2277	9.2	6.4-12.0
45-54	818	12.3	9.0-15.6	1481	13.9	10.3-17.6	2299	13.1	11.2-15.0
55-64	686	20.0	14.7-25.4	1159	20.7	16.2-25.2	1845	20.3	15.9-24.8
25-64	**2873**	**9.0**	**6.9-11.2**	**5289**	**10.2**	**8.1-12.3**	**8162**	**9.6**	**8.0-11.2**

Table 12.5 presents the percentage of respondents with raised blood pressure (SBP ≥160 and/or DBP ≥100 mmHg), excluding those on medication for raised blood pressure. Overall prevalence of raised blood pressure (SBP ≥160 and/or DBP ≥100 mmHg), excluding those on medication for raised blood pressure was 9.6% with 9% in the men and 10% in the women. The percentage of the women with the risk of high blood pressure (SBP ≥160 and/or DBP ≥100 mmHg), excluding those on medication for raised blood pressure increased with age from 2% in 25-34 year age group to 21% in 55-64 year age group.

Table 12.6 Raised blood pressure (SBP ≥160 and/or DBP ≥ 100 mmHg or currently on medication for raised blood pressure)

SBP ≥160 and/or DBP ≥ 100 mmHg or currently on medication for raised blood pressure									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	627	3.7	1.4-6.0	1122	2.8	1.6-4.0	1749	3.2	2.0-4.4
35-44	756	8.3	5.6-10.9	1589	14.0	8.7-19.3	2345	11.1	8.4-13.8
45-54	847	14.9	11.6-18.3	1565	18.2	14.0-22.3	2412	16.6	14.5-18.6
55-64	718	22.9	18.1-27.8	1259	26.4	22.9-29.9	1977	24.7	20.9-28.5
25-64	**2948**	**10.6**	**8.4-12.8**	**5535**	**13.0**	**10.8-15.3**	**8483**	**11.8**	**10.2-13.4**

Table 12.6 presents the percentage of respondents with raised blood pressure (SBP ≥160 and/or DBP ≥100 mmHg) or on medication for raised blood pressure. Overall prevalence of raised blood pressure (SBP ≥160 and/or DBP ≥100 mmHg) or on medication for raised blood pressure was 12% with 11% in the men and 13% in the women. The percentage of the men with the risk of high blood pressure (SBP ≥160 and/or DBP ≥100 mmHg) or on medication for raised blood pressure increased with age from 4% in 25-34 year age group to 23% in 55-64 year age group. The percentage of the women with the risk of high blood pressure (SBP ≥160 and/or DBP ≥100 mmHg) or on medication for raised blood pressure increased with age from 3% in 25-34 year age group to 26% in 55-64 year age group.

Table 12.7 Treatment and control of raised blood pressure among the men with high blood pressure (SBP ≥140 and/or DBP ≥ 90 mmHg) or currently on medication for raised blood pressure

Respondents with treated and/or controlled raised blood pressure							
	Men						
Age Group (years)	n	% On medication and SBP<140 and DBP<90	95% CI	% On medication and SBP≥140 and/orDBP≥90	95% CI	% Not on medication and SBP≥140 and/orDBP≥90	95% CI
25-34	75	0.0	0.0-0.0	0.9	0.0-2.3	99.1	97.7-100.0
35-44	178	3.0	0.1-5.9	2.9	0.4-5.4	94.2	90.4-97.9
45-54	273	2.6	0.0-5.2	6.6	2.0-11.2	90.8	85.7-95.9
55-64	279	3.1	0.1-6.2	5.8	1.4-10.1	91.1	84.6-97.6
25-64	**805**	**2.4**	**0.8-4.0**	**4.4**	**2.1-6.8**	**93.2**	**90.1-96.3**

Table 12.7 presents the percentage of respondents with treated and/or controlled of raised blood pressure among the men with raised blood pressure (SBP ≥140 and/or DBP ≥90 mmHg) or currently on medication for raised blood pressure. There were 805 men with high blood pressure (SBP ≥140 and/or DBP ≥90 mmHg) or currently on medication for raised blood pressure. Among them, only 7% received treatment for high blood pressure (2.4% treated and controlled and 4.4% treated but not controlled).

Table 12.8 Treatment and control of raised blood pressure of women with high blood pressure (SBP ≥140 and/or DBP ≥ 90 mmHg) or currently on medication for raised blood pressure

Respondents with treated and/or controlled raised blood pressure							
	Women						
Age Group (years)	n	% On medication and SBP<140 and DBP<90	95% CI	% On medication and SBP≥140 and/orDBP≥90	95% CI	% Not on medication and SBP≥140 and/orDBP≥90	95% CI
25-34	135	1.3	0.0-4.0	1.8	0.0-3.7	96.9	93.6-100.0
35-44	446	2.0	0.2-3.8	7.5	3.3-11.7	90.5	85.7-95.2
45-54	596	4.7	0.4-8.9	8.4	4.6-12.2	87.0	81.2-92.7
55-64	576	4.1	1.9-6.2	11.9	6.7-17.1	84.1	78.1-90.0
25-64	**1753**	**3.2**	**1.1-5.4**	**8.1**	**5.3-10.8**	**88.7**	**84.5-92.9**

Table 12.8 presents the percentage of respondents with treated and/or controlled of raised blood pressure among the women with raised blood pressure (SBP ≥140 and/or DBP ≥ 90 mmHg) or currently on medication for raised blood pressure. There were 1753 women with high blood pressure (SBP ≥140 and/or DBP ≥ 90 mmHg) or currently on medication for raised blood pressure. Among them, only 11.3% received treatment for high blood pressure (3.2% treated and controlled and 8.1% treated but not controlled).

Table 12.9 Treatment and control of raised blood pressure of both sexes with high blood pressure (SBP ≥140 and/or DBP ≥90 mmHg) or currently on medication for raised blood pressure

Respondents with treated and/or controlled raised blood pressure							
	Both Sexes						
Age Group (years)	n	% On medication and SBP<140 and DBP<90	95% CI	% On medication and SBP≥140 and/orDBP≥90	95% CI	% Not on medication and SBP≥140 and/orDBP≥90	95% CI
25-34	210	0.7	0.0-2.0	1.3	0.2-2.5	98.0	96.3-99.7
35-44	624	2.4	0.7-4.2	5.5	2.5-8.5	92.1	88.4-95.7
45-54	869	3.7	0.9-6.5	7.5	4.3-10.7	88.7	84.0-93.5
55-64	855	3.6	1.4-5.9	9.0	4.6-13.3	87.4	81.5-93.3
25-64	**2558**	**2.8**	**1.1-4.6**	**6.4**	**4.1-8.6**	**90.8**	**87.3-94.3**

Table 12.9 presents the percentage of respondents with treated and/or controlled of raised blood pressure among the respondents of both sexes with raised blood pressure (SBP ≥140 and/or DBP ≥90 mmHg) or currently on medication for raised blood pressure. There were 2558 respondents with high blood pressure (SBP ≥140 and/or DBP ≥90 mmHg) or currently on medication for raised blood pressure. Among them, only 9.2% received treatment for high blood pressure (2.8% treated and controlled and 6.4% treated but not controlled).

Table 12.10 Mean heart rate of the respondents

Mean heart rate (beats per minute)									
Age Group (years)	Men			Women			Both Sexes		
	n	mean	95% CI	n	mean	95% CI	n	mean	95% CI
25-34	627	74.1	72.4-75.8	1122	81.5	80.4-82.5	1749	77.8	76.8-78.8
35-44	756	75.6	73.9-77.4	1589	80.6	79.5-81.8	2345	78.1	77.0-79.2
45-54	848	76.0	74.6-77.4	1565	79.0	78.1-79.9	2413	77.5	76.5-78.5
55-64	718	75.9	74.1-77.6	1260	78.5	76.8-80.1	1978	77.2	75.5-78.8
25-64	**2949**	**75.2**	**74.0-76.5**	**5536**	**80.2**	**79.5-80.9**	**8485**	**77.7**	**76.9-78.6**

Table 12.10 presents the mean heart rates of all the respondents—male, female and both sexes. The mean heart rates was 75 beats per minute in the male respondents and 80 beats per minute in the female respondents. It did not differ much across age groups

for both the male and the female respondents.

