Solomon Islands NCD Risk Factors

STEPS REPORT

Solomon Islands

World Health Organization
Western Pacific Region

Solomon Islands NCD Risk Factors STEPS REPORT

Acknowledgements

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LIST OF ABBREVIATIONS

BMI	Body Mass Index
BP	Blood Pressure
CHD	Coronary Heart Disease
CI	Confidence Interval
CVD	Cardiovascular Disease
DBP	Diastolic Blood Pressure
DM	Diabetes Mellitus
FBS	Fasting Blood Sugar
HTN	Hypertension
MET	Metabolic equivalent
mg/dl	Milligrams per decilitre (unit of blood chemistry values)
mmHg	Millimetres of mercury (unit of blood pressure measurement)
mmol/L	Millimoles per litre (unit for blood chemistry values)
NCD	Noncommunicable disease
PICs	Pacific island countries and areas
SBP	Systolic Blood Pressure
WHO	World Health Organization
MHMS	Ministry of Health and Medical Services

FOREWORD

Almost every country in the world has experienced a dramatic increase in chronic or lifestyle diseases that lead to death – attributable to change in lifestyles and the surrounding environment—referred to many as noncommunicable diseases (NCDs). In order to address this growing problem effectively and efficiently, we must have accurate information regarding the risk factors that contribute to the development of NCDs. A "Risk factor" refers to any characteristic or exposure that increases a person's likelihood of developing a NCD. These risk factors include smoking, alcohol use, physical inactivity, obesity, high blood pressure, a raised level of blood glucose or cholesterol, and an unbalanced diet. Each country needs to establish its capacity in order to conduct population risk surveillance over time for countries' planning of program activities and services.

We are pleased that the WHO has assisted the Solomon Islands to build our national capacity in population risk factors survey and analysis. The findings suggest actions for implementation of policy in NCD control and prevention, supportive physical environment and infrastructure, and improved health care services. The Solomon Islands NCD STEPS survey was specifically designed to assess the prevalence of the common NCDs and risk factors in our population. The information from this survey provides an important platform for the development and implementation of strategic plans and programs to address the growing epidemic of NCDs in Solomon Islands.
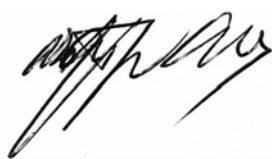
This report is the result of the STEPS survey carried out in Solomon Islands in 2005-2006. It shows high prevalence of NCDs and their risk factors among our population and suggests actions to: control and prevention NCDs; provide a supportive physical environment and infrastructure, and improved health service delivery.

This is the first population-based survey on the prevalence of the NCD risk affecting our population. It represents a milestone in our efforts to address the increasing NCD epidemic affecting our people and marks an increased commitment by the Ministry of Health and Medical Services to tackle the NCD challenge. The survey results and recommendations will enable us to develop more effective health policies and programs in primary and secondary NCD prevention and in monitoring and evaluating our ongoing efforts in NCD prevention.

The WHO STEPS survey in Solomon Islands would not have been possible without the vision and leadership of our predecessors. Their determination enabled this important survey to be given priority in Solomon Islands.

Their determination in ensuring that Solomon Islands STEPS survey with WHO's support has been realized. Last but certainly not the least, we would like to thank all the staff of this Ministry of Health and Medical Services, partners like the Fiji School of Medicine for completing the first ever NCD population survey in Solomon Islands, WHO for its strong technical support, and AusAID for financial support. This report is dedicated to the hard work and commitment evidenced from the inception to the completion of the NCD Risk Factors STEPS survey in Solomon Islands.

We hope that the findings and recommendation in this report will guide our actions for improving health for all.

Mr Clay Forau Soalaoi
Minister for Health and Medical Services
Solomon Islands

Dr Lester Ross
Permanent Secretary
Ministry of Health and Medical Services
Solomon Islands

The WHO STEPwise Approach to Surveillance of Risk Factors for NCDs (STEPS) is the WHO recommended surveillance tool for chronic disease risk factors and chronic disease-specific morbidity and mortality at national level. To date, 120 countries and areas throughout the world utilize WHO STEPS to conduct national surveys on risk factors of chronic disease and morbidity of NCDs. The publication of the "Solomon Islands NCD Risk Factors STEPS REPORT" marks a milestone as it provides the scientific, national, updated and comparable data that will assist the government in addressing the escalating issue of NCDs.

The national STEPS Survey in Solomon Islands was conducted in 2005-2006. Some of the key results of the survey and the report include the following:

- 30.6% of the population smoked tobacco daily.
- 62.6% of the total population (67.8% of men and 57.3% of women) chewed betel nut.
- 25.1% of men drank an average of 5 or more standard drinks of alcohol, 20.3% of women drank an average of 4 or more standard drinks of alcohol per day in the past week.
- 93.6% of the population consumed less than five combined servings of fruit and vegetables per day.
- 41.9% of the population was with low level of physical activity.
- 67.4% of the population was overweight, 32.8% was obese.
- 13.5% of the population was diabetic.
- 10.7% of the population was hypertensive.

WHO has developed "the summary of combined risk factors", selecting five common and critical risk factors for NCDs: current daily smokers, overweight (BMI≥25kg/m²), raised blood pressure (SBP≥140 and/or DBP≥90 mmHg or currently on medication for raised blood pressure), less than 5 servings of fruit and vegetables per day and low level of physical activity (<600 METminutes per week). According to this comprehensive assessment, only 0.7% of the whole population in Solomon Islands was of low risk to NCDs, compared with 46.0% of the population at high risk. More attention is required for those aged 45 to 64 years age group for both men (56.9%) and women (53.1%) classified at high risk for NCDs.

These results clearly document that NCDs are a major problem in Solomon Islands. The national STEPS results can be used for formulating or updating the national NCD strategy, evaluating the impact of comprehensive NCD intervention activities, monitoring national trends, etc.

Future priorities need to be given to both primary and secondary prevention activities to prevent and control key NCDs, including diabetes, cardiovascular diseases, cancer, and their risk factors including smoking and betel nut use, unhealthy diet, physical inactivity and excessive consumption of alcohol.

WHO is honoured to be a critical part of the collaborative efforts between the Solomon Islands Ministry of Health and Medical Services, the Fiji School of Medicine, Australian Agency for International Develoment and New Zealand Agency for International Development to complete the national STEPS survey and report in Solomon Islands.

WHO, through its offices in Honiara, Suva, Manila and Geneva is proud to collaborate with the Solomon Islands Ministry of Health and Medical Services in publishing this first national NCD STEPS report in Solomon Islands and will continue to work with health authorities, health workers and the public to address the issues raised in this report.

Dr Chen Ken
World Health Organization Representative
in the South Pacific

Dr William Adu-Krow
World Health Organization Country Liaison Officer
for Solomon Islands

Executive Summary

The Solomon Islands NCD STEPS survey provides the baseline assessment of the risk factors of noncommunicable diseases (NCDs) and their associated risk factors among Solomon Islanders. The data are based on three populations within the nation: in Honiara the national capital in Guadalcanal Province, Gizo in Western Province and Auki in Malaita. The survey data were collected between December, 2005 and November, 2006.

The key objectives of the NCD STEPS survey were:

- To document the prevalence and magnitude of key NCDs among adults
- To document the prevalence and magnitude of major modifiable risk factors for NCDs including tobacco use, betel nut use, alcohol consumption, dietary behaviours, physical inactivity, obesity, raised blood pressure, raised blood glucose and cholesterol levels
- To compare NCDs and their risk factors across different age groups and between men and women.

A total of 2,833 individuals aged 15-64 participated in the survey. This report's main tables present data and commentary on the sample aged 25-64 years (n=1925), following the standard age group reporting for WHO STEPS surveys. Additional results for respondents aged 15-24 years are described at the end of each section of behavioural risk factors. Some risk factor behaviours (like tobacco and alcohol consumption) were worse for this group than for older adults.

Step 1. Behavioural risk factors

Overall, the prevalence of current smokers among those aged 25-64 years was 39.8%. More than half of men (54.1%) were current smokers compared to 25% of women. Among current smokers 30.6% smoked daily (smoking all types), with a gender difference of 43.9% of men and 16.9% of women. The mean age at which smoking started was reported to be 21 years, although people in the 15-24 years age group reported starting at 16 years.

Betel Nut chewing is widespread in the Solomon Islands and was practiced by 62.6% of the total population (67.8% of men and 57.3% of women). Thirty percent (30%) of males and females combined chewed betel on a daily basis. Importantly, rather than being on the decrease among young people betel was chewed by 77.5% of men and 66.3% of women in the 15-24 years age group. The data also reveals a younger mean age of uptake in the youngest group, again suggestive of a recent reduction in the age of uptake. Data on the duration of betel chewing suggest that, once started, it remains a lifetime habit, as those in the age group 55-64 had a mean of 33 years duration of betel consumption.

Overall, 33.5% of the sample had consumed alcohol in the past 12 months and were classified as current drinkers, highest in the youngest age groups of 15-24 (45.3%) and in age group 25-34 (42%). A significant gender difference of 51.5% of men and 14.9% of women current drinkers was observed in age groups 25-64; higher still in the 15-24 age group (63.8% of males and 25.2% of females). Among male current drinkers 25.1% reported drinking more than 5 standard drinks on a drinking day and 20.3% of women reported drinking 4 or more, suggestive of 'binge drinking'. The highest proportion of binge drinking among men was in the 35-44 years age group and among women in the 45-54 years age group (27.1% and 23.8% respectively).

The average consumption of fruit and vegetables among Solomon Islands falls well below the recommended levels. The mean number of days per week fruit and vegetables were consumed were 2.5 and 4.7 days for men and women, respectively. When fruit and vegetables were consumed on those days, the mean number of combined fruit and vegetables servings was 2.1 serves per average

day. The vast majority (93.6%) consumed less than 5 combined servings of fruit and vegetables per day.

The survey found that 41.9% of the sample reported a low level of total physical activity, that is, less than 600 METminutes per week (males 557 and females 455 METminutes per week respectively). 600 METminutes per week are equivalent to 30 minutes of moderate-intensity physical activity for 5 days per week, or 20 minutes of vigorous activity for 3 days per week. A greater proportion of women (47.4%) had low level of physical activity compared to men (36.5%). Conversely, a higher proportion of men reported a high level of total physical activity compared to women (38.1% and 26.9% respectively), largely due to work-related activities. Main contribution to physical activity in the Solomon Islands was from the work domain, followed by transport and recreation-related activities.

Step 2: Physical risk factors

The overall prevalence of overweight (BMI ≥25kg/m^2) was 67.4%, and of obesity (BMI ≥30kg/m^2) was 32.8%. Among women, 72.7% were overweight and 40.4% of these were obese. Among men, 62.5% were overweight and 25.8% of these were obese. An estimated 32.0% of the sample had a normal body mass index (18.5 ≤ BMI ≤ 24.9): 26.5% of women and 37.0% of men.

Mean waist circumference was similar in both genders and highest in males aged 45-54. Women in age groups 35-64 had mean waist circumference values exceeding 88 cm, a cut-off value for women considered to increase cardiovascular disease risks; while males were well below the 102cm where the risk of cardiovascular disease increases.

The survey found an estimated 10.7% of the sample had raised blood pressure/was hypertensive (defined as having SBP ≥140 mmHg and/or DBP ≥90 mmHg or on medication for raised blood pressure). Hypertension increased with age in both genders, increased significantly in the 45-54 years age group and was highest in women in the 55-64 years age group.

Step 3. Biochemical risk factors

Based on measures of fasting capillary whole blood, the overall prevalence of diabetes (fasting glucose level ≥6.1 mmol/L or on medication for raised blood glucose) in the sample aged 25-64 years was 13.5%, with a slightly higher rate among men (15.3%) than women (11.7%). Rates of diabetes increased with age in both genders and was highest among males aged 55-64.

Overall, 24.6% of the sample was found to have raised total blood cholesterol levels exceeding 5.0 mmol/L (≥190 mg/dl), higher in women (28.5%) than in men (19.6%) and highest in women in the 55-64 years age group, where half of the sample had raised cholesterol.

Combined risk factors

As the number of NCD risk factors for an individual increases, so does the risk of developing an NCD. For this report, the surveyed population was classified into three NCD risk categories: High Risk (with 3-5 risk factors), Moderate Risk (with 1-2 risk factors) or Low Risk (with no risk factors). The combined NCD risk factors included in the computation of NCD risk categories were current daily smokers, overweight (BMI ≥25 kg/m^2), raised blood pressure (SBP ≥140 and/or DBP≥90 mmHg or currently on medication), consuming less than five combined servings of fruit and vegetables per day, and a low level of physical activity (<600 METminutes per week).

This survey found that overall, less than 1% of the sample was at Low Risk of NCDs, 53.3% at Moderate Risk and 46.0% at High Risk. In age group 25-44 years, 54.8% of men and 59% of women were already at Moderate risk of NCD, reporting 1-2 risk factors and 44.2% of men and 40.7% of women were at High risk, reporting 3-5 risk factors.

Conclusion

The Solomon Islands STEPS survey represents a significant step forward in gathering national information for informing the national strategy for the prevention, control and management of NCDs. The survey has provided strong evidence that NCDs and related modifiable risk factors are prevalent in the Solomon Islands. One outstanding feature of the findings is that the youngest group (15-24) appears to have adopted NCD risk laden behaviours at an earlier age than the rest of the sample. This factor alone suggests that current prevention programs are not deterring them from adopting these behaviours and that they are a clear target group for health education, health promotion and health protection initiatives.

The following recommendations are outlined as priority actions for the Solomon Islands:

Addressing Information needs

That the Ministry of Health and Medical Services:

- Use the opportunity of the publication of this Solomon Islands NCD Risk Factors STEPS Report to organize national NCD risk factor reduction campaigns, focusing on adults, children should be paid attention too
- Compare the sub-samples (Honiara with Gizo and Auki) to determine whether differences   exist between them in the consumption of fruit and vegetables, cigarettes, betel nut and alcohol and in other NCD risk behaviours
- Conduct additional analysis of the data contained herein to compare mean values and   identify statistically significant associations among the variables
- Establish strong leadership and secure political and financial commitment to maintain a systematic and rigorous approach to STEPS data collection supported by a workforce trained in implementing the survey, in order to create an ongoing and robust STEPS surveillance system in the Solomon Islands
- Repeat the NCD STEPS surveys periodically to determine the outcome of the NCD prevention and control programmes/activities implemented in the Solomon Islands
- Participate in the comparison of NCD STEPS findings across all PICs that have completed the NCD STEPS survey, in order to identify the risk factors that are particular to and most amenable to modification within the Solomon Islands

Addressing policy, organizational and environmental factors

That government:

- Earmark funds for ongoing NCD strategy implementation and monitoring
- Implement the WHO Framework Convention on Tobacco Control and the Regional Action Plan for the Tobacco-Free Initiative 2010-2014 for the Western Pacific
- Consider the potential for manufacturers and importers of cigarettes and alcohol to be taxed to the degree that they subsidize the health services provided to consumers of their products
- Generate resources for ongoing national health education programs aimed at national and personal productivity
- Continue to ban Betel nut from sale in urban markets
- Develop policies supporting importation of healthy foods
- Investigate the potential to improve the distribution, marketing and availability of fruit and vegetables
- Develop policies to establish physical activity-friendly environments, such as walking tracks, urban parklands, sports facilities and workplace fitness programs

Addressing NCD behavioural risk factors

That government, Ministry of Health and Medical Services and NGO agencies create and provide:

- Comprehensive anti-smoking campaigns to reduce smoking rates, particularly targeting teenagers and the younger adult age groups to prevent smoking uptake, and smoking cessation programs to reduce smoking rates across all age groups
- Comprehensive health promotion campaigns to reduce alcohol consumption, particularly targeted at young people and binge drinking
- Comprehensive health promotion campaigns promoting the recommended levels of fruit and vegetable consumption and increasing public awareness of the adverse effects of excessive consumption of high-fat, high-salt, and high-sugar foods
- Culturally-appropriate and diverse programs to promote daily physical activity
- Public awareness campaigns on the importance of regular monitoring and screening of blood pressure, blood cholesterol and blood sugar levels
- Public awareness programs targeted to increase awareness of the multipliers of NCD risk associated with combining the 5 major NCD risk factors (current daily smoking, being overweight, having raised blood pressure, eating less than five combined servings of fruit and vegetables per day, and having a low level of physical activity)
- A system of community-based care and management of individuals with diagnosed NCDs

1. INTRODUCTION

1.1   Background and Rationale

In all countries, non-communicable diseases (NCDs)[1] are responsible for a high proportion of death and disability. In developing countries, the burden of disease caused by NCDs is increasing rapidly and there are significant social, economic, and health consequences for these countries. NCDs caused an estimated 60% of deaths in the world and 43% of the global burden of diseases in 1999. Based on current trends, by the year 2020 these diseases are predicted to account for 73% of deaths and 60% of the disease burden[2]. Most of these increases will reflect the epidemiological transition in developing countries; from communicable to non communicable diseases.   Unless increasing prevalence can be reversed the disability and dependency that accompanies NCDs will present an increasing burden on health facilities and on families.

Despite such observations that NCDs are an increasing health burden to the country, to date there is no in-depth knowledge of the prevalence of the common risk factors contributing to NCDs in the Solomon Islands. Comprehensive policy has not progressed since the Ministry of Health and Medical Services developed a *Practical Guide to Management of NCDs* in 2001. Whilst the guide is helpful to clinical management, there is a need for a clearer understanding of the cultural and behavioural factors that contribute to NCDs in order to improve prevention and control programs.

This STEPS survey, being the first in the Solomon Islands, provides a baseline for future STEPS surveys to assist in determining the effectiveness, or otherwise, of prevention and control measures. It also provides the basis for comparison with other countries. In the immediate term, this STEPS report provides information for national policy development, health education programs and health protection and promotion initiatives, as ultimately, the improvements in diet and physical activity and the control of risk laden consumptions are vested with the nation, the community and the individual.

1.2   The National Context

1.2.1 Geography

The Solomon Islands is a group of almost 1,000 islands lying to the east of Papua New Guinea. Together they cover a land mass of 28,400 square kilometres. The climate of the Solomon Islands is mostly tropical and monsoonal with little extremes in temperature and a mean annual temperature of 27 °C. The terrain is mostly rugged mountains with some low coral atolls.

1.2.2 Population and Living Environment

In 2005 the population of the Solomon Islands was estimated at 538,032 people. The population profile was estimated as: 0-14 years: 41.9%, 15-64 years: 54.9% and 65 years and over: 3.2%. Population growth was estimated as 2.68% per annum, highest in the Pacific region and sufficient to double the population in 25 years. The birth rate was estimated at 30.74 births/1,000 population and the mortality rate at 3.98 deaths/1,000 population. The living environment of Honiara and northern Guadalcanal reportedly differ from the non-economically active provinces, where the population survives on subsistence farming and have comparatively less access to health and other services.

1.2.3 Government, Culture and the Economy

The Solomon Islands achieved independence from The United Kingdom in 1978. The form of government is a parliamentary democracy. The Solomon Islands has 10 administrative divisions, 9 of

which are provinces; Central, Choiseul, Guadalcanal, Isabel, Makira-Ulawa, Malaita, Rennel and Bellona, Temotu, Western and 1 capital territory - Honiara.

The majority population is Melanesian (94.5%) and minority groups include, Polynesian (3%), Micronesian (1.2%), other (1.1%) and unspecified (0.2%). There are approximately 64 indigenous languages spoken in the Solomon Islands. Culturally, Solomon Islanders participate in Melanesian traditions, where ancestral guides assist in maintaining cultural values and land ownership is clan based, leading to modern day tensions as outer island populations move to Guadalcanal, where the capital is situated along with much of the nation's economic activity.

The economy is largely subsistence, and people depend on agriculture, fishing, and forestry for their livelihood (75% of the labour force). Its per capita GDP of US$600 ranks Solomon Islands as a lesser developed nation.

1.2.4 Noncommunicable Disease, Health Status and Health Infrastructure

Ministry of Health and Medical Services Plan 2004-5 identified its second priority as "reducing the health determinants or factors contributing to poor health and poverty". The prevention and control of NCDs is consistent with this priority. The Plan states that "in sum, the population health status has not been severely affected despite the crisis but the health determinants and risk factors to poor health and poverty have been observed to have deteriorated significantly in the past few years at an alarming rate". The policy goals on morbidity and mortality reduction included: "To prevent or delay onset of the noncommunicable diseases, including reduction in occupational diseases, in order to maximize disability-free and productive lives in older age".

In 2005, cardiovascular diseases, neoplasms, malaria, respiratory diseases and neonatal causes were major causes of mortality. Cardiovascular diseases (cerebrovascular accident or CVA as the leading causes) was the leading cause of mortality. Although infectious diseases are still major causes of morbidity and mortality, there is some evidence that noncommunicable diseases like cancer (cervical and breast cancers are reported to be the most common, followed by lung cancer), diabetes mellitus, hypertension, tobacco-related diseases and mental illness are increasing noticeably (WHO 2005-9). Adult mortality is high, with an average life expectancy of only 60.6 years for males and 61.6 years for females. Average life expectancy for both men and women is close to being the lowest in the Pacific region.

The provision of health services in Solomon Islands is a function of the central Government in agreements with implementing agencies in the province under the Provincial Agreement Act. It relies heavily on primary health care approaches and community participation. There are 157 public sector health facilities 116 of which are primary health care centres, 29 are district level referral hospitals and 12 are general hospitals, including the National Referral Hospital in Honiara. The reliance on primary health care approaches challenges the nation to provide adequate services for the prevention and management of NCDs at the local level.

1.3   Developing WHO STEPS Survey in Solomon Islands

No population-wide epidemiological data on NCD risk factors have been collected in the Solomon Islands. Recognizing the gap in knowledge on the magnitude of major NCDs and their risk factors for planning and policy development, a number of agencies came together to implement the WHO STEPS survey in 2004. The survey was conducted by the Ministry of Health and Medical Services, with technical support provided by the Fiji School of Medicine and the World Health Organization.

2.   OBJECTIVES

The overall aim of the NCD STEPS risk factor survey is to investigate the prevalence of key NCDs and their associated risk factors.

The STEPS survey:

- Documents the prevalence and magnitude of key NCDs among adults
- Documents the prevalence and magnitude of major modifiable risk factors for NCDs including smoking, alcohol consumption, poor eating patterns, physical inactivity, obesity, raised blood pressure, raised blood glucose and cholesterol
- Compare NCDs and their risk factors by age and gender groups.

3.   METHODOLOGY

3.1   Survey Structure

The Solomon Islands STEPS survey followed a sequential three-step process as follows (Figure 1):

Step 1: A questionnaire-based (interview) survey on tobacco use, betel nut chewing, alcohol drinking, fruit and vegetable consumption, physical activity, and history of a NCD condition.

Step 2: Physiological measures of blood pressure, height, weight, and waist circumference.

Step 3: Biochemical measures of fasting blood glucose and total cholesterol.

Similar to other STEPS surveys conducted in the Pacific region, the Solomon Island survey collected core information across the three steps. STEPS standardized survey methodology was followed. This approach ensures that the Solomon Islands has available population-wide and representative data for between-country comparisons as well as within-country comparisons. In future surveys, Solomon Islands could add more questions or measurements to the core questions, depending on local needs.
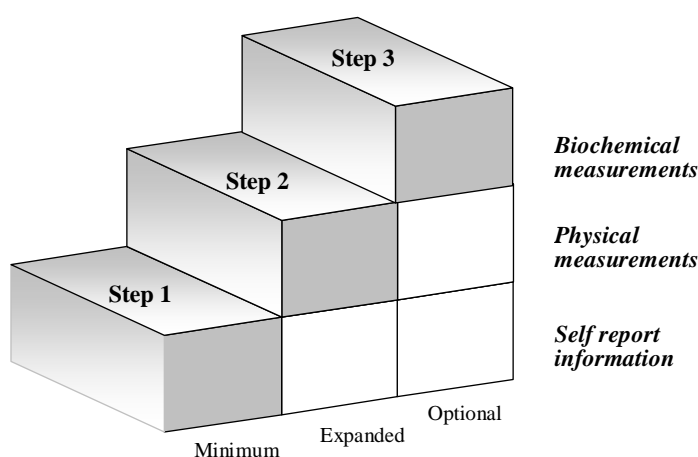
Figure 1. The WHO STEPwise approach to surveillance of NCDs

3.2   Survey Sampling Methodology

Following the WHO STEPS guidelines[3], the survey used a multi-stage cluster sampling method, using Probability Proportionate to Size (PPS) methods in all 3-study provinces.

3.2.1 National/Provincial Level Sampling

The total population of the Solomon Islands was divided into 9 'provinces' using the Statistical boundaries and classifications from the year 2004 Census. From the 9 provinces, 6 provinces were excluded for logistical reasons, although this was considered not to compromise representativeness. The 3 remaining provinces in the sampling frame were Honiara, Western and Malaita.

Table A: Solomon Islands NCD STEPS Survey: Province Samples

		POPULATION SIZE						
CODE	PROVINCES	Age 15-34	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Total Age 15-64	Total Sub sample
1	Honiara	13,236	15,468	8,837	4,948	2,451	44,940	1000
2	Western	15,539	12,195	8,602	4,978	2,943	44,257	1000
3	Malaita	28,987	19,008	12,411	8,075	5,676	74,157	1000
TOTAL							163,354	3,000

3.2.2. Ward/village level sampling

The first-stage cluster sampling randomly selected 10 Wards in Honiara (Table B), 2 villages in Gizo (Table C) and 3 villages in Auki (Tables D).

3.2.3. Household level sampling

Second-stage cluster sampling commenced in Honiara with one randomly selected household within each of the 10 Wards. Recruitment continued with participants from adjacent households until the target number of people within the age group of 15-64 in each Ward was achieved.

Table B: Total Households (HH) in Honiara Province and sample selected

Code	Province 1 Honiara Wards	Total # HH	Sample # H
101	Ngossi	6,186	300
102	Mbumburu	2,390	100
103	Rove. Lengakiki	2,177	100
104	Vavea	6,683	400
105	Mataniko	2,898	100
106	Kukum	1,969	100
107	Kola'a	7,287	400
108	Vura	8,025	400
109	Panatina	9,274	500
110	Vuhokesa	1,073	100
Total		49,125	2,500

Two villages were selected in Gizo in the Western Province and three were selected in Auki in Malaita Province. People living within each defined area on the map/list were invited to attend the survey at a central site. This arrangement was communicated to the village leaders or Church pastors, and a map or list was provided to them in advance.

Table C: Total Households (HH) in Western Province and sample selected

Western: Village - Based POPULATION SIZE			
Code	Province 2 Gizo	Total # HH	Target # HH
213	Titiana Village	417	**100**
215	Rarumana	800	**100**
Total		**1,217**	**200**

Table D: Total Households (HH) in Malaita Province and sample selected

Malaita: Village - Based POPULATION SIZE			
Code	Province 3 Auki	Total # HH	Target # HH
322	Lilisiana	644	100
324	Dala South	534	100
327	Fiu	567	100
Total		**1,745**	**300**

3.3   Sample Size

A total target sample size of 3,000. Participants were selected from the age group 15-64 years to undergo STEP 1 and STEP 2. 2,833 participants took part in the survey. The final sample comprised 1,925 people in the age group 25-64 and 908 people in the age group 15-24. One third of the sample was randomly selected to participate in STEP 3.

3.4   Data Collection Procedures

Survey personnel obtained informed consent from survey participants and gave fasting instructions to those randomly selected for STEP 3 (excluding the 15-24 age group) and made appointment times for those who consented to participate in the survey. All study provinces and selected wards/villages followed the same procedure for selecting eligible participants.

