



2024

COUNTRY REPORT

**Trinidad and Tobago
Non-Communicable Diseases
Risk Factor Survey
[Pan American Steps]**

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- The Chief Nutritionist (*Ms. Michelle Ash*) & The Nutrition and Metabolism Unit

- Pan American Health Organization (PAHO)
- Central Statistical Office (CSO)
- University of the West Indies (UWI)
- Interviewers who conducted the Survey (All Supervisors & Enumerators)
- Citizens of Trinidad and Tobago who participated in the Survey

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ABBREVIATIONS

NCDs	Non – Communicable Diseases
MOH	Ministry of Health
PAHO/WHO	Pan American Health Organization/World Health Organization
CSO	Central Statistical Office
UWI	University of the West Indies
HDL	High Density Lipoprotein
BMI	Body Mass Index
T&T	Trinidad and Tobago
ED	Enumeration District
CVD	Cardiovascular Disease
BP	Blood Pressure
SBP	Systolic Blood Pressure
DBP	Diastolic Blood Pressure

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FOREWORD

Message from the Honourable Terrence Deyalsingh Minister of Health

As the Minister of Health, Trinidad and Tobago, I am pleased to share the findings of the 2024 STEPS Survey, conducted by the Ministry of Health from May to August of 2024. This comprehensive survey is a critical tool for understanding the risk factors associated with Non Communicable Diseases (NCDs) in Trinidad and Tobago, as we continue to prioritise the health and well-being of our citizens.

The data collected through the 2024 STEPS Survey highlights the challenges that we face in addressing the growing burden of NCDs, which remain the leading cause of morbidity and mortality in the country. However, it also provides us with invaluable insights to guide our national health policies and initiatives.

The findings are clear and significant. NCDs—such as diabetes, hypertension, cardiovascular diseases, and certain cancers—remain the leading causes of morbidity and mortality in Trinidad and Tobago. As highlighted in the STEPS Survey Report of 2011, behavioural and biological risk factors such as: unhealthy diets, physical inactivity, tobacco use, excess alcohol consumption, obesity, high blood pressure and uncontrolled blood glucose levels remain the major drivers of NCDs within our population.

As such, the Ministry of Health remains committed to addressing these challenges head-on. While the Ministry's effort has been steadfast against NCDs, the reality is that NCDs are not caused by infectious organisms such as viruses or bacteria but rather, NCDs are mainly attributed to behavioural, environmental, social and genetic factors. This reality calls for a significant change in behaviour among members of the population geared towards the adoption of healthier lifestyle practices in order to reduce the number of deaths attributed to NCDs in the future.

Government's Commitment

The Ministry of Health reaffirms its commitment to tackling NCDs through evidence-based policies, public education, and expanded access to healthcare services and will continue to effect its key initiatives aimed at:

- Enhancing community-level health promotion programs to encourage healthier lifestyle choices
- Increasing access to screening services for early detection and management of chronic diseases, and
- Collaborating with stakeholders to address social and environmental factors that contribute to unhealthy behaviours.

Call to Action

Addressing the scourge of NCDs requires a whole-of-society approach. Therefore, I urge all citizens to take personal responsibility for their health by adopting healthier habits—be it through regular physical activity, balanced diets, increased water intake and avoiding the use of tobacco and excess consumption of alcohol. Together, we can reduce the prevalence of NCDs and ensure a healthier future for Trinidad and Tobago.

The results of the 2024 STEPS survey will guide our continued efforts toward building a more robust and resilient healthcare system that meets the needs of all our people.

I extend my gratitude to all who participated in this survey and to the dedicated teams who made this initiative a success.

Let us work together to turn these findings into actionable solutions for the benefit of our nation.

The Honourable Terrence Deyalsingh

Minister of Health

Message from the Permanent Secretary

The STEPS Survey 2024 is a vital milestone in the Ministry of Health's ongoing efforts to enhance the health and well-being of our citizens. The survey provides a comprehensive and insightful analysis of the state of non-communicable diseases (NCDs) within our population. It stands as an important tool for understanding the burden of these diseases and the opportunities for effective intervention.