Table 12.11 Mean Height of the respondents (excluding pregnant women)

Mean height (cm)						
Age Group (years)	Men			Women		
	n	Mean	95% CI	n	Mean	95% CI
25-34	627	164.2	163.6-164.8	1062	153.6	153.1-154.2
35-44	756	163.5	162.5-164.4	1562	154.0	153.2-154.9
45-54	849	163.4	162.8-164.0	1564	153.2	152.6-153.9
55-64	716	162.3	161.4-163.3	1259	152.1	151.5-152.7
25-64	**2948**	**163.5**	**163.1-164.0**	**5447**	**153.4**	**153.0-153.8**

Table 12.11 presents the mean height in centimeters of the respondents by age and sex. The mean height of the male respondents was 164 cm, while that of the females was 153 cm. The mean heights of the men in each group were not very different and the highest mean was observed in the age group of 25–34 years. Similarly, among women, the means were not very different. The highest mean among women was observed in the age group of 35–44 years.

Table 12.12 Mean Weight of the respondents (excluding pregnant women)

Mean weight (kg)						
Age Group (years)	Men			Women		
	n	Mean	95% CI	n	Mean	95% CI
25-34	627	56.3	55.1-57.6	1062	52.0	50.7-53.2
35-44	756	58.2	57.1-59.4	1561	56.6	55.3-57.9
45-54	849	58.4	57.0-59.8	1564	56.3	55.1-57.5
55-64	717	57.6	56.1-59.2	1260	53.2	51.7-54.7
25-64	**2949**	**57.5**	**56.7-58.4**	**5447**	**54.4**	**53.4-55.4**

Table 12.12 presents the mean weight in kilograms of the respondents by age and sex. The mean weight of the male respondents was 58 kg and that of females, 54 kg. Among men, the highest mean weight was observed in the age group of 45–54 years (58.4 kg) and the lowest in that of 25–34 years (56.3 kg). Among women, the highest mean weight was observed in the age group of 35–44 years (56.6 kg) and the lowest in that of 25–34 years (52 kg).

Table 12.13 Mean BMI of the respondents (excluding pregnant women)

Mean BMI (kg/m^2)									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	626	20.8	20.4-21.3	1059	22.0	21.5-22.5	1685	21.4	21.0-21.8
35-44	755	21.8	21.4-22.1	1554	23.8	23.4-24.3	2309	22.8	22.4-23.2
45-54	847	21.8	21.3-22.3	1542	24.0	23.5-24.5	2389	22.9	22.5-23.3
55-64	713	21.8	21.4-22.3	1239	23.1	22.6-23.7	1952	22.5	22.1-22.9
25-64	**2941**	**21.5**	**21.2-21.8**	**5394**	**23.2**	**22.8-23.5**	**8335**	**22.3**	**22.0-22.6**

Table 12.13 presents the mean body mass index (BMI) of the respondents by age and sex. The mean BMI of the male respondents was 22 and that of the females was 23. The mean BMIs of men in the different groups were not very different. The mean BMI of the women roughly ranged from 22 in the age group of 25–34 years to 24 in that of 45–54 years. The mean BMI of women was slightly higher than that of their male counterparts in the respective age groups.

Table 12.14 BMI classifications of men

BMI classifications									
Age Group (years)	Men								
	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	% Overweight 25.0-29.9	95% CI	% Obese ≥30.0	95% CI
25-34	626	21.4	15.4-27.4	69.3	62.7-75.9	7.5	5.1-9.9	1.8	0.3-3.2
35-44	755	14.9	10.8-19.0	70.6	63.0-78.1	12.4	8.2-16.6	2.1	0.8-3.5
45-54	847	21.4	17.0-25.8	59.1	54.9-63.2	15.6	11.3-19.8	4.0	2.1-5.8
55-64	713	19.1	14.0-24.1	64.9	58.5-71.3	12.5	7.9-17.1	3.5	1.7-5.3
25-64	**2941**	**19.2**	**15.6-22.7**	**66.7**	**62.2-71.2**	**11.5**	**9.4-13.6**	**2.6**	**1.8-3.5**

Table 12.15 BMI classifications of women (excluding pregnant women)

BMI classifications									
Age Group (years)	Women								
	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	% Overweight 25.0-29.9	95% CI	% Obese ≥30.0	95% CI
25-34	1059	19.8	15.4-24.2	59.2	54.5-63.9	16.0	12.5-19.6	5.0	3.2-6.7
35-44	1554	10.2	7.5-12.8	54.1	49.4-58.7	27.0	23.6-30.5	8.8	6.9-10.6
45-54	1542	11.8	9.2-14.4	49.5	46.8-52.3	26.4	22.5-30.3	12.2	8.2-16.2
55-64	1239	18.7	14.9-22.4	49.5	45.3-53.7	22.3	18.1-26.5	9.5	6.4-12.6
25-64	**5394**	**15.2**	**12.8-17.6**	**54.0**	**51.5-56.6**	**22.4**	**20.1-24.7**	**8.4**	**6.6-10.1**

Table 12.16 BMI classifications of both sexes (excluding pregnant women)

BMI classifications									
Age Group (years)	Both Sexes								
	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	% Overweight 25.0-29.9	95% CI	% Obese ≥30.0	95% CI
25-34	1685	20.6	16.1-25.2	64.3	59.5-69.2	11.7	9.1-14.3	3.3	2.0-4.7
35-44	2309	12.6	9.9-15.2	62.4	56.6-68.2	19.6	15.9-23.3	5.4	3.8-7.0
45-54	2389	16.6	14.1-19.1	54.3	51.7-57.0	21.0	17.6-24.4	8.1	5.3-10.9
55-64	1952	18.9	15.8-21.9	57.2	53.3-61.2	17.4	13.6-21.2	6.5	4.7-8.2
25-64	**8335**	**17.2**	**14.5-19.9**	**60.4**	**57.2-63.7**	**16.9**	**14.7-19.1**	**5.5**	**4.2-6.7**

Tables 12.14, 12.15 and 12.16 present the percentage of respondents—men, women and both sexes—by BMI classification. Overall prevalence of obesity was 5.5% with 2.6% in the men and 8.4% in the women. Prevalence of obesity, in the men or women or both sexes, increased with an increase in age, reached a peak in the age group of 45–54 years and declined a little in the oldest age group. The highest percentage of obesity in the men (4%) was observed among the 45-54 age group. Similarly, the highest percentage of obesity in the women (12%) was observed among the 45-54 age group. Most of the respondents (60%) were in the normal BMI group with 67% of the men and 54% of the women in that range. About 17% of the respondents were in the overweight group with the 12% of the men and 22% of the women in that group. The highest percentage of overweight in the men (16%) was observed among the 45-54 age group. The highest percentage of overweight in the women (27%) was observed among the 35-44 age group. Overall prevalence of underweight was 17% with 19% in the men and 15% in the women. The highest percentage of underweight in the men (21%) was found in the 25-34 and 45-54 year age groups. The highest percentage of underweight in the women (20%) was found in the 25-34 year age group.

Table 12.17 BMI ≥25 among the respondents (excluding pregnant women)

BMI≥25									
Age Group (years)	Men			Women			Both Sexes		
	n	% BMI≥25	95% CI	n	% BMI≥25	95% CI	n	% BMI≥25	95% CI
25-34	626	9.3	6.5-12.0	1059	21.0	17.2-24.8	1685	15.1	12.2-17.9
35-44	755	14.6	9.6-19.5	1554	35.8	31.0-40.6	2309	25.0	20.1-29.9
45-54	847	19.5	15.1-23.9	1542	38.6	35.2-42.1	2389	29.0	25.2-32.8
55-64	713	16.0	10.6-21.5	1239	31.8	26.9-36.7	1952	23.9	19.8-27.9
25-64	**2941**	**14.1**	**11.5-16.7**	**5394**	**30.8**	**27.5-34.1**	**8335**	**22.4**	**19.3-25.4**

Table 12.17 presents the percentage of respondents (excluding pregnant women) classified as overweight (BMI≥25) - men, women and both sexes. Overall prevalence of overweight and obesity was 22% with 14% in the men and 31% in the women. Prevalence of overweight and obesity, in the men or women or both sexes, increased with an increase in age, reached a peak in the age group of 45–54 years and declined a little in the oldest age group. The highest percentage of overweight and obesity in the men (20%) was observed among the 45-54 age group. Similarly, the highest percentage of overweight and obesity in the women (39%) was observed among the 45-54 age group.