Figure 2: Sequence of data collection and stations at the survey base
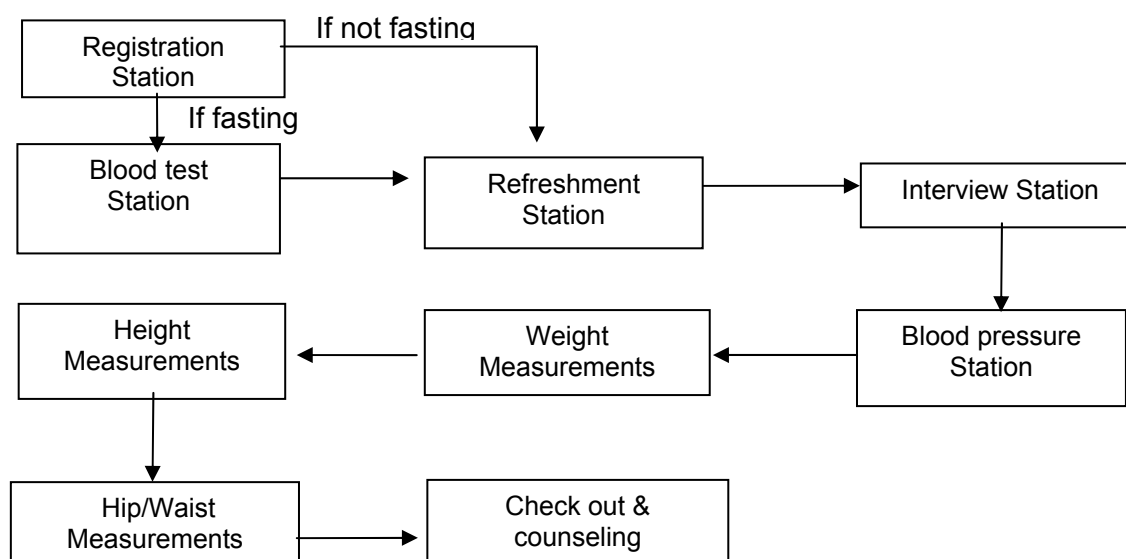
3.5   Data Collection Process

3.5.1 Registration of Participants

Individual Household Summary Forms and a Household Tracking Form were used to keep track of the number of participants in each household and the number of total individuals recruited. At the registration station, survey staff confirmed informed consent, participants' date of birth, fasting status of the participant, and explained to participants all the steps involved in the survey.

3.5.2 Step 1 - Behavioural Risk Factors Interviews

All participants participated in a face-to-face interview in which questions were asked on smoking, alcohol consumption, fruit and vegetable consumption, physical activity and history of chronic conditions and medications. Participants were also asked about the number of years of their formal education and their main work status.

3.5.3 Step 2 - Physical Measurements

Survey staff conducted the physical measurements following the recommended STEPwise protocols. The OMRON M4 Digital Automatic Blood Pressure Monitor was used to measure resting blood pressure. Blood pressure was measured three times; the first reading followed by two more measurements taken with 2-3 minute intervals. The three readings of the blood pressure were recorded, and the average of the second and third readings was used in the analysis.

Height and weight were measured once using the Seca Leicester Height Measure to the nearest whole centimeter and the Siltec PS500L to the nearest 0.1 kg, respectively. Participants were measured without shoes and wearing only light clothing. Waist circumference was measured once using the Figure Finder constant tension tape and recorded to the nearest 0.1 cm. Waist circumference of female pregnant participants was not measured.

3.5.4 Step 3 - Biochemical Measurements

The survey included assessments of fasting blood glucose and fasting total cholesterol. Participants fasted from the previous night for 12 hours until the following morning, when their capillary blood samples were drawn using the method of finger prick.

3.5.5 Check-out Station and Counselling

After the STEPS 1, 2 & 3 were completed, participants received health advice and counseling and were provided with literature about smoking, alcohol drinking, obesity and nutrition, physical activity, hypertension, diabetes, and heart diseases. Participants who were identified as being at high risk of developing, or with, advanced chronic conditions were referred for a follow-up clinical examination.

3.6   Data Management and Analyses

3.6.1 Data Entry

Finished questionnaires were checked randomly by staff to assess overall quality of data collection and completeness. Data entry was conducted by the survey staff at the Ministry of Health and Medical Services office using the EpiData software configured for double data entry function.

3.6.2 Data Weighting and Analysis

Post-stratification weights were calculated using the 2005 population projections based on Solomon Islands 2004 census of the population aged 15-64 years. This weighting adjusted for certain age/sex stratum and population structure being either over-represented or under-represented in the survey data. Weighted sample means were computed for continuous variables. Frequency distributions were calculated using weighted frequencies for categorical variables. For both weighted frequency estimates and weighted means, 95% confidence intervals were reported by 10-year age groups and gender.

With support from the WHO Office in Suva, WHO Office in Geneva performed final data cleaning, data weighting, and analysis. Data analyses were conducted using the EpiInfo 2002 Version 3.5.1. The WHO Office in Suva compiled the Data Book.

In this report, main data tables present findings for those aged 25-64 years, following the standard age group reporting for WHO STEPS surveys. However, as data for the age group of 15-24 years was also collected, additional commentary is presented at the end of each section of behavioural risk factors.

4. RESULTS

4.1 Characteristics of Survey Population

The study selected and invited 3,000 Solomon Islanders aged 15-64 years to participate in the survey. A total of 2,833 individuals participated (response rate of 94.4%). Data for those aged 25-64 years are reported here in the main tables, following the standard age group reporting for WHO STEPS surveys.

Table 1 presents the age and gender distribution of the entire survey sample. Overall, more women respondents in all age groups participated in the survey than men: 56.9% and 43.1%, respectively. Hereafter, percentages given in the text relate to the age groups 25-64, and commentary on the 15-24 age group is provided at the end of each section.

Of the sample age 25-64, 41.5% were women aged 25-44. Two thirds (67.7%) of the sample was aged below 45 years, and only 10.6% were in the 55-64 years age group.

Table 1   Age and Gender of study population

Age group and gender of respondents							
Age Group (years)	**Men**			**Women**		**Both Sexes**	
	n	%		n	%	n	%
25-34	317	39.9		477	60.1	794	41.2
35-44	188	36.9		322	63.1	510	26.5
45-54	180	43.2		237	56.8	417	21.7
55-64	117	57.4		87	42.6	204	10.6
25-64	802	41.7		1123	58.3	1925	100.0

Table 2 presents the mean years of education of the survey respondents. Men reported a greater mean years of education than women: 8.4 years and 6.0 years respectively. In both genders, the youngest age group (25-34 years) reported the highest mean years of education 9.4 and 7.1 years respectively, while the oldest age group (55-64) reported the shortest mean years of education collectively, although that of men was higher than women:6.6 and 3.8 years respectively.

Table 2   Mean number of years of education by gender and age group

Age Group (years)	\multicolumn{2}{c}{**Men**}		\multicolumn{2}{c}{**Women**}		\multicolumn{2}{c}{**Both Sexes**}
	n	Mean	n	Mean	n	Mean
25-34	315	9.4	476	7.1	791	8.0
35-44	188	8.2	322	5.7	510	6.6
45-54	180	8.3	237	5.0	417	6.4
55-64	117	6.6	87	3.8	204	5.4
25-64	800	8.4	1122	6.0	1922	7.0

Those aged 15-24 of both genders reported having the longest duration of education of any age group in the sample (males 9.5 years and females 8.5).

4.2   Tobacco Use

Tobacco use was measured by asking participants if they currently smoke tobacco products. Respondents were categorized into the following smoking status:

- Current smokers – those who had smoked any tobacco product (such as cigarettes, cigars or rolled tobacco) in the past 12 months.

- Daily smokers – those who smoke any tobacco product every day.

- Non-daily smokers – those current smokers who do not smoke on a daily basis.

Table 3 shows that 39.8% of respondents were current smokers. More than half of men (54.1% ±6.9) were current smokers, compared to a quarter of women (25% ±4.5) respondents. This greater than two-fold gender difference was observed in all age groups except in those aged 55-64 years. The highest proportion of current smokers among both genders was in the 25-34 years age group: 59.5% ±8.4 of men and 27.9% ±5.2 of women.

Table 3   Percentage of current smokers in the study population by gender and age group

Age Group (years)	\multicolumn{3}{c}{**Men**}		\multicolumn{3}{c}{**Women**}		\multicolumn{3}{c}{**Both Sexes**}
	n	% Current smoker	95% CI	n	% Current smoker	95% CI	n	% Current smoker	95% CI
25-34	316	59.5	±8.4	477	27.9	±5.2	793	43.8	±5.5
35-44	188	52.1	±7.3	321	23.4	±6.5	509	38.0	±5.1
45-54	180	51.7	±8.1	237	21.5	±5.5	417	37.1	±6.8
55-64	117	41.9	±12.8	87	23.0	±10.8	204	32.6	±9.5
25-64	801	54.1	±6.9	1122	25.0	±4.5	1923	39.8	±5.0

Table 4 shows that 45.9 % of male respondents were non-smokers. Of the balance (54%) who smoked, 43.9% ±5.7 smoked on a daily basis. Almost half (48.4% ±7.8) of young men aged 25-34 years were daily smokers. The proportion of daily smokers decreased thereafter to a low of 35% ±12.3 of daily smokers in the age group 55-64 years, as did the proportion of non-daily smokers.

Table 4   Current smoking status among men in the study population by age group

Age Group (years)		Smoking status					
		Men					
	n	Current smoker				% Does not smoke	95% CI
		% Daily	95% CI	% Non-daily	95% CI		
25-34	316	48.4	±7.8	11.1	±4.2	40.5	±8.4
35-44	188	42.0	±4.7	10.1	±3.6	47.9	±7.3
45-54	180	41.7	±9.2	10.0	±7.1	48.3	±8.1
55-64	117	35.0	±12.3	6.8	±2.3	58.1	±12.8
25-64	801	43.9	±5.7	10.1	±2.8	45.9	±6.9

Table 5 shows that 75% of the female respondents were non-smokers, 16.9% ±3.8.smoked on a daily basis. The proportions of daily smokers decreased with increasing age, from 17.6% ±3.9 in the youngest age group (25-34 years) to 14.9% ±9.0 in the oldest age group (55-64 years), while the proportion of non-daily smokers increased in age 55-64.

Table 5   Current smoking status among women in the study population by age group

Age Group (years)		Smoking status					
		Women					
	n	Current smoker				% Does not smoke	95% CI
		% Daily	95% CI	% Non-daily	95% CI		
25-34	477	17.6	±3.9	10.3	±2.6	72.1	±5.2
35-44	321	17.4	±5.3	5.9	±2.5	76.6	±6.5
45-54	237	15.2	±4.3	6.3	±4.1	78.5	±5.5
55-64	87	14.9	±9.0	8.0	±8.0	77.0	±10.8
25-64	1122	16.9	±3.8	8.1	±1.8	75.0	±4.5

Table 6 presents the prevalence of daily smokers, non-daily smokers and non-smokers for men and women combined. Overall, 30.6 % ±3.9 of survey respondents were daily smokers, 9.1% ±2.0 were non-daily smokers and 60.2% ±5.0 were non-smokers. The highest proportion of daily smokers (33.1% ±5.2) was reported in the age group 25-34, although those in age group 45-54 reported a similar rate (28.9% ±5.2).

Table 6   Current smoking status among both sexes in the study population by age group

Age Group (years)	Smoking status						
	Both Sexes						
		Current smoker				% Does not smoke	95% CI
	n	% Daily	95% CI	% Non-daily	95% CI		
25-34	793	33.1	±5.2	10.7	±2.3	56.2	±5.5
35-44	509	29.9	±4.0	8.0	±2.3	62.0	±5.1
45-54	417	28.9	±5.2	8.2	±4.6	62.9	±6.8
55-64	204	25.2	±7.3	7.4	±3.8	67.4	±9.5
25-64	1923	30.6	±3.9	9.1	±2.0	60.2	±5.0

Table 7 shows that among current daily smokers, the mean age of starting smoking for men was 20.3 ±0.5 years and for women was 23.1 ±1.2 years. This gender difference in the reported mean age of smoking uptake occurs in all age groups. Across both genders, the youngest cohort of 25-34 years reported starting smoking earlier than the older cohorts. The highest mean age of starting smoking (27.4 ±3.2 years) was reported among women in age groups 45-54.

Table 7   Mean age started smoking among current daily smokers

Age Group (years)	Mean age started smoking								
	Men			**Women**			**Both Sexes**		
	n	Mean age	95% CI	n	Mean age	95% CI	n	Mean age	95% CI
25-34	151	19.0	±0.8	82	20.3	±1.1	233	19.4	±0.6
35-44	78	20.7	±1.4	51	24.1	±2.2	129	21.6	±1.3
45-54	74	22.1	±1.6	35	27.4	±3.2	109	23.5	±1.2
55-64	39	22.6	±2.0	13	26.5	±7.5	52	23.8	±2.5
25-64	342	20.3	±0.5	181	23.1	±1.2	523	21.0	±0.5

Table 8 shows that among current daily smokers overall, the mean number of years of smoking was 16.6 (±1.1) years. Men reported smoking for a mean of 17.2 ±1.4 years and women for a mean of 15 ±1.8 years. Respondents in age group 55-64 reported a mean duration of smoking as 37.3 ±2 years for men and 33 ±7.6 years for women.

Table 8   Mean number of years of smoking among current daily smokers

Age Group (years)	Mean duration of smoking								
	Men			**Women**			**Both Sexes**		
	n	Mean duration	95% CI	n	Mean duration	95% CI	n	Mean duration	95% CI
25-34	151	10.0	±0.7	82	8.8	±0.9	233	9.6	±0.5
35-44	78	17.4	±1.7	51	15.0	±2.0	129	16.7	±1.4
45-54	74	27.5	±1.7	35	21.8	±2.8	109	26.1	±1.2
55-64	39	37.3	±2.0	13	33.0	±7.6	52	36.0	±2.8
25-64	342	17.2	±1.4	181	15.0	±1.8	523	16.6	±1.1

Table 9 shows that manufactured cigarettes were the most common cigarettes smoked by current daily smokers: 60.6% ±9.2 of men and 56.3% ±5.1 of women. The smoking of manufactured cigarettes was highest in the youngest age groups of both genders and the lowest among the oldest age group 55-64, particularly in females at 30.8% ±23.8, although the confidence interval is widest in this age group.

Table 9   Percentage of current daily smokers who smoke manufactured cigarettes

Age Group (years)	Manufactured cigarette smokers among daily smokers								
	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	153	66.0	±13.5	84	66.7	±11.4	237	66.2	±9.0
35-44	79	65.8	±11.0	56	51.8	±16.6	135	61.8	±7.8
45-54	75	45.3	±13.7	36	50.0	±19.5	111	46.5	±13.2
55-64	41	43.9	±28.7	13	30.8	±23.8	54	40.1	±20.6
25-64	348	60.6	±9.2	189	56.3	±5.1	537	59.4	±7.3

Among those aged15-24 years, 59.5% ±5.6 of males were current smokers compared to 28.1% ±5.4 of females.42.4% ±4.5 of males and 12.3% ±3.9 of females reported smoking on a daily basis. Males reported having started smoking at age 16.4 ±0.6 years and having smoked for a mean of 4.3 ±0.7 years. Women reported starting at age 16.8 ±0.6 years and having smoked for a mean of 4.2 ±0.4 years. Notably, the age of smoking uptake in both genders of this age group was younger than in other age groups. The majority (71.2% ±7.0) of the sample in age group 15-24 smoked manufactured cigarettes, the largest proportion of all age groups.

4.3   Betel Nut Use

Table 10 shows that 32.2% ±7.7 of the male respondents were abstainers from chewing betel nut. 67.8% ±7.7 of men who chewed betel nut in the past 12 months, the largest proportion (72.8% ± 9.3) was in the age group 25-34. Rates of betel nut use remained relatively stable thereafter but declined in age group 55-64.

Table 10   Percentage of current betel nut chewers among men during the past 12 months by age group

| Age Group (years) | Betel nut chewing status | | | | |
| | Men | | | | |
	n	% Chewed in last 12 months	95% CI	% Abstainer	95% CI
25-34	316	72.8	±9.3	27.2	±9.3
35-44	188	65.4	±11.2	34.6	±11.2
45-54	180	63.9	±8.7	36.1	±8.7
55-64	117	60.7	±12.3	39.3	±12.3
25-64	801	67.8	±7.7	32.2	±7.7

Table 11 shows that 42.7% ±8.9 of female respondents were abstainers from chewing betel nut. 57.3% ±8.9 of women chewed betel nut in the past 12 months, the largest proportion (65.6% ±8.1) was in the age group 25-34. Rates of betel nut use declined thereafter in age group 35-44, peaked again in age group 45-54 and declined again in age group 55-64.

Table 11   Percentage of current betel nut chewers among women during the past 12 months by age group

| Age Group (years) | Betel nut chewing status | | | | |
| | Women | | | | |
	n	% Chewed in last 12 months	95% CI	% Abstainer	95% CI
25-34	477	65.6	±8.1	34.4	±8.1
35-44	320	50.9	±8.4	49.1	±8.4
45-54	236	53.0	±9.9	47.0	±9.9
55-64	87	47.1	±21.0	52.9	±21.0
25-64	1120	57.3	±8.9	42.7	±8.9

Table 12 shows that 37.4% ± 8.0 of all respondents were abstainers from chewing betel nut. 62.6% ± 8.0 chewed betel nut in the past 12 months, the largest proportion (69.2% ±7.9) was in the age group 25-34. Rates of betel use remained relatively constant in age groups 35-44 and 45-54 and declined in age group 55-64.

Table 12   Percentage of current betel nut chewers among both sexes during the past 12 months by age group

Age Group (years)	Betel nut chewing status				
	Both Sexes				
	n	% Chewed in last 12 months	95% CI	% Abstainer	95% CI
25-34	793	69.2	±7.9	30.8	±7.9
35-44	508	58.3	±8.8	41.7	±8.8
45-54	416	58.6	±7.5	41.4	±7.5
55-64	204	54.1	±14.1	45.9	±14.1
25-64	1921	62.6	±8.0	37.4	±8.0

Table 13 shows that among current daily betel chewers overall, the mean age of starting betel use was 20.8 (±0.7) years. Men reported a mean age of starting betel use at 20.4 ±1.1 years and women reported a mean age of 21.5 ±0.7 years. Women in the two younger age groups 25-34 and 35-44 reported starting at an older age than men, while older women 55-64 reported starting at a younger age than men.

Table 13   Mean age started chewing betel nut among current daily chewers

Age Group (years)	Mean age started chewing								
	Men			Women			Both Sexes		
	n	Mean age	95% CI	n	Mean age	95% CI	n	Mean age	95% CI
25-34	123	18.0	±1.4	127	19.5	±0.8	250	18.6	±0.8
35-44	69	19.9	±1.8	60	22.3	±2.4	129	20.7	±1.6
45-54	56	24.0	±2.8	59	24.3	±2.9	115	24.1	±1.9
55-64	42	26.9	±2.9	19	24.4	±5.7	61	26.0	±3.3
25-64	290	20.4	±1.1	265	21.5	±0.7	555	20.8	±0.7

Table 14 reveals that among current daily betel chewers, the mean number of years of use was 17.1 ±1.0 years. Men reported betel use for a mean of 17.5 ±1.3 years and women for a mean of 16.4 ±1.2 years, although respondents in age group 55-64 reported a mean duration of betel use as 32.5 ± 3.4 years for men and 34.8 ± 5.5.years for women.

Table 14   Mean number of years of betel nut chewing among current daily chewers

Age Group (years)	Mean duration of chewing								
	Men			Women			Both Sexes		
	n	Mean duration	95% CI	n	Mean duration	95% CI	n	Mean duration	95% CI
25-34	123	10.7	±1.1	127	9.6	±0.7	250	10.3	±0.6
35-44	69	18.4	±1.7	60	16.4	±2.3	129	17.8	±1.5
45-54	56	25.7	±2.5	59	25.1	±3.0	115	25.4	±2.0
55-64	42	32.5	±3.4	19	34.8	±5.5	61	33.4	±3.5
25-64	290	17.5	±1.3	265	16.4	±1.2	555	17.1	±1.0

Table 15 presents the current prevalence of daily betel users, non-daily users and non-users among men. Overall, 35.8 % ±4.7 of male respondents were daily chewers, 32.0% ±5.0 were non-daily chewers and 32.2% ±7.7 were non-betel users. The highest proportion of daily betel chewers (38.0% ±5.7) was reported in the age group 25-34.

Table 15   Current chewing status among men in the study population by age group

Age Group (years)	n	Chewing status					
		Men					
		Current chewer				% Does not chew	95% CI
		% Daily	95% CI	% Non-daily	95% CI		
25-34	316	38.0	±5.7	34.8	±8.2	27.2	±9.3
35-44	188	35.6	±10.7	29.8	±6.8	34.6	±11.2
45-54	180	30.6	±6.9	33.3	±8.8	36.1	±8.7
55-64	117	35.9	±9.3	24.8	±10.0	39.3	±12.3
25-64	801	35.8	±4.7	32.0	±5.0	32.2	±7.7

Table 16 presents the current prevalence of daily betel users, non-daily users and non-users among women. Overall, 24.0 % ± 6.4 of female respondents were daily chewers, 33.3% ± 4.3 were non-daily chewers and 42.7 ± 8.9 were non-betel users. The highest proportion of daily betel chewers (27.0% ± 7.7) was reported in the age group 25-34.

Table 16   Current chewing status among women in the study population by age group

Age Group (years)	n	Chewing status					
		Women					
		Current chewer				% Does not chew	95% CI
		% Daily	95% CI	% Non-daily	95% CI		
25-34	477	27.0	±7.7	38.6	±4.5	34.4	±8.1
35-44	320	18.8	±7.3	32.2	±6.2	49.1	±8.4
45-54	236	26.3	±8.9	26.7	±5.2	47.0	±9.9
55-64	87	21.8	±14.7	25.3	±15.1	52.9	±21.0
25-64	1120	24.0	±6.4	33.3	±4.3	42.7	±8.9

Table 17 presents the current prevalence of daily betel users, non-daily users and non-users among both men and women combined. Overall, 30.0 % ± 5.1.of respondents were daily chewers, 32.6% ± 4.4 were non-daily chewers and 37.4 ± 8.0 were non-betel users. The highest proportion of daily betel chewers (32.5% ± 5.3) was reported in the age group 25-34.

Table 17   Current chewing status among both sexes in the study population by age group

Age Group (years)	n	Current chewer % Daily	Current chewer 95% CI	Current chewer % Non-daily	Current chewer 95% CI	% Does not chew	95% CI
		Both Sexes					
25-34	793	32.5	±5.3	36.7	±5.6	30.8	±7.9
35-44	508	27.4	±7.6	31.0	±5.8	41.7	±8.8
45-54	416	28.5	±6.7	30.1	±4.9	41.4	±7.5
55-64	204	29.0	±8.3	25.0	±10.6	45.9	±14.1
25-64	1921	30.0	±5.1	32.6	±4.4	37.4	±8.0

Among those aged15-24 years, 77.5% ±8.3 of men were current betel nut chewers compared to 66.3% ±5.9 of women. Both genders current users reported commencing betel use at age15.2 ±0.7 years, younger than all other age groups, and having used betel nut for a mean of 5.3 ±0.6 years. Betel was chewed daily by 34% ±8.9 of men and 20.9% ±5.9 of women.

4.4   Alcohol Consumption

This section describes patterns of alcohol consumption. To assess patterns and prevalence of alcohol consumption, respondents were asked if they ever consumed alcohol, and the frequency and quantity of alcohol consumed. Those who had consumed an alcoholic drink in the past 12 months were classified as current drinkers. Tables 18-20 summarise the prevalence of alcohol consumption during the past 12 months among men, women and both genders respectively.

There was a significant gender difference in consumption behaviour, with more than half of males (51.5%± 3.6) (Table 18) and less than a seventh of females (14.9% ± 2.5) (Table 19) classified as current drinkers. Males exceeded females in all age groups of current drinkers, while the highest proportions of current drinkers in both genders combined was in the age group 25-34. More than a quarter (26.9% ±4.7) of males and three quarters (74% ±4.3) of females reported being a lifetime abstainer from alcohol. The highest proportion of current drinkers among both genders was in the 25-34 years age group (42% ± 3.6). Thereafter, the proportion of current drinkers decreased with increasing age (Table 20).

Table 18   Percentage of alcohol consumption among men during the past 12 months by age group

Age Group (years)	n	% Lifetime Abstainer	95% CI	% Past 12 mos. abstainer	95% CI	% current drinker (drank in past 12 mos.)	95% CI
		Men					
25-34	315	21.0	±5.6	14.9	±6.1	64.1	±6.6
35-44	188	25.5	±8.2	22.3	±8.0	52.1	±7.1
45-54	180	31.7	±10.0	30.0	±7.9	38.3	±5.0
55-64	117	46.2	±8.9	31.6	±13.4	22.2	±10.7
25-64	800	26.9	±4.7	21.5	±4.3	51.5	±3.6

Table 19   Percentage of alcohol consumption among women during the past 12 months by age group

Age Group (years)	n	% Lifetime Abstainer	95% CI	% Past 12 mos. abstainer	95% CI	% current drinker (drank in past 12 mos.)	95% CI
				Women			
25-34	477	67.9	±5.7	12.4	±3.5	19.7	±3.3
35-44	322	74.8	±5.8	10.6	±4.6	14.6	±4.5
45-54	237	78.9	±6.9	11.0	±3.5	10.1	±5.4
55-64	87	88.5	±6.0	8.0	±6.9	3.4	±3.4
25-64	1123	74.0	±4.3	11.1	±2.9	14.9	±2.5

Table 20   Percentage of alcohol consumption among both sexes during the past 12 months by age group

Age Group (years)	n	% Lifetime Abstainer	95% CI	% Past 12 mos. abstainer	95% CI	% current drinker (drank in past 12 mos.)	95% CI
				Both Sexes			
25-34	792	44.3	±4.2	13.7	±3.4	42.0	±3.6
35-44	510	49.8	±5.0	16.5	±4.0	33.7	±5.1
45-54	417	54.5	±8.3	20.8	±4.9	24.7	±4.8
55-64	204	66.9	±5.7	20.1	±8.8	13.0	±6.3
25-64	1923	50.1	±3.5	16.4	±2.2	33.5	±2.5

Table 21 and 22 present information on current drinkers by the frequency (number of drinking days) of alcohol consumption, quantity of drinks consumed (number of drinks on any drinking day) and the proportion that drank more that 20 alcohol drinks in the past 7 days.

Table 21 shows that among male current drinkers 25.1% ±5.2.consumed 5 or more drinks on any drinking day and 3.9% ± 2.6 drank 20 or more drinks over the 7 day period. The highest proportions that drank 5 or more standard drinks on any day were in the 35-44 age group (27.1% ±10.6) and the 25-34 age group (25.7 ± 7.7).

Table 21 Frequency and quantity of drinks consumed by male current drinkers in the last 7 days

Frequency and quantity of drinks consumed in the last 7 days														
Men														
Age Group years	n	%Drank 4+ Days	95% CI	% Drank <4 days	95% CI	% 5+ Drinks on any day	95% CI	% <5 Drinks on any day	95% CI	% 20+ drinks in 7 days	95% CI	% <20 drinks in 7 days	95% CI
25-34	183	1.1	±1.6	98.9	±1.6	25.7	±7.7	74.3	±7.7	2.7	±3.6	97.3	±3.6
35-44	96	3.1	±3.5	96.9	±3.5	27.1	±10.6	72.9	±10.6	4.2	±3.4	95.8	±3.4
45-54	62	3.2	±4.6	96.8	±4.6	21.0	±11.0	79.0	±11.0	6.5	±7.0	93.5	±7.0
55-64	24	4.2	±8.6	95.8	±8.6	16.7	±13.1	83.3	±13.1	8.3	±9.8	91.7	±9.8
25-64	365	2.1	±1.7	97.9	±1.7	25.1	±5.2	74.9	±5.2	3.9	±2.6	96.1	±2.6

Table 22 shows that among female current drinkers 20.3% ± 9.0 consumed 4 or more drinks on any drinking day and 3.9% drank 15 or more drinks over the 7 day period. The highest proportions that drank 4 or more standard drinks on any day was in the 45-54 age group (23.8%± 21.7) and those in the 35-44 age group were the only group to report drinking on more than 4 days.