The financial impact of NCDs is one of the most pressing concerns for our nation. As many of us are aware, NCDs—including cardiovascular diseases, diabetes, chronic respiratory diseases, and cancers—are not only a leading cause of premature death and disability, but also place a substantial burden on our healthcare system and economy. The costs associated with treating these conditions are escalating each year, due to both direct healthcare expenditure and lost productivity. It is estimated that NCDs are responsible for a significant proportion of our national healthcare expenditure, diverting resources from other essential health programs and services.

This report, therefore, is more than just a snapshot of current health related trends; it is a call to action. By providing evidence-based insights into the prevalence and risk factors of NCDs, the STEPS Survey empowers the Ministry of Health, policymakers, healthcare professionals, and the public with the information needed to design targeted interventions. With this data, we can improve the allocation of resources, as well as, strengthen our prevention and treatment strategies, ultimately reducing the financial strain these diseases impose on our society.

For citizens, the benefits of this report are clear. By identifying key risk factors, such as tobacco use, poor dietary habits, lack of physical activity and excess alcohol consumption, we can develop more targeted, effective public health campaigns and community outreach programs. Through education, prevention, early detection and intervention, we have the opportunity to reduce the prevalence of NCDs and improve quality of life across all segments of the population.

I wish to express my gratitude to all who contributed to this important survey. The STEPS Survey Report 2024 provides us with the knowledge and clarity to take decisive action. Let us use this valuable resource to build a healthier and more resilient nation for the public that we serve.

Mr. Asif Ali

Permanent Secretary

Message from the Chief Medical Officer

The completion of the 2024 STEPS Survey is a testament to the commitment and collaboration of our healthcare workers, field staff, researchers and most importantly, the citizens of Trinidad and Tobago who willingly participated. These contributions have provided us with vital insight into the health status of our nation, and for that, we extend our deepest gratitude.

The data collected through the 2024 STEPS Survey serves as a foundation for further evidence-based decision-making. It provides a comprehensive picture of the prevalence of major non-communicable diseases such as diabetes, hypertension and cardiovascular diseases in Trinidad and Tobago and also sheds light on the prevailing risk factors. Understanding these inherent risk factors is essential for shaping future targeted interventions, policies, and health promotion strategies.

Overall, the 2024 STEPS Survey results show that there has been no major change in most of the indicators measured when compared to that of the previous 2011 STEPS Survey. This shows that over the last thirteen years, while there has not been a marked decline in the health status of the citizens of Trinidad and Tobago, NCDs continue to be a significant health challenge that we face.

Non-communicable diseases remain a matter of concern and the data indicates that many individuals continue to struggle with disease prevention and management. However, the completion of the 2024 STEPS Survey provides us with the necessary data to strengthen and guide the work of our healthcare professionals. By implementing targeted services and support mechanisms, such as nutrition counseling, physical activity programs, and continuous public health education, healthcare providers can address key risk factors such as obesity. Managing these risk factors is critical to reducing the overall prevalence and effect of NCDs in our population.

The health of our people is a shared responsibility, and the 2024 STEPS Survey Report empowers us to make more informed decisions in our collective effort towards building a healthier nation.

Dr. Roshan Parasram

Chief Medical Officer

Message from the Director, Non-Communicable Diseases

The 2024 STEPS Survey is a pivotal milestone in our ongoing efforts towards addressing the issue of Non-Communicable Diseases (NCDs) in Trinidad and Tobago.

The growing burden of NCDs poses a major challenge to healthcare worldwide, and its impact is felt no less within our borders. These diseases, primarily ischaemic heart disease, cancer, diabetes, and other cardiovascular disease conditions such as strokes; are the leading causes of morbidity and mortality in our nation. Their prevalence affects not only the health of our citizens but also the social, economic and healthcare systems on which we depend. If we do not reverse this trend, the consequences can be profound and far-reaching.

Over the years, NCDs have become the primary cause of death and disability in Trinidad and Tobago. The findings of this survey provide us with clear, up to date, data on some of the major NCDs and the associated risk factors. By identifying these risk factors, we gain critical insights that will enable us to continue to strengthen our health policies and further develop targeted strategies to mitigate risk and enhance the quality of life for persons within our population.