Table 12.18 Waist circumference of the respondents (excluding pregnant women)

Waist circumference (cm)						
Age Group (years)	Men			Women		
	n	Mean	95% CI	n	Mean	95% CI
25-34	626	74.7	73.1-76.3	1062	72.9	71.5-74.4
35-44	755	77.5	76.1-78.9	1560	77.8	76.6-79.0
45-54	848	78.6	77.0-80.2	1563	79.6	78.4-80.7
55-64	718	80.7	78.8-82.6	1259	79.9	78.6-81.2
25-64	**2947**	**77.3**	**76.0-78.6**	**5444**	**76.9**	**75.7-78.1**

Table 12.18 presents the mean waist circumference among all respondents, excluding pregnant women. The mean waist circumference of the male respondents was 77 cm and that of the female respondents, 77 cm. The mean waist circumferences of men increased as age increased and the highest mean waist circumference (81 cm) was

observed in the oldest age group. The mean waist circumference of women also increased with increasing age, and the highest mean waist circumference (80 cm) was observed in the oldest age group.

Table 12.19 Hip circumference of the respondents (excluding pregnant women)

Hip circumference (cm)						
Age Group (years)	Men			Women		
	n	Mean	95% CI	n	Mean	95% CI
25-34	626	87.6	86.5-88.6	1062	90.0	88.7-91.2
35-44	755	89.6	88.6-90.7	1560	93.7	92.5-94.8
45-54	848	89.7	88.6-90.8	1563	94.5	93.3-95.7
55-64	718	90.4	89.0-91.8	1259	93.5	92.3-94.7
25-64	**2947**	**89.1**	**88.2-90.0**	**5444**	**92.6**	**91.6-93.6**

Table 12.19 presents the mean hip circumference among all respondents, excluding pregnant women. The mean hip circumference of the male respondents was 89 cm and that of female respondents, 93 cm. The mean hip circumferences of the men increased with an increase in age and the highest mean hip circumference (90cm) was observed in the oldest age group. The mean hip circumferences of the men were not very different among the different age groups. The highest mean waist circumference of the women (95 cm) was observed in the age group of 45–54 years and the lowest (90 cm) in the youngest age group.

Table 12.20 Waist / hip ratio of the respondents (excluding pregnant women)

Mean waist / hip ratio						
Age Group (years)	Men			Women		
	n	Mean	95% CI	n	Mean	95% CI
25-34	626	0.9	0.8-0.9	1062	0.8	0.8-0.8
35-44	755	0.9	0.9-0.9	1560	0.8	0.8-0.8
45-54	848	0.9	0.9-0.9	1563	0.8	0.8-0.8
55-64	718	0.9	0.9-0.9	1259	0.9	0.8-0.9
25-64	**2947**	**0.9**	**0.9-0.9**	**5444**	**0.8**	**0.8-0.8**

Table 12.20 presents the mean waist-to-hip ratio among all respondents, excluding pregnant women. The mean waist-to-hip ratio in all age groups among both males and females was less than one. Among men, the mean waist-to-hip ratio was the

same in all age groups. Among women, the mean waist-to-hip ratio in the oldest age group (0.9) was a little higher than that in other age groups (0.8). The mean waist-to-hip ratios of men were slightly higher than those of women in the respective age groups.

13. Biochemical Measurements

Table 13.1 Mean fasting blood glucose (mmol/L) of the respondents

Mean fasting blood glucose (mmol/L)									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	616	4.9	4.7-5.1	1099	4.7	4.6-4.8	1715	4.8	4.7-4.9
35-44	738	5.0	4.9-5.1	1559	5.1	5.0-5.3	2297	5.1	5.0-5.2
45-54	832	5.2	5.0-5.3	1537	5.5	5.3-5.7	2369	5.3	5.2-5.5
55-64	707	5.3	5.2-5.5	1236	5.8	5.6-6.0	1943	5.6	5.4-5.8
25-64	**2893**	**5.1**	**5.0-5.1**	**5431**	**5.2**	**5.1-5.3**	**8324**	**5.1**	**5.0-5.2**

Table 13.2 Mean fasting blood glucose (mg/dl) of the respondents

Mean fasting blood glucose (mg/dl)									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	616	88.2	85.1-91.2	1099	84.8	83.3-86.4	1715	86.5	84.6-88.4
35-44	738	89.5	87.5-91.6	1559	92.6	90.6-94.7	2297	91.1	89.3-92.9
45-54	832	93.2	90.2-96.1	1537	99.0	95.8-102.2	2369	96.1	93.5-98.7
55-64	707	96.3	93.2-99.4	1236	104.4	100.1-108.7	1943	100.3	96.9-103.8
25-64	**2893**	**91.0**	**89.2-92.7**	**5431**	**93.3**	**91.2-95.3**	**8324**	**92.1**	**90.3-93.9**

Tables 13.1 and 13.2 presents the mean fasting blood glucose results of the respondents including those currently on medication for diabetes (non-fasting recipients excluded) in different units (mmol/l in Table 13.1 and mg/dl in Table 13.2). The mean fasting blood glucose was 5.1 mmol/l (or) 92 mg/dl for both sexes but it was a little higher in the women than in the men. The mean fasting blood glucose increased with an increase in age for the men, the women and both sexes.

Table 13.3 Impaired Fasting Glycaemia of the respondents

Impaired Fasting Glycaemia*									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	616	4.6	0.9-8.3	1153	1.6	0.6-2.7	1715	3.1	1.0-5.2
35-44	738	3.0	1.0-4.9	1626	3.1	1.9-4.3	2297	3.0	2.0-4.1
45-54	832	4.4	3.0-5.8	1604	4.8	3.2-6.4	2369	4.6	3.8-5.4
55-64	707	3.9	1.8-6.0	1282	4.8	3.6-6.0	1943	4.4	3.3-5.5
25-64	**2893**	**4.0**	**2.8-5.3**	**5665**	**3.2**	**2.6-3.9**	**8324**	**3.6**	**2.8-4.5**

*Impaired fasting glycaemia is defined as plasma-equivalent value of capillary whole blood ≥6.1 mmol/L (110 mg/dl) and <7.0 mmol/L (126 mg/dl).

Tables 13.3 presents the percentage of the respondents with impaired fasting glucose (plasma-equivalent value of capillary whole blood ≥6.1 mmol/L (110 mg/dl) and <7.0 mmol/L (126 mg/dl) - (non-fasting recipients excluded)). Overall prevalence of impaired fasting glucose was 3.6% with 4% in the men and 3.2% in the women. Among the men, the lowest percentage of impaired fasting glucose (3%) was observed among the 35-44 age group while the highest percentage of impaired fasting glucose (4.6%) was observed among the 25-34 age group. Among the women, the prevalence of impaired fasting glucose increased with an increase in age from 1.6% in the 25-34 year age group to 4.8% in the 45-54 and 55-64 year age group.

Table 13.4 Mean 2-h blood glucose (mmol/l) of the respondents

Mean 2-h blood glucose (mmol/l)									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	596	6.06	5.83-6.29	1075	6.75	6.56-6.95	1671	6.41	6.24-6.58
35-44	693	6.17	5.94-6.40	1449	7.26	6.84-7.68	2142	6.71	6.40-7.01
45-54	764	7.07	6.51-7.63	1356	7.59	7.32-7.85	2120	7.33	6.95-7.70
55-64	643	7.90	7.18-8.61	1018	7.95	7.60-8.30	1661	7.92	7.40-8.44
25-64	**2696**	**6.59**	**6.30-6.89**	**4898**	**7.24**	**6.98-7.51**	**7594**	**6.92**	**6.65-7.19**

Table 13.5 Mean 2-h blood glucose (mg/dl) of the respondents

Mean 2-h blood glucose (mg/dl)									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	596	109.2	105.1-113.3	1075	121.7	118.2-125.2	1671	115.5	112.5-118.5
35-44	693	111.1	107.0-115.3	1449	130.7	123.2-138.3	2142	120.8	115.4-126.3
45-54	764	127.4	117.4-137.5	1356	136.7	131.9-141.4	2120	132.0	125.3-138.8
55-64	643	142.3	129.4-155.2	1018	143.2	136.9-149.5	1661	142.7	133.3-152.1
25-64	**2696**	**118.8**	**113.5-124.1**	**4898**	**130.5**	**125.8-135.2**	**7594**	**124.6**	**119.8-129.5**

Tables 13.4 and 13.5 present the mean 2-hour plasma glucose after oral glucose load among the respondents excluding non-fasting recipients (in mmol/l in Table 13.4 and mg/dl in Table 13.5). The mean 2-hour plasma glucose was 6.9 mmol/l (or) 125 mg/dl for both sexes but it was higher in the women than in the men. The mean 2-hour plasma glucose increased with an increase in age for the men, the women and both sexes.