Table 22 Frequency and quantity of drinks consumed by female current drinkers in the last 7 days

Frequency and quantity of drinks consumed in the last 7 days														
Women														
Age Group (years)	n	%Drank 4+ Days	95% CI	% Drank <4 days	95% CI	% 4+ Drinks on any day	95% CI	% <4 Drinks on any day	95% CI	% 15+ drinks in 7 days	95% CI	% <15 drinks in 7 days	95% CI
25-34	85	----	±0.0	100.0	±0.0	20.0	±12.7	80.0	±12.7	2.4	±4.0	97.6	±3.2
35-44	42	4.8	±6.3	95.2	±6.3	21.4	±12.9	78.6	±12.9	7.1	±8.4	92.9	±7.8
45-54	21	----	----	100.0	±0.0	23.8	±21.7	76.2	±21.7	4.8	±10.7	95.2	±7.7
55-64	3	----	----	100.0	±0.0	----	----	100.0	0.0	----	----	100.0	±0.0
25-64	151	1.3	±1.6	98.7	±1.6	20.3	±9.0	79.7	±9.0	3.9	±4.0	96.1	±3.9

Tables 23 and 24 present information on the number of standard drinks consumed per drinking day by current drinkers and show that heavy drinking is more common among men than women across all age groups, with 79.5% ±4.1 of men consuming more than 6 standard drinks on a drinking day compared to 45.5% ±10.4 of women.

Table 23 shows that current male drinkers drink an average of 8.3 ± 0.3 standard drinks on a drinking day and that the largest mean number (8.6 ± 0.4) was consumed by the age group 25-34, of whom 84.7% ±5.0 consumed six or more standard drinks on a drinking day.

Table 23   Number of drinks per drinking day among male current drinkers by age group

Age Group (years)	n	% 1 drink	95% CI	% 2-3 drinks	95% CI	% 4-5 drinks	95% CI	% 6+ drinks	95% CI	Mean # of standard drinks	95% CI
						Men					
25-34	189	1.1	±2.1	4.8	±2.8	9.5	±5.4	84.7	±5.0	8.6	±0.4
35-44	90	4.4	±5.3	12.2	±7.4	7.8	±7.4	75.6	±7.0	8.4	±0.8
45-54	67	4.5	±5.3	14.9	±7.7	13.4	±7.0	67.2	±13.0	6.9	±0.8
55-64	26	----	----	3.8	±9.1	15.4	±15.8	80.8	±17.4	7.4	±1.5
25-64	372	2.4	±1.6	8.2	±3.2	9.9	±3.7	79.5	±4.1	8.3	±0.3

Table 24 shows that current female drinkers drink an average of 5.4 standard drinks on a drinking day and that the largest mean number (5.7) was consumed by the age group 25-34, of whom almost a half (49.4 ± 9.9) consumed six or more standard drinks on a drinking day.

Table 24   Number of drinks per drinking day among female current drinkers by age group

Age Group (years)	n	% 1 drink	95% CI	% 2-3 drinks	95% CI	% 4-5 drinks	95% CI	% 6+ drinks	95% CI	Mean # of standard drinks	95% CI
						Women					
25-34	87	8.0	±7.1	21.8	±9.7	20.7	±6.8	49.4	±9.9	5.7	--
35-44	45	11.1	±10.0	24.4	±13.5	20.0	±8.9	44.4	±20.4	5.3	--
45-54	23	13.0	±14.3	21.7	±17.4	26.1	±27.4	39.1	±24.5	5.0	--
55-64	3	----	----	33.3	±63.1	66.7	±63.1	----	----	3.7	--
25-64	158	9.3	±5.3	22.9	±6.8	22.4	±7.9	45.5	±10.4	5.4	--

Table 25 shows that current drinkers of both genders drink an average of 7.6 ± 0.3 standard drinks on a drinking day and that the largest mean number (8.0 ± 0.4) was consumed by the age group 25-34, of whom more than three quarters (76.5 ± 4.1) consumed six or more standard drinks on a drinking day.

Table 25   Number of drinks per drinking day among both genders of current drinkers by age group

Age Group (years)	n	% 1 drink	95% CI	% 2-3 drinks	95% CI	% 4-5 drinks	95% CI	% 6+ drinks	95% CI	Mean # of standard drinks	95% CI
						Both Sexes					
25-34	276	2.7	±2.7	8.7	±3.0	12.1	±4.5	76.5	±4.1	8.0	±0.4
35-44	135	5.9	±5.1	14.9	±6.2	10.5	±6.9	68.7	±7.0	7.7	±0.6
45-54	90	6.2	±5.5	16.3	±7.6	15.9	±8.0	61.7	±12.9	6.6	±0.7
55-64	29	----	----	7.7	±13.2	22.0	±13.6	70.3	±15.4	6.9	±1.5
25-64	530	3.9	±1.9	11.4	±2.6	12.6	±4.1	72.1	±3.9	7.6	±0.3

Among those aged 15-24 years, 63.8% ±4.2 of males were current drinkers compared to 25.2% ±4.7 of females. One quarter of male current drinkers (25.2% ±8.3) reported drinking 5+ standard drinks on any day in the last 7 days compared to 10.9% ±8.9 of females who reported drinking 4+ standard drinks. However, 76.4% ±5.1 of young males reported drinking 6 or more standard drinks on a drinking day compared to 47.5% ±8.9 of young females.

4.5   Intake of Fruit and Vegetables

Respondents' fruit and vegetable intake was assessed by asking how many days they consumed fruit and vegetables in a typical week, and how many servings of each they consumed on one of those days. Table 26 shows that women reported marginally higher mean days of fruit consumed in a typical week (2.7 ±0.3) than men (2.4 ±0.3) overall and across all age groups. Table 27 shows that women reported marginally higher mean days of vegetable consumption in a typical week (4.8 ±0.3) than men (4.6 ±0.2) overall and across all age groups.

Table 26   Mean number of days in a week fruits consumed by gender and age group

	Mean number of days fruit consumed in a typical week								
	Men			**Women**			**Both Sexes**		
Age Group (years)	n	Mean number of days	95% CI	n	Mean number of days	95% CI	n	Mean number of days	95% CI
25-34	296	2.4	±0.3	459	2.8	±0.2	755	2.6	±0.2
35-44	178	2.5	±0.5	305	2.7	±0.3	483	2.6	±0.4
45-54	170	2.2	±0.4	227	2.4	±0.4	397	2.3	±0.4
55-64	110	2.2	±0.3	82	2.5	±0.5	192	2.3	±0.4
25-64	754	2.4	±0.3	1073	2.7	±0.3	1827	2.5	±0.3

Table 27   Mean number of days in a week vegetables consumed by gender and age group

	Mean number of days vegetables consumed in a typical week								
	Men			**Women**			**Both Sexes**		
Age Group (years)	n	Mean number of days	95% CI	n	Mean number of days	95% CI	n	Mean number of days	95% CI
25-34	313	4.6	±0.3	468	4.8	±0.3	781	4.7	±0.3
35-44	188	4.7	±0.3	317	4.9	±0.5	505	4.8	±0.4
45-54	178	4.6	±0.4	234	4.8	±0.5	412	4.7	±0.4
55-64	117	4.7	±0.4	87	5.0	±0.5	204	4.8	±0.4
25-64	796	4.6	±0.2	1106	4.8	±0.3	1902	4.7	±0.3

Tables 28 and 29 show the reported consumption of servings of fruit and vegetables on the day when these food items were eaten, while Table 30 shows the reported average consumption of combined servings of fruit and vegetables per day. Table 28 shows that, overall, respondents reported an average of 0.8 ± 0.1 servings of fruit relatively consistently across all age groups. Table 29 shows that overall, respondents reported an average of 1.4 ±0.1 servings of vegetables relatively consistently across all age groups.

Table 28   Mean number of servings of fruits consumed on a day when fruits were eaten

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	296	0.7	±0.1	459	0.8	±0.1	755	0.7	±0.1
35-44	178	0.9	±0.3	305	0.7	±0.2	483	0.8	±0.2
45-54	170	0.6	±0.2	227	0.7	±0.1	397	0.7	±0.2
55-64	110	0.8	±0.2	82	0.8	±0.3	192	0.8	±0.2
25-64	754	0.7	±0.2	1073	0.8	±0.1	1827	0.8	±0.1

Mean number of servings of fruit on average per day

Table 29   Mean number of servings of vegetables consumed on a day when vegetables were eaten

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	313	1.3	±0.1	468	1.4	±0.1	781	1.3	±0.1
35-44	188	1.5	±0.3	317	1.3	±0.2	505	1.4	±0.2
45-54	178	1.4	±0.2	234	1.4	±0.2	412	1.4	±0.1
55-64	117	1.4	±0.2	87	1.5	±0.4	204	1.4	±0.2
25-64	796	1.4	±0.1	1106	1.4	±0.1	1902	1.4	±0.1

Mean number of servings of vegetables on average per day

Table 30 shows that overall; respondents reported an average of 2.1. ±0.2 combined servings of fruit and vegetables relatively consistently across all age groups, although males in age group 25-34 reported consuming the least (1.9 ± 0.2).

Table 30   Mean number of combined servings of fruit and vegetables consumed per average 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	314	1.9	±0.2	473	2.2	±0.2	787	2.0	±0.2
35-44	188	2.4	±0.5	318	2.1	±0.3	506	2.2	±0.4
45-54	178	2.0	±0.2	235	2.1	±0.2	413	2.0	±0.2
55-64	117	2.1	±0.4	87	2.2	±0.6	204	2.2	±0.5
25-64	797	2.1	±0.2	1113	2.1	±0.2	1910	2.1	±0.2

Mean number of servings of fruit and vegetables on average per day

Table 31 shows that 93.6% ±2.3 of respondents of both genders consumed less than five combined servings of fruit and vegetables on an average day with no difference between men (93.3% ±3.1) and women (93.9% ± 1.8), although males in age group 35-44 presented the lowest proportion of those eating less than 5 combined servings per average day.

Table 31   Percentage who consumed less than five combined servings of fruit and vegetables per average day

Age Group (years)	Less than five servings of fruit and vegetables on average per day

Age Group (years)	Men			Women			Both Sexes		
	n	% < 5 servings per day	95% CI	n	% < 5 servings per day	95% CI	n	% < 5 servings per day	95% CI
25-34	314	94.3	±2.4	473	93.2	±1.5	787	93.8	±1.7
35-44	188	90.4	±5.5	318	95.0	±3.4	506	92.6	±4.1
45-54	178	94.9	±4.0	235	93.6	±3.6	413	94.3	±1.9
55-64	117	94.0	±3.9	87	94.3	±6.5	204	94.1	±4.5
25-64	797	93.3	±3.1	1113	93.9	±1.8	1910	93.6	±2.3

Those aged 15-24 years reported consuming fruit on 2.8 ± 0.3 days a week, vegetables on 4.6 ±0.3 days a week and 2.2 ±0.3 combined servings of fruit and vegetables on an average per day. The majority (92.1% ±3.0) reported consuming less than 5 combined servings of fruit and vegetables on an average day.

4.6   Physical Activity

4.6.1   Questions

Respondents were asked how often (frequency) and how long (duration) they engaged in three domains of physical activity in a typical week: work-related, transport-related and leisure-related. In the work and leisure domains, respondents were asked how many days per week and how many hours/minutes per day they participate in moderate and vigorous intensity activities. In the transport domain, respondents were asked how often and how long they either walk and/or cycle to and from places.

4.6.2   Analysis

The three physical activity domains were first examined separately to determine the proportion of activity undertaken in each domain as a component of total physical activity. For each domain, three levels of activity were recorded: low, moderate, and high. In each domain, the total time participants spent in an activity per 5 day week was computed by multiplying the number of days by the duration of the activity. To account for the different levels of energy expenditure required for the activities (i.e. low, moderate or high), the daily duration of activity was converted into METminutes per day. The term MET (metabolic equivalent) is used as an indication of the intensity of physical activity. A MET is the ratio of the associated metabolic rate for a specific activity divided by the resting metabolic rate. The energy cost of sitting is equivalent to a resting metabolic rate of 1 MET.

In this report, the following MET values were allocated to the three physical activity domains:

Moderate physical activity (work and leisure domain)   = 4.0 METS
High physical activity (work and leisure domain)   = 8.0 METS
Travel related walking/cycling   = 4.0 METS

The following levels of activity in terms of METminutes were defined as:

Low activity: <600 METminutes per week
Moderate activity: 600-1500 METminutes per week
High activity: >1500 METminutes per week

4.6.3   Levels of Physical Activity

Table 32 shows that when physical activity done as part of work, transport and leisure time are combined 36.5% ±3.3 of men reported a low level of total physical activity. Moderate physical activity was reported by 25.4% ±2.8 of men and a high level of physical was reported by 38.1% ±3.4. The proportions of low total physical activity increased in age group 45-54, while the proportions reporting a moderate level of physical activity varied little. A high level of total physical activity decreased in the age group 45-54 and further decreased in age group 55-64.

Table 32   Categories of total physical activity among men by age group

Level of total physical activity							
	Men						
Age Group (years)	n	% Low	95% CI	% Moderate	95% CI	% High	95% CI
25-34	311	34.7	±4.8	24.4	±3.2	40.8	±7.4
35-44	187	32.6	±4.3	26.7	±6.8	40.6	±6.0
45-54	176	40.9	±8.4	25.0	±7.0	34.1	±6.0
55-64	116	46.6	±7.6	25.9	±7.1	27.6	±9.7
25-64	790	36.5	±3.3	25.4	±2.8	38.1	±3.4

Table 33 shows that when physical activity done as part of work, transport and leisure time are combined 47.4% ±4.5 of women reported a low level of total physical activity. Moderate physical activity was reported by 25.6% ±3.0 of women and a high level of physical was reported by 26.9% ±3.0. The proportions of low total physical activity increased in age group 45-54, while the proportions reporting a moderate level of physical activity varied little. A high level of total physical activity decreased in the age group 45-54 and further decreased in age group 55-64.

Table 33   Categories of total physical activity among women by age group

Level of total physical activity							
	Women						
Age Group (years)	n	% Low	95% CI	% Moderate	95% CI	% High	95% CI
25-34	472	47.2	±5.1	25.6	±4.1	27.1	±3.1
35-44	316	45.9	±3.8	25.3	±3.8	28.8	±3.5
45-54	234	50.4	±9.0	23.9	±6.3	25.6	±8.3
55-64	86	47.7	±14.7	29.1	±10.6	23.3	±8.5
25-64	1108	47.4	±4.5	25.6	±3.0	26.9	±3.0

Table 34 shows that when physical activity done as part of work, transport and leisure time are combined 41.9% ±2.8 of both genders reported a low level of total physical activity. Moderate physical activity was reported by 25.5% ±1.8 and a high level of physical was reported by 32.6% ±2.5. The proportions of low total physical activity increased in age group 45-54, while the proportions reporting a moderate level of physical activity decreased in age group 45-54 and increased in age group 55-64. A high level of total physical activity decreased in the age group 45-54 and further decreased in age group 55-64.

Table 34   Categories of total physical activity among both sexes by age group

| Age Group (years) | Level of total physical activity | | | | | | |
| | Both Sexes | | | | | | |
	n	% Low	95% CI	% Moderate	95% CI	% High	95% CI
25-34	783	41.0	±2.8	25.0	±2.8	34.0	±4.3
35-44	503	39.1	±3.3	26.0	±3.3	34.9	±3.0
45-54	410	45.5	±7.0	24.5	±4.3	30.0	±6.7
55-64	202	47.1	±10.3	27.4	±5.5	25.5	±7.4
25-64	1898	41.9	±2.8	25.5	±1.8	32.6	±2.5

Table 35 presents the mean minutes of total physical activity across all three domains in METminutes per day by gender and age. Overall, respondents reported an average of 101.4 ±8.2 METminutes per day spent in total physical activity. There was a significant gender difference with men engaged in physical activity for a mean of 111.4 ±10.4 METminutes per day, and women for a mean of 91.0 ± 9.1 METminutes per day.

Table 35   Level of total physical activity (mean METminutes per day) by gender and age group

| Age Group (years) | Mean METminutes of total physical activity on average per day | | | | | | | | |
| | Men | | | Women | | | Both Sexes | | |
	n	Mean minutes	95% CI	n	Mean minutes	95% CI	n	Mean minutes	95% CI
25-34	311	116.7	±20.0	472	90.8	±10.8	783	103.8	±11.3
35-44	187	116.6	±23.7	316	97.5	±8.2	503	107.3	±13.3
45-54	176	97.8	±13.7	234	79.8	±22.6	410	89.1	±15.8
55-64	116	98.5	±23.9	86	92.3	±33.0	202	95.5	±23.9
25-64	790	111.4	±10.4	1108	91.0	±9.1	1898	101.4	±8.2

Tables 36-38 present results on mean METminutes per day engaged in work-related, transport-related and recreation-related physical activity. Table 36 shows that work-related physical activities comprised 68.5 ±9.2 METminutes/day for men and 57.7 ±8.0 METminutes/day for women. Across age groups 25-35, 35-44 and 45-54 men reported engaging in more METminutes of work-related physical activity than women, although women reported more METminutes than men in age group 55-64.

Table 36   Level of work-related physical activity (mean METminutes per day) by gender and age group

Age Group (years)	Men			Women			Both Sexes		
	n	Mean minutes	95% CI	n	Mean minutes	95% CI	n	Mean minutes	95% CI
25-34	311	68.5	±19.0	472	58.3	±11.5	783	63.4	±11.0
35-44	187	74.6	±19.8	316	60.2	±9.6	503	67.6	±11.4
45-54	176	64.1	±14.5	234	49.9	±17.8	410	57.2	±13.4
55-64	116	59.4	±16.3	86	60.4	±22.8	202	59.9	±16.5
25-64	790	68.5	±9.2	1108	57.7	±8.0	1898	63.2	±7.1

Table 37 shows that transport-related physical activities comprised 29.0 ±2.0 METminutes/day for men and 21.5 ±2.0 METminutes/day for women. Across all age groups men reported engaging in more METminutes/day of transport related physical activity than women.

Table 37   Level of transport-related physical activity (mean METminutes per day) by gender and age group

Age Group (years)	Men			Women			Both Sexes		
	n	Mean minutes	95% CI	n	Mean minutes	95% CI	n	Mean minutes	95% CI
25-34	311	30.5	±2.6	472	19.8	±3.2	783	25.2	±2.2
35-44	187	27.6	±6.0	316	23.5	±3.4	503	25.6	±4.3
45-54	176	27.2	±3.7	234	21.8	±4.5	410	24.6	±3.1
55-64	116	29.7	±8.4	86	23.1	±7.9	202	26.5	±6.5
25-64	790	29.0	±2.0	1108	21.5	±2.0	1898	25.3	±1.5

Table 38 shows that recreation-related physical activities comprised 13.9 ± 2.1 METminutes/day for men and 11.8 ±2.5 METminutes/day for women. In age groups 25-34 and 35-44 men reported engaging in more METminutes/day of recreation related physical activity than women, while in age groups 45-54 and 55-64 women reported engaging in more METminutes/day of recreation-related physical activity than men.

Table 38   Level of recreation-related physical activity (mean MET minutes per day) by gender and age group

Age Group (years)	Men			Women			Both Sexes		
	n	Mean minutes	95% CI	n	Mean minutes	95% CI	n	Mean minutes	95% CI
25-34	311	17.7	±4.8	472	12.7	±4.5	783	15.2	±2.8
35-44	187	14.4	±4.6	316	13.8	±6.0	503	14.1	±3.8
45-54	176	6.5	±2.9	234	8.1	±3.8	410	7.3	±2.3
55-64	116	9.5	±4.3	86	8.8	±5.8	202	9.1	±4.1
25-64	790	13.9	±2.1	1108	11.8	±2.5	1898	12.9	±1.6

Among those aged15-24 years 43.2% ± 4.3 of both genders combined reported a low level of physical activity (38.3% ±5.0 for men and 48.5% ±6.4 for women). Young men reported more mean METminutes of total physical activity than young women (86.1 ±11.7 METminutes and 67.1 ±6.7 respectively) largely due to more transport-related and recreation-related activity.

4.7 Overweight and Obesity

4.7.1 Height and Weight

The height and weight of each participant was measured following the standardized STEPS protocol. The body mass index (BMI) of each participant was computed by dividing the weight (kilograms) by the square of the height (metres^2). BMI risk categories are defined as follows:

Underweight   BMI < 18.5
Normal weight   18.5 ≤ BMI ≤ 24.9
Overweight   BMI ≥ 25.0
Obese   BMI ≥ 30.0

Tables 39 and 40 show that men were significantly taller (166.4 cm ±0.7) and heavier (75.3kg ±1.5) than women (155.7cm ±0.6 and 70.4kg ±2.0). In both genders, younger people were marginally taller than older people. Among men, weight peaked in the 45-54 year group (79.2kg ±2.6) and among women in the 35-44 years age group (73kg ± 2.6).

Table 39   Mean height (cm) by gender and age group

Mean height (cm)							
Age Group (years)	Men				Women		
	n	Mean	95% CI		n	Mean	95% CI
25-34	263	167.4	±1.3		424	156.5	±0.6
35-44	157	166.8	±1.5		296	156.2	±0.9
45-54	157	165.4	±1.0		219	154.2	±0.9
55-64	111	162.7	±0.9		79	153.1	±1.3
25-64	688	166.4	±0.7		1018	155.7	±0.6

Table 40   Mean weight (kg) by gender and age group

Mean weight (kg)							
Age Group (years)	Men				Women		
	n	Mean	95% CI		n	Mean	95% CI
25-34	263	73.5	±1.6		390	69.6	±1.9
35-44	157	77.5	±3.4		292	73.0	±2.6
45-54	157	79.2	±2.6		219	70.4	±3.4
55-64	111	70.4	±3.5		77	66.4	±6.3
25-64	688	75.3	±1.5		978	70.4	±2.0

4.7.2 Body Mass Index Categories

Table 41 presents the mean BMI scores for both genders, individually and combined. The overall mean BMI was 28.1kg/m^2 ±0.5. Women had a higher mean BMI (29kg/m^2 ±0.7) than men (27.2 kg/m^2 ± 0.5) and in all age groups. The mean BMI for men was highest in the 45-54 age group, while for women there was little variation across age groups.

Table 41 Mean body mass index (kg/m^2) by gender and age group

Age Group (years)	Mean BMI (kg/m^2)								
	Men			**Women**			**Both Sexes**		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	263	26.2	±0.7	390	28.4	±0.8	653	27.2	±0.6
35-44	157	27.8	±1.0	292	29.9	±0.9	449	28.8	±0.8
45-54	157	28.9	±0.8	218	29.7	±1.3	375	29.3	±0.6
55-64	111	26.6	±1.3	77	28.2	±2.4	188	27.3	±1.5
25-64	688	27.2	±0.5	977	29.0	±0.7	1665	28.1	±0.5

Tables 42, 43 and 44 present the proportion of the sample population in 3 BMI classifications - underweight, normal and overweight (includes obese) for men, women and both genders combined. Table 42 shows that 62.5% ± 6.6 of men are classified as overweight, 37% ±6.4 as normal and 0.5% ± 0.6 as underweight.

Table 42 BMI classifications among men by age group

Age Group (years)	BMI classifications						
	Men						
	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	% Over-weight ≥25.0	95% CI
25-34	263	----	----	46.0	±8.8	54.0	±8.8
35-44	157	0.6	±1.5	29.3	±10.5	70.1	±10.5
45-54	157	0.6	±1.5	24.8	±8.4	74.5	±8.4
55-64	111	1.8	±2.6	41.4	±8.6	56.8	±9.4
25-64	688	0.5	±0.6	37.0	±6.4	62.5	±6.6

Table 43 shows that 72.7% ±5.5 of women are classified as overweight, 26.5 ±5.3 as normal and 0.8% ±0.7 as underweight.

Table 43   BMI classifications among women by age group

Age Group (years)		BMI classifications					
		Women					
	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	% Over-weight ≥25.0	95% CI
25-34	390	0.5	±0.7	27.9	±4.6	71.5	±5.1
35-44	292	0.7	±1.1	21.9	±6.6	77.4	±6.5
45-54	218	1.4	±2.2	24.3	±7.8	74.3	±7.8
55-64	77	1.3	±2.9	36.4	±14.7	62.3	±15.0
25-64	977	0.8	±0.7	26.5	±5.3	72.7	±5.5

Table 44 shows that the proportion of males and females combined classified as being overweight was 67.4% ±5.7, as normal 32% ±5.6 and 0.6% ±0.5 as underweight.

Table 44   BMI classifications among both genders by age group

Age Group (years)		BMI classifications					
		Both Sexes					
	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	% Over-weight ≥25.0	95% CI
25-34	653	0.2	±0.4	37.4	±6.2	62.3	±6.4
35-44	449	0.7	±0.9	25.7	±7.0	73.6	±7.2
45-54	375	1.0	±1.2	24.6	±5.6	74.4	±5.0
55-64	188	1.6	±2.0	39.0	±9.6	59.4	±10.4
25-64	1665	0.6	±0.5	32.0	±5.6	67.4	±5.7

Table 45 presents rates of obesity (BMI ≥30 kg/m^2) for both genders, individually and combined. The overall prevalence of obesity was 32.8% ± 3.3. The obesity rate was significantly higher among women (40.4% ±5.8) than among men (25.8% ±2.6). The highest prevalence of obese women (47.3% ±7.0) was in the 35-44 age group, while for men it was in the 45-54 age group.

Table 45   Percentage of obesity (BMI≥30 kg/m^2) by gender and age group

Age Group (years)	Men			Women			Both Sexes		
	n	% BMI≥30	95% CI	n	% BMI≥30	95% CI	n	% BMI≥30	95% CI
25-34	263	16.7	±4.5	390	35.4	±7.4	653	25.6	±4.8
35-44	157	31.8	±8.4	292	47.3	±7.0	449	39.4	±6.7
45-54	157	41.4	±7.9	218	44.0	±7.3	375	42.7	±6.1
55-64	111	20.7	±10.8	77	35.1	±16.8	188	27.6	±10.0
25-64	688	25.8	±2.6	977	40.4	±5.8	1665	32.8	±3.3

The mean height of those aged15-24 years was similar to the mean height of the other age groups, while mean weight was lower for both genders. Mean BMI for both genders were lower than the sample means of the other age groups.

4.7.3   Waist Circumference

Waist circumference was assessed as a measure of central obesity, a measure of risk of cardiovascular diseases. Table 46 shows the mean waist circumference for both men and women, that women had a marginally higher mean waist circumference (89.6cm ±1.4) than men (88.2cm ±1.2), that mean waist circumference in men varied more than in women and was highest in age group 45-54 in both genders.

Table 46   Mean waist circumference (cm) by gender and age group

Waist circumference (cm)						
Age Group (years)	**Men**			**Women**		
	n	Mean	95% CI	n	Mean	95% CI
25-34	256	84.8	±2.1	390	87.2	±1.3
35-44	149	89.1	±2.3	292	91.3	±2.1
45-54	152	94.7	±2.2	219	92.1	±2.5
55-64	108	89.3	±3.5	77	90.0	±5.6
25-64	665	88.2	±1.2	978	89.6	±1.4

4.8   Blood Pressure and Hypertension

As part of the Step 2 protocol, all survey participants had their blood pressure measured. Participants were also asked if they had had their blood pressure measured in the last 12 months, within the last 1-5 years or longer, whether they had ever been told in the last 12 months by a health worker that they had high blood pressure, and if they were currently receiving any medical treatment for high blood pressure.

The STEPS protocol reports the presence of raised blood pressure to include people with:
- a mean systolic pressure of ≥140 mmHg, whether or not they had previously been told by a health worker that they had high blood pressure, OR

- a mean diastolic pressure of ≥90 mmHg, whether or not they had previously been told by a health worker that they had high blood pressure, OR

- normal mean systolic and diastolic pressures (i.e. normotensive) AND who were currently receiving anti-hypertensive medication, whether or not they had previously been told by a health worker that they had high blood pressure.

Those participants who reported having been previously told by a health worker that they had high blood pressure, but who were normotensive and NOT on anti-hypertensive medication, were NOT included among those considered to have hypertension.

Table 47 presents mean resting systolic and Table 28 mean resting diastolic blood pressures for both genders, individually and combined. Table 47 shows a higher mean systolic blood pressure in males than in females (117.0 ±2.0 and 114.2 ±2.1 respectively), increasing with age in both genders, particularly in females, where the means in age groups 45-54 and 55-64 exceeded those of males.