Of note, the 2024 iteration of the STEPS Survey now includes data on Mental Health -Depression and 10-year Cardiovascular Disease (CVD) Risk. The data presented in this report is a vital resource for health planning and will guide future interventions geared towards reducing the prevalence and impact of NCDs.

I would like to take this opportunity to extend my sincere gratitude to the dedicated staff, the STEPS survey committee and all key stakeholders who have worked tirelessly to bring this important project to fruition. Your commitment to this project is deeply appreciated. I would also like to acknowledge the invaluable support provided by the Chief Medical Officer, whose leadership has been instrumental in guiding this initiative.

Dr. Maria Clapperton

Director, Non-Communicable Diseases

Message from the PAHO/WHO Representative

We commend the Ministry of Health of Trinidad and Tobago for successfully completing the population-based survey of non-communicable disease (NCD) risk factors. This comprehensive survey is a testament to the dedication and hard work of everyone involved. The team at the Pan American Health Organization, Regional Office for the Americas of the World Health Organization (PAHO/WHO) in Trinidad and Tobago is honored to have provided technical support for this initiative, utilizing a methodology successfully implemented in several other countries.

We are particularly pleased that the 2024 survey included the Mental Health optional module. This addition is vital as it provides an important assessment of the current mental health situation at the population level, offering crucial insights for addressing mental health challenges alongside other NCDs.

This achievement required immense effort and coordination. The survey marks a significant step forward since the last nationally representative NCD risk factors survey in Trinidad and Tobago. The findings from this STEPS survey will undoubtedly bolster the Ministry of Health's efforts in developing and implementing data-driven responses to NCDs. The insights will help shape policies and interventions tailored to the specific needs of the population. The data will also be instrumental in evaluating the long-term impact of these strategies, ultimately improving health outcomes and enhancing the wellbeing of the people of Trinidad and Tobago.

Once again, congratulations to the Ministry of Health for this outstanding accomplishment. We look forward to continuing our partnership and supporting your efforts to create a healthier future for all through informed, data-driven approaches.

Dr Gabriel Vivas Francesconi

PAHO/WHO Representative for Trinidad and Tobago, Aruba, Curacao, Sint Maarten, Bonaire, St Eustatius and Saba

EXECUTIVE SUMMARY

Non-Communicable Diseases (NCDs), such as cardiovascular diseases, continue to pose a significant challenge to global health in the 21st century. Unhealthy lifestyles, particularly sedentary behaviours, poor diet, tobacco use and excessive alcohol consumption are risk factors that contribute significantly to the rise in NCDs. These diseases are mainly driven by unhealthy dietary habits, rapid urbanization and an aging population.

Technological advancements in today's world, alongside urbanization, has led to an increase in sedentary lifestyles and thus, a decline in the physical activity levels of the population. This decrease in physical activity is a risk factor for obesity, high blood pressure and Type 2 Diabetes. Diets have shifted to foods high in calories, fat and salt content, with many people consuming less fruits, vegetables, whole grains and legumes. The globalization of fast-food industries has resulted in overconsumption of highly processed foods, which contribute to obesity and some major NCDs. Aging populations further contribute toward the NCD burden as older adults are more prone to health conditions such as heart disease, hypertension, diabetes and chronic respiratory conditions. These factors, coupled with tobacco use and excessive alcohol consumption contribute to the ongoing NCD epidemic.

According to the PAHO/WHO, 71% of annual deaths worldwide are attributed to NCDs, with 5.5 million NCD related deaths occurring in the region of the Americas.[1] NCDs are often associated with advanced age; however, evidence suggests that 18 million NCD related deaths occur prematurely, that is, in persons below the age of 70.[2] Socio-economic factors are also responsible for the rise in these diseases, as poverty appears to be closely related to the presence of non-communicable diseases. The cost of managing NCDs may place a strain on household finances in low- and middle-income countries, thus exacerbating the poverty cycle. With an increase in NCD cases in these countries, additional pressure is placed on the healthcare systems to manage these chronic illnesses. If the burden is not reduced, health services may be negatively impacted and strained due to overwhelming demand and limited resources.