Table 13.6 Impaired Glucose Tolerance

Impaired Glucose Tolerance*									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	596	9.9	6.8-14.1	1075	16.8	13.7-20.4	1671	13.4	10.9-16.4
35-44	693	12.4	9.9-15.5	1449	26.6	20.6-33.6	2142	19.4	15.6-23.9
45-54	764	18.5	14.1-23.9	1356	28.4	23.4-33.9	2120	23.4	19.7-27.5
55-64	643	27.8	20.7-36.2	1018	29.7	24.5-35.5	1661	28.7	23.7-34.2
25-64	**2696**	**15.2**	**12.2-18.9**	**4898**	**23.9**	**20.0-28.3**	**7594**	**19.5**	**16.5-23.0**

*Impaired glucose tolerance is defined as plasma-equivalent 2-hour glucose value of capillary whole blood ≥7.8mmol/L (140mg/dl) and ≤11.0 mmol/L (199 mg/dl)

Tables 13.6 presents the percentage of the respondents with impaired glucose tolerance (2-hour plasma glucose ≥7.8mmol/L (140mg/dl) and ≤11.0 mmol/L (199 mg/dl)) among the respondents excluding non-fasting recipients. Overall prevalence of impaired glucose tolerance was 20% with 15% in the men and 24% in the women. Among the men, the prevalence of impaired glucose tolerance increased with an increase in age from 10% in the 25-34 year age group to 28% in the 55-64 year age group. Among the women also, the prevalence of impaired glucose tolerance increased with an increase in age from 17% in the 25-34 year age group to 30% in the 55-64 year age group.

Table 13.7 Raised blood glucose (by fasting glucose) or currently on medication for diabetes among the respondents excluding non-fasting respondents

Raised blood glucose or currently on medication for diabetes*									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	616	2.5	0.0-5.3	1099	1.3	0.6-2.1	1715	1.9	0.4-3.4
35-44	738	4.5	2.3-6.6	1559	6.5	5.0-8.0	2297	5.5	4.0-6.9
45-54	832	6.4	4.0-8.8	1537	9.8	7.1-12.5	2369	8.1	5.8-10.4
55-64	707	7.6	4.0-11.3	1236	16.2	12.3-20.2	1943	11.9	8.5-15.3
25-64	**2893**	**4.7**	**3.4-6.1**	**5431**	**7.0**	**5.5-8.5**	**8324**	**5.9**	**4.6-7.2**

*Raised fasting blood glucose is defined as plasma-equivalent value of capillary whole blood ≥7.0 mmol/L (126 mg/dl).

Tables 13.7 presents the percentage of the respondents with raised blood glucose by fasting glucose (defined as plasma-equivalent value of fasting glucose ≥7.0

mmol/L (126 mg/dl)) or currently on medication for diabetes among the respondents excluding non-fasting respondents. Overall prevalence of raised blood glucose by fasting glucose or currently on medication for diabetes was 5.9% with 4.7% in the men and 7% in the women. Among the men, the prevalence of raised blood glucose by fasting glucose or currently on medication for diabetes increased with an increase in age from 2.5% in the 25-34 year age group to 7.6% in the 55-64 year age group. Among the women also, the prevalence of raised blood glucose by fasting glucose or currently on medication for diabetes increased with an increase in age from 1.3% in the 25-34 year age group to 16.2% in the 55-64 year age group.

Table 13.8 Raised blood glucose (by fasting glucose or 2-hour blood glucose) or currently on medication for diabetes among the respondents excluding non-fasting respondents

Raised blood glucose or currently on medication for diabetes*									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	616	3.6	1.6-8.1	1099	4.5%	3.1-6.6	1715	4.1%	2.6-6.2
35-44	738	7.6	5.0-11.2	1559	11.0%	7.9-15.0	2297	9.3%	6.8-12.4
45-54	832	11.8	8.7-15.9	1537	15.6%	12.6-19.1	2369	13.7%	11.3-16.6
55-64	707	19.5	8.7-15.9	1236	23.7%	19.2-28.8	1943	21.6%	16.5-27.7
25-64	**2893**	**9.1**	**6.9-11.8**	**5431**	**11.8%**	**9.6-14.6**	**8324**	**10.5%**	**8.3-13.1**

*Raised fasting blood glucose is defined as plasma-equivalent fasting glucose value of capillary whole blood ≥7.0 mmol/L (126 mg/dl). Raised 2-hour blood glucose is defined as plasma-equivalent 2-hour glucose value of capillary whole blood ≥11.1 mmol/L (200 mg/dl)

Tables 13.8 presents the percentage of the respondents with raised blood glucose (by fasting glucose or 2-hour blood glucose) or currently on medication for diabetes among the respondents excluding non-fasting respondents. Overall prevalence of raised blood glucose (by fasting glucose or 2-hour blood glucose) or currently on medication for diabetes was 10.5 % with 9.1% in the men and 11.8% in the women. Among the men, the prevalence of raised blood glucose (by fasting glucose or 2-hour blood glucose) or currently on medication for diabetes increased with an increase in age from 3.6% in the 25-34 year age group to 19.5% in the 55-64 year age group. Among the women also, the prevalence of raised blood glucose (by fasting glucose or 2-hour blood glucose) or currently on medication for diabetes increased with an increase in age from 4.5% in the 25-34 year age group to 23.7% in the 55-64 year age group.

Table 13.9 Currently on medication for diabetes

Currently on medication for diabetes									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	652	0.4	0.0-0.8	1153	0.9	0.3-1.4	1805	0.6	0.3-1.0
35-44	794	1.9	0.9-2.9	1626	2.3	1.2-3.4	2420	2.1	1.3-2.9
45-54	879	5.2	1.8-8.6	1604	6.2	4.2-8.2	2483	5.7	3.6-7.8
55-64	744	4.0	1.3-6.6	1282	10.1	6.7-13.5	2026	7.0	4.2-9.8
25-64	**3069**	**2.5**	**1.5-3.4**	**5665**	**3.9**	**2.7-5.0**	**8734**	**3.2**	**2.3-4.0**

Tables 13.9 presents the percentage of the respondents currently on medication for diabetes among the respondents. Overall percentage of current medication for diabetes was 3.2% with 2.5% in the men and 3.9% in the women. Among the respondents of both sexes and also among the women, the percentage of current medication for diabetes increased with an increase in age.

Table 13.10 Total cholesterol (mmol/L) of the respondents

Mean total cholesterol (mmol/L)									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	603	4.2	4.0-4.3	1101	4.4	4.3-4.5	1704	4.3	4.2-4.4
35-44	732	4.5	4.4-4.7	1564	4.7	4.6-4.8	2296	4.6	4.5-4.7
45-54	822	4.6	4.5-4.8	1557	5.0	4.9-5.1	2379	4.8	4.7-5.0
55-64	711	4.7	4.5-4.9	1243	5.2	5.1-5.4	1954	5.0	4.8-5.1
25-64	**2868**	**4.5**	**4.4-4.6**	**5465**	**4.8**	**4.7-4.9**	**8333**	**4.6**	**4.5-4.7**

Table 13.11 Total cholesterol (mg/dl) of the respondents

Mean total cholesterol (mg/dl)									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	603	161.2	156.2-166.3	1101	171.0	166.7-175.4	1704	166.2	162.4-169.9
35-44	732	175.5	171.0-180.1	1564	181.4	177.7-185.0	2296	178.5	174.7-182.2
45-54	822	179.8	174.9-184.6	1557	194.1	189.3-198.8	2379	187.0	182.5-191.5
55-64	711	181.9	173.2-190.6	1243	202.5	196.8-208.2	1954	192.2	185.8-198.6
25-64	**2868**	**172.6**	**168.5-176.7**	**5465**	**184.1**	**180.2-187.9**	**8333**	**178.4**	**174.5-182.2**

Tables 13.10 and 13.11 presents the mean total cholesterol among all respondents including those currently on medication for raised cholesterol (in mmol/l in

Table 13.10 and mg/dl in Table 13.11). The mean total cholesterol was 4.6 mmol/l (or) 178 mg/dl for both sexes but it was higher in the women than in the men. The mean total cholesterol increased with an increase in age for the men, the women and both sexes.