Table 47   Mean resting systolic blood pressure (mmHg) by gender and age group

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	263	114.5	±2.4	423	107.9	±1.6	686	111.2	±1.8
35-44	157	116.3	±3.0	295	112.8	±3.5	452	114.6	±2.4
45-54	156	120.3	±3.1	218	122.8	±2.5	374	121.5	±2.0
55-64	111	123.1	±2.7	79	129.3	±4.4	190	126.1	±2.9
25-64	687	117.0	±2.0	1015	114.2	±2.1	1702	115.6	±1.8

Table 48 shows a higher mean diastolic blood pressure in males than in females (72.3 ±2.5 and 71.0 ±2.1 respectively), increasing with age in both genders until age 55-64 where it decreased marginally in males and was relatively unchanged in females, both remaining above the sample mean.

Table 48   Mean resting diastolic blood pressure (mmHg) by gender and age group

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	263	70.0	±2.6	424	68.7	±2.0	687	69.4	±2.1
35-44	157	72.8	±3.6	296	70.9	±2.9	453	71.9	±2.7
45-54	157	75.3	±3.1	219	74.5	±1.6	376	74.9	±2.0
55-64	111	74.8	±3.2	79	74.8	±3.9	190	74.8	±3.4
25-64	688	72.3	±2.5	1018	71.0	±2.1	1706	71.6	±2.2

Table 49 presents the prevalence of hypertension in the sample, consistent with the above definition. Hypertension was found in 11% ±4.2 of men and 10.5% ±2.5 of women and 10.7% ±2.6 overall. The prevalence of hypertension increased with increasing age in both men and women. From the base of age group of 35-44, the male rate doubles (9.6% to 18.6%) and the female rate more than triples (6.1% to 21.6%) in age group 35-44; and ultimately triples in males and increases six-fold in females in the age group 55-64.

Table 49   Percentage with hypertension
(SBP ≥140 and/or DBP ≥ 90 or currently on medication for raised blood pressure)

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	263	4.9	±3.9	423	2.8	±1.4	686	3.9	±2.3
35-44	157	9.6	±6.2	295	6.1	±3.6	452	7.9	±3.3
45-54	156	18.6	±7.1	218	21.6	±5.4	374	20.0	±4.3
55-64	111	26.1	±7.0	79	35.4	±12.5	190	30.7	±8.5
25-64	687	11.0	±4.2	1015	10.5	±2.5	1702	10.7	±2.6

4.9 Fasting Blood Glucose and Diabetes

Survey participants were asked if they had been told by a health worker in the previous 12 months that they had diabetes, within 1-5 years or longer, and whether they were currently receiving medical treatment for diabetes. To measure fasting blood sugar levels, capillary whole blood was drawn using the finger prick method.

Estimates of diabetes prevalence were computed based on the capillary whole blood glucose test results and by following the WHO guidelines for defining and classifying diabetes mellitus[4].

- fasting capillary whole blood value of glucose greater than or equal to 6.1 mmol/L (≥110 mg/dl) whether or not they had previously been told by a health worker that they had diabetes, OR

- normal capillary whole blood value of glucose less than 6.1 mmol/L (<110 mg/dl) AND who were currently receiving anti-diabetes medication prescribed by a health worker.

Those participants who had been advised by a health worker that they had diabetes but who had normal fasting blood glucose, and who were NOT on anti-diabetes medication or on a special diet prescribed by a health worker, were NOT included among those considered as having diabetes.

Table 50 summarizes results on mean fasting blood glucose for both genders individually and combined. The overall mean fasting blood glucose was 5.4 mmol/L ±0.2. Men reported a marginally higher mean fasting glucose level (5.5 mmol/L ±0.2) than women (5.4 mmo/L ±0.2), although this difference was not statistically significant. For both men and women, mean fasting blood glucose levels increased with increasing age and peaked in the oldest age group.

Table 50   Mean fasting blood glucose (mmol/L) by gender and age group

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	136	5.2	±0.1	205	5.0	±0.2	341	5.1	±0.1
35-44	99	5.5	±0.3	156	5.4	±0.3	255	5.4	±0.2
45-54	98	5.8	±0.3	138	5.9	±0.6	236	5.8	±0.4
55-64	70	6.5	±0.8	39	6.2	±0.9	109	6.3	±0.8
25-64	403	5.5	±0.2	538	5.4	±0.2	941	5.4	±0.2

Table 51 shows the prevalence of diabetes for both genders individually and combined. The overall prevalence diabetes was 13.5% ±4.3. Diabetes prevalence was greater in men than in women (15.3% ± 5.1 and 11.7% ±4.0 respectively). More than one third of the sample in the age group 55-64 was diabetic (32.4 ±11.4). The onset of adult diabetes is evident in the increase in age group 24-35; thereafter both gender rates increase with increasing age, two and half-fold by age 55-64.

Table 51 Prevalence of diabetes by gender and age group

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	136	7.4	±5.0	205	3.4	±2.5	341	5.4	±3.2
35-44	100	13.0	±4.9	157	12.1	±5.2	257	12.6	±3.6
45-54	100	24.0	±10.7	139	22.3	±8.1	239	23.2	±7.7
55-64	73	37.0	±12.4	40	27.5	±14.7	113	32.4	±11.4
25-64	409	15.3	±5.1	541	11.7	±4.0	950	13.5	±4.3

Table header: **Raised blood glucose or currently on medication for diabetes ****

** capillary whole blood value: ≥ 6.1 mmol/L (110 mg/dl)

4.10   Total Cholesterol

For elevated total blood cholesterol, a cut-off point ≥5.0 mmol/L (or ≥190 mg/dl) was used to classify participants as being in a high-risk group for coronary artery disease.

Table 52 shows the mean total cholesterol level for both genders individually and combined. The overall mean was 4.6 mmol/L ±0.1 and similar mean levels for men (4.5 mmol/L ±0.1) and women (4.7 mmol/L ±0.1) showed little variance across age groups, although were highest in both genders in the 55-64 age group.

Table 52 Mean total blood cholesterol (mmol/L) by gender and age group

Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	44	4.5	±0.2	89	4.7	±0.2	133	4.6	±0.2
35-44	41	4.5	±0.2	80	4.6	±0.1	121	4.5	±0.1
45-54	54	4.5	±0.2	100	4.7	±0.1	154	4.6	±0.1
55-64	36	4.7	±0.3	26	4.9	±0.3	62	4.8	±0.2
25-64	175	4.5	±0.1	295	4.7	±0.1	470	4.6	±0.1

Table header: **Mean total cholesterol (mmol/L)**

Table 53 shows the proportion of the sample with raised blood cholesterol for both genders individually and combined. Close to a quarter of the sample (24.6% ±5.3) had raised blood cholesterol, a greater proportion in women than in men (28.5% ±5.3. and 19.6 ±6.1 respectively) and particularly in age group 55-64 where half (50% ±19.7) of women and a quarter of men (25% ±21.4) had raised blood cholesterol.

Table 53 Percentage with raised total blood cholesterol (≥ 5.0 mmol/L or ≥ 190 mg/dl)

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	44	20.5	±14.2	89	27.0	±13.2	133	24.2	±13.1
35-44	41	17.1	±9.9	80	20.0	±5.8	121	18.7	±5.2
45-54	54	18.5	±9.8	100	29.0	±5.3	154	24.4	±5.0
55-64	36	25.0	±21.4	26	50.0	±19.7	62	38.9	±15.0
25-64	175	19.6	±6.1	295	28.5	±5.3	470	24.6	±5.3

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

4.11   Combined Risk Factors

To summarize the findings for the five important risk factors for NCDs, the following factors were combined and are presented in Tables 54, 55, and 56 in two age groups, 25-44 and 45-64.

- current daily smokers,
- overweight (BMI ≥25 kg/m^2),
- raised blood pressure (SBP ≥140 and/or DBP≥90 mmHg or currently on medication),
- consumed less than five combined servings of fruit and vegetables per day, and
- low level of activity (<600 METminutes per week).

These five risk factors were summed to indicate the overall risk for NCDs as follows:

- Low Risk: 0 of 5 risk factors
- Moderate Risk: 1 or 2 of 5 risk factors
- High Risk: 3 or more of 5 risk factors

Table 54 shows that almost half of the male respondents (47.8% ±4.9) were classified as at High Risk and more than half (51.1% ±4.3) as at Moderate Risk. Table 55 shows women at a marginally lower risk than men with 44.2% ±5.4 at High Risk and 55.6% ±5.3 at Moderate Risk.   In both genders (table 56) the highest level of risk was in the older age group, although 44.2% ±6.1 of younger men and 40.7% ± 5.2 of younger women were in the High Risk category. Overall, 46.0% ±4.8 of the Solomon Islands sample was at High Risk of NCDs.

Table 54 Percentage of NCD risk categories among men by age group

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	418	1.0	±1.3	54.8	±5.6	44.2	±6.1
45-64	265	1.5	±1.2	41.6	±6.2	56.9	±5.8
25-64	683	1.1	±1.1	51.1	±4.3	47.8	±4.9

Table header: Level of Risk — Men

Table 55   Percentage of NCD risk categories among women by age group

				Raised Risk				
				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	709	0.1	±0.3	59.1	±5.2	40.7	±5.2
45-64	294	0.5	±1.1	46.4	±8.4	53.1	±8.8
25-64	1003	0.2	±0.4	55.6	±5.3	44.2	±5.4

Table 56   Percentage of NCD risk categories among both genders by age group

				Raised Risk				
				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	1127	0.6	±0.7	56.9	±4.7	42.5	±5.0
45-64	559	1.0	±1.0	44.0	±5.9	55.0	±6.2
25-64	1686	0.7	±0.7	53.3	±4.5	46.0	±4.8

5. DISCUSSION AND CONCLUSIONS

This section summarizes key findings from the STEPS survey and presents a range of recommendations to control NCDs in the Solomon Islands.

Behavioural risk factors for NCDs are common in the Solomon Islands and present a public health problem at all ages of adulthood, with almost half of the sample aged 25-64 classified as at High Risk (with 3-5 concurrent risk factors) of developing an NCD. Solomon Islands women face only slightly less risk than men. The highest level of combined risk factors is in the 45-64 age group, although over 40% of men and women aged 25-44 years were also in the High Risk category. More than half of the sample was at Moderate Risk (with 1-2 concurrent risk factors). As the combination of risk factors increase the risk of developing and dying from an NCD also increases.

Compared to the mean values calculated for the 25-64 years group, a higher proportion of current smokers, a younger age of smoking uptake, a higher proportion using manufactured cigarettes, a younger age of betel nut uptake and a higher rate of betel nut chewing, a higher proportion of current alcohol drinkers, a higher proportion of female current drinkers drinking 6 or more standard drinks on a drinking day, and a higher proportion engaged in low levels of work-related physical activity in 15-24 years group. These findings suggest peer group pressure, or the effects of marketing activities producing a recent reduction in the age of risk factor uptake, and indicate the need to target prevention strategies to teenagers. Compared to the older age groups, greater proportions of the 15-24 age group, smoked manufactured cigarettes. This behaviour raised the need for health protection legislation.

More than a third of the 25-64 sample population was classified as current smokers: more than half of men and a quarter of women surveyed, the majority of whom reported that they smoked on a daily basis. For most current smokers, smoking uptake occurred during the early 20s and continued as a lifetime habit, with a reported duration of 36 years among the 55-64 age group.

Betel nut is widely used in the Solomon Islands, as indicated by the more than three quarters and of men and one third of women in the sample reporting its use, and of whom 25% consume it on a daily basis. Chronic use of betel nuts may increase the risk of some cancers, and immediate effects can include worsening of asthma, high or low blood pressure, and abnormal heart rate. Betel nut use has been shown to have a harmful effect on the gums, it is closely related to the oral cancer. These facts have been well observed in Melanesian communities, so increases the proportion of abstainers (currently almost one quarter of men and a third of women) through health education campaigns. Continuing the ban on betel nut sale in urban markets to reduce the red stain from betel spitting is likely to contribute to a reduction in betel nut use.

Just over a half of men in the sample were current alcohol drinkers. The highest proportions of drinkers in both genders were in the age group 25-34 (although not as high as in the 15-24 years age group). That one quarter of male current drinkers drank 5 or more drinks and one fifth of females drank 4 or more drinks on a drinking day is suggestive of binge drinking. Binge drinking leads to social disruption, damage to the brain and liver, risk of cancer of the mouth, throat or oesophagus, possible increased risk of neurological disorders and heart problems and increases the potential for violence and unprotected sex.

The majority (93%) of the sample was not consuming the recommended five combined servings of fruit and vegetables per day. The consumption level of fruit and vegetables did not differ much across gender and age groups but did suggest that males of the age group 35-44 were better fed than the rest of the population.

More than a third of males and almost a half of females aged 25-64 reported Low levels of physical activity. As measured by METminutes, males engaged in more physical activity than females across

all age groups, but both genders scored Low levels of physical activity per 5 day week (males 557 and females 455 METminutes respectively), where Low Activity is defined as < 600. Surprisingly, young people in the age group 15-24 engaged in less METminutes per week than the 25-64 years age group (385 and 507 METminutes respectively). Work related physical activity accounted for the majority of physical activity and recreation for the least among both males and females.

The BMI for females exceeded that for males in all age groups. Overall, as classified by BMI, there was a significantly higher proportion of obese females than males. The highest proportions of overweight and obese females were in the 35-44 year age group, while the highest proportions of overweight and obese males were in the 45-54 age group. This decade difference may be explained by a combination of biological and social roles, where females are still in the reproductive years and males have decreased their level of physical activity and increased their waist circumference. The mean waist circumference for men and women were greatest in the 45-54 age groups (94.7cm and 92.1cm respectively), although only women were at an elevated risk of high blood pressure, high blood cholesterol, type-2 diabetes, heart disease and stroke. (Men with a waist circumference of more than 102cm and women with a waist circumference of more than 88cm may have a higher disease risk than people with smaller waist circumferences).

Although hypertension was identified in approximately 11% of the sample, the findings for those aged 45-54 and 55-64 show a marked increase from age 35-44 and are highest in females. Hence a substantial portion of the older population was hypertensive, and had an elevated risk of developing cardiovascular disease or stroke. Similarly, the proportion of the sample with diabetes was approximately 14% overall but increased in the groups 45-54 and 55-64. One quarter of the surveyed population was found to have elevated fasting blood cholesterol, distributed across all age groups, but over one third in age group 55-64 and reaching 50% in older females.

These behavioural, physiological and biochemical measures indicate the substantial presence of NCDs and NCD risk factors in the Solomon Islands, all of which increase markedly in the older age groups. While the behavioural risk factor data were collected from self-reports and, as such, the prevalence of some risk factors may be over-estimated or under-estimated, the key strength of the survey is its size and its population-wide characteristics. An important strength of the survey is that key physiological and biochemical indicators were measured using objective and clinical techniques by staff trained in the STEPS protocol.

The Solomon Islands STEPS survey has confirmed that NCDs pose a threat to public health and longevity, and a challenge to national productivity. A national strategy is required to address cross-sectoral contributing factors, such as the availability of fruit and vegetables for daily consumption, the licensing and regulation of products that impact adversely on health status, health education campaigns on the outcomes of risk laden behaviours, particularly among young people who may yet have the potential to avoid NCDs by changing their behaviours.

Importantly, all of the risk factors mentioned herein are modifiable. However, for such a strategy to be effective, the population has to be informed the risks and value the outcome of improved health. This change will need to be driven by information, such as that provided in this STEPS report and provided in a manner that is sensitive to the prevailing social, economic and cultural environments of Solomon Islands.

6.   RECOMMENDATIONS

Addressing Information needs

That the Ministry of Health and Medical Services:

- Use the opportunity of the publication of this Solomon Islands NCD Risk Factors STEPS Report to initiate a national NCD risk factor reduction campaign
- Compare the sub-samples (Honiara with Gizo and Auki) to determine whether   differences exist in the consumption of fruit and vegetables and consumables
- Conduct secondary analysis of the data contained herein to compare mean values and to determine statistical   associations among the variables
- Establish strong leadership and secure political and financial commitment to maintain a systematic and rigorous approach to STEPS data collection supported by a workforce   trained in implementing the survey, in order to create an ongoing and robust STEPS   surveillance system in the Solomon Islands
- Repeat the NCD STEPS surveys to determine the effectiveness, or otherwise, of NCD prevention and control measures implemented in the Solomon Islands
- Participate in the comparison of NCD STEPS findings across all PICT that have completed   the NCD STEPS survey, in order to identify the risk factors that are particular to and most amenable to modification within the Solomon Islands
- Enhance the dissemination of this national STEPS report through workshops/meetings from national to provincial levels and with different stakeholders
- MHMS and WHO need to organize the standardized training for national STEPS Surveys
- Ensure sufficient financial support for the 2nd-round national STEPS survey

Addressing policy, organizational and environmental factors

That government:

- Earmark funds for ongoing NCD prevention and control activities
- Implement the WHO Framework Convention on Tobacco Control and the Regional Action Plan for the Tobacco-Free Initiative 2010-2014 for the Western Pacific
- Consider the potential for manufacturers and importers of cigarettes and alcohol to be taxed to the degree that they subsidize the health services provided to consumers of their products
- Generate resources for ongoing national health education programs aimed at productivity
- Continue to ban Betel nut from sale in urban markets
- Develop policies supporting importation of healthy foods.
- Investigate the potential to improve the distribution, marketing and availability of fruit and vegetables
- Develop policies to establish physical activity-friendly environments, such as walking tracks, urban parklands, sports facilities and workplace fitness programs
- Integrated approach for community involvement, e.g., health village setting

Addressing NCD behavioural risk factors

That government, Ministry of Health and Medical Services and NGO agencies create and provide:

- Comprehensive anti-smoking campaigns to reduce smoking rates, particularly targeting teenagers and the younger adult age groups to prevent smoking uptake, and smoking cessation programs to reduce smoking rates across all age groups
- Comprehensive health promotion campaigns to reduce alcohol consumption, particularly targeted at young people and binge drinking
- Comprehensive health promotion campaigns promoting the recommended levels of fruit and vegetable consumption and increasing public awareness of the adverse effects of excessive consumption of high-fat, high-salt, and high-sugar foods
- Make fruit and vegetables available and affordable
- Culturally-appropriate and diverse programs to promote daily physical activity
- Public awareness campaigns on the importance of regular monitoring and screening of blood pressure, blood cholesterol and blood sugar levels
- Public awareness programs targeted to increase awareness of the multipliers of NCD risk associated with combining the 5 major NCD risk factors (current daily smoking, being overweight, having raised blood pressure, eating less than five combined servings of fruit and vegetables per day, and having a low level of physical activity)
- A system of community-based care and management of individuals with diagnosed NCDs

APPENDICES

Respondent Identification Number ☐☐ ☐☐☐

Appendix 1. Solomon Islands STEPS Survey Questionnaire

The WHO STEPwise approach to Surveillance of Noncommunicable Diseases (STEPS)

Check if the following are completed	(to be checked by:)	Yes	No	Signature
Fasting status	(Registration Station)	☐	☐	
Step 1, 2 & 3 data collection	(Checkout Station)	☐	☐	
First EpiData data entry	(Data entry personnel)	☐	☐	
Second EpiData data entry	(Data entry personnel)	☐	☐	
Data entry irregularities	(Data entry personnel)	☐	☐	

Identification Information:		
I 1	Province code	☐☐
I 2	Province Name:	
I 3	Village code: (SEE NOTE BELOW)	☐☐
I 4	Interviewer code	☐☐
I 5	Date of completion of the questionnaire	☐☐/☐☐/200☐ Day Month Year

✂ - ✂

		Respondent ID Number ☐☐-☐☐☐	
	Consent		
I 6	Consent has been read out to respondent	Yes 1 No 2	☐ If NO, read consent
I 7	Consent has been obtained (verbal or written)	Yes 1 No 2	☐ If NO, END
I 8	Interview Language	English 1 Pidgin English 2	☐
I 9	Time of interview (24 hour clock)		☐☐:☐☐
I 10	Family Name		
I 11	First Name		
I 12	Contact phone number where possible		
I 13	Specify whose phone	Work 1 Home 2 Neighbour 3 Other (specify) 4	☐

Note: Identification information I6 to I13 should be stored separately from the questionnaire because it contains confidential information.
Please note: Village code is required as part of main instrument for data analyses.   Date of interview is required to calculate age.

Respondent Identification Number ☐☐ ☐☐☐

Step 1   Demographic Information

			Coding Column
C1	Sex (*Record Male / Female as observed*)	Male 1 Female 2	☐
C2	What is your date of birth? *If Don't Know, See Note* below and Go to C3*	Day ☐☐ Month ☐☐ Year 19☐☐	
C3	How old are you?	Years	☐☐
C4	What is your *ethnic* background?	Melanesian 1 Polynesian 2 Micronesian 3 Chinese/Asian 4 Others 5	☐
C5	In total, how many years have you spent at school or in full-time study (excluding pre-school)?	Years	☐☐
C6	What is the highest level of education you have completed?	No formal schooling 1 Preclass 2 Primary school 3 Secondary/High school 4 Higher education/college other than secondary school 5 University 6 Post graduate degree 7	☐
C7	Which of the following best describes your main work status over the last 12 months? [*INSERT COUNTRY-SPECIFIC CATEGORIES*] USE SHOWCARD	Government employee 1 Non-government employee 2 Self-employed 3 Non-paid 4 Student 5 Homemaker 6 Retired 7 Unemployed (able to work) 8 Unemployed (unable to work) 9	☐
C8	How many people older than 18 years, including yourself, live in your household?	Number of people	☐☐
C9	Taking **the past year**, can you tell me what the average earnings of the household have been?	Per week ☐☐☐☐☐☐ OR per month ☐☐☐☐☐☐ OR per year ☐☐☐☐☐☐☐ *Go to Next Section (S1a) if given estimated earnings* Refused 8 ☐	*If Refused Go to C10*
C10	If you don't know the amount, can you give an **estimate** of the annual household income if I read some options to you? Is it [*USE SHOWCARD & READ OPTIONS*] [*INSERT QUINTILE VALUES*]	≤ Quintile (Q) 1 1 More than Q 1, ≤ Q 2 2 More than Q 2, ≤ Q 3 3 More than Q 3, ≤ Q 4 4 More than Q 4 5 Refused 8	☐

Note*: 1) The **Date of Birth** (C2) or the **age** (C3) or **both** (C2 and C3) have to be filled. If both C2 and C3 not available, then STOP. CODE "DK" FOR DON'T KNOW or DON'T REMEMBER.

Respondent Identification Number ☐☐ ☐☐☐

Step 1   Behavioural Measures

Tobacco Use (Section S)

Now I am going to ask you some questions about various health behaviours. This includes things like smoking, drinking alcohol, eating fruits and vegetables and physical activity. Let's start with smoking.

		Response		Coding Column	
S 1a	Do you currently smoke any **tobacco products**, such as cigarettes, cigars or pipes?	Yes 1 No 2		☐	*If No, go to N1a*
S 1b	<u>If Yes,</u> Do you currently smoke tobacco products **daily**?	Yes 1 No 2		☐	*If No, go to N1a*
S 2a	How old were you when you **first started** smoking <u>daily</u>?	Age (years) Don't remember D K		☐☐	*If Known, go to S 3*
S 2b	Do you remember how long ago it was?	In Years	Years ☐☐		
		OR in Months	Months ☐☐		
		OR in Weeks	Weeks ☐☐		
S 3	On average, **how many** of the following do you smoke each day? *(RECORD FOR EACH TYPE)*	Manufactured cigarettes		☐☐	
		Hand-rolled cigarettes		☐☐	
		Pipes full of tobacco		☐☐	
		Cigars, cheroots, cigarillos		☐☐	
		← Other (please specify):		☐☐	

Betel Nut Use (Section N)

The next questions ask about the use of betel nut.

		Response		Coding Column	
N 1a	Do you **currently** *chew betel* nut ?	Yes 1 No 2		☐	*If No, go to A1a*
N 1b	<u>If Yes,</u> Do you **currently chew betel nuts daily?**	Yes 1 No 2		☐	*If No, go to A1a*
N 2a	How old were you when you **first started** chewing betel nuts daily?	Age (years) Don't remember D K		☐☐	*If Known, go to N3*
N 2b	Do you remember how long ago it was? *(CODE DK FOR DON'T REMEMBER)*	In Years	Years ☐☐		
		OR in Months	Months ☐☐		
		OR in Weeks	Weeks ☐☐		
N 3	Do you **usually** smoke while chewing betel nut?	Yes 1 No 2		☐	

Alcohol Consumption (Section A)

The next questions ask about the consumption of alcohol.

		Response	Coding Column	
A 1a	Have you **ever consumed** a drink that contains alcohol such as beer, wine, spirit or fermented cider? *USE SHOWCARD or SHOW EXAMPLES*	Yes 1 No 2	☐	*If No, Go to D1a*
A 1b	Have you consumed alcohol within the **past 12 months**?	Yes 1 No 2	☐	*If No, Go to D1a*
A 2	Have you **ever** tried or drunk home brewed alcohol or kwaso in the past 12 months?	Yes 1 No 2	☐	
A 3	In the past 12 months, **how frequently** have you had at least one drink? *(READ RESPONSES)* *USE SHOWCARD*	5 or more days a week 1 1-4 days per week 2 1-3 days a month 3 Less than once a month 4	☐	

Note: Code *DK* for "Don't know" or "Don't remember".

			Coding Column	
A 4	When you drink alcohol, **on average**, how many drinks do you have during one day?	Number Don't know D K	☐☐	
A 5	During each of the **past 7 days**, how many standard drinks of any alcoholic drink did you have each day? *(RECORD FOR EACH DAY USE SHOWCARD)*	Monday	☐☐	
		Tuesday	☐☐	
		Wednesday	☐☐	
		Thursday	☐☐	
		Friday	☐☐	
		Saturday	☐☐	
		Sunday	☐☐	
A 6	During the **last 30 days**, on **how many days** did you drink home brewed alcohol or kwaso?	Number of days	☐☐	
A 7	Do you usually smoke during or after drinking alcohol?	Yes 1 No 2	☐	

Diet (Section D)

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

			Coding Column	
D 1a	In a typical week, on how many days do you **eat fruit**? *USE SHOWCARD*	Number of days	☐	*If Zero days, go to D 2a*
D 1b	How many **servings** of fruit do you eat on **one** of those days? *USE SHOWCARD*	Number of servings	☐☐	
D 2a	In a typical week, on how many days do you **eat vegetables**? *USE SHOWCARD*	Number of days	☐	*If Zero days, go to Section P*
D 2b	How many **servings** of vegetables do you eat on one of those days? *USE SHOWCARD*	Number of servings	☐☐	

Respondent Identification Number ☐☐ ☐☐☐

D 3	What type of **oil or fat is most often** used for meal preparation in your household? *SELECT ONLY ONE* _____	Vegetable oil 1 Lard or suet 2 Butter or ghee 3 Margarine 4 Coconut oil ◄— Other 5 None in particular 6 None used 7 Don't know 8	☐
D 4	In a typical week, on how many days do you eat **fresh fish**?	Number of days	☐
D 5	In a typical week, on how many days do you eat **tinned fish**?	Number of days	☐

<u>Note</u>: Code **DK** for "Don't know" or "Don't remember".