Trinidad and Tobago has one of the highest rates of non-communicable diseases in the region. These diseases pose a serious health challenge to the country, accounting for over 60% of deaths annually and significantly impacts the workforce as persons under the age of 70 are increasingly affected. The major NCDs include cardiovascular diseases, cancer, diabetes, and chronic respiratory conditions. Heart disease alone reportedly accounts for a quarter of NCD related deaths annually and is the number one cause of death overall in Trinidad and Tobago.[3] Primarily driven by lifestyle-related risk factors, such as physical inactivity, poor dietary habits, excess consumption of alcohol and tobacco use, more than quarter of the population exhibit three or more of these known ‘modifiable’ risk factors, substantially increasing their risk of developing an NCD in the long run.

In the region of the Americas, Trinidad and Tobago has one of the highest prevalence rates of NCDs. Taking into account the high morbidity and mortality rates associated with these diseases, more focus must be placed on the primary prevention of key risk factors, in order to control and better manage the ongoing NCD epidemic. Though not easy to achieve, lifestyle modification is a crucial component of reducing the NCD burden placed on the healthcare system. Thus, emphasis should be placed on strengthening primary healthcare with a view towards reducing the prevalence of modifiable risk factors among members of the population.

The WHO STEPwise approach to NCD risk factor surveillance is a useful tool for countries seeking to identify and address major NCD risk factors. This standardized method offers a systematic approach to collecting, analyzing and disseminating data on crucial NCD risk factors in developing countries. Similarly to the 2011 STEPS Survey, the 2024 iteration of the National STEPS Survey was a nationwide survey conducted to collect necessary NCD related data of permanent residents of Trinidad and Tobago.

Cognizant of the fact that in Trinidad and Tobago, Mental Health is also considered an NCD, the 2024 STEPS Survey includes PAHO/WHO’s recently introduced Mental Health Module on Depression. Additionally, with Cardiovascular Disease being the leading cause of mortality in the population, data on 10-year Cardiovascular Disease (CVD) Risk was also included in the 2024 STEPS Survey report.

The goals and objectives of the survey were as follows:

Goals

1. To obtain up to date data and assess the prevalence of risk factors for non-communicable diseases in the Trinidad and Tobago population
2. To assess the trends of risk factors for non-communicable diseases in the Trinidad and Tobago population by comparing the data collected for the standardized indicators of the current survey with that of the previously conducted survey.

Objectives

- To generate empirical data on risk factors for NCDs.
- To conduct a national survey utilizing standardized tools to enable comparisons over time and across countries.
- To help health services plan, monitor and evaluate public health policies, priorities and programs, including population-wide interventions.
- To make informed projections about future caseloads of non-communicable diseases.
- To facilitate advocacy for the introduction of policies for the prevention of NCDs in other government and social development programs, as well as in the private sector and in civil society, in order to influence their policies which, have direct impact on risk factors for death and disability in the population.

The planning and implementation of the survey was a collaborative effort among the Ministry of Health (MOH), Central Statistical Office (CSO), Pan American Health Organization/World Health Organization (PAHO/WHO) and other key stakeholders. Data collection occurred via a three step process and was conducted from May 2024 to August 2024 in both islands simultaneously.

The three-step process employed for data collection is outlined below:

- **Step 1:** Interview based questionnaire with core and expanded questions on selected health risk behaviours for example: tobacco use, alcohol consumption, fruit and vegetable consumption, health screening, history of hypertension and diabetes, salt intake and physical activity.
- **Step 2:** Physical measurements such as height, weight, waist and hip circumference, pulse and blood pressure.
- **Step 3:** Biochemical measurements such as fasting total cholesterol, triglycerides, HDL cholesterol and fasting blood glucose.

Scope:

The total sample size estimated (obtained by summing across the age/sex strata) is adjusted for the design effect and for the expected non-response rate, margin of error and baseline levels of indicators from results obtained from the aforementioned 2011 STEPS survey (for age groups 15-64 years in STEPS 2011). A minimum sample size of 5,404 individuals was calculated for this STEPS survey.

The 2024 STEPS survey was conducted at a national level, utilizing the updated Enumeration District (ED) listing of 2,992 EDs for Trinidad and Tobago obtained from and maintained by the Central Statistical Office (CSO).[4, 5] Sex and age strata were used based on the 2023 midyear population estimates, provided by the CSO. [4] Hence, there were 8 strata of recommended age groups; 18 – 29, 30 – 44, 45 – 59 and 60 – 69 in each of the 2 sexes.