Table 13.12 Raised total cholesterol (Total cholesterol ≥5.0 mmol/L or ≥190 mg/dl or currently on medication for raised cholesterol) among the respondents

Total cholesterol ≥5.0 mmol/L or ≥190 mg/dl or currently on medication for raised cholesterol									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	603	20.2	15.4-25.0	1101	27.2	22.8-31.6	1704	23.7	20.2-27.3
35-44	732	31.8	27.2-36.4	1564	40.0	35.1-44.8	2296	35.9	31.5-40.4
45-54	822	38.4	32.0-44.9	1557	54.6	48.1-61.1	2379	46.6	41.1-52.2
55-64	711	41.7	30.3-53.0	1243	62.4	55.3-69.5	1954	52.0	43.7-60.4
25-64	**2868**	**30.9**	**26.5-35.4**	**5465**	**42.5**	**37.7-47.2**	**8333**	**36.7**	**32.2-41.2**

Tables 13.12 presents the percentage of the respondents with raised total cholesterol (total cholesterol ≥5.0 mmol/L or ≥190 mg/dl) or currently on medication for raised cholesterol among the respondents. Overall prevalence of raised total cholesterol (total cholesterol ≥5.0 mmol/L or ≥190 mg/dl) or currently on medication for raised cholesterol was 37% with 31% in the men and 42% in the women.

Table 13.13 Raised total cholesterol (Total cholesterol ≥6.2 mmol/L or ≥240 mg/dl or currently on medication for raised cholesterol) among the respondents

Total cholesterol ≥6.2 mmol/L or ≥240 mg/dl or currently on medication for raised cholesterol									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	603	2.3	0.6-4.0	1101	4.8	2.6-7.0	1704	3.5	1.8-5.3
35-44	732	6.4	3.4-9.5	1564	8.7	5.6-11.8	2296	7.6	5.3-9.9
45-54	822	5.9	4.1-7.7	1557	12.9	10.1-15.6	2379	9.4	7.5-11.4
55-64	711	7.4	3.4-11.5	1243	16.4	13.6-19.3	1954	11.9	9.4-14.5
25-64	**2868**	**5.1**	**3.6-6.6**	**5465**	**9.5**	**7.9-11.2**	**8333**	**7.3**	**5.9-8.7**

Tables 13.13 presents the percentage of the respondents with raised total cholesterol (total cholesterol ≥6.2 mmol/L or ≥240 mg/dl) or currently on medication for raised cholesterol among the respondents. Overall prevalence of raised total cholesterol

(total cholesterol ≥6.2 mmol/L or ≥240 mg/dl) or currently on medication for raised cholesterol was 7.3% with 5.1% in the men and 9.5% in the women.

Table 13.14 High density lipoprotein (HDL) (mmol/L) among the respondents

Mean HDL (mmol/L)									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	616	1.1	1.1-1.2	1106	1.3	1.3-1.3	1722	1.2	1.2-1.2
35-44	726	1.1	1.1-1.2	1561	1.2	1.2-1.3	2287	1.2	1.2-1.2
45-54	819	1.1	1.1-1.2	1550	1.2	1.2-1.3	2369	1.2	1.1-1.2
55-64	703	1.1	1.1-1.1	1235	1.3	1.3-1.3	1938	1.2	1.2-1.2
25-64	**2864**	**1.1**	**1.1-1.2**	**5452**	**1.3**	**1.2-1.3**	**8316**	**1.2**	**1.2-1.2**

Table 13.15 High density lipoprotein (HDL) (mg/dl) among the resondents

Mean HDL (mg/dl)									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	616	43.8	42.4-45.2	1106	50.3	49.5-51.1	1722	47.0	46.2-47.9
35-44	726	44.1	42.7-45.5	1561	48.0	47.0-49.0	2287	46.1	44.9-47.2
45-54	819	43.4	41.6-45.2	1550	47.3	46.0-48.6	2369	45.4	44.0-46.7
55-64	703	43.1	42.1-44.2	1235	49.1	48.4-49.9	1938	46.2	45.4-46.9
25-64	**2864**	**43.7**	**42.9-44.5**	**5452**	**48.8**	**48.1-49.5**	**8316**	**46.3**	**45.5-47.0**

Tables 13.14 and 13.15 present the mean HDL among the respondents (in mmol/l in Table 13.14 and mg/dl in Table 13.15). The mean HDL was 1.2 mmol/l (or) 46 mg/dl for both sexes but it was higher in the women than in the men. The mean HDL didn't vary much between age groups.

Table 13.16 Percentage of respondents with HDL <1.03mmol/L or <40 mg/dl and <1.29mmol/L or <50 mg/dl among the respondents

Percentage of respondents with HDL <1.03mmol/L or <40 mg/dl			
ge Group	Men		
(years)	n	%	95% CI
25-34	616	37.8	32.3-43.4
35-44	726	39.3	34.2-44.4
45-54	819	44.1	37.2-51.0
55-64	703	44.9	39.5-50.3
25-64	**2864**	**40.7**	**37.6-43.8**

Percentage of respondents with HDL <1.29mmol/L or <50 mg/dl			
Age Group	Women		
(years)	n	%	95% CI
25-34	1106	52.1	48.2-56.1
35-44	1561	60.1	56.2-63.9
45-54	1550	61.4	56.4-66.3
55-64	1235	53.6	49.1-58.2
25-64	**5452**	**56.6**	**53.7-59.4**

Table 13.16 presents the percentage of the respondents with low level of HDL among the men and among the women in separate tables. Level of HDL is considered as low if it is <1.03mmol/L or <40 mg/dl in the men (or) it is <1.29mmol/L or <50 mg/dl in the women. Prevalence of low HDL was 41% in the men and 57% in the women.

Table 13.17 Triglycerides (mmol/L) among the respondents

Mean fasting triglycerides (mmol/L)									
n	Men			Women			Both Sexes		
	N	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	578	1.5	1.4-1.6	1005	1.3	1.2-1.4	1583	1.4	1.3-1.4
35-44	699	1.6	1.5-1.8	1483	1.5	1.4-1.5	2182	1.5	1.5-1.6
45-54	796	1.6	1.5-1.7	1493	1.7	1.6-1.8	2289	1.7	1.6-1.7
55-64	683	1.5	1.4-1.6	1208	1.7	1.6-1.8	1891	1.6	1.6-1.7
25-64	**2756**	**1.6**	**1.5-1.6**	**5189**	**1.5**	**1.4-1.5**	**7945**	**1.5**	**1.5-1.6**

Table 13.18 Triglycerides (mg/dl) among the respondents

Mean fasting triglycerides (mg/dl)									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	578	130.1	121.5-138.8	1005	114.3	107.4-121.3	1583	122.3	116.3-128.3
35-44	699	145.3	135.2-155.4	1483	128.6	123.1-134.1	2182	137.0	131.8-142.3
45-54	796	144.8	134.9-154.7	1493	148.9	140.6-157.2	2289	146.9	140.5-153.3
55-64	683	134.2	123.4-144.9	1208	153.5	144.1-162.8	1891	143.9	137.3-150.4
25-64	**2756**	**138.3**	**132.6-144.0**	**5189**	**132.6**	**128.3-136.9**	**7945**	**135.4**	**131.3-139.6**

Tables 13.17 and 13.18 present the mean fasting triglycerides among all respondents excluding non-fasting respondents (in mmol/l in Table 13.17 and in mg/dl in Table 13.18). The mean fasting triglycerides was 1.5 mmol/l (or) 135 mg/dl for both sexes but it was higher in the men than in the women.

Table 13.19 Percentage of respondents with fasting triglycerides ≥1.7 mmol/L or ≥150 mg/dl among the respondents

Percentage of respondents with fasting triglycerides ≥ 1.7 mmol/L or ≥ 150 mg/dl									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	578	28.0	21.4-34.6	1005	18.2	14.8-21.7	1583	23.2	19.0-27.3
35-44	699	36.5	32.3-40.7	1483	27.3	23.2-31.5	2182	32.0	28.8-35.1
45-54	796	34.5	29.1-40.0	1493	38.6	34.1-43.2	2289	36.6	32.9-40.3
55-64	683	30.2	24.8-35.6	1208	42.6	36.9-48.3	1891	36.4	32.2-40.7
25-64	**2756**	**32.2**	**28.8-35.6**	**5189**	**29.4**	**27.2-31.6**	**7945**	**30.8**	**28.3-33.3**

Table 13.19 presents the percentage of the respondents with fasting triglycerides ≥1.7 mmol/L or ≥150 mg/dl among the respondents excluding non-fasting respondents. Overall prevalence of raised fasting triglycerides more than 6.2 mmol/L (240 mg/dl) was 31% with 32% in the men and 29% in the women.