Physical Activity (Section P)

Next I am going to ask you about the time you spend doing different types of physical activity. Please answer these questions even if you do not consider yourself to be an active person.
Think first about the time you spend doing work. Think of work as the things that you have to do such as paid or unpaid work, household chores, harvesting food, fishing or hunting for food, seeking employment. *[Insert other examples if needed]*

P 1	Does your work involve mostly sitting or standing, with walking for no more than 10 minutes at a time?	Yes 1 No 2	☐	*If Yes, go to P6*
P 2	Does your work involve vigorous activity, like [*heavy lifting, digging or construction work*] for at least 10 minutes at a time? *INSERT EXAMPLES & USE SHOWCARD*	Yes 1 No 2	☐	*If No, go to P4*
P 3a	In a typical week, on how many days do you do vigorous activities as part of your work?	Days a week	☐	
P 3b	On a typical day on which you do vigorous activity, how much time do you spend doing such work?	In hours and minutes hrs ☐☐ : mins ☐☐ OR in Minutes only or minutes ☐☐☐		
P 4	Does your work involve moderate-intensity activity, like brisk walking [*or carrying light loads*] for at least 10 minutes at a time? *INSERT EXAMPLES & USE SHOWCARD*	Yes 1 No 2	☐	*If No, go to P6*
P 5a	In a typical week, on how many days do you do moderate-intensity activities as part of your work?	Days a week	☐	
P 5b	On a typical day on which you did moderate-intensity activities, how much time do you spend doing such work?	In hours and minutes hrs ☐☐ : mins ☐☐ OR in Minutes only or minutes ☐☐☐		
P 6	How long is your typical work day?	Number of hours hrs ☐☐		

Other than activities that you've already mentioned, I would like to ask you about the way you travel to and from places. For example to work, for shopping, to market, to church. [*insert other examples if needed*]

P 7	Do you walk or use a bicycle (*pedal cycle*) for at least 10 minutes continuously to get to and from places?	Yes 1 No 2	☐	*If No, go to P9*
P 8a	In a typical week, on how many days do you walk or bicycle for at least 10 minutes to get to and from places?	Days a week	☐	
P 8b	How much time would you spend walking or bicycling for travel on a typical day?	In hours and minutes hrs ☐☐ : mins ☐☐ OR in Minutes only or minutes ☐☐☐		

The next questions ask about activities you do in your leisure time. Think about activities you do for recreation, fitness or sports *[insert relevant terms]*.   Do not include the physical activities you do at work or for travel mentioned already.

P 9	Does your [*recreation, sport or leisure time*] involve mostly sitting, reclining, or standing, with no physical activity lasting more than 10 minutes at a time?	Yes 1 No 2	☐	*If Yes, go to P 14*
P 10	In your [*leisure time*], do you do any vigorous activities like [*running or strenuous sports, weight lifting*] for at least 10 minutes at a time? *INSERT EXAMPLES & USE SHOWCARD*	Yes 1 No 2	☐	*If No, go to P 12*
P 11a	If Yes, In a typical week, on how many days do you do vigorous activities as part of your [*leisure time*]?	Days a week	☐	
P 11b	How much time do you spend doing this on a typical day?	In hours and minutes hrs ☐☐ : mins ☐☐ OR in Minutes only or minutes ☐☐☐		

Note: Code *DK* for "Don't know" or "Don't remember".

P 12	In your [*leisure time*], do you do any moderate-intensity activities like brisk walking,[*cycling or swimming*] for at least 10 minutes at a time? *INSERT EXAMPLES & USE SHOWCARD*	Yes 1 No 2	☐	*If No, go to P 14*
P 13a	If Yes In a typical week, on how many days do you do moderate-intensity activities as part of [*leisure time*]?	Days a week	☐	
P 13b	How much time do you spend doing this on a typical day?	In hours and minutes hrs ☐☐ : mins ☐☐ OR in Minutes only or minutes ☐☐☐		

The following question is about sitting or reclining. Think back over the past 7 days, to time spent at work, at home, in *[leisure]*, including time spent sitting at a desk, visiting friends, reading, or watching television, but do not include time spent sleeping.

P 14	Over the past 7 days, how much time did you spend sitting or reclining on a typical day?	In hours and minutes hrs ☐☐ : mins ☐☐ OR in Minutes only or minutes ☐☐☐	

History of High Blood Pressure

V 1	How many times did you visit the doctor during the last 12 months? *(Include hospitalisation or visits to the outpatient department/health clinics; do not include visits to the dentist).*	Number of times	☐☐	
H 1	When was your blood pressure last measured by a health professional?	Within past 12 months 1 1-5 years ago 2 Not within past 5 yrs 3	☐	
H 2	During the past 12 months have you been told by a doctor or other health worker that you have elevated blood pressure or hypertension?	Yes 1 No 2	☐	*If No, skip to Next Section*
H 3	Are you currently receiving any of the following treatments for high blood pressure prescribed by a doctor or other health worker?			
H 3a	Drugs (medication) that you have taken in the last 2 weeks	Yes 1 No 2	☐	
H 3b	Special prescribed diet	Yes 1 No 2	☐	
H 3c	Advice or treatment to lose weight	Yes 1 No 2	☐	
H 3d	Advice or treatment to stop smoking	Yes 1 No 2	☐	
H 3e	Advice to start or do more exercise	Yes 1 No 2	☐	

Respondent Identification Number ☐☐ ☐☐☐

H 4	During the past 12 months have you seen a traditional healer for elevated blood pressure or hypertension	Yes 1	☐
		No 2	
H 5	Are you currently taking any herbal or traditional remedy for your high blood pressure?	Yes 1	☐
		No 2	

History of Diabetes

H 6	When was your blood sugar last measured by a health professional	Within past 12 months 1	☐	
		1-5 years ago 2		
		Not within past 5 yrs 3		
H 7	Have you ever been told by a doctor or other health worker that you have diabetes?	Yes 1	☐	*If No, skip to Next Section*
		No 2		
H 8	Are you currently receiving any of the following treatments for diabetes prescribed by a doctor or other health worker?			
H 8a	Insulin	Yes 1	☐	
		No 2		
H 8b	Oral drug (medication that you have taken in the last 2 weeks	Yes 1	☐	
		No 2		
H 8c	Special prescribed diet	Yes 1	☐	
		No 2		
H 8d	Advice or treatment to lose weight	Yes 1	☐	
		No 2		
H 8e	Advice or treatment to stop smoking	Yes 1	☐	
		No 2		
H 8f	Advice to start or do more exercise	Yes 1	☐	
		No 2		
H 9	During the past 12 months have you seen a traditional healer for diabetes?	Yes 1	☐	
		No 2		
H 10	Are you currently taking any herbal or traditional remedy for your diabetes?	Yes 1	☐	
		No 2		

Note: Code **_DK_** for "Don't know" or "Don't remember

Comments: Step 1		(to be answered by the Interviewer)	
V 2	Are there any irregularities or problems with the measurements?	Yes 1	☐
		No 2	

If yes, please describe. _____

_____

_____

_____

_____

Respondent Identification Number ☐☐ ☐☐☐

Step 2   Physical Measurements

Height and weight   Coding Column

M 1	Technician ID Code		☐☐
M 2a & 2b	Device IDs for height and weight	(2a) height ☐☐ (2b) weight ☐☐	
M 3	Height	(in Centimetres)	☐☐☐.☐
M 4	Weight *If too large for scale, code 666.6*	(in Kilograms)	☐☐☐.☐
M 5	*(For women)* Are you pregnant?	Yes 1 No 2	☐ *If Yes, Skip Waist*

Waist and Hip

M 6	Technician ID		☐☐
M 7	Device ID for waist		☐☐
M 8	Waist circumference	(in Centimetres)	☐☐☐.☐
M 9	Hip circumference	(in Centimetres)	☐☐☐.☐

Blood pressure   Coding Column

M 10	Technician ID		☐☐
M 11	Device ID for blood pressure		☐☐
M 12	Cuff size used	Normal 1 Large 2 Manual 3	☐
M 13a	Reading 1 **Systolic BP**	Systolic mmHg	☐☐☐
M 13b	**Diastolic BP**	Diastolic mmHg	☐☐☐
M 14a	Reading 2 **Systolic BP**	Systolic mmHg	☐☐☐
M 14b	**Diastolic BP**	Diastolic mmHg	☐☐☐
M 15a	Reading 3 **Systolic BP**	Systolic mmHg	☐☐☐
M 15b	**Diastolic BP**	Diastolic mmHg	☐☐☐

Respondent Identification Number ☐☐ ☐☐☐

Step 3 Biochemical Measurements

Blood glucose			Coding Column
B 1	Since 10pm last night, have you had anything to eat or drink, other than water?	Yes 1 No 2	☐
B 2	Technician ID Code		☐☐☐
B 3	Device ID code		☐☐
B 4	Time of day blood specimen taken (24 hour clock)		hrs ☐☐ : mins ☐☐
B 5	Blood glucose		mmol/l ☐☐.☐
		Low 1 High 2 Unable to assess 3	☐

Blood Lipids			
B 6	Technician ID Code (cholesterol)		☐☐☐
B 7	Device ID code (cholesterol)		☐☐
B 8	Total cholesterol		mmol/l ☐☐.☐☐
		Low 1 High 2 Unable to assess 3	☐
B 9	Technician ID Code (triglycerides)		☐☐☐
B 10	Device ID code (triglycerides)		☐☐
B 11	Triglycerides		mmol/l ☐☐.☐☐
		Low 1 High 2 Unable to assess 3	☐

Haemoglobin			
B 12	Technician ID Code		☐☐☐
B 13	Device ID Code		☐☐
B 14	Haemoglobin		g/l ☐☐.☐☐
		Low 1 High 2 Unable to access 3	☐

If yes, please describe. _____

Comments: Step 2 and 3		(to be answered by any Step 2 or 3 technician)	
V 3	Are there any irregularities or problems with the measurements?	Yes 1 No 2	☐

_____

_____

Appendix 2. The Whole Data Book of the Solomon Islands STEPS Survey

WHO STEPS

Chronic Disease
Risk Factor Surveillance

DATA BOOK FOR
SOLOMON ISLANDS

Demographic Information Results

Age group by sex

Description: Summary information by age group and sex of the respondents.

Instrument question:
- Sex
- What is your date of birth?

Age group and sex of respondents						
Age Group (years)	Men		Women		Both Sexes	
	n	%	n	%	n	%
25-34	317	39.9	477	60.1	794	41.2
35-44	188	36.9	322	63.1	510	26.5
45-54	180	43.2	237	56.8	417	21.7
55-64	117	57.4	87	42.6	204	10.6
25-64	802	41.7	1123	58.3	1925	100

Ethnicity

Description: Summary results for the ethnicity of the respondents.

Instrument Question:
- What is your [insert relevant ethnic group/racial group/cultural subgroup/others] background?

Ethnic group of respondents						
Age Group (years)	Both Sexes					
	n	1) Melanesian	2) Polynesian	3) Micronesian	4) Chinese/Asian	5) Other
25-34	793	92.1	4.3	3.2	0.3	0.3
35-44	510	89.0	6.5	4.1	0.2	0.2
45-54	417	88.5	5.3	6.0	0.2	0.0
55-64	204	88.2	5.9	4.9	1.0	0.0
25-64	1924	90.1	5.2	4.2	0.3	0.2

Education Description: Mean number of years of education among respondents.

Instrument question:
- In total, how many years have you spent at school or in full-time study (excluding pre-school)?

Mean number of years of education							
Age Group (years)	**Men**			**Women**		**Both Sexes**	
	n	Mean		n	Mean		n	Mean
25-34	315	9.4		476	7.1		791	8.0
35-44	188	8.2		322	5.7		510	6.6
45-54	180	8.3		237	5.0		417	6.4
55-64	117	6.6		87	3.8		204	5.4
25-64	800	8.4		1122	6.0		1922	7.0

Highest level of education

Description: Highest level of education achieved by the survey respondents.

Instrument question:
- What is the highest level of education you have completed?

	Highest level of education						
	Men						
Age Group (years)	n	% No formal schooling	% Preclass	% Primary school	% Secondary School	% Higher education / college	% University	% Post graduate degree
25-34	316	1.6	5.1	39.6	25.6	21.8	6.3	0.0
35-44	188	3.7	5.3	53.7	19.1	12.2	5.3	0.5
45-54	180	7.8	3.9	44.4	23.3	11.7	6.1	2.8
55-64	117	12.8	9.4	44.4	17.9	11.1	4.3	0.0
25-64	801	5.1	5.5	44.7	22.5	15.7	5.7	0.7

	Highest level of education						
	Women						
Age Group (years)	n	% No formal schooling	% Preclass	% Primary school	% Secondary School	% Higher education / college	% University	% Post graduate degree
25-34	476	8.2	8.8	50.8	20.0	10.7	1.5	0.0
35-44	321	17.1	12.1	50.8	11.8	5.3	2.5	0.3
45-54	237	23.2	11.4	47.3	11.8	5.1	1.3	0.0
55-64	87	33.3	8.0	44.8	10.3	3.4	0.0	0.0
25-64	1121	15.9	10.3	49.6	15.2	7.4	1.6	0.1

	Highest level of education						
	Both Sexes						
Age Group (years)	n	% No formal schooling	% Preclass	% Primary school	% Secondary School	% Higher education / college	% University	% Post graduate degree
25-34	792	5.6	7.3	46.3	22.2	15.2	3.4	0.0
35-44	509	12.2	9.6	51.9	14.5	7.9	3.5	0.4
45-54	417	16.5	8.2	46.0	16.8	7.9	3.4	1.2
55-64	204	21.6	8.8	44.6	14.7	7.8	2.5	0.0
25-64	1922	11.4	8.3	47.6	18.2	10.9	3.3	0.4

Employment status

Description: Proportion of respondents in paid employment and those who are unpaid. Unpaid includes persons who are non-paid, students, homemakers, retired, and unemployed.

Instrument question:
- Which of the following best describes your main work status over the last 12 months?

Employment status					
Men					
Age Group (years)	n	% Government employee	% Non-government employee	% Self-employed	% Unpaid
25-34	315	10.5	22.5	22.5	44.4
35-44	188	16.0	21.3	26.1	36.7
45-54	180	15.0	21.7	30.6	32.8
55-64	117	6.8	8.5	14.5	70.1
25-64	800	12.3	20.0	24.0	43.8

Employment status					
Women					
Age Group (years)	n	% Government employee	% Non-government employee	% Self-employed	% Unpaid
25-34	477	8.8	9.9	5.0	76.3
35-44	322	7.1	9.3	9.9	73.6
45-54	237	3.0	7.2	8.4	81.4
55-64	87	0.0	3.4	6.9	89.7
25-64	1123	6.4	8.6	7.3	77.6

Employment status					
Both Sexes					
Age Group (years)	n	% Government employee	% Non-government employee	% Self-employed	% Unpaid
25-34	792	9.5	14.9	12.0	63.6
35-44	510	10.4	13.7	15.9	60.0
45-54	417	8.2	13.4	18.0	60.4
55-64	204	3.9	6.4	11.3	78.4
25-64	1923	8.8	13.4	14.2	63.5

Unpaid work and unemployed

Description: Proportion of respondents in unpaid work.

Instrument question:
- Which of the following best describes your main work status over the last 12 months?

Unpaid work and unemployed							
Men							
Age Group (years)	n	% Home-maker	% Non-paid	% Retired	% Student	Unemployed	
						% Able to work	% Not able to work
25-34	140	14.3	17.1	0.0	20.7	42.1	5.7
35-44	69	33.3	11.6	1.4	0.0	49.3	4.3
45-54	59	20.3	20.3	16.9	0.0	27.1	15.3
55-64	82	14.6	19.5	40.2	0.0	14.6	11.0
25-64	350	19.1	17.1	12.6	8.3	34.6	8.3

Unpaid work and unemployed							
Women							
Age Group (years)	n	% Home-maker	% Non-paid	% Retired	% Student	Unemployed	
						% Able to work	% Not able to work
25-34	364	73.9	2.2	0.0	5.5	15.4	3.0
35-44	237	83.5	3.8	0.0	0.8	8.9	3.0
45-54	193	76.2	2.6	6.2	1.0	8.3	5.7
55-64	78	64.1	6.4	9.0	0.0	1.3	19.2
25-64	872	76.1	3.1	2.2	2.8	10.8	5.0

Unpaid work and unemployed							
Both Sexes							
Age Group (years)	n	% Home-maker	% Non-paid	% Retired	% Student	Unemployed	
						% Able to work	% Not able to work
25-34	504	57.3	6.3	0.0	9.7	22.8	3.8
35-44	306	72.2	5.6	0.3	0.7	18.0	3.3
45-54	252	63.1	6.7	8.7	0.8	12.7	7.9
55-64	160	38.8	13.1	25.0	0.0	8.1	15.0
25-64	1222	59.8	7.1	5.2	4.3	17.6	6.0

Per capita annual income

Description: Mean reported per capita annual income of respondents in local currency.

Instrument question:
- How many people older than 18 years, including yourself, live in your household?
- Taking the past year, can you tell me what the average earning of the household has been?

Mean annual per capita income	
n	Mean
952	17353.97

Estimated household earnings

Description: summary of participant household earnings by quintile.

Instrument question:
- If you don't know the amount, can you give an estimate of the annual household income if I read some options to you?

Estimated household earnings					
n	% Quintile 1: Under $........	% Quintile 2: $......-$......	% Quintile 3: $......-$......	% Quintile 4: $......-$......	% Quintile 5: Over $......
765	9.20	33.5	46.4	8.5	2.5

Tobacco Use

Current smoking Description: Current smokers among all respondents.

Instrument questions:
- Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?

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	316	59.5	51.1 - 67.9		477	27.9	22.7 - 33.1		793	43.8	38.3 - 49.3
35-44	188	52.1	44.8 - 59.4		321	23.4	16.8 - 29.9		509	38.0	32.9 - 43.1
45-54	180	51.7	43.6 - 59.7		237	21.5	16.0 - 27.0		417	37.1	30.2 - 43.9
55-64	117	41.9	29.1 - 54.7		87	23.0	12.2 - 33.8		204	32.6	23.1 - 42.2
25-64	801	54.1	47.2 - 60.9		1122	25.0	20.5 - 29.5		1923	39.8	34.7 - 44.8

Smoking Status

Description: Smoking status of all respondents.

Instrument questions:
- Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?
- Do you currently smoke tobacco products daily?

Smoking status							
Men							
Age Group (years)	n	Current smoker				% Does not smoke	95% CI
		% Daily	95% CI	% Non-daily	95% CI		
25-34	316	48.4	40.7 - 56.2	11.1	6.9 - 15.3	40.5	32.1 - 48.9
35-44	188	42.0	37.4 - 46.7	10.1	6.5 - 13.7	47.9	40.6 - 55.2
45-54	180	41.7	32.4 - 50.9	10.0	2.9 - 17.1	48.3	40.3 - 56.4
55-64	117	35.0	22.7 - 47.3	6.8	4.6 - 9.1	58.1	45.4 - 70.9
25-64	801	43.9	38.3 - 49.6	10.1	7.4 - 12.9	45.9	39.1 - 52.8

Smoking status							
Women							
Age Group (years)	n	Current smoker				% Does not smoke	95% CI
		% Daily	95% CI	% Non-daily	95% CI		
25-34	477	17.6	13.7 - 21.5	10.3	7.7 - 12.9	72.1	66.9 - 77.3
35-44	321	17.4	12.1 - 22.8	5.9	3.4 - 8.4	76.6	70.1 - 83.2
45-54	237	15.2	10.8 - 19.5	6.3	2.3 - 10.4	78.5	73.0 - 84.0
55-64	87	14.9	5.9 - 23.9	8.0	0.0 - 16.1	77.0	66.2 - 87.8
25-64	1122	16.9	13.1 - 20.6	8.1	6.4 - 9.9	75.0	70.5 - 79.5

Smoking status							
Both Sexes							
Age Group (years)	n	Current smoker				% Does not smoke	95% CI
		% Daily	95% CI	% Non-daily	95% CI		
25-34	793	33.1	28.0 - 38.3	10.7	8.3 - 13.0	56.2	50.7 - 61.7
35-44	509	29.9	26.0 - 33.9	8.0	5.7 - 10.4	62.0	56.9 - 67.1
45-54	417	28.9	23.6 - 34.1	8.2	3.7 - 12.8	62.9	56.1 - 69.8
55-64	204	25.2	17.9 - 32.5	7.4	3.6 - 11.2	67.4	57.8 - 76.9
25-64	1923	30.6	26.7 - 34.5	9.1	7.1 - 11.2	60.2	55.2 - 65.3

Frequency of smoking

Description: Percentage of current daily smokers among smokers.

Instrument question:
- Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?
- Do you currently smoke tobacco products daily?

<table>
<tr><th colspan="10">Current daily smokers among smokers</th></tr>
<tr><th rowspan="2">Age Group (years)</th><th colspan="3">Men</th><th colspan="3">Women</th><th colspan="3">Both Sexes</th></tr>
<tr><th>n</th><th>% Daily smokers</th><th>95% CI</th><th>n</th><th>% Daily smokers</th><th>95% CI</th><th>n</th><th>% Daily smokers</th><th>95% CI</th></tr>
<tr><td>25-34</td><td>188</td><td>81.4</td><td>74.9 - 87.8</td><td>133</td><td>63.2</td><td>56.3 - 70.1</td><td>321</td><td>75.6</td><td>70.5 - 80.8</td></tr>
<tr><td>35-44</td><td>98</td><td>80.6</td><td>75.7 - 85.5</td><td>75</td><td>74.7</td><td>66.4 - 83.0</td><td>173</td><td>78.8</td><td>74.1 - 83.6</td></tr>
<tr><td>45-54</td><td>93</td><td>80.6</td><td>67.3 - 94.0</td><td>51</td><td>70.6</td><td>55.2 - 86.0</td><td>144</td><td>77.8</td><td>67.6 - 88.0</td></tr>
<tr><td>55-64</td><td>49</td><td>83.7</td><td>77.5 - 89.9</td><td>20</td><td>65.0</td><td>36.3 - 93.7</td><td>69</td><td>77.2</td><td>69.0 - 85.5</td></tr>
<tr><td>25-64</td><td>428</td><td>81.2</td><td>77.0 - 85.4</td><td>279</td><td>67.5</td><td>61.5 - 73.4</td><td>707</td><td>77.0</td><td>73.3 - 80.6</td></tr>
</table>

Manufactured cigarette smokers

Description: Percentage of smokers who use manufactured cigarettes among daily smokers.

Instrument question:
- On average, how many of the following do you smoke each day?

<table>
<tr><th colspan="10">Manufactured cigarette smokers among daily smokers</th></tr>
<tr><th rowspan="2">Age Group (years)</th><th colspan="3">Men</th><th colspan="3">Women</th><th colspan="3">Both Sexes</th></tr>
<tr><th>n</th><th>% Manu-factured cigarette smoker</th><th>95% CI</th><th>n</th><th>% Manu-factured cigarette smoker</th><th>95% CI</th><th>n</th><th>% Manu-factured cigarette smoker</th><th>95% CI</th></tr>
<tr><td>25-34</td><td>153</td><td>66.0</td><td>52.5 - 79.5</td><td>84</td><td>66.7</td><td>55.3 - 78.1</td><td>237</td><td>66.2</td><td>57.2 - 75.2</td></tr>
<tr><td>35-44</td><td>79</td><td>65.8</td><td>54.8 - 76.8</td><td>56</td><td>51.8</td><td>35.2 - 68.4</td><td>135</td><td>61.8</td><td>54.0 - 69.6</td></tr>
<tr><td>45-54</td><td>75</td><td>45.3</td><td>31.7 - 59.0</td><td>36</td><td>50.0</td><td>30.5 - 69.5</td><td>111</td><td>46.5</td><td>33.3 - 59.8</td></tr>
<tr><td>55-64</td><td>41</td><td>43.9</td><td>15.2 - 72.6</td><td>13</td><td>30.8</td><td>7.0 - 54.5</td><td>54</td><td>40.1</td><td>19.5 - 60.7</td></tr>
<tr><td>25-64</td><td>348</td><td>60.6</td><td>51.3 - 69.8</td><td>189</td><td>56.3</td><td>51.2 - 61.4</td><td>537</td><td>59.4</td><td>52.1 - 66.7</td></tr>
</table>

Amount of tobacco used among smokers by type

Description: Mean amount of tobacco used by daily smokers per day, by type.

Instrument question:
• On average, how many of the following do you smoke each day?

Mean amount of tobacco used by daily smokers by type														
Men														
Age Group (years)	n	Mean # of manu-factured cig.	95% CI	n	Mean #of hand-rolled cig.	95% CI	n	Mean # of pipes of tobacco	95% CI	n	Mean # of other type of tobacco	95% CI
25-34	137	7.2	5.7 - 8.7	145	4.5	4.0 - 5.0	104	0.1	0.0 - 0.1	104	0.1	0.0 - 0.3
35-44	73	8.6	5.2 - 12.0	72	4.7	3.7 - 5.6	56	0.2	0.0 - 0.5	56	0.0	----
45-54	68	6.5	3.1 - 10.0	68	3.5	2.8 - 4.3	54	1.1	0.3 - 1.9	52	0.5	0.0 - 0.9
55-64	37	4.9	0.9 - 8.9	37	3.9	3.2 - 4.7	34	0.4	0.0 - 0.9	32	0.1	0.0 - 0.4
25-64	315	7.3	5.8 - 8.7	322	4.3	3.9 - 4.8	248	0.3	0.1 - 0.5	244	0.1	0.0 - 0.3

Mean amount of tobacco used by daily smokers by type														
Women														
Age Group (years)	n	Mean # of manu-factured cig.	95% CI	n	Mean #of hand-rolled cig.	95% CI	n	Mean # of pipes of tobacco	95% CI	n	Mean # of other type of tobacco	95% CI
25-34	79	6.1	4.2 - 8.0	74	2.5	1.8 - 3.3	58	0.1	0.0 - 0.3	58	0.0	----
35-44	52	5.0	2.4 - 7.6	53	3.3	2.5 - 4.1	46	0.1	0.0 - 0.2	46	0.0	----
45-54	34	6.9	2.8 - 11.0	32	3.8	1.6 - 6.0	22	1.0	0.0 - 2.2	22	0.1	0.0 - 0.3
55-64	12	2.8	0.0 - 6.9	12	2.3	0.9 - 3.6	11	1.3	0.0 - 2.9	11	0.2	0.0 - 0.5
25-64	177	5.6	4.3 - 6.9	171	2.9	2.3 - 3.6	137	0.3	0.0 - 0.7	137	0.0	0.0 - 0.1

Mean amount of tobacco used by daily smokers by type														
Both Sexes														
Age Group (years)	n	Mean # of manu-factured cig.	95% CI	n	Mean #of hand-rolled cig.	95% CI	n	Mean # of pipes of tobacco	95% CI	n	Mean # of other type of tobacco	95% CI
25-34	216	6.9	5.7 - 8.0	219	4.0	3.6 - 4.4	162	0.1	0.0 - 0.1	162	0.1	0.0 - 0.2
35-44	125	7.5	5.2 - 9.9	125	4.3	3.5 - 5.1	102	0.2	0.0 - 0.4	102	0.0	----
45-54	102	6.6	3.3 - 9.9	100	3.6	2.7 - 4.5	76	1.1	0.4 - 1.7	74	0.4	0.0 - 0.8
55-64	49	4.3	0.7 - 7.9	49	3.4	2.8 - 4.1	45	0.7	0.0 - 1.4	43	0.1	0.0 - 0.4
25-64	492	6.8	5.5 - 8.1	493	4.0	3.6 - 4.4	385	0.3	0.1 - 0.5	381	0.1	0.0 - 0.2

Initiation of smoking

Description: Mean age of initiation and mean duration of smoking, in years, among daily smokers (no total age group for mean duration of smoking as age influences these values).

Instrument questions:
- How old were you when you first started smoking daily?
- How long ago did you stop smoking daily?

Mean age started smoking											
	Men				**Women**				**Both Sexes**		
Age Group (years)	n	Mean age started smoking	95% CI		n	Mean age started smoking	95% CI		n	Mean age started smoking	95% CI
25-34	151	19.0	18.2 - 19.8		82	20.3	19.2 - 21.4		233	19.4	18.8 - 20.0
35-44	78	20.7	19.3 - 22.1		51	24.1	21.9 - 26.3		129	21.6	20.4 - 22.9
45-54	74	22.1	20.5 - 23.8		35	27.4	24.2 - 30.6		109	23.5	22.2 - 24.7
55-64	39	22.6	20.6 - 24.6		13	26.5	19.0 - 33.9		52	23.8	21.3 - 26.3
25-64	342	20.3	19.8 - 20.8		181	23.1	21.9 - 24.3		523	21.0	20.5 - 21.6

Mean duration of smoking											
	Men				**Women**				**Both Sexes**		
Age Group (years)	n	Mean yrs of smoking	95% CI		n	Mean yrs of smoking	95% CI		n	Mean yrs of smoking	95% CI
25-34	151	10.0	9.3 - 10.6		82	8.8	7.8 - 9.7		233	9.6	9.1 - 10.1
35-44	78	17.4	15.7 - 19.0		51	15.0	13.0 - 17.0		129	16.7	15.3 - 18.1
45-54	74	27.5	25.9 - 29.2		35	21.8	18.9 - 24.6		109	26.1	24.8 - 27.3
55-64	39	37.3	35.3 - 39.4		13	33.0	25.4 - 40.6		52	36.0	33.2 - 38.8
25-64	342	17.2	15.9 - 18.6		181	15.0	13.2 - 16.8		523	16.6	15.5 - 17.7

Betel Nut Use

Betel Nut Use Description: Percentage of participants who chew betel nut.