A representative sample of 5,404 participants from the ages of 18 to 69 years from across Trinidad and Tobago was selected for this Survey, of which a total response rate of 85.0% (4,593 participants) was proposed. Upon execution of the Survey, an actual response rate of 75.0% was observed, with a total sample size of 4,052 participants surveyed. Of this sample of 4,052, there were 1,837 male respondents and 2,215 female respondents.

Weighted (to represent the total national population aged 18-69 years), descriptive analysis is provided in the results presented in this report for the data stratified by age groups and sex. Estimates are accompanied by a 95% confidence interval (CI).

Tobacco Use

- *Description: Current smokers among all population*

The prevalence of smoking was 21.3% (CI 19.1-23.7). Of these, 31.5% (CI 28.6-34.6) of persons engaging in tobacco use were male and 11.0% (CI 8.9-13.6) were female.

The percentage of persons who were daily smokers was 17.0% (CI 14.9-19.2): with 25.0% (CI 22.2-28.1) male and 8.8% (CI 6.8-11.3) female respectively.

- Among current smokers, 92.8% (CI 89.3-95.2) used manufactured cigarettes whereas 4.9% (CI 3.4-6.5) used electronic cigarettes

Alcohol Consumption

- *Description: Percentage of current drinkers (past 30 days)*

The overall prevalence of current drinkers was 51.5% (CI 48.9-54.2). The proportion was higher for males 59.6% (CI 56.3-62.8) as opposed to females 43.4% (CI 39.1-47.7).

- *Description: Mean number of standard drinks consumed on a drinking occasion among current (past 30 days) drinkers*

The mean number of standard drinks consumed on a drinking occasion was 3.8 (CI 3.5-4.0) for both sexes which exceeds the standard limitation of 1 drink for a female and 2 drinks for a male in any given 24-hour period.

- *Description: Percentage of population who had six or more drinks on any occasion in the past 30 days during a single occasion among the total population.*

Among current drinkers, 29.4% (CI 25.9-33.3) of males and 12.0% (CI 9.2-15.5) of females engaged in heavy episodic drinking.

- 15.4% (CI 13.2-18.0) of the population were lifetime abstainers.

Fruit and Vegetable Consumption

- *Description: Frequency of fruit and/or vegetable consumption*

The proportion of persons who consumed less than five (5) servings of fruit and vegetables on an average day was 93.3% (CI 91.6-94.7) [94.1% (CI 91.8-95.8) of males and 92.5% (CI 90.4-94.3) of females].

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

The mean number of servings of fruit consumed on average per day was 1.0 (CI 0.9-1.0) and the mean number of servings of vegetables consumed on average per day was 1.2 (CI 1.1-1.3).

Physical Activity

- The percentage of persons in the population with insufficient levels of physical activity (*defined by WHO as < 150 minutes of moderate-intensity activity per week, or equivalent*) was 25.3% (CI 22.0-29.1). A higher proportion of insufficient levels of physical activity was observed in females 34.1% (CI 29.4-39.0) when compared to that of males 16.6% (CI 13.7-19.8)

- *Description: Median minutes of total physical activity on average per day (activity at work, travel to and from places, and recreational activities)*

The median time spent per day engaging in physical activity was 102.9 minutes (IQR 17.9 - 296.0)

- 70.8% (CI 68.1-73.4) of participants reportedly did not engage in vigorous activity.

Mental Health - Depression

- *Description: Percentage of population with depression*

The prevalence of depression in the population was 13.6% (CI 11.4-16.2). A higher prevalence was observed in females i.e. 17.3% (CI 14.3-20.9) in comparison to males 9.9% (CI 7.8-12.5).

Cervical Cancer Screening

- 25.4% (CI 20.0-31.6) of females between aged 30-49 years were reportedly screened for cervical cancer within the past year

Overweight and Obesity

Body Mass Index (BMI kg/m²) is calculated as weight in kilograms divided by the square of the height in metres. BMI(kg/m²) was categorized as follows: underweight (BMI < 18.5), normal weight (BMI 18.5 - 24.9), overweight (BMI 25 -29.9) and obese (BMI ≥ 30).