Table 13.20 Percentage of respondents with fasting triglycerides ≥2.0 mmol/L or ≥180 mg/dl among the respondents

Percentage of respondents with fasting triglycerides ≥2.0 mmol/L or ≥180 mg/dl									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	578	19.0	13.5-24.6	1005	11.5	8.6-14.4	1583	15.3	12.2-18.3
35-44	699	24.6	20.7-28.4	1483	16.8	14.1-19.5	2182	20.7	18.4-23.0
45-54	796	21.2	15.7-26.7	1493	25.8	19.7-32.0	2289	23.5	19.5-27.6
55-64	683	15.2	9.8-20.7	1208	28.4	21.4-35.3	1891	21.8	18.3-25.4
25-64	**2756**	**20.4**	**17.6-23.3**	**5189**	**19.0**	**16.7-21.3**	**7945**	**19.7**	**17.5-21.9**

Table 13.20 presents the percentage of the respondents with fasting triglycerides ≥2.0 mmol/L (180 mg/dl) among the respondents excluding non-fasting respondents. Overall prevalence of raised fasting triglycerides more than ≥2.0 mmol/L (180 mg/dl) was 20% with 20% in the men and 19% in the women.

Table 13.21 Low density lipoprotein (LDL) (mmol/L) among the respondents

Mean LDL (mmol/L)									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	553	2.42	2.29-2.55	993	2.60	2.51-2.68	1546	2.51	2.42-2.60
35-44	662	2.62	2.50-2.73	1463	2.86	2.78-2.95	2125	2.74	2.66-2.83
45-54	762	2.80	2.68-2.93	1480	3.05	2.93-3.17	2242	2.93	2.82-3.04
55-64	672	2.87	2.71-3.03	1181	3.16	3.08-3.25	1853	3.02	2.92-3.11
25-64	**2649**	**2.63**	**2.53-2.74**	**5117**	**2.87**	**2.78-2.95**	**7766**	**2.75**	**2.66-2.84**

Table 13.22 Low density lipoprotein (LDL) (mg/dl) among the respondents

Mean LDL (mg/dl)									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	553	93.7	88.7-98.7	993	100.4	97.0-103.8	1546	97.1	93.7-100.4
35-44	662	101.3	96.8-105.7	1463	110.7	107.4-114.1	2125	106.1	102.9-109.3
45-54	762	108.3	103.5-113.1	1480	117.9	113.2-122.6	2242	113.2	108.9-117.5
55-64	672	110.9	104.7-117.1	1181	122.3	119.0-125.7	1853	116.6	112.9-120.4
25-64	**2649**	**101.9**	**97.8-105.9**	**5117**	**110.8**	**107.6-114.1**	**7766**	**106.4**	**103.0-109.8**

Tables 13.21 and 13.22 presents the mean LDL among the respondents (in mmol/l in Table 13.21 and in mg/dl in Table 13.22). The mean LDL was 2.8 mmol/l (or) 106 mg/dl for both sexes but it was higher in the women than in the men.

Table 13.23 Percentage of respondents with LDL ≥160 mg/dl among the respondents

Percentage of respondents with LDL ≥ 160 mg/dl									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	553	4.1	2.3-7.0	993	4.0	2.6-6.3	1546	4.1	2.9-5.6
35-44	662	6.8	4.3-10.4	1463	8.4	6.3-11.3	2125	7.6	5.9-9.7
45-54	762	6.3	4.3-9.0	1480	11.0	8.4-14.2	2242	8.7	6.9-11.0
55-64	672	8.9	4.6-16.4	1181	13.9	11.4-16.9	1853	11.4	8.6-15.0
25-64	**2649**	**6.1**	**4.6-8.0**	**5117**	**8.5**	**6.9-10.3**	**7766**	**7.3**	**5.9-8.9**

Table 13.23 presents the percentage of the respondents with the LDL ≥160 mg/dl among the respondents. Overall prevalence of the LDL ≥160 mg/dl was 7.3% with 6.1% in the men and 8.5% in the women.

Table 13.24 Percentage of respondents with LDL ≥190 mg/dl among the respondents

Percentage of respondents with f LDL ≥190 mg/dl									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	553	0.6	0.2-1.7	993	1.3	0.6-2.7	1546	0.9	0.5-1.7
35-44	662	0.1	0.0-0.4	1463	1.3	0.8-2.1	2125	0.7	0.4-1.1
45-54	762	1.8	0.9-3.3	1480	1.1	0.6-1.9	2242	1.4	0.9-2.2
55-64	672	1.3	0.6-3.1	1181	1.4	0.8-2.3	1853	1.3	0.8-2.2
25-64	**2649**	**0.8**	**0.5-1.2**	**5117**	**1.2**	**0.9-1.8**	**7766**	**1.0**	**0.8-1.4**

Table 13.24 presents the percentage of the respondents with the LDL ≥190 mg/dl among the respondents. Overall prevalence of the LDL ≥190 mg/dl was 1 % with 0.8% in the men and 1.2% in the women.

14. Cardiovascular disease risk

Table 14.1 CVD risk of ≥30% or existing CVD among the respondents aged 40-64 years

Percentage of respondents with a 10-year CVD risk ≥30% or with existing CVD*									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
40-54	1172	6.4	3.9-9.0	2359	12.8	9.7-16.0	3531	9.7	7.3-12.0
55-64	698	12.9	8.5-17.2	1229	22.0	19.1-25.0	1927	17.5	14.3-20.6
40-64	1870	8.5	6.2-10.7	3588	15.7	13.1-18.3	5458	12.1	9.9-14.3

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

Table 14.1 presents the percentage of respondents aged 40-64 years with a 10-year cardiovascular disease (CVD) risk ≥30% or with existing CVD. Overall prevalence of 10-year CVD risk ≥30% or with existing CVD was 12 % with 8.5% in the men and 15.7% in the women. This prevalence of 10-year CVD risk or existing CVD was approximately 2 times in 55-64 year age group, compared to 40-54 year age group, for both the men and the women.

Table 14.2 Drug therapy and counseling for those with CVD risk ≥30% or existing CVD among the respondents aged 40-64 years

Percentage of eligible persons receiving drug therapy and counseling to prevent heart attacks and strokes*									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
40-54	78	23.2	13.5-33.0	330	34.0	23.4-44.7	408	30.5	21.8-39.2
55-64	103	26.4	11.3-41.6	279	38.2	26.8-49.6	382	33.9	23.5-44.3
40-64	181	24.8	16.2-33.4	609	35.9	27.9-43.8	790	32.0	24.6-39.5

*Counseling is defined as receiving advice from a doctor or other health worker to quit using tobacco or not start, reduce salt in diet, eat at least five servings of fruit and/or vegetables per day, reduce fat in diet, start or do more physical activity, maintain a healthy body weight or lose weight.

Table 14.2 presents the percentage of receiving drug therapy and counseling (including glycaemic control) to prevent heart attacks and strokes among eligible persons (defined as aged 40-64 years with a 10-year cardiovascular disease (CVD) risk ≥30%, including those with existing CVD). There were 790 persons aged 40-64 years with a 10-year cardiovascular disease (CVD) risk ≥30% or with existing CVD. Among these eligible respondents, overall percentage of receiving drug therapy and counseling was 32% with 25% in the men and 36% in the women. This percentage did not vary much between 40-54 and 55-64 year age groups.