Age Group (years)	n	Current User				% Does not use	95% CI
		% Daily	95% CI	% Non-daily	95% CI		
Betel Nut Use							
Men							
25-34	316	38.0	32.3 – 43.7	34.8	26.6 – 43.0	27.2	17.9 – 36.5
35-44	188	35.6	24.9 – 46.4	29.8	23.0 – 36.6	34.6	23.3 – 45.8
45-54	180	30.6	23.7 – 37.4	33.3	24.6 – 42.1	36.1	27.4 – 44.8
55-64	117	35.9	26.6 – 45.2	24.8	14.8 – 34.8	39.3	27.0 – 51.6
25-64	801	35.8	31.1 – 40.5	32.0	27.0 – 37.1	32.2	24.5 – 39.9

Age Group (years)	n	Current User				% Does not use	95% CI
		% Daily	95% CI	% Non-daily	95% CI		
Betel Nut Use							
Women							
25-34	477	27.0	19.4 – 34.7	38.6	34.1 – 43.1	34.4	26.3 – 42.4
35-44	320	18.8	11.4 – 26.1	32.2	26.0 – 38.4	49.1	40.7 – 57.4
45-54	236	26.3	17.3 – 35.2	26.7	21.5 – 31.9	47.0	37.1 – 57.0
55-64	87	21.8	7.1 – 36.6	25.3	10.2 – 40.4	52.9	31.9 – 73.8
25-64	1120	24.0	17.6 – 30.4	33.3	29.0 – 37.6	42.7	33.8 – 51.6

Age Group (years)	n	Current User				% Does not use	95% CI
		% Daily	95% CI	% Non-daily	95% CI		
Betel Nut Use							
Both Sexes							
25-34	793	32.5	27.2 – 37.9	36.7	31.1 – 42.3	30.8	22.8 – 38.7
35-44	508	27.4	19.8 – 34.9	31.0	25.1 – 36.8	41.7	32.8 – 50.5
45-54	416	28.5	21.8 – 35.2	30.1	25.3 – 35.0	41.4	33.9 – 48.9
55-64	204	29.0	20.7 – 37.3	25.0	14.5 – 35.6	45.9	31.9 – 60.0
25-64	1921	30.0	24.9 – 35.1	32.6	28.3 – 37.0	37.4	29.4 – 45.3

Initiation of Use   Description: Mean age of initiation among current betel nut chewers.

Age of Initiation of Betel Nut Chewing											
Age Group (years)	**Men**				**Women**				**Both Sexes**		
	n	%	95% CI		n	%	95% CI		n	%	95% CI
25-34	123	18.0	16.6 – 19.5		127	19.5	18.7 – 20.3		250	18.6	17.8 – 19.4
35-44	69	19.9	18.1 – 21.8		60	22.3	19.9 – 24.7		129	20.7	19.1 – 22.3
45-54	56	24.0	21.2 – 26.8		59	24.3	21.4 – 27.1		115	24.1	22.2 – 26.0
55-64	42	26.9	23.9 – 29.8		19	24.4	18.8 – 30.1		61	26.0	22.7 – 29.3
25-64	290	20.4	19.4 – 21.5		265	21.5	20.8 – 22.2		555	20.8	20.1 – 21.6

Smoking while chewing   Description: Percentage of betel nut chewers who usually smoke while chewing.

Usually Smoke while Chewing Betel Nut											
Age Group (years)	**Men**				**Women**				**Both Sexes**		
	n	%	95% CI		n	%	95% CI		n	%	95% CI
25-34	217	69.1	59.5 - 78.7		294	31.0	21.9 - 40.0		511	51.2	42.4 - 60.0
35-44	117	59.8	51.3 - 68.4		154	35.7	27.0 - 44.4		271	49.5	43.5 - 55.6
45-54	109	57.8	42.0 - 73.6		116	28.4	20.2 - 36.7		225	45.1	34.0 - 56.3
55-64	69	50.7	37.5 - 64.0		40	27.5	12.7 - 42.3		109	40.8	30.0 - 51.6
25-64	512	62.8	54.6 - 71.0		604	31.4	24.6 - 38.3		1116	48.8	41.1 - 56.4

Alcohol Consumption

Alcohol consumption status

Description: Alcohol consumption status of all respondents.

Instrument questions:
- Have you ever consumed alcohol?
- Have you consumed alcohol (such as beer, wine, spirits, fermented cider, or (add other local examples) within the past 12 months?

Alcohol consumption status							
Men							
Age Group (years)	n	% Lifetime Abstainer	95% CI	% Past 12 mos. abstainer	95% CI	% current drinker (drank in past 12 mos.)	95% CI
25-34	315	21.0	15.3 - 26.6	14.9	8.8 - 21.0	64.1	57.5 - 70.8
35-44	188	25.5	17.3 - 33.8	22.3	14.3 - 30.4	52.1	45.0 - 59.2
45-54	180	31.7	21.7 - 41.6	30.0	22.1 - 37.9	38.3	33.3 - 43.4
55-64	117	46.2	37.3 - 55.0	31.6	18.3 - 45.0	22.2	11.5 - 32.9
25-64	800	26.9	22.2 - 31.6	21.5	17.2 - 25.9	51.5	47.9 - 55.1

Alcohol consumption status							
Women							
Age Group (years)	n	% Lifetime Abstainer	95% CI	% Past 12 mos. abstainer	95% CI	% current drinker (drank in past 12 mos.)	95% CI
25-34	477	67.9	62.2 - 73.7	12.4	8.8 - 15.9	19.7	16.4 - 23.0
35-44	322	74.8	69.1 - 80.6	10.6	5.9 - 15.2	14.6	10.1 - 19.1
45-54	237	78.9	72.0 - 85.8	11.0	7.5 - 14.4	10.1	4.8 - 15.5
55-64	87	88.5	82.5 - 94.5	8.0	1.1 - 15.0	3.4	0.0 - 6.9
25-64	1123	74.0	69.7 - 78.3	11.1	8.2 - 14.1	14.9	12.4 - 17.3

Alcohol consumption status							
Both Sexes							
Age Group (years)	n	% Lifetime Abstainer	95% CI	% Past 12 mos. abstainer	95% CI	% current drinker (drank in past 12 mos.)	95% CI
25-34	792	44.3	40.1 - 48.5	13.7	10.3 - 17.0	42.0	38.5 - 45.6
35-44	510	49.8	44.8 - 54.8	16.5	12.6 - 20.5	33.7	28.6 - 38.8
45-54	417	54.5	46.2 - 62.9	20.8	15.8 - 25.7	24.7	19.8 - 29.5
55-64	204	66.9	61.1 - 72.6	20.1	11.3 - 28.9	13.0	6.7 - 19.4
25-64	1923	50.1	46.7 - 53.6	16.4	14.2 - 18.6	33.5	31.0 - 36.0

Frequency of alcohol consumption

Description: Frequency of alcohol consumption in the last year among those respondents who have drank in the last 12 months.

Instrument question:
- In the past 12 months, how frequently have you had at least one drink?

Age Group (years)	n	% less than once a month	95% CI	% 1-3 days per month	95% CI	% 1-4 days per week	95% CI	% >=5 days per week	95% CI
					Men				
25-34	201	43.8	36.9 - 50.6	37.8	29.7 - 45.9	15.4	7.8 - 23.1	3.0	0.8 - 5.2
35-44	97	50.5	38.0 - 63.0	29.9	20.8 - 39.0	14.4	5.3 - 23.6	5.2	1.3 - 9.0
45-54	69	60.9	47.6 - 74.1	20.3	8.1 - 32.4	11.6	4.4 - 18.8	7.2	0.0 - 15.7
55-64	26	65.4	43.9 - 86.9	23.1	6.1 - 40.1	3.8	0.0 - 11.1	7.7	0.0 - 17.2
25-64	393	49.0	43.2 - 54.8	32.5	26.5 - 38.6	14.1	8.3 - 19.8	4.4	2.8 - 6.0

Age Group (years)	n	% less than once a month	95% CI	% 1-3 days per month	95% CI	% 1-4 days per week	95% CI	% >=5 days per week	95% CI
					Women				
25-34	94	66.0	56.1 - 75.8	26.6	14.1 - 39.1	7.4	0.3 - 14.6	----	---
35-44	47	74.5	54.2 - 94.7	12.8	0.0 - 26.9	8.5	0.2 - 16.8	4.3	0.0 - 11.2
45-54	24	70.8	52.9 - 88.8	12.5	1.4 - 23.6	16.7	3.3 - 30.0	----	---
55-64	3	66.7	3.5 - 100.0	33.3	0.0 - 96.5	----	---	----	---
25-64	168	68.9	58.7 - 79.1	21.3	12.2 - 30.4	8.6	4.1 - 13.2	1.2	0.0 - 3.0

Age Group (years)	n	% less than once a month	95% CI	% 1-3 days per month	95% CI	% 1-4 days per week	95% CI	% >=5 days per week	95% CI
					Both Sexes				
25-34	295	49.0	42.3 - 55.7	35.2	28.1 - 42.2	13.6	7.8 - 19.3	2.3	0.6 - 3.9
35-44	144	55.7	45.2 - 66.1	26.2	17.0 - 35.4	13.2	6.4 - 19.9	5.0	1.3 - 8.6
45-54	93	62.8	52.8 - 72.9	18.7	8.8 - 28.7	12.6	5.6 - 19.6	5.8	0.0 - 12.5
55-64	29	65.6	47.3 - 83.8	24.4	8.0 - 40.8	3.3	0.0 - 9.5	6.7	0.0 - 15.0
25-64	561	53.4	47.8 - 59.0	30.1	24.1 - 36.0	12.9	8.3 - 17.4	3.7	2.4 - 4.9

Standard drinks per drinking day

Description: Number of standard drinks consumed on a drinking day among those respondents who have drank in the last 12 months.

Instrument question:
• When you drink alcohol, on average, how many drinks do you have during one day?

Number of standard drinks consumed on a drinking day												
Men												
Age Group (years)	n	% 1 drink	95% CI	% 2-3 drinks	95% CI	% 4-5 drinks	95% CI	% 6+ drinks	95% CI	Mean # of standard drinks	95% CI
25-34	189	1.1	0.0 - 3.2	4.8	2.0 - 7.6	9.5	4.2 - 14.9	84.7	79.6 - 89.7	8.6	8.3 - 9.0
35-44	90	4.4	0.0 - 9.7	12.2	4.8 - 19.6	7.8	0.4 - 15.2	75.6	68.6 - 82.5	8.4	7.5 - 9.2
45-54	67	4.5	0.0 - 9.7	14.9	7.2 - 22.6	13.4	6.4 - 20.5	67.2	54.2 - 80.1	6.9	6.1 - 7.8
55-64	26	---	---	3.8	0.0 - 12.9	15.4	0.0 - 31.2	80.8	63.4 - 98.1	7.4	5.9 - 8.9
25-64	372	2.4	0.8 - 4.0	8.2	5.0 - 11.3	9.9	6.2 - 13.5	79.5	75.4 - 83.6	8.3	7.9 - 8.6

Number of standard drinks consumed on a drinking day												
Women												
Age Group (years)	n	% 1 drink	95% CI	% 2-3 drinks	95% CI	% 4-5 drinks	95% CI	% 6+ drinks	95% CI	Mean # of standard drinks	95% CI
25-34	87	8.0	1.0 - 15.1	21.8	12.1 - 31.6	20.7	13.9 - 27.4	49.4	39.5 - 59.3	5.7	--
35-44	45	11.1	1.1 - 21.1	24.4	11.0 - 37.9	20.0	11.1 - 28.9	44.4	24.1 - 64.8	5.3	--
45-54	23	13.0	0.0 - 27.4	21.7	4.4 - 39.1	26.1	0.0 - 53.5	39.1	14.7 - 63.6	5.0	--
55-64	3	---	---	33.3	0.0 - 96.5	66.7	3.5 - 100.0	---	---	3.7	--
25-64	158	9.3	4.0 - 14.6	22.9	16.1 - 29.7	22.4	14.5 - 30.2	45.5	35.1 - 55.9	5.4	--

Number of standard drinks consumed on a drinking day												
Both Sexes												
Age Group (years)	n	% 1 drink	95% CI	% 2-3 drinks	95% CI	% 4-5 drinks	95% CI	% 6+ drinks	95% CI	Mean # of standard drinks	95% CI
25-34	276	2.7	0.0 - 5.4	8.7	5.7 - 11.7	12.1	7.6 - 16.6	76.5	72.4 - 80.6	8.0	7.6 - 8.3
35-44	135	5.9	0.8 - 11.1	14.9	8.8 - 21.1	10.5	3.6 - 17.4	68.7	61.7 - 75.7	7.7	7.1 - 8.3
45-54	90	6.2	0.6 - 11.7	16.3	8.7 - 23.8	15.9	7.9 - 23.9	61.7	48.7 - 74.6	6.6	5.8 - 7.3
55-64	29	---	---	7.7	0.0 - 20.9	22.0	8.4 - 35.6	70.3	55.0 - 85.7	6.9	5.4 - 8.4
25-64	530	3.9	2.0 - 5.8	11.4	8.8 - 14.0	12.6	8.5 - 16.7	72.1	68.2 - 75.9	7.6	7.4 - 7.9

Heavy drinking

Description: Frequency and quantity of drinks consumed in the last 7 days by current (last 30 days) drinker, grouped into three categories.

Instrument question:
- During each of the past 7 days, how many standard drinks of any alcoholic drink did you have each day?

Frequency and quantity of drinks consumed in the last 7 days							
Men							
Age Group (years)	n	% Drank on 4+ days	95% CI	% 5+ drinks on any day	95% CI	% 20+ drinks in 7 days	95% CI
25-34	183	1.1	0.0 - 2.7	25.7	18.0 - 33.3	2.7	0.0 - 6.3
35-44	96	3.1	0.0 - 6.6	27.1	16.5 - 37.7	4.2	0.7 - 7.6
45-54	62	3.2	0.0 - 7.9	21.0	10.0 - 32.0	6.5	0.0 - 13.5
55-64	24	4.2	0.0 - 12.7	16.7	3.6 - 29.7	8.3	0.0 - 18.1
25-64	365	2.1	0.4 - 3.9	25.1	19.9 - 30.3	3.9	1.3 - 6.5

Frequency and quantity of drinks consumed in the last 7 days							
Women							
Age Group (years)	n	% Drank on 4+ days	95% CI	% 4+ drinks on any day	95% CI	% 15+ drinks in 7 days	95% CI
25-34	85	----	---	20.0	7.3 - 32.7	2.4	0.0 - 6.3
35-44	42	4.8	0.0 - 11.0	21.4	8.5 - 34.3	7.1	0.0 - 15.5
45-54	21	----	---	23.8	2.1 - 45.5	4.8	0.0 - 15.4
55-64	3	----	---	----	---	----	---
25-64	151	1.3	0.0 - 2.9	20.3	11.3 - 29.2	3.9	0.0 - 7.9

Frequency and quantity of drinks consumed in the last 7 days			
Both Sexes			
Age Group (years)	n	% Drank on 4+ days	95% CI
25-34	268	0.8	0.0 - 2.1
35-44	138	3.5	0.3 - 6.6
45-54	83	2.6	0.0 - 6.3
55-64	27	3.6	0.0 - 10.8
25-64	516	2.0	0.5 - 3.4

Hazardous and harmful drinking

Description: Percentage of current (last 30 days) drinker engaging in hazardous and harmful drinking in the last 7 days.

Harmful drinking is defined as ≥60g of pure alcohol on average per day for men and ≥40 g for women.

Hazardous drinking is defined as 40-59.9g of pure alcohol on average per day for men and 20-39.9g for women.

A standard drink contains approximately 10g of pure alcohol.

Instrument question:

- During each of the past 7 days, how many standard drinks of any alcoholic drink did you have each day?

Hazardous and harmful drinking in the last 7 days					
	Men				
Age Group (years)	n	% hazardous drinking	95% CI	% harmful drinking	95% CI
25-34	183	1.6	0.0 - 3.9	----	---
35-44	96	1.0	0.0 - 3.4	1.0	0.0 - 3.2
45-54	62	3.2	0.0 - 8.6	1.6	0.0 - 4.9
55-64	24	----	---	----	---
25-64	365	1.6	0.0 - 3.2	0.5	0.0 - 1.2

Hazardous and harmful drinking in the last 7 days					
	Women				
Age Group (years)	n	% hazardous drinking	95% CI	% harmful drinking	95% CI
25-34	85	2.4	0.0 - 6.3	----	---
35-44	42	2.4	0.0 - 7.7	4.8	0.0 - 11.0
45-54	21	4.8	0.0 - 15.4	----	---
55-64	3	----	---	----	---
25-64	151	2.6	0.0 - 6.1	1.3	0.0 - 2.9

Fruit and Vegetable Consumption

Mean number of days of fruit and vegetable consumption

Description: mean number of days fruit and vegetables consumed.

Instrument questions:
- In a typical week, on how many days do you eat fruit?
- In a typical week, on how many days do you eat vegetables?

Mean number of days fruit consumed in a typical week									
	Men			**Women**			**Both Sexes**		
Age Group (years)	n	Mean number of days	95% CI	n	Mean number of days	95% CI	n	Mean number of days	95% CI
25-34	296	2.4	2.1 - 2.7	459	2.8	2.6 - 3.0	755	2.6	2.4 - 2.8
35-44	178	2.5	2.0 - 3.1	305	2.7	2.3 - 3.0	483	2.6	2.2 - 3.0
45-54	170	2.2	1.8 - 2.6	227	2.4	2.0 - 2.8	397	2.3	1.9 - 2.7
55-64	110	2.2	1.9 - 2.6	82	2.5	1.9 - 3.0	192	2.3	1.9 - 2.7
25-64	754	2.4	2.0 - 2.7	1073	2.7	2.4 - 2.9	1827	2.5	2.2 - 2.8

Mean number of days vegetables consumed in a typical week									
	Men			**Women**			**Both Sexes**		
Age Group (years)	n	Mean number of days	95% CI	n	Mean number of days	95% CI	n	Mean number of days	95% CI
25-34	313	4.6	4.3 - 4.9	468	4.8	4.5 - 5.1	781	4.7	4.4 - 4.9
35-44	188	4.7	4.4 - 5.0	317	4.9	4.4 - 5.4	505	4.8	4.4 - 5.2
45-54	178	4.6	4.2 - 5.0	234	4.8	4.3 - 5.3	412	4.7	4.3 - 5.1
55-64	117	4.7	4.3 - 5.1	87	5.0	4.4 - 5.5	204	4.8	4.5 - 5.2
25-64	796	4.6	4.4 - 4.9	1106	4.8	4.5 - 5.2	1902	4.7	4.5 - 5.0

Mean number of servings of fruit and vegetable consumption

Description: mean number of fruit, vegetable, and combined fruit and vegetable servings on average per day.

Instrument questions:
- In a typical week, on how many days do you eat fruit?
- How many servings of fruit do you eat on one of those days?
- In a typical week, on how many days do you eat vegetables?
- How many servings of vegetables do you eat on one of those days?

Mean number of servings of fruit on average per day										
	Men			**Women**			**Both Sexes**			
Age Group (years)	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI	
25-34	296	0.7	0.5 - 0.8	459	0.8	0.7 - 1.0	755	0.7	0.6 - 0.9	
35-44	178	0.9	0.6 - 1.2	305	0.7	0.6 - 0.9	483	0.8	0.6 - 1.0	
45-54	170	0.6	0.4 - 0.8	227	0.7	0.6 - 0.8	397	0.7	0.5 - 0.8	
55-64	110	0.8	0.5 - 1.0	82	0.8	0.5 - 1.0	192	0.8	0.5 - 1.0	
25-64	754	0.7	0.6 - 0.9	1073	0.8	0.6 - 0.9	1827	0.8	0.6 - 0.9	

Mean number of servings of vegetables on average per day										
	Men			**Women**			**Both Sexes**			
Age Group (years)	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI	
25-34	313	1.3	1.2 - 1.4	468	1.4	1.2 - 1.5	781	1.3	1.2 - 1.4	
35-44	188	1.5	1.2 - 1.8	317	1.3	1.2 - 1.5	505	1.4	1.2 - 1.6	
45-54	178	1.4	1.2 - 1.6	234	1.4	1.2 - 1.6	412	1.4	1.2 - 1.5	
55-64	117	1.4	1.1 - 1.6	87	1.5	1.2 - 1.9	204	1.4	1.2 - 1.7	
25-64	796	1.4	1.2 - 1.5	1106	1.4	1.2 - 1.5	1902	1.4	1.3 - 1.5	

Mean number of servings of fruit and/or vegetables on average per day										
	Men			**Women**			**Both Sexes**			
Age Group (years)	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI	
25-34	314	1.9	1.7 - 2.1	473	2.2	2.0 - 2.3	787	2.0	1.9 - 2.2	
35-44	188	2.4	1.9 - 2.8	318	2.1	1.7 - 2.4	506	2.2	1.8 - 2.6	
45-54	178	2.0	1.8 - 2.2	235	2.1	1.8 - 2.3	413	2.0	1.9 - 2.2	
55-64	117	2.1	1.7 - 2.5	87	2.2	1.6 - 2.8	204	2.2	1.7 - 2.6	
25-64	797	2.1	1.8 - 2.3	1113	2.1	1.9 - 2.3	1910	2.1	1.9 - 2.3	

Fruit and vegetable consumption per day

Description: Frequency of fruit and/or vegetable consumption.

Instrument questions:
- In a typical week, on how many days do you eat fruit?
- How many servings of fruit do you eat on one of those days?
- In a typical week, on how many days do you eat vegetables?
- How many servings of vegetables do you eat on one of those days?

Age Group (years)	n	% no fruit and/or vegetables	95% CI	% 1-2 servings	95% CI	% 3-4 servings	95% CI	% ≥5 servings	95% CI
Number of servings of fruit and/or vegetables on average per day									
Men									
25-34	314	26.8	19.6 - 33.9	53.2	46.5 - 59.9	14.3	10.6 - 18.1	5.7	3.3 - 8.2
35-44	188	21.3	13.2 - 29.3	51.1	42.0 - 60.1	18.1	10.1 - 26.0	9.6	4.1 - 15.0
45-54	178	23.6	15.5 - 31.7	54.5	45.7 - 63.3	16.9	11.6 - 22.1	5.1	1.1 - 9.0
55-64	117	24.8	18.0 - 31.5	57.3	45.2 - 69.3	12.0	2.0 - 21.9	6.0	2.1 - 9.9
25-64	797	24.4	18.6 - 30.2	53.3	48.8 - 57.7	15.6	12.6 - 18.5	6.7	3.7 - 9.8

Age Group (years)	n	% no fruit and/or vegetables	95% CI	% 1-2 servings	95% CI	% 3-4 servings	95% CI	% ≥5 servings	95% CI
Number of servings of fruit and/or vegetables on average per day									
Women									
25-34	473	20.9	14.8 - 27.1	56.4	50.6 - 62.3	15.9	11.8 - 19.9	6.8	5.2 - 8.3
35-44	318	17.9	8.7 - 27.2	60.7	52.7 - 68.6	16.4	12.3 - 20.4	5.0	1.6 - 8.4
45-54	235	23.0	13.6 - 32.4	54.5	44.9 - 64.0	16.2	9.9 - 22.4	6.4	2.8 - 10.0
55-64	87	17.2	9.2 - 25.3	58.6	45.4 - 71.8	18.4	9.4 - 27.4	5.7	0.0 - 12.2
25-64	1113	20.0	13.9 - 26.2	57.6	52.9 - 62.2	16.3	13.3 - 19.4	6.1	4.3 - 7.9

Age Group (years)	n	% no fruit and/or vegetables	95% CI	% 1-2 servings	95% CI	% 3-4 servings	95% CI	% ≥5 servings	95% CI
Number of servings of fruit and/or vegetables on average per day									
Both Sexes									
25-34	787	23.9	18.1 - 29.6	54.8	50.2 - 59.4	15.1	11.9 - 18.3	6.2	4.6 - 7.9
35-44	506	19.6	12.2 - 27.1	55.8	51.2 - 60.4	17.2	13.2 - 21.3	7.4	3.2 - 11.5
45-54	413	23.3	15.8 - 30.8	54.5	47.9 - 61.1	16.5	13.1 - 20.0	5.7	3.8 - 7.6
55-64	204	21.1	14.6 - 27.6	57.9	48.5 - 67.3	15.1	9.0 - 21.2	5.9	1.3 - 10.4
25-64	1910	22.3	16.5 - 28.0	55.4	51.5 - 59.3	15.9	13.7 - 18.2	6.4	4.2 - 8.7

Fruit and vegetable consumption per day

Description: Percentage of those eating less than five servings of fruit and/or vegetables on average per day.

Instrument questions:
- In a typical week, on how many days do you eat fruit?
- How many servings of fruit do you eat on one of those days?
- In a typical week, on how many days do you eat vegetables?
- How many servings of vegetables do you eat on one of those days?

	Less than five servings of fruit and/or vegetables 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	314	94.3	91.8 – 96.7	473	93.2	91.7 – 94.8	787	93.8	92.1 – 95.4
35-44	188	90.4	85.0 – 95.9	318	95.0	91.6 – 98.4	506	92.6	88.5 – 96.8
45-54	178	94.9	91.0 – 98.9	235	93.6	90.0 – 97.2	413	94.3	92.4 – 96.2
55-64	117	94.0	90.1 – 97.9	87	94.3	87.8 – 100.0	204	94.1	89.6 – 98.7
25-64	797	93.3	90.2 – 96.3	1113	93.9	92.1 – 95.7	1910	93.6	91.3 – 95.8

Type of oil used most frequently

Description: type of oil or fat most often used for meal preparation in households (presented only for both sexes because results are for the household not individuals).

Instrument question:
- What type of oil or fat is most often used for meal preparation in your household?

Type of oil or fat most often used for meal preparation in household												
n (house-holds)	% Vege-table oil	95% CI	% Lard	95% CI	% Butter	95% CI	% Coconut Oil	95% CI	% None used	95% CI	% Other	95% CI
1857	27.6	21.6 - 33.6	0.1	0.0 - 0.3	0.1	0.0 - 0.3	51.8	47.8 - 55.8	6.4	4.4 - 8.3	14.0	10.1 - 17.8

Fish Consumption

Description: Mean no. of days per week tinned or fresh fish consumed.

Fresh Fish Consumption											
	Men				Women				Both Sexes		
Age Group (years)	n	Mean no. of days	95% CI		n	Mean no. of days	95% CI		n	Mean no. of days	95% CI
25-34	307	2.7	2.3 - 3.0		467	2.8	2.5 - 3.0		774	2.7	2.4 - 3.0
35-44	185	2.8	2.5 - 3.1		319	2.7	2.3 - 3.1		504	2.8	2.5 - 3.1
45-54	177	2.9	2.5 - 3.4		236	2.9	2.4 - 3.3		413	2.9	2.5 - 3.3
55-64	116	2.5	2.0 - 3.0		86	2.4	1.9 - 2.9		202	2.4	2.1 - 2.8
25-64	785	2.7	2.5 - 3.0		1108	2.7	2.4 - 3.0		1893	2.7	2.5 - 3.0

Tinned Fish Consumption											
	Men				Women				Both Sexes		
Age Group (years)	n	Mean no. of days	95% CI		n	Mean no. of days	95% CI		n	Mean no. of days	95% CI
25-34	310	4.2	3.9 - 4.5		467	4.4	4.1 - 4.8		777	4.3	4.0 - 4.6
35-44	184	4.2	3.6 - 4.8		318	4.3	3.8 - 4.9		502	4.3	3.8 - 4.7
45-54	178	4.2	3.9 - 4.4		231	4.0	3.6 - 4.4		409	4.1	3.8 - 4.3
55-64	115	3.3	2.8 - 3.9		84	3.6	2.7 - 4.4		199	3.4	2.8 - 4.0
25-64	787	4.1	3.8 - 4.4		1100	4.2	3.9 - 4.5		1887	4.2	3.9 - 4.4

Physical Activity

Introduction   Analysis physical activity data can be very complicated and the result confusing. The following guidelines will help clarify the results of the physical activity data and will also provide valuable information on the classifications. Make sure you use some of these guidelines when you report physical activity data.