- The mean BMI was 26.6 (CI 26.2-27.0) for males and 28.9 (CI 28.2-29.6) for females.
- 61.2% (CI 58.1-64.2) of the population were either overweight or obese (BMI ≥25 kg/m²) , with 55.3% (CI 51.7-58.8) of these being males and 67.2% (CI 62.3-71.7) being females.
- The percentage of participants who were obese (BMI ≥ 30 kg/m²) was 31.6% (CI 28.5-34.9). The prevalence among females at 38.3% (CI 34.4-42.4) was higher than that among males at 24.9% (CI 21.5-28.8).

Blood Pressure (BP)

- *Description: Blood pressure measurement and diagnosis among all population*

The overall prevalence of raised blood pressure [SBP ≥ 140 mmHg and/or DBP ≥ 90 mmHg (viz. hypertension) or currently on medication for raised BP] was 29.0% (CI 27.0 - 31.2). The prevalence was almost 10% higher in males 33.2% (CI 29.6 - 37.1) than in females 24.9% (CI 22.2-27.8).

- *Description: Treatment of raised blood pressure among those with raised BP or under medication*

The percentage of persons who were previously diagnosed with raised blood pressure and currently on medication was 38.5% (CI 34.0-43.3).

- *Description: Control of raised blood pressure among those with raised BP or under medication*

18.5% (CI 14.6-23.2) of the persons with raised blood pressure had their condition under control

Fasting Blood Cholesterol

- *Description: Mean total cholesterol among all population including those currently on medication for raised cholesterol*

The mean total blood cholesterol, including those currently on medication for raised cholesterol, was 185.5 mg/dl (CI 182.1-188.8).

- *Description: Percentage of population with raised total cholesterol*

39.6% (CI 35.6-43.8) of persons had raised total cholesterol (≥ 190 mg/dl or currently on medication for raised cholesterol).

- *Description: Total cholesterol measurement and diagnosis among all population*

The overall prevalence for raised total cholesterol for males was 42.9% (CI 37.5-48.6) and for females was 36.4% (CI 30.6-42.5).

Fasting Blood Glucose

- *Description: Blood sugar measurement and diagnosis among all population*

The prevalence of raised fasting blood glucose [plasma venous value ≥ 126 mg/dl (viz. diabetes)] or currently on medication for raised blood glucose was 15.8% (CI 13.0-19.1). The prevalence was higher for females 17.3% (CI 13.8-21.5) as compared to males 14.3% (CI 10.6-18.8).

- *Description: Mean fasting blood glucose results including those currently on medication for diabetes (non-fasting recipients excluded)*

The mean fasting blood glucose, including those currently on medication for raised blood glucose was 110.5 mg/dl (CI 107.2-113.7).

10- Year Cardiovascular Disease (CVD) Risk

- *Description: Percentage of population aged 40-69 years with a 10-year cardiovascular disease (CVD) risk* $\geq 20\%$ or with existing CVD*
- 11.8% (CI 9.2 - 15.1) of persons 9.3% (CI 6.3-13.4) males and 14.4% (CI 10.4 -19.6) females aged 40-69 years had a 10 - year CVD risk $\geq 20\%$, or had existing CVD

Summary of Combined NCD Risk Factors:

- *Current daily smokers*
- *Less than 5 servings of fruits & vegetables per day*
- *Insufficient physical activity*
- *Overweight ($BMI \geq 25 \text{ kg/m}^2$)*
- *Raised BP ($SBP \geq 140$ and/or $DBP \geq 90 \text{ mmHg}$ or currently on medication for raised BP)*
- 1.6% (CI 1.0-2.5) of the population had none of the risk factors mentioned above.
- The prevalence of persons with three or more of the above risk factors aged 18- 69 years was 38.4% (CI 35.2-41.7).

In light of these results, a multi-disciplinary, whole of society and holistic approach is recommended. Public health campaigns should continue to focus on educating, promoting healthy lifestyles as well as focusing key messaging to encourage the population to reduce alcohol consumption and increase smoking cessation. It was revealed that there is opportunity for a gender specific approach geared towards increasing physical activity levels particularly in women.