15. Summary of Combined Risk Factors

Table 15.1 Summary of Combined Risk Factors for men

Summary of Combined Risk Factors							
	Men						
Age Group (years)	n	% with 0 risk factors	95% CI	% with 1-2 risk factors	95% CI	% with 3-5 risk factors	95% CI
25-44	1375	7.5	4.9-10.0	78.9	76.1-81.7	13.6	10.2-17.1
45-64	1552	5.1	2.7-7.5	69.0	64.8-73.2	25.9	20.8-30.9
25-64	2927	6.6	4.6-8.6	75.1	72.3-78.0	18.3	14.4-22.3

Table 15.2 Summary of Combined Risk Factors for women

Summary of Combined Risk Factors							
	Women						
Age Group (years)	n	% with 0 risk factors	95% CI	% with 1-2 risk factors	95% CI	% with 3-5 risk factors	95% CI
25-44	2600	7.3	4.8-9.7	77.0	73.8-80.2	15.7	13.0-18.5
45-64	2766	3.3	2.0-4.5	67.4	63.2-71.7	29.3	25.4-33.3
25-64	5366	5.7	4.2-7.3	73.4	70.7-76.0	20.9	18.1-23.7

Table 15.3 Summary of Combined Risk Factors for both sexes

Summary of Combined Risk Factors							
	Both Sexes						
Age Group (years)	n	% with 0 risk factors	95% CI	% with 1-2 risk factors	95% CI	% with 3-5 risk factors	95% CI
25-44	3975	7.4	5.4-9.4	78.0	75.6-80.4	14.6	12.1-17.2
45-64	4318	4.2	2.7-5.7	68.2	65.8-70.7	27.5	24.3-30.8
25-64	8293	6.2	4.7-7.7	74.3	72.1-76.4	19.6	16.9-22.2

Tables 15.1, 15.2 and 12.3 present the percentage of respondents with 0, 1-2, or 3-5 of the following NCD risk factors —men, women and both sexes:

- Current daily smoking
- Less than five servings of fruit and/or vegetable per day
- Not meeting WHO recommendations on physical activity for health (<150 minutes of moderate activity per week, or equivalent)
- Overweight or obese (BMI ≥25 kg/m2)

• Raised BP (SBP ≥140 and/or DBP ≥90 mmHg or currently on medication for raised BP).

Overall prevalence of combined 3-5 risk factors was 20% with 18% in the men and 21% in the women. The prevalence of combined 3-5 risk factors was approximately 2 times in 45-64 year age group, compared to 25-44 year age group, for both the men and the women. Most of the respondents (74%) were in the 1-2 risk factors group with 75% of the men and 73% of the women in that group. About 6% of the respondents were free from any of these risks factors with 7% of the men and 6% of the women in that group.

Chapter 4: Conclusions

This survey was done among a nationally representative sample of 8757 adults aged 25 to 64 years from 52 townships of Myanmar in 2014. The survey covered 4 major behavioural risk factors (tobacco use, harmful use of alcohol, insufficient physical activity and low consumption of fruit and vegetable consumption) and 4 major biological risk factors (obesity, hypertension, raised blood glucose and abnormal lipid levels). This survey also collected additional information on some aspects of implementation of tobacco control policies and cervical screening exposure. All 8757 respondents participated in assessment of 4 major behavioural risk factors (tobacco use, harmful use of alcohol, insufficient physical activity and low consumption of fruit and vegetable consumption). Among 8757 respondents, 8495 (97%) completed assessment of obesity and hypertension, which involved measurement of height, body weight, waist, hip and circumference, and blood pressure measurement, 8429 (96%) completed assessment of raised blood glucose and abnormal lipid levels, which involved measurement of fasting blood glucose, 2 hour blood glucose after oral glucose load and total cholesterol, triglycerides, HDL and LDL.

The survey indicated that almost all of the major risk factors for NCDs were highly prevalent among adult population of Myanmar: current smoking was 26%, current smokeless tobacco use 43%, current drinking 20% (above 40% in 25-44 years age group), consumption of less than 5 servings of fruit and/or vegetable on average per day 87%, insufficient physical activity (defined as <150 minutes of moderate-intensity activity per week, or equivalent) 16%, prevalence of overweight and obesity (BMI ≥25 kg/m2) 22% (31% in the women), prevalence of raised BP (SBP ≥140 and/or DBP ≥90 mmHg or currently on medication for raised BP) 26%, combined prevalence of raised fasting blood glucose or raised 2-h blood glucose or currently on medication for raised blood glucose 10.5%, prevalence of raised total cholesterol (≥190 mg/dl) or currently on medication for raised cholesterol) 37%, prevalence of low HDL 41% in the men 57% in the women, prevalence of fasting triglycerides (≥150 mg/dl) 31% and prevalence of high LDL (≥160 mg/dl) 7%. The current survey also found out that 39% of the respondents were exposed to second-hand tobacco smoke at their home and 28% of the respondents were exposed to second-hand tobacco smoke in their workplace. The study pointed out

that a high percentage of the respondents never had their blood pressure and blood sugar measured, 37% and 86%, respectively. Among hypertensive respondents, only 9.2% received treatment for high blood pressure (2.8% treated and controlled and 6.4% treated but not controlled). This study shows the very low percentage (4.4%) of ever having a screening test for cervical cancer among the female respondents aged 30-49 years in Myanmar.

Prevalence of most risk factors was higher in the women than in the men: low consumption of fruit and vegetable (88% vs. 85%), insufficient physical activity (19% vs. 13%), overweight and obesity (31% vs. 14%), hypertension (28% vs. 25%), diabetes (12% vs. 9%) and raised total cholesterol (43% vs. 31%). Prevalence of a few risk factors were higher in the men than in the women: current smoking (44% vs. 8%), current smokeless tobacco use (62% vs. 24%), current (past 30 days) drinking of alcohol (38% vs. 1.5%).

In this study, most of risk factors were more prevalent in older age groups than in the younger age groups: current smoking (33% in 55-64 year age group vs. 22% in 25-34 year age group), insufficient physical activity (20% in 55-64 year age group vs. 15% in 25-34 year age group), hypertension (43% in 55-64 year age group vs. 12% in 25-34 year age group), diabetes (22% in 55-64 year age group vs. 4% in 25-34 year age group) and high total cholesterol (52% in 55-64 year age group vs. 24% in 25-34 year age group). Current alcohol drinking was higher in younger age groups than in the older age groups: (25% in 25-34 year age group vs. 9% in 55-64 year age group). Overweight and obesity were more prevalent in 45-54 year age group (29%) than other age groups. Current smokeless tobacco use was higher in younger age groups than in older age groups for the male respondents (over 60% in 25-44 year aged men vs. less than 60% in 45-54 year aged men). Prevalence of low consumption of fruit and vegetable consumption was not much different across age groups (86-87% for all age groups).

In the study population, almost all respondents have at least one NCD risk factor and 20% of the respondents had 3-5 risk factors in combination (15% in the 25-44 year and in 28% in the 45-64 year age group). This survey highlighted that 12% of the respondents aged 40-64 years had already had one kind of CVDs or a high level (i.e.,

≥30%) of 10-year cardiovascular disease risk and that percentage was higher in the women than that in the men in the same age range (16% vs. 9%).

Many risk factors assessed in this survey were higher than those in the national NCD risk factor survey done in 2009 in Myanmar: current smoking (26% vs. 17%), current smokeless tobacco use (43% vs. 22%), current drinking (20% vs.13%) and insufficient physical activity (16% vs. 13%). The difference in age composition between the current survey (24-64 years) and the 2009 survey (15-64 years) may account for some small amount of increase in prevalence of these risk factors. A few risk factors assessed in this national survey were lower than those in the national NCD risk factor survey done in 2009: consumption of less than 5 servings of fruit and/or vegetable on average per day (87% vs. 90%), prevalence of overweight and obesity (22% vs. 25%), prevalence of hypertension (26% vs. 30%).

The national NCD risk factor survey done in 2009 did not include assessment of blood glucose and blood lipids so that diabetes and abnormal lipid levels cannot be compared between the current national survey and the 2009 national survey. But in 2003, a sub-national NCD risk factors survey including assessment of blood glucose and blood lipids was done in Yangon Region, which is probably the most urbanized region among all 14 Regions and States of Myanmar. Prevalence of diabetes in Yangon Region was higher in 2014 (18%) than that in 2003 (12%) but prevalence of raised total cholesterol in current national survey was higher than that in the 2003 sub-national NCD risk factor survey (31% vs. 21% for men and 43% vs. 35% for men).