- MET values are applied to vigorous and moderate intensity variables in the work, transport and recreation domains. These have been calculated using an average of the typical types of activity undertaken. Different types of activities have been grouped together and given a MET value based on the intensity of the activity. Applying MET values to types of activities allows us to calculate total physical activity. For more information regarding MET values go the STEPS website at www.who.int/chp/steps .

- The calculations below use multiple questions in the physical activity section. To simplify this a bit the questions have been clustered into four groups (as they appear in the Instrument). In the Instrument questions section of the table, only the group label appears. The specific questions for each group are presented below.

  - Activity at work:
    - Does your work involve vigorous-intensity activity that causes large increases in breathing or heart rate like [examples] for at least 10 minutes continuously?
    - In a typical week, on how many days do you do vigorous-intensity activities as part of your work?
    - How much time do you spend doing vigorous-intensity activities at work on a typical day?
    - Does your work involve moderate-intensity activity, that causes small increases in breathing or heart rate such as brisk walking for at least 10 minutes continuously?
    - In a typical week, on how many days do you do moderate-intensity activities as part of your work?
    - How much time do you spend doing moderate-intensity activities at work on a typical day?
    -
  - Travel to and from places:
    - Do you walk or use a bicycle for at least 10 minutes continuously to get to and from places?
    - In a typical week, on how many days do you walk or bicycle for at least 10 minutes continuously to get to and from places?

Introduction
(cont.)

- How much time do you spend walking or bicycling for travel on a typical day?
-

– Recreational activities:
- Do you do any involve vigorous-intensity sports, fitness or recreational activities that cause large increases in breathing or heart rate like [examples] for at least 10 minutes continuously?
- In a typical week, on how many days do you do vigorous-intensity sports, fitness or recreational activities?
- How much time do you spend doing vigorous-intensity sports, fitness or recreational activities on a typical day?
- Do you do any involve moderate-intensity sports, fitness or recreational activities that cause large increases in breathing or heart rate like [examples] for at least 10 minutes continuously?
- In a typical week, on how many days do you do moderate--intensity sports, fitness or recreational activities?
- How much time do you spend doing moderate--intensity sports, fitness or recreational activities on a typical day?

–

– Sedentary behaviour :
- How much time do you usually spend sitting or reclining on a typical day?

Levels of total physical activity

Description: Percentage of respondents classified into three categories of total physical activity.

Instrument questions:
- activity at work
- travel to and from places
- recreational activities

Level of total physical activity							
	Men						
Age Group (years)	n	% Low	95% CI	% Moderate	95% CI	% High	95% CI
25-34	311	34.7	29.9 – 39.6	24.4	21.2 – 27.7	40.8	33.4 – 48.3
35-44	187	32.6	28.3 – 36.9	26.7	19.9 – 33.5	40.6	34.6 – 46.7
45-54	176	40.9	32.5 – 49.3	25.0	18.0 – 32.0	34.1	28.1 – 40.0
55-64	116	46.6	38.9 – 54.2	25.9	18.8 – 32.9	27.6	17.9 – 37.2
25-64	790	36.5	33.2 – 39.8	25.4	22.6 – 28.1	38.1	34.7 – 41.6

Level of total physical activity							
	Women						
Age Group (years)	n	% Low	95% CI	% Moderate	95% CI	% High	95% CI
25-34	472	47.2	42.2 – 52.3	25.6	21.5 – 29.7	27.1	24.0 – 30.2
35-44	316	45.9	42.1 – 49.7	25.3	21.5 – 29.1	28.8	25.3 – 32.3
45-54	234	50.4	41.5 – 59.4	23.9	17.6 – 30.3	25.6	17.4 – 33.9
55-64	86	47.7	32.9 – 62.4	29.1	18.5 – 39.7	23.3	14.8 – 31.8
25-64	1108	47.4	43.0 – 51.9	25.6	22.6 – 28.6	26.9	23.9 – 29.9

Level of total physical activity							
	Both Sexes						
Age Group (years)	n	% Low	95% CI	% Moderate	95% CI	% High	95% CI
25-34	783	41.0	38.2 – 43.8	25.0	22.2 – 27.9	34.0	29.7 – 38.3
35-44	503	39.1	35.8 – 42.4	26.0	22.8 – 29.3	34.9	31.9 – 37.8
45-54	410	45.5	38.6 – 52.5	24.5	20.2 – 28.8	30.0	23.3 – 36.7
55-64	202	47.1	36.8 – 57.4	27.4	21.9 – 33.0	25.5	18.1 – 32.9
25-64	1898	41.9	39.1 – 44.7	25.5	23.7 – 27.3	32.6	30.2 – 35.1

Total physical activity-mean

Description: Mean minutes of total physical activity on average per day.

Instrument questions
- activity at work
- travel to and from places
- recreational activities

Age Group (years)	Men			Women			Both Sexes		
	n	Mean minutes	95% CI	n	Mean minutes	95% CI	n	Mean minutes	95% CI
25-34	311	116.7	96.8 – 136.7	472	90.8	79.9 – 101.6	783	103.8	92.5 – 115.1
35-44	187	116.6	92.9 – 140.3	316	97.5	89.3 – 105.7	503	107.3	94.0 – 120.6
45-54	176	97.8	84.2 – 111.5	234	79.8	57.2 – 102.5	410	89.1	73.3 – 104.9
55-64	116	98.5	74.7 – 122.4	86	92.3	59.3 – 125.3	202	95.5	71.6 – 119.4
25-64	790	111.4	101.0 – 121.8	1108	91.0	81.9 – 100.1	1898	101.4	93.2 – 109.5

Total physical activity-median

Description: Median minutes of total physical activity on average per day.

Instrument questions
- activity at work
- travel to and from places
- recreational activities

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	390	68.6	20.0 - 154.3	387	38.6	0.0 - 120.0	777	51.4	11.4 - 137.1
35-44	261	64.3	17.1 - 154.3	250	51.4	2.9 - 128.6	511	60.0	12.1 - 142.9
45-54	159	60.0	10.0 - 141.4	150	40.0	4.3 - 111.4	309	50.0	8.6 - 128.6
55-64	101	51.4	0.0 - 111.4	96	38.6	8.6 - 107.1	197	42.9	5.7 - 111.4
25-64	911	64.3	17.1 - 150.0	883	42.9	2.9 - 120.0	1794	51.4	8.6 - 137.1

Domain-specific physical activity-mean

Description: Mean minutes spent in work-, transport- and recreation-related physical activity on average per day.

Instrument questions:
- activity at work
- travel to and from places
- recreational activities

Age Group (years)	Men			Women			Both Sexes		
	n	Mean minutes	95% CI	n	Mean minutes	95% CI	n	Mean minutes	95% CI
25-34	311	68.5	49.5 – 87.5	472	58.3	46.8 – 69.8	783	63.4	52.5 – 74.4
35-44	187	74.6	54.7 – 94.4	316	60.2	50.7 – 69.8	503	67.6	56.2 – 79.0
45-54	176	64.1	49.6 – 78.6	234	49.9	32.1 – 67.8	410	57.2	43.8 – 70.6
55-64	116	59.4	43.1 – 75.7	86	60.4	37.7 – 83.2	202	59.9	43.4 – 76.4
25-64	790	68.5	59.3 – 77.7	1108	57.7	49.6 – 65.7	1898	63.2	56.0 – 70.3

Table: 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	311	30.5	28.0 – 33.1	472	19.8	16.6 – 22.9	783	25.2	23.0 – 27.3
35-44	187	27.6	21.6 – 33.6	316	23.5	20.1 – 26.9	503	25.6	21.3 – 29.9
45-54	176	27.2	23.5 – 30.9	234	21.8	17.3 – 26.2	410	24.6	21.4 – 27.7
55-64	116	29.7	21.3 – 38.0	86	23.1	15.2 – 31.0	202	26.5	20.0 – 33.0
25-64	790	29.0	27.0 – 31.1	1108	21.5	19.6 – 23.5	1898	25.3	23.8 – 26.9

Table: 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	311	17.7	12.9 – 22.5	472	12.7	8.2 – 17.2	783	15.2	12.4 – 18.1
35-44	187	14.4	9.8 – 19.0	316	13.8	7.8 – 19.8	503	14.1	10.4 – 17.9
45-54	176	6.5	3.7 – 9.4	234	8.1	4.3 – 12.0	410	7.3	5.1 – 9.6
55-64	116	9.5	5.1 – 13.8	86	8.8	3.0 – 14.6	202	9.1	5.0 – 13.2
25-64	790	13.9	11.8 – 16.0	1108	11.8	9.3 – 14.3	1898	12.9	11.2 – 14.5

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

Domain-specific physical activity - median

Description: Median minutes spent on average per day in work-, transport- and recreation-related physical activity.

Instrument questions:
- activity at work
- travel to and from places
- recreational activities

Median minutes of work-related physical activity on average per day									
	Men			**Women**			**Both Sexes**		
Age Group (years)	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	390	4.3	0.0 - 90.0	387	0.0	0.0 - 64.3	777	0.0	0.0 - 85.7
35-44	261	0.0	0.0 - 102.9	250	2.1	0.0 - 85.7	511	2.1	0.0 - 102.9
45-54	159	0.0	0.0 - 85.7	150	0.0	0.0 - 68.6	309	0.0	0.0 - 81.4
55-64	101	0.0	0.0 - 60.0	96	8.6	0.0 - 85.7	197	0.0	0.0 - 68.6
25-64	911	0.0	0.0 - 102.9	883	0.0	0.0 - 77.1	1794	0.0	0.0 - 85.7

Median minutes of transport-related physical activity on average per day									
	Men			**Women**			**Both Sexes**		
Age Group (years)	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	390	17.1	0.0 - 51.4	387	8.6	0.0 - 25.7	777	12.9	0.0 - 34.3
35-44	261	14.3	0.0 - 42.9	250	8.6	0.0 - 34.3	511	12.9	0.0 - 42.9
45-54	159	17.1	0.0 - 42.9	150	8.6	0.0 - 34.3	309	12.9	0.0 - 38.6
55-64	101	17.1	0.0 - 51.4	96	8.6	0.0 - 34.3	197	14.3	0.0 - 38.6
25-64	911	17.1	0.0 - 42.9	883	8.6	0.0 - 34.3	1794	12.9	0.0 - 40.0

Median minutes of recreation-related physical activity on average per day									
	Men			**Women**			**Both Sexes**		
Age Group (years)	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	390	0.0	0.0 - 17.1	387	0.0	0.0 - 0.0	777	0.0	0.0 - 6.4
35-44	261	0.0	0.0 - 8.6	250	0.0	0.0 - 0.0	511	0.0	0.0 - 0.0
45-54	159	0.0	0.0 - 0.0	150	0.0	0.0 - 0.0	309	0.0	0.0 - 0.0
55-64	101	0.0	0.0 - 0.0	96	0.0	0.0 - 0.0	197	0.0	0.0 - 0.0
25-64	911	0.0	0.0 - 8.6	883	0.0	0.0 - 0.0	1794	0.0	0.0 - 0.0

No physical activity by domain

Description: Percentage of respondents classified as doing no work-, transport- or recreational-related physical activity.

Instrument questions:
- activity at work
- travel to and from places
- recreational activities

No work-related physical activity											
	Men				**Women**				**Both Sexes**		
Age Group (years)	n	% no activity at work	95% CI		n	% no activity at work	95% CI		n	% no activity at work	95% CI
25-34	311	49.5	41.4 - 57.6		472	53.8	48.9 - 58.7		783	51.7	47.0 - 56.3
35-44	187	50.3	45.4 - 55.2		316	49.4	43.8 - 55.0		503	49.8	45.5 - 54.1
45-54	176	56.8	49.6 - 64.0		234	52.1	43.6 - 60.7		410	54.5	48.9 - 60.2
55-64	116	57.8	47.9 - 67.6		86	46.5	35.1 - 57.9		202	52.3	42.3 - 62.2
25-64	790	51.9	47.5 - 56.4		1108	51.5	47.3 - 55.7		1898	51.7	47.9 - 55.5

No transport-related physical activity											
	Men				**Women**				**Both Sexes**		
Age Group (years)	n	% no activity for transport	95% CI		n	% no activity for transport	95% CI		n	% no activity for transport	95% CI
25-34	311	32.2	27.6 - 36.7		472	45.3	42.3 - 48.3		783	38.7	36.6 - 40.8
35-44	187	36.9	28.6 - 45.2		316	40.2	33.9 - 46.4		503	38.5	31.9 - 45.1
45-54	176	37.5	29.2 - 45.8		234	41.0	32.8 - 49.3		410	39.2	33.3 - 45.1
55-64	116	35.3	21.1 - 49.6		86	43.0	24.3 - 61.8		202	39.1	24.5 - 53.7
25-64	790	34.8	29.8 - 39.8		1108	42.9	39.3 - 46.5		1898	38.8	35.0 - 42.5

No recreation-related physical activity											
	Men				**Women**				**Both Sexes**		
Age Group (years)	n	% no activity at recreation	95% CI		n	% no activity at recreation	95% CI		n	% no activity at recreation	95% CI
25-34	311	67.8	61.4 - 74.3		472	78.4	72.5 - 84.3		783	73.1	69.0 - 77.2
35-44	187	71.7	64.7 - 78.6		316	79.7	75.4 - 84.1		503	75.6	70.7 - 80.5
45-54	176	80.7	73.0 - 88.4		234	82.9	78.0 - 87.8		410	81.8	77.5 - 86.0
55-64	116	80.2	75.0 - 85.3		86	80.2	70.5 - 90.0		202	80.2	75.8 - 84.6
25-64	790	72.5	68.5 - 76.5		1108	79.7	76.7 - 82.8		1898	76.1	73.3 - 78.9

Composition of total physical activity

Description: Percentage of work, transport and recreational activity contributing to total activity.

Instrument questions:
- activity at work
- travel to and from places
- recreational activities

Composition of total physical activity							
Men							
Age Group (years)	n	% Activity from work	95% CI	% Activity for transport	95% CI	% Activity during leisure time	95% CI
25-34	260	40.8	33.0 - 48.7	44.9	37.1 - 52.6	14.3	9.9 - 18.7
35-44	153	46.1	41.6 - 50.7	39.5	34.0 - 45.0	14.4	10.9 - 17.8
45-54	136	40.8	34.1 - 47.5	48.8	43.6 - 54.0	10.4	3.7 - 17.1
55-64	87	37.9	31.0 - 44.8	53.5	45.8 - 61.1	8.6	4.3 - 12.9
25-64	636	42.1	39.2 - 44.9	44.8	40.8 - 48.9	13.1	10.8 - 15.4

Composition of total physical activity							
Women							
Age Group (years)	n	% Activity from work	95% CI	% Activity for transport	95% CI	% Activity during leisure time	95% CI
25-34	346	47.3	41.4 - 53.2	40.1	34.1 - 46.1	12.5	7.7 - 17.4
35-44	240	50.0	44.6 - 55.5	39.6	34.3 - 44.8	10.4	6.8 - 14.0
45-54	181	46.5	38.8 - 54.3	46.2	39.3 - 53.0	7.3	4.1 - 10.5
55-64	67	50.9	40.9 - 60.9	39.3	27.8 - 50.8	9.8	5.2 - 14.4
25-64	834	48.4	45.2 - 51.5	40.9	37.4 - 44.5	10.7	8.5 - 12.9

Composition of total physical activity							
Both Sexes							
Age Group (years)	n	% Activity from work	95% CI	% Activity for transport	95% CI	% Activity during leisure time	95% CI
25-34	606	43.9	38.7 - 49.0	42.7	37.9 - 47.4	13.5	10.6 - 16.3
35-44	393	48.0	44.5 - 51.4	39.5	35.4 - 43.7	12.5	9.5 - 15.5
45-54	317	43.6	39.2 - 48.0	47.5	43.1 - 51.9	8.9	5.9 - 11.9
55-64	154	44.4	36.7 - 52.0	46.4	39.0 - 53.8	9.2	6.0 - 12.5
25-64	1470	45.0	42.5 - 47.6	43.0	40.0 - 46.0	12.0	10.2 - 13.7

No vigorous physical activity

Description: Percentage of respondents not engaging in vigorous physical activity.

Instrument questions:
- activity at work
- recreational activities

	Men				**Women**				**Both Sexes**		
Age Group (years)	n	% no vigorous activity	95% CI		n	% no vigorous activity	95% CI		n	% no vigorous activity	95% CI
25-34	311	58.5	51.6 - 65.4		472	86.7	82.4 - 90.9		783	72.5	68.0 - 77.1
35-44	187	68.4	62.7 - 74.2		316	83.2	77.0 - 89.5		503	75.7	71.3 - 80.1
45-54	176	75.0	68.9 - 81.1		234	86.8	80.9 - 92.6		410	80.7	75.1 - 86.3
55-64	116	74.1	68.1 - 80.2		86	86.0	79.1 - 93.0		202	79.9	75.7 - 84.2
25-64	790	66.0	62.3 - 69.7		1108	85.6	82.4 - 88.8		1898	75.7	72.6 - 78.7

Sedentary   Description: Minutes spent in sedentary activities on a typical day.

Instrument question:
• sedentary behaviour

Minutes spent in sedentary activities on average per day					
Men					
Age Group (years)	n	Mean minutes	95% CI	Median minutes	Inter-quartile range (P25-P75)
25-34	313	428.4	396.2 - 460.5	420	300 - 540
35-44	186	413.0	385.8 - 440.1	420	300 - 540
45-54	179	437.1	389.6 - 484.6	420	300 - 540
55-64	116	413.9	371.4 - 456.4	420	240 - 540
25-64	794	423.9	400.8 - 447.1	420	300 - 540

Minutes spent in sedentary activities on average per day					
Women					
Age Group (years)	n	Mean minutes	95% CI	Median minutes	Inter-quartile range (P25-P75)
25-34	473	436.9	398.6 - 475.3	420	300 - 565
35-44	316	473.0	434.6 - 511.5	480	360 - 600
45-54	234	444.6	407.0 - 482.1	480	360 - 540
55-64	86	433.1	384.3 - 481.9	420	300 - 540
25-64	1109	448.0	414.8 - 481.2	480	300 - 570

Minutes spent in sedentary activities on average per day					
Both Sexes					
Age Group (years)	n	Mean minutes	95% CI	Median minutes	Inter-quartile range (P25-P75)
25-34	786	432.6	398.6 - 466.7	420	300 - 540
35-44	502	442.4	417.1 - 467.7	420	300 - 570
45-54	413	440.7	402.3 - 479.1	445	330 - 540
55-64	202	423.3	383.2 - 463.4	420	270 - 540
25-64	1903	435.8	408.3 - 463.3	420	300 - 540

Blood Pressure and Diabetes History

Blood pressure diagnosis and treatment

Description: Raised blood pressure diagnosis and treatment results among all respondents.

Instrument questions:
- During the past 12 months have you been told by a doctor or other health worker that you have elevated blood pressure or hypertension?
- Are you currently receiving any of the following treatments/advice for high blood pressure prescribed by a doctor or other health worker?
- Drugs (medication) that you have taken in the last 2 weeks?

Raised blood pressure diagnosed by doctor or health worker in last 12 months									
Age Group (years)	Men			Women			Both Sexes		
	n	% diagnosed	95% CI	n	% diagnosed	95% CI	n	% diagnosed	95% CI
25-34	314	1.9	0.4 - 3.5	467	1.7	0.1 - 3.3	781	1.8	0.8 - 2.9
35-44	183	2.7	0.0 - 6.1	317	4.7	2.2 - 7.3	500	3.7	1.5 - 6.0
45-54	179	11.2	6.2 - 16.2	231	13.0	8.7 - 17.3	410	12.0	9.6 - 14.5
55-64	115	13.0	7.4 - 18.7	82	18.3	7.3 - 29.2	197	15.6	9.3 - 21.8
25-64	791	5.0	3.6 - 6.4	1097	6.2	4.1 - 8.3	1888	5.6	4.8 - 6.4

Currently taking blood pressure drugs prescribed by doctor or health worker									
Age Group (years)	Men			Women			Both Sexes		
	n	% taking meds	95% CI	n	% taking meds	95% CI	n	% taking meds	95% CI
25-34	6	---	---	12	16.7	0.0 - 36.8	18	9.4	0.0 - 19.8
35-44	7	14.3	0.0 - 44.3	16	12.5	0.0 - 29.5	23	13.3	0.0 - 30.2
45-54	20	35.0	10.8 - 59.2	36	33.3	15.2 - 51.4	56	34.1	19.3 - 48.8
55-64	17	64.7	40.0 - 89.5	16	43.8	14.5 - 73.0	33	53.2	31.8 - 74.7
25-64	50	34.5	18.4 - 50.6	80	29.5	19.5 - 39.6	130	31.7	23.0 - 40.5

Blood pressure lifestyle advice

Description: Percentage of respondents who received lifestyle advice from a doctor or health worker to treat raised blood pressure.

Instrument question:
- Are you currently receiving any of the following treatments/advice for high blood pressure prescribed by a doctor or other health worker?

Advised by doctor or health worker to have special prescribed diet

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	6	16.7	0.0 - 47.7	12	66.7	29.9 - 100.0	18	45.0	17.0 - 73.0
35-44	7	71.4	41.9 - 100.0	16	68.8	44.2 - 93.3	23	69.9	45.4 - 94.4
45-54	21	57.1	39.7 - 74.6	36	77.8	60.8 - 94.8	57	68.5	59.5 - 77.5
55-64	17	47.1	29.7 - 64.4	16	81.3	61.1 - 100.0	33	65.8	49.4 - 82.2
25-64	51	51.0	37.7 - 64.3	80	75.2	62.5 - 88.0	131	64.4	56.2 - 72.7

Advised by doctor or health worker to lose weight

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	6	----	---	12	50.0	31.3 - 68.7	18	28.3	15.4 - 41.3
35-44	7	57.1	22.9 - 91.4	16	43.8	9.2 - 78.3	23	49.6	19.6 - 79.6
45-54	21	47.6	30.2 - 65.1	36	69.4	54.7 - 84.2	57	59.6	47.2 - 72.1
55-64	17	58.8	29.4 - 88.3	16	68.8	47.0 - 90.5	33	64.3	49.3 - 79.2
25-64	51	45.7	30.1 - 61.2	80	61.1	49.1 - 73.1	131	54.2	45.7 - 62.7

Advised by doctor or health worker to stop smoking

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	6	----	---	12	33.3	13.4 - 53.3	18	18.9	10.3 - 27.5
35-44	7	71.4	35.5 - 100.0	16	25.0	5.5 - 44.5	23	45.3	25.6 - 64.9
45-54	21	33.3	19.4 - 47.3	36	47.2	25.3 - 69.1	57	41.0	27.0 - 54.9
55-64	17	47.1	20.2 - 73.9	16	43.8	18.9 - 68.6	33	45.2	30.3 - 60.2
25-64	51	39.7	26.8 - 52.6	80	39.7	28.6 - 50.8	131	39.7	29.7 - 49.7

Advised by doctor or health worker to start or do more exercise

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	6	----	---	12	58.3	29.4 - 87.3	18	33.1	10.6 - 55.5
35-44	7	57.1	22.9 - 91.4	16	62.5	36.8 - 88.2	23	60.2	36.6 - 83.7
45-54	21	71.4	54.6 - 88.3	36	83.3	69.3 - 97.4	57	78.0	68.3 - 87.6
55-64	17	64.7	42.9 - 86.5	16	75.0	54.4 - 95.6	33	70.3	56.5 - 84.2
25-64	51	56.2	44.8 - 67.7	80	73.0	62.9 - 83.0	131	65.5	56.9 - 74.1

Blood pressure advice by a traditional healer

Description: Percentage of respondents who have sought advice or received treatment from traditional healers for raised blood pressure.

Instrument questions:
- During the past 12 months have you seen a traditional healer for raised blood pressure?
- Are you currently taking any herbal or traditional remedy for your high blood pressure?

Seen a traditional healer in the last 12 months									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	6	----	---	12	25.0	3.7 - 46.3	18	14.2	1.5 - 26.8
35-44	7	28.6	0.0 - 58.1	16	25.0	0.0 - 51.7	23	26.6	8.3 - 44.8
45-54	21	38.1	20.4 - 55.8	36	19.4	4.3 - 34.6	57	27.8	18.2 - 37.5
55-64	17	29.4	17.7 - 41.1	16	37.5	15.1 - 59.9	33	33.8	21.4 - 46.3
25-64	51	28.1	17.7 - 38.6	80	26.5	18.0 - 35.0	131	27.2	20.7 - 33.8

Currently taking herbal or traditional remedy for high blood pressure									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	6	----	---	12	8.3	0.0 - 27.7	18	4.7	0.0 - 14.4
35-44	7	----	---	16	12.5	0.0 - 27.9	23	7.0	0.0 - 16.9
45-54	21	28.6	14.1 - 43.0	36	11.1	0.0 - 23.0	57	19.0	9.0 - 29.0
55-64	17	17.6	0.0 - 35.7	16	12.5	0.0 - 27.0	33	14.8	5.5 - 24.2
25-64	51	15.7	8.7 - 22.8	80	11.3	3.7 - 19.0	131	13.3	7.4 - 19.2

Diabetes diagnosis and treatment

Description: Diabetes diagnosis and treatment results among all respondents.

Instrument questions:
- During the past 12 months, have you ever been told by a doctor or other health worker that you have diabetes?
- Are you currently taking any of the following treatments/advice for diabetes prescribed by a doctor or other health worker?

Diabetes diagnosed by doctor or health worker in last 12 months											
Age Group (years)	**Men**				**Women**				**Both Sexes**		
	n	% diagnosed	95% CI		n	% diagnosed	95% CI		n	% diagnosed	95% CI
25-34	313	0.3	0.0 - 1.0		473	1.1	0.4 - 1.8		786	0.7	0.3 - 1.1
35-44	187	2.7	0.3 - 5.1		317	2.8	0.8 - 4.9		504	2.8	1.2 - 4.4
45-54	179	4.5	1.0 - 7.9		233	5.2	0.7 - 9.6		412	4.8	2.6 - 7.0
55-64	114	8.8	2.2 - 15.3		83	8.4	2.9 - 14.0		197	8.6	3.7 - 13.5
25-64	793	2.6	1.3 - 4.0		1106	3.0	1.8 - 4.3		1899	2.8	1.9 - 3.8

Currently taking insulin prescribed for diabetes by doctor or health worker											
Age Group (years)	**Men**				**Women**				**Both Sexes**		
	n	% taking insulin	95% CI		n	% taking insulin	95% CI		n	% taking insulin	95% CI
25-64	27	25.4	6.8 - 44.1		38	15.3	2.7 - 27.9		65	20.0	9.8 - 30.2

Currently taking oral drugs prescribed for diabetes by doctor or health worker											
Age Group (years)	**Men**				**Women**				**Both Sexes**		
	n	% taking meds	95% CI		n	% taking meds	95% CI		n	% taking meds	95% CI
25-64	27	32.1	12.2 - 51.9		38	19.5	4.4 - 34.6		65	25.3	15.4 - 35.3

Diabetes lifestyle advice

Description: Percentage of respondents who received lifestyle advice from a doctor or health worker to diabetes.

Instrument question:
- Are you currently taking any of the following treatments/advice for diabetes prescribed by a doctor or other health worker?