Strengthening primary healthcare systems is essential for the early detection and management of NCDs while supporting policy measures, for example, on e-cigarettes and excess alcohol consumption can serve to increase effective barriers for these harmful behaviours.

This report emphasizes that addressing NCDs and its risk factors is not only vital for improving individual health outcomes but also for achieving national goals and strategic priorities. By utilising the data from this 2024 STEPS survey, policymakers and stakeholders can design and implement evidence-based interventions that will lead to a healthier, more productive and resilient population.

INTRODUCTION

This 2024 STEPS Survey Country Report is the main report of the 2024 STEPS Survey conducted in Trinidad and Tobago.

Background

Non-communicable diseases (NCDs) are a group of medical conditions that are not transmitted from person to person and are typically long-lasting in nature. These include chronic diseases such as cardiovascular diseases, cancer, diabetes, and chronic respiratory disorders.

Over the years, the world experienced the phenomenon of epidemiologic and demographic transition which has led to a significant shift in the pattern of diseases, with a growing predominance of Non-Communicable Diseases (NCDs) as opposed to Communicable Diseases. This transition is largely driven by an aging population, alongside dramatic changes in lifestyle, diet, and environmental factors over the past few decades. As infectious diseases become less prevalent due to advancements in public health and medical interventions, the aforementioned chronic conditions have emerged as the leading causes of morbidity and mortality worldwide. The rise of NCDs poses a major public health challenge. These diseases are often linked to modifiable risk factors such as poor dietary practices, sedentary behaviour, tobacco use and excess alcohol consumption. Addressing the burden of NCDs requires comprehensive strategies focused on prevention, early detection and improved management to mitigate their impact on both individuals and healthcare systems.

The disease burden from NCDs continues to increase rapidly and has significant social, economic and health consequences. Therefore, it is imperative to monitor the epidemic over time, as well as observing the impact of policies and programs on any changes in prevalence for commonly known risk factors is also of great importance.

Of the named top ten leading causes of deaths globally in 2021, seven of these were NCDs. [6] Approximately 41 million people or 71% of deaths globally were due to non-communicable diseases.[1] Some of the leading causes of death were ischaemic heart disease, stroke, chronic obstructive pulmonary disease, lung cancers, diabetes and kidney disease.[6]

In the Caribbean, 76.8% of deaths in 2016 were attributed to NCDs. A 2020 study by Hassan et al, highlighted risk factors such as tobacco smoking, abuse of alcohol, poor dietary habits and physical inactivity as the major contributors to NCD related mortality. Most notably, the study also reported that the highest level of alcohol consumption was found in the developing world. Alcohol

consumption per capita in the Caribbean countries for those 15 years and older was more than 7.5 liters in 2010. Latin American and Caribbean nations had a high prevalence of cardiovascular disease, where 8.7% of total cardiovascular disease related deaths were associated with high sodium intake.[7]

Moreover, the region of the Americas (inclusive of the Caribbean) had one of the highest rates of physical inactivity at 35.6%.[8] Subsequently, the region of the Americas also had the highest rate of obesity, reported as 67.5%. [9] A PAHO/WHO report in 2021 stated that the leading causes of NCD related mortality in Trinidad and Tobago were diabetes mellitus, ischaemic heart disease, stroke, kidney disease and certain types of cancers. [10]

Description of STEPS

The WHO STEPwise approach to NCD risk factor surveillance is a useful tool for countries seeking to identify and address major NCD risk factors. This standardized method offers a systematic approach to collecting, analyzing and disseminating data on crucial NCD risk factors in developing countries. Similar, to the 2011 STEPS Survey, the 2024 iteration of the National STEPS Survey was a nationwide survey conducted to collect necessary NCD related data of permanent residents of Trinidad and Tobago.

Trinidad and Tobago

Trinidad and Tobago is a twin island republic in the Caribbean. The population as of June 30th, 2024 is 1,368,333 with 50.2% males and 49.8% females. With 20.6% of the population being in the 0-14 age group, 70.5% in the 15-64 age group and 8.9% in the age group 65 and over.

Life expectancy at birth (