Many risk factors assessed in this survey were higher than those in the NCD risk factor surveys done in recent years in most of other South East Asia countries: current smoking (26% in Myanmar vs. 21.5% in Thailand in 2007[14], 18.8% in Maldives in 2011[15], 18.5% in Nepal in 2013[16], 18% in 7 States of India in 2004[17], 16.6% in Western Province of Sri Lanka in 2003[18], 15.7% in Depok municipality of Indonesia in 2006[19] and 7.4% in Bhutan in 2014[20]), current smokeless tobacco use (43% in Myanmar vs. 31.7% in Bangladesh in 2010[21], 19.4% in Bhutan in 2014[20] and 9% in 7 States of India in 2004[17]), current drinking (20% in Myanmar vs. 17.4% in Nepal in 2013[16], 14% in 7 States of India in 2004[17], 0.9% in Maldives in 2011[15] and 0.9% in Bangladesh in 2010[21]), low daily consumption of fruit and vegetable (87% in Myanmar vs. 83.2% in Depok municipality of

Indonesia in 2006[19], 77.5% in Thailand in 2007[14] and 66.9% in Bhutan in 2014[20]), insufficient physical activity (16% in Myanmar vs. 15.6% in Western Province of Sri Lanka in 2003[18], 6.4% in Bhutan in 2014[20] and 3.5% in Nepal in 2013[16]), overweight and obesity (22% in Myanmar vs. 21.6% in Nepal in 2013[16], 19.1% in Thailand in 2007[14], 17% in Bangladesh in 2010[21], 13.8% in Depok municipality of Indonesia in 2006[19], 13% in 7 States of India in 2004[17] and 4.4% in DPRK in 2008[22]), hypertension (26% in Myanmar vs. 23% in Thailand in 2004[14], 20% in 7 States of India in 2004[17], 18.7% in DPRK in 2008[22], 17.9% in Bangladesh in 2010[21], 16.6% in Maldives in 2011[15], 6.9% in Western Province of Sri Lanka in 2003[18] and 4.2% in Depok municipality of Indonesia in 2006[19]), diabetes (10.5% in Myanmar vs. 8% in Depok municipality of Indonesia in 2006[19], 7.5% in Thailand in 2009[23], 6.4% in Bhutan in 2014[20] and 3.6% in Nepal in 2013[16]), raised total cholesterol (37% in Myanmar vs. 22.7% in Nepal in 2013[16], 19.6% in Depok municipality of Indonesia in 2006[19] and 12.5% in Bhutan in 2014[20]).

Some risk factors assessed in this survey were lower than those in the NCD risk factor surveys done in recent years in some other South East Asia countries: current drinking (20% in Myanmar vs. 22.6% in DPRK in 2008[22], 35.9% in Western Province of Sri Lanka in 2003[18] and 42.4% in Bhutan in 2014[20]), low daily consumption of fruit and vegetable (87% in Myanmar vs. 93.6% in Maldives in 2011[15], 95.7% in Bangladesh in 2010[21], 96.9% in Western Province of Sri Lanka in 2003[18], 98.9% in Nepal in 2013[17]), insufficient physical activity (16% in Myanmar vs. 45.9% in Maldives in 2011[15], 27% in Bangladesh in 2010[21], 68% in 7 States of India in 2004[17], 2010, 21.5% in Depok municipality of Indonesia in 2006[19]), overweight and obesity (22% in Myanmar vs. 33% in Bhutan in 2014[20] and 37.1% in Maldives in 2011[15]), hypertension (26% in Myanmar vs. 35.7% in Bhutan in 2014[20])

A few risk factors assessed in this survey were similar in level to those in the NCD risk factor surveys done in recent years in a few number of other South East Asia countries: current smoking (26% in Myanmar vs. 26.2% in Bangladesh in 2010[21], 25.7% in DPRK in 2008[23]); low daily consumption of fruit and vegetable (87% in Myanmar vs. 88% in 7 States of India in 2004[17]), overweight and obesity (22% in Myanmar vs. 21.6% in Nepal in 2013[17]), hypertension (26% in Myanmar vs. 25.7% in Nepal in 2013[17]).

Prevalence of existing CVDs or a high level (i.e., ≥30%) of 10-year cardiovascular disease risk among the people aged 40-64 years in Myanmar is much higher than that among the people aged 40-69 years in Bhutan in 2014 (12% in Myanmar vs. 1.8% in Bhutan[20]).

Prevalence of 3 or more NCD risk factors among the people aged 25-64 years in Myanmar in 2014 (20%) is higher than those in Bhutan in 2014 (13.5%)[20], Depok municipality of Indonesia in 2006 (11.4%)[19] and Nepal in 2013 (15.5%)[16] but lower than that in Maldives in 2011 (39.5%)[15].

It can be concluded that almost every adult have at least one NCD risk factor; percentage with multiple NCD risk factors (3 or more risk factors) is high; 10-year CVD risk is also high; most of major NCD risk factors in Myanmar are high in prevalence, notably smoking, smokeless tobacco use, exposure to second-hand smoke, current alcohol drinking (esp. in younger males), low consumption of fruit and vegetable, overweight and obesity (esp. in the women), hypertension, diabetes and abnormal lipid levels; in general, the women are at higher risk of NCDs than the men in Myanmar; and Myanmar is high in rank among South East Asia countries in terms of prevalence of many NCD risk factors access to cervical cancer screening, blood pressure screening and blood sugar screening is low; the very low percentage of hypertensive people was receiving treatment.

Chapter 5: Recommendations

(1) Based on the results of the survey, policy and strategies should be tailored to effectively tackle the prevailing risk factors for NCDs in Myanmar, focusing on tobacco use, healthy diet, prevention and control of hypertension and diabetes.

(2) An integrated policy on NCD prevention and control should be developed and enacted to set up and boost essential NCD prevention and control activities.

(3) Comprehensive programmes for behaviour change communication targeting the major NCD risk factors in Myanmar should be developed.

(4) An attempt should be made to enforce the existing tobacco law and prevention of second-hand smoking.

(5) Great emphasis should be paid to prevention and control of smokeless tobacco use and betel chewing in policies and programs on NCD prevention and control.

(6) Comprehensive alcohol control strategies should be developed, focusing on reduction of alcohol consumption among younger citizens.

(7) Interventions should be introduced to increase the consumption of fruit and vegetable among the community.

(8) Action is required at the national level to develop community-based physical activity programmes which match the needs of the modern lifestyle.

(9) Since the study revealed that a high percentage of the respondents never had their blood pressure and blood sugar measured and a high percentage of the female respondents never had cervical screening, there is a need for policies and programmes for community screening of high blood pressure, high blood sugar and cervical cancer.

(10) Standard management of hypertension should be made widely and easily accessible to the communities.

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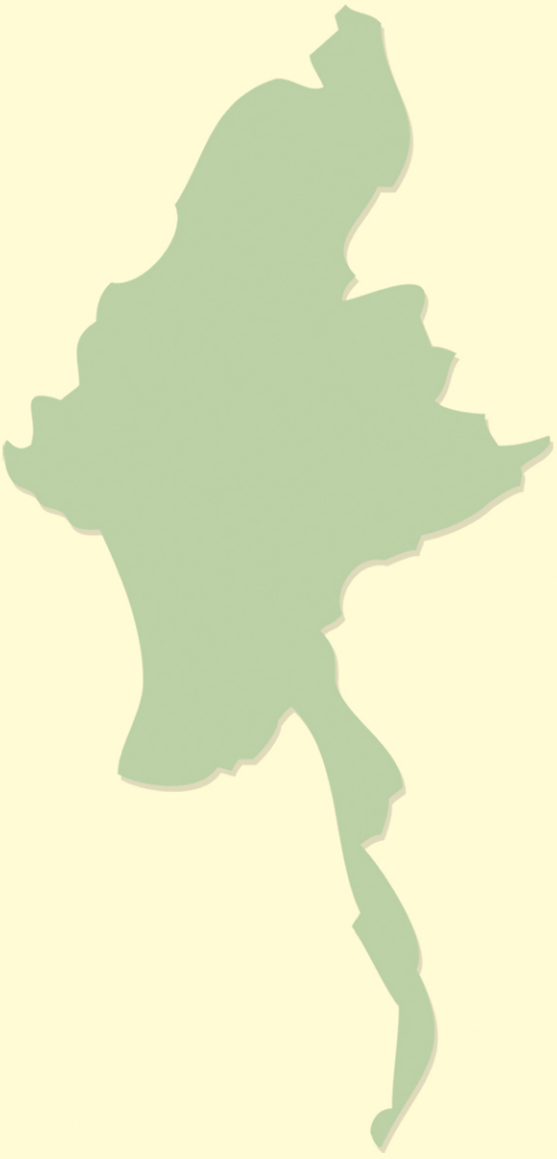

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