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
Advised by doctor or health worker to have special prescribed diet									
25-34	1	100.0	100.0 - 100.0	4	75.0	23.4 - 100.0	5	81.9	42.3 - 100.0
35-44	5	60.0	10.3 - 100.0	10	70.0	45.6 - 94.4	15	65.3	39.2 - 91.5
45-54	9	77.8	48.1 - 100.0	16	93.8	89.8 - 97.7	25	86.7	74.4 - 99.0
55-64	13	76.9	60.6 - 93.2	8	87.5	61.7 - 100.0	21	81.6	70.6 - 92.6
25-64	28	73.9	51.8 - 96.1	38	83.7	74.8 - 92.6	66	79.1	71.4 - 86.7

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
Advised by doctor or health worker to lose weight									
25-34	1	----	---	4	75.0	23.4 - 100.0	5	54.3	0.0 - 100.0
35-44	5	80.0	67.0 - 93.0	10	60.0	28.8 - 91.2	15	69.4	46.6 - 92.2
45-54	9	66.7	42.6 - 90.8	16	81.3	66.6 - 95.9	25	74.8	60.9 - 88.7
55-64	13	84.6	67.7 - 100.0	8	50.0	7.8 - 92.2	21	69.3	50.1 - 88.6
25-64	28	74.4	60.2 - 88.5	38	65.9	49.2 - 82.5	66	69.9	61.6 - 78.3

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
Advised by doctor or health worker to stop smoking									
25-34	1	----	---	4	75.0	23.4 - 100.0	5	54.3	0.0 - 100.0
35-44	5	40.0	0.0 - 96.7	10	10.0	0.0 - 30.2	15	24.1	1.0 - 47.2
45-54	9	88.9	79.5 - 98.3	16	43.8	14.8 - 72.7	25	63.7	33.8 - 93.6
55-64	13	53.8	44.6 - 63.1	8	25.0	0.0 - 54.8	21	41.1	24.8 - 57.4
25-64	28	58.2	40.0 - 76.4	38	32.8	15.4 - 50.3	66	44.9	30.9 - 58.9

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
Advised doctor or health worker to start or do more exercise									
25-34	1	100.0	100.0 - 100.0	4	100.0	100.0 - 100.0	5	100.0	100.0 - 100.0
35-44	5	80.0	67.0 - 93.0	10	60.0	28.8 - 91.2	15	69.4	56.2 - 82.6
45-54	9	77.8	48.1 - 100.0	16	93.8	78.8 - 100.0	25	86.7	71.8 - 100.0
55-64	13	61.5	41.3 - 81.8	8	62.5	6.7 - 100.0	21	62.0	44.7 - 79.3
25-64	28	72.7	57.4 - 88.0	38	76.5	57.3 - 95.6	66	74.7	69.1 - 80.3

Diabetes advice by traditional healer

Description: Percentage of respondents who are have sought advice or treatment from traditional healers for diabetes.

Instrument questions:
- During the past 12 months have you seen a traditional healer for diabetes?
- Are you currently taking any herbal or traditional remedy for your diabetes?

Age Group (years)	Seen a traditional healer for diabetes in the last 12 months								
	Men			**Women**			**Both Sexes**		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-64	28	50.3	33.5 - 67.2	38	45.8	26.4 - 65.1	66	47.9	35.7 - 60.2

Age Group (years)	Currently taking herbal or traditional treatment for diabetes								
	Men			**Women**			**Both Sexes**		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-64	28	22.5	12.6 - 32.3	38	17.3	4.2 - 30.5	66	19.8	12.1 - 27.4

Physical Measurements

Height, weight and BMI

Description: Mean height, weight, and body mass index among all respondent (excluding pregnant women for weight and BMI).

Instrument questions:
- Height
- Weight

Mean height (cm)							
Age Group (years)	**Men**				**Women**		
	n	Mean	95% CI		n	Mean	95% CI
25-34	263	167.4	166.1 – 168.7		424	156.5	155.9 – 157.1
35-44	157	166.8	165.3 – 168.4		296	156.2	155.4 – 157.1
45-54	157	165.4	164.4 – 166.4		219	154.2	153.3 – 155.2
55-64	111	162.7	161.8 – 163.6		79	153.1	151.8 – 154.4
25-64	688	166.4	165.7 – 167.1		1018	155.7	155.1 – 156.2

Mean weight (kg)							
Age Group (years)	**Men**				**Women**		
	n	Mean	95% CI		n	Mean	95% CI
25-34	263	73.5	71.8 – 75.1		390	69.6	67.7 – 71.5
35-44	157	77.5	74.2 – 80.9		292	73.0	70.5 – 75.6
45-54	157	79.2	76.6 – 81.8		219	70.4	67.1 – 73.8
55-64	111	70.4	66.9 – 73.9		77	66.4	60.1 – 72.6
25-64	688	75.3	73.8 – 76.8		978	70.4	68.4 – 72.4

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	263	26.2	25.5 – 26.9		390	28.4	27.6 – 29.2		653	27.2	26.6 – 27.9
35-44	157	27.8	26.8 – 28.7		292	29.9	29.0 – 30.8		449	28.8	28.0 – 29.6
45-54	157	28.9	28.0 – 29.7		218	29.7	28.5 – 31.0		375	29.3	28.7 – 29.9
55-64	111	26.6	25.2 – 27.9		77	28.2	25.8 – 30.5		188	27.3	25.8 – 28.8
25-64	688	27.2	26.7 – 27.6		977	29.0	28.3 – 29.8		1665	28.1	27.5 – 28.6

BMI categories

Description: Percentage of respondents (excluding pregnant women) in each BMI category.

Instrument questions:
- Height
- Weight

BMI classifications									
Men									
Age Group (years)	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	% Over-weight 25.0-29.9	95% CI	% Obese ≥30.0	95% CI
25-34	263	----	---	46.0	37.2 - 54.8	37.3	31.1 - 43.5	16.7	12.3 - 21.2
35-44	157	0.6	0.0 - 2.1	29.3	18.8 - 39.8	38.2	28.2 - 48.2	31.8	23.4 - 40.3
45-54	157	0.6	0.0 - 2.1	24.8	16.4 - 33.3	33.1	24.7 - 41.6	41.4	33.5 - 49.3
55-64	111	1.8	0.0 - 4.4	41.4	32.8 - 50.1	36.0	23.9 - 48.2	20.7	9.9 - 31.5
25-64	688	0.5	0.0 - 1.0	37.0	30.6 - 43.5	36.7	30.5 - 42.8	25.8	23.2 - 28.4

BMI classifications									
Women									
Age Group (years)	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	% Over-weight 25.0-29.9	95% CI	% Obese ≥30.0	95% CI
25-34	390	0.5	0.0 - 1.3	27.9	23.3 - 32.6	36.2	31.8 - 40.5	35.4	28.0 - 42.8
35-44	292	0.7	0.0 - 1.8	21.9	15.3 - 28.5	30.1	23.8 - 36.5	47.3	40.3 - 54.2
45-54	218	1.4	0.0 - 3.6	24.3	16.5 - 32.1	30.3	25.8 - 34.8	44.0	36.8 - 51.3
55-64	77	1.3	0.0 - 4.2	36.4	21.7 - 51.1	27.3	18.3 - 36.2	35.1	18.2 - 51.9
25-64	977	0.8	0.1 - 1.5	26.5	21.2 - 31.7	32.4	28.8 - 36.0	40.4	34.6 - 46.1

BMI classifications									
Both Sexes									
Age Group (years)	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	% Over-weight 25.0-29.9	95% CI	% Obese ≥30.0	95% CI
25-34	653	0.2	0.0 - 0.6	37.4	31.2 - 43.7	36.7	32.6 - 40.9	25.6	20.8 - 30.4
35-44	449	0.7	0.0 - 1.6	25.7	18.7 - 32.7	34.3	28.7 - 39.8	39.4	32.7 - 46.0
45-54	375	1.0	0.0 - 2.2	24.6	19.0 - 30.2	31.7	26.3 - 37.2	42.7	36.6 - 48.8
55-64	188	1.6	0.0 - 3.5	39.0	29.4 - 48.6	31.8	24.5 - 39.2	27.6	17.6 - 37.6
25-64	1665	0.6	0.2 - 1.1	32.0	26.4 - 37.5	34.6	30.8 - 38.4	32.8	29.5 - 36.1

Waist circumference

Description: Mean waist circumference among all respondents (excluding pregnant women).

Instrument question:
- Waist circumference measurement

Waist circumference (cm)							
Age Group (years)	Men				Women		
	n	Mean	95% CI		n	Mean	95% CI
25-34	256	84.8	82.6 – 86.9		390	87.2	85.9 – 88.5
35-44	149	89.1	86.9 – 91.4		292	91.3	89.1 – 93.4
45-54	152	94.7	92.5 – 96.9		219	92.1	89.5 – 94.6
55-64	108	89.3	85.8 – 92.8		77	90.0	84.4 – 95.5
25-64	665	88.2	87.0 – 89.4		978	89.6	88.2 – 90.9

Hip circumference

Description: Mean hip circumference among all respondents (excluding pregnant women).

Instrument question:
- Hip circumference measurement

Hip circumference (cm)							
Age Group (years)	Men				Women		
	n	Mean	95% CI		n	Mean	95% CI
25-34	255	94.2	92.8 - 95.6		389	99.0	98.3 - 99.7
35-44	150	96.8	95.2 - 98.4		292	100.7	99.2 - 102.2
45-54	152	98.8	96.9 - 100.8		219	99.6	96.7 - 102.6
55-64	108	93.8	90.6 - 96.9		77	96.4	91.4 - 101.3
25-64	665	95.7	94.6 - 96.8		977	99.3	98.0 - 100.6

Waist / hip ratio

Description: Mean waist-to-hip ratio among all respondents (excluding pregnant women).

Instrument question:
- Waist and hip circumference measurement

Mean waist / hip ratio							
Age Group (years)	Men				Women		
	n	Mean	95% CI		n	Mean	95% CI
25-34	255	0.9	0.9 - 0.9		389	0.9	0.9 - 0.9
35-44	149	0.9	0.9 - 0.9		292	0.9	0.9 - 0.9
45-54	152	1.0	0.9 - 1.0		219	0.9	0.9 - 0.9
55-64	108	1.0	0.9 - 1.0		77	0.9	0.9 - 1.0
25-64	664	0.9	0.9 - 0.9		977	0.9	0.9 - 0.9

Blood pressure Description: Mean blood pressure among all respondents.

Instrument question:
• Reading 1-3 systolic and diastolic blood pressure

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	263	114.5	112.1 – 116.9	423	107.9	106.3 – 109.6	686	111.2	109.4 – 113.1
35-44	157	116.3	113.3 – 119.3	295	112.8	109.2 – 116.3	452	114.6	112.2 – 116.9
45-54	156	120.3	117.2 – 123.5	218	122.8	120.3 – 125.3	374	121.5	119.5 – 123.5
55-64	111	123.1	120.4 – 125.8	79	129.3	125.0 – 133.7	190	126.1	123.2 – 129.0
25-64	687	117.0	114.9 – 119.0	1015	114.2	112.1 – 116.2	1702	115.6	113.8 – 117.4

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	263	70.0	67.4 – 72.5	424	68.7	66.8 – 70.7	687	69.4	67.3 – 71.5
35-44	157	72.8	69.3 – 76.4	296	70.9	68.0 – 73.8	453	71.9	69.2 – 74.6
45-54	157	75.3	72.2 – 78.4	219	74.5	72.9 – 76.1	376	74.9	72.9 – 76.9
55-64	111	74.8	71.6 – 78.0	79	74.8	70.8 – 78.7	190	74.8	71.4 – 78.2
25-64	688	72.3	69.8 – 74.7	1018	71.0	68.9 – 73.1	1706	71.6	69.4 – 73.8

Raised blood pressure Description: Percentage of respondents with raised blood pressure.

Instrument question:
• Reading 1-3 systolic and diastolic blood pressure

SBP ≥140 and/or DBP ≥ 90 mmHg											
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	263	4.9	1.0 - 8.9	423	2.4	0.6 - 4.1	686	3.7	1.2 - 6.1
35-44	157	9.6	3.4 - 15.8	295	5.8	2.2 - 9.3	452	7.7	4.3 - 11.1
45-54	156	16.7	9.0 - 24.3	218	19.7	13.9 - 25.5	374	18.1	13.5 - 22.8
55-64	111	21.6	13.2 - 30.1	79	32.9	20.0 - 45.8	190	27.1	19.3 - 34.9
25-64	687	10.1	5.7 - 14.6	1015	9.6	7.1 - 12.1	1702	9.9	7.4 - 12.4

SBP ≥160 and/or DBP ≥ 100 mmHg											
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	263	0.4	0.0 - 1.2	423	0.2	0.0 - 0.7	686	0.3	0.0 - 0.7
35-44	157	1.9	0.0 - 4.2	295	0.7	0.0 - 1.5	452	1.3	0.0 - 2.6
45-54	156	5.1	0.4 - 9.8	218	5.5	1.6 - 9.4	374	5.3	1.6 - 9.0
55-64	111	4.5	1.0 - 8.1	79	7.6	2.7 - 12.4	190	6.0	3.0 - 9.0
25-64	687	2.1	1.1 - 3.1	1015	2.1	1.1 - 3.0	1702	2.1	1.3 - 2.8

Biochemical Measurements

Mean fasting blood glucose

Description: mean fasting blood glucose results excluding those currently on medication for diabetes (Non-fasting recipients excluded).

Instrument questions:
- Are you currently receiving any of the following treatments for diabetes prescribed by a doctor or other health worker?
  - Insulin?
  - Oral drugs (medication) that you have taken in the last 2 weeks?
- During the last 12 hours have you had anything to eat or drink, other than water?
- Blood glucose measurement

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	136	5.2	5.0 – 5.3	205	5.0	4.8 – 5.1	341	5.1	4.9 – 5.2
35-44	99	5.5	5.2 – 5.7	156	5.4	5.1 – 5.7	255	5.4	5.2 – 5.6
45-54	98	5.8	5.5 – 6.1	138	5.9	5.3 – 6.5	236	5.8	5.5 – 6.2
55-64	70	6.5	5.6 – 7.3	39	6.2	5.3 – 7.0	109	6.3	5.6 – 7.1
25-64	403	5.5	5.3 – 5.7	538	5.4	5.2 – 5.6	941	5.4	5.3 – 5.6

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	136	92.9	90.8 – 94.9	205	89.3	86.4 – 92.2	341	91.0	89.0 – 93.1
35-44	99	98.5	93.6 – 103.4	156	97.4	92.4 – 102.5	255	98.0	94.3 – 101.6
45-54	98	104.4	98.5 – 110.3	138	105.7	94.9 – 116.5	236	105.1	98.6 – 111.5
55-64	70	116.4	101.5 – 131.3	39	110.9	95.4 – 126.4	109	113.7	100.0 – 127.5
25-64	403	99.1	95.9 – 102.3	538	96.7	93.3 – 100.1	941	97.9	95.0 – 100.8

Raised blood glucose

Description: Categorization of respondents into blood glucose level categories and percentage currently on medication for raised blood glucose (non-fasting recipients excluded).

Instrument questions:
- Are you currently receiving any of the following treatments for diabetes prescribed by a doctor or other health worker?
  - Insulin?
  - Oral drugs (medication) that you have taken in the last 2 weeks?
- During the last 12 hours have you had anything to eat or drink, other than water?
- Blood glucose measurement

Impaired Fasting Glycaemia*										
Age Group (years)	Men				Women				Both Sexes	
	n	%	95% CI		n	%	95% CI		n	%	95% CI
25-34	136	11.0	5.8 – 16.3		205	8.8	5.2 – 12.3		341	9.9	5.8 – 14.0
35-44	100	14.0	7.3 – 20.7		157	10.2	5.9 – 14.4		257	12.1	7.7 – 16.5
45-54	100	18.0	5.2 – 30.8		139	13.0	8.1 – 17.8		239	15.5	9.0 – 22.1
55-64	73	12.3	6.7 – 17.9		40	12.5	2.5 – 22.5		113	12.4	7.5 – 17.4
25-64	409	13.3	10.7 – 15.9		541	10.3	7.9 – 12.7		950	11.8	10.0 – 13.6

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	136	7.4	2.3 – 12.4		205	3.4	0.9 – 5.9		341	5.4	2.1 – 8.6
35-44	100	13.0	8.1 – 17.9		157	12.1	6.9 – 17.3		257	12.6	8.9 – 16.2
45-54	100	24.0	13.3 – 34.7		139	22.3	14.2 – 30.4		239	23.2	15.5 – 30.9
55-64	73	37.0	24.6 – 49.4		40	27.5	12.8 – 42.2		113	32.4	20.9 – 43.8
25-64	409	15.3	10.1 – 20.4		541	11.7	7.7 – 15.7		950	13.5	9.2 – 17.8

Currently on medication for diabetes										
Age Group (years)	Men				Women				Both Sexes	
	n	%	95% CI		n	%	95% CI		n	%	95% CI
25-34	136	----	----		205	0.5	0.0 – 1.6		341	0.2	0.0 – 0.8
35-44	100	2.0	0.0 – 4.7		157	0.6	0.0 – 2.0		257	1.3	0.0 – 2.7
45-54	100	3.0	0.0 – 6.0		139	3.6	0.4 – 6.7		239	3.3	1.4 – 5.2
55-64	73	9.6	1.3 – 17.9		40	7.5	0.0 – 15.1		113	8.6	3.0 – 14.2
25-64	409	2.2	0.8 – 3.6		541	1.8	0.7 – 2.9		950	2.0	0.8 – 3.1

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

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

	Description: Mean total cholesterol among all respondents and percentage of respondents with raised total cholesterol.
Total cholesterol	

Instrument question:
- Total cholesterol measurement

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	44	4.5	4.3 – 4.7		89	4.7	4.5 – 4.9		133	4.6	4.4 – 4.8
35-44	41	4.5	4.3 – 4.7		80	4.6	4.5 – 4.6		121	4.5	4.4 – 4.6
45-54	54	4.5	4.4 – 4.7		100	4.7	4.6 – 4.8		154	4.6	4.6 – 4.7
55-64	36	4.7	4.3 – 5.0		26	4.9	4.6 – 5.2		62	4.8	4.6 – 5.0
25-64	175	4.5	4.4 – 4.6		295	4.7	4.6 – 4.8		470	4.6	4.5 – 4.7

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	44	173.1	166.1 - 180.1		89	181.1	174.3 - 187.9		133	177.7	171.2 - 184.3
35-44	41	174.0	167.2 - 180.7		80	176.0	173.5 - 178.5		121	175.1	171.8 - 178.4
45-54	54	175.0	168.9 - 181.1		100	182.9	179.6 - 186.1		154	179.4	176.0 - 182.8
55-64	36	179.9	167.5 - 192.3		26	190.7	178.5 - 202.9		62	185.9	176.8 - 195.0
25-64	175	174.7	171.6 - 177.9		295	181.3	178.7 - 184.0		470	178.5	175.9 - 181.0

Total cholesterol ≥ 5.0 mmol/L or ≥ 190 mg/dl											
Age Group (years)	**Men**				**Women**				**Both Sexes**		
	n	%	95% CI		n	%	95% CI		n	%	95% CI
25-34	44	20.5	6.3 – 34.6		89	27.0	13.8 – 40.1		133	24.2	11.1 – 37.4
35-44	41	17.1	7.2 – 26.9		80	20.0	14.2 – 25.8		121	18.7	13.5 – 23.9
45-54	54	18.5	8.7 – 28.4		100	29.0	23.7 – 34.3		154	24.4	19.3 – 29.4
55-64	36	25.0	3.6 – 46.4		26	50.0	30.3 – 69.7		62	38.9	23.9 – 53.9
25-64	175	19.6	13.5 – 35.8		295	28.5	23.3 – 33.8		470	24.6	19.4 – 29.9

Total cholesterol ≥ 6.2 mmol/L or ≥ 240 mg/dl											
Age Group (years)	**Men**				**Women**				**Both Sexes**		
	n	%	95% CI		n	%	95% CI		n	%	95% CI
25-34	44	----	---		89	4.5	0.7 - 8.3		133	2.6	0.5 - 4.7
35-44	41	2.4	0.0 - 7.0		80	1.3	0.0 - 3.8		121	1.8	0.0 - 5.3
45-54	54	1.9	0.0 - 5.6		100	6.0	3.5 - 8.5		154	4.2	1.8 - 6.6
55-64	36	----	---		26	3.8	0.0 - 10.7		62	2.1	0.0 - 6.2
25-64	175	1.1	0.0 - 2.8		295	3.9	2.1 - 5.6		470	2.7	1.5 - 3.9

Fasting Triglycerides

Description: Mean fasting triglycerides among all respondents and percentage of respondents with raised fasting triglycerides.

Instrument question:
- Triglyceride measurement

Triglycerides (mmol/L)											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean	95% CI		n	Mean	95% CI		n	Mean	95% CI
25-34	107	1.5	1.4 - 1.6		164	1.6	1.4 - 1.7		271	1.5	1.4 - 1.6
35-44	78	1.6	1.4 - 1.7		130	1.5	1.3 - 1.7		208	1.5	1.4 - 1.7
45-54	90	1.6	1.5 - 1.7		116	1.6	1.5 - 1.8		206	1.6	1.5 - 1.7
55-64	53	1.6	1.4 - 1.7		32	1.7	1.4 - 2.1		85	1.6	1.4 - 1.9
25-64	328	1.5	1.5 - 1.6		442	1.6	1.5 - 1.7		770	1.6	1.5 - 1.7

Triglycerides (mg/dl)											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean	95% CI		n	Mean	95% CI		n	Mean	95% CI
25-34	107	132.9	121.0 - 144.9		164	138.3	126.2 - 150.3		271	135.6	126.4 - 144.9
35-44	78	138.9	123.5 - 154.2		130	135.0	119.0 - 151.1		208	136.9	125.3 - 148.5
45-54	90	140.7	133.3 - 148.1		116	145.1	131.0 - 159.1		206	142.7	134.2 - 151.3
55-64	53	138.6	123.1 - 154.1		32	152.5	121.2 - 183.8		85	145.7	126.4 - 165.0
25-64	328	136.7	128.6 - 144.8		442	140.0	128.6 - 151.4		770	138.4	130.0 - 146.8

Percentage of those with 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	107	33.6	23.9 - 43.4		164	31.1	21.4 - 40.8		271	32.3	24.2 - 40.4
35-44	78	37.2	24.0 - 50.4		130	27.7	17.6 - 37.8		208	32.3	23.1 - 41.5
45-54	90	34.4	24.3 - 44.6		116	31.9	20.7 - 43.1		206	33.3	24.1 - 42.4
55-64	53	35.8	26.0 - 45.7		32	37.5	22.4 - 52.6		85	36.7	26.9 - 46.5
25-64	328	35.0	27.2 - 42.8		442	30.9	22.6 - 39.2		770	33.0	25.7 - 40.2

Percentage of those with 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	107	18.7	10.9 - 26.5		164	19.5	13.0 - 26.0		271	19.1	13.0 - 25.2
35-44	78	20.5	8.7 - 32.3		130	15.4	8.8 - 22.0		208	17.9	10.4 - 25.4
45-54	90	23.3	16.1 - 30.5		116	21.6	11.6 - 31.5		206	22.5	16.3 - 28.7
55-64	53	22.6	11.6 - 33.7		32	18.8	2.9 - 34.6		85	20.7	9.5 - 31.8
25-64	328	20.5	15.9 - 25.2		442	18.6	13.1 - 24.0		770	19.5	15.1 - 24.0

Raised Risk

Raised risk Description: Percentage of respondents with 0, 1-2, or 3-5 of the following risk factors:

- current daily smoker
- less than 5 servings of fruits & vegetables per day
- low level of activity (<600 MET -minutes)
- overweight or obese (BMI $\geq$ 25 kg/m^2)
- raised BP (SBP $\geq$ 140 and/or DBP $\geq$ 90 mmHg or currently on medication for raised BP).

Instrument questions: combined from Step 1 and Step 2

Raised Risk							
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	418	1.0	0.0 – 2.3	54.8	49.2 – 60.4	44.2	38.1 – 50.3
45-64	265	1.5	0.2 – 2.7	41.6	35.5 – 47.8	56.9	51.1 – 62.7
25-64	683	1.1	0.0 – 2.3	51.1	46.8 – 55.3	47.8	42.9 – 52.7

Raised Risk							
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	709	0.1	0.0 – 0.5	59.1	53.9 – 64.4	40.7	35.6 – 45.9
45-64	294	0.5	0.0 – 1.6	46.4	38.1 – 54.8	53.1	44.3 – 61.9
25-64	1003	0.2	0.0 – 0.6	55.6	50.3 – 60.9	44.2	38.8 – 49.6

Raised Risk							
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	1127	0.6	0.0 – 1.3	56.9	52.2 – 61.6	42.5	37.6 – 47.5
45-64	559	1.0	0.0 – 2.0	44.0	38.1 – 49.9	55.0	48.9 – 61.2
25-64	1686	0.7	0.0 – 1.4	53.3	48.8 – 57.7	46.0	41.2 – 50.9

Appendix 3. List and Responsibilities of STEPS Survey Staff from Solomon Islands

Team Members	Code No	Responsibility	Interviewer	Station
Makiva Tuni	01	Team Leader / Quality check-up	Yes	Overall
Josephine Watoto	06	Team Leader / Quality check-up	Yes	Overall
Micha Malefoata	13	Multi-purpose (Blood testing)	Yes	Multi
Elwin Talomatakwe	17	Multi-purpose (Blood pressure)	Yes	Multi
Harriet Salokeni	08	Multi-purpose (Height/Weight)	Yes	Multi
Adrian Leamana	07	Multi-purpose (Counseling)	Yes	Multi
Clement Ivan	33	Multi-purpose (Counseling)	Yes	Multi
Jennifer Anga	16	Multi-purpose (Waist/Hip)	Yes	Multi
Julie Au	18	Registration / Data Entry	Yes	Registration
Margaret Kisita	24	Registration / Data Entry	Yes	Registration
Rachael Sorumana	26	Blood testing	Yes	Blood testing
Albert Keniona	21	Blood testing	Yes	Blood testing
Anon Tavalusu	10	Blood testing	Yes	Blood testing
Japhet Honimae	12	Blood testing	Yes	Blood testing
Dalcie Darcy	04	Blood pressure	Yes	Blood pressure
Julie Daefoni	14	Blood pressure	Yes	Blood pressure

Ellen Honimae	15	Blood pressure	Yes	Blood pressure
Silas Torihahia	09	Blood pressure	Yes	Blood pressure
Nellie Hano	05	Height/Weight	Yes	Height/Weight
Christina qotso	27	Waist/Hip	Yes	Waist/Hip
Sarah Fekau	19	Waist/Hip	Yes	Waist/Hip
Jack Hou	22	Counseling (Registration)	Yes	Checkout
Nevalyn Laesango	02	Counseling (Registration)	Yes	Checkout
Dr. John Paulsen	03	Counseling (Registration)	No	Checkout
Grace Bauro	11	Data Entry	Yes	Data Entry
Rebecca	28	Data Entry	No	Data Entry
Dorothy	29	Data Entry	No	Data Entry
Simon palmer.	30	Multi-purpose	Yes	Multi.

Appendix 4. References

1. Beaglehole R, Yach D. Globalisation and the prevention and control of non-communicable disease: the neglected chronic diseases of adults. Lancet 2003; 362:903-08.

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4. World Health Organization (1999b). Definition, Diagnosis and Classification of Diabetes Mellitus and its Complications. Report of a WHO Consultation. Part 1: Diagnosis and Classification of Diabetes Mellitus. Department of Noncommunicable Disease Surveillance, Geneva, World Health Organization. WHO/NCD/NCS/99.2.

KEY CONTACTS

Solomon Islands Ministry of Health and Medical Services Contact:

Dr Lester Ross
Permanent Secretary
Ministry of Health and Medical Services
P. O. Box 349
Honiara
Solomon Islands
Tel: (677) 20831
Fax: (677) 20085
Email: rossl@moh.gov.sb

WHO Contact:

Dr Li Dan
Medical Officer
Noncommunicable Diseases
WHO Office for the South Pacific
Plaza One, Downtown Boulevard
P. O. Box 113
Suva
Fiji
Tel: (679) 3234103
Fax: (679) 3234166
Email: LiD@wpro.who.int

Fiji School of Medicine Contact:

Dr Graham Roberts
Director-Research
Fiji School of Medicine
Hoodless House in Brown Street
Suva
Fiji
Tel: (679) 3311700 ext. 1404
Email: g.roberts@fsm.ac.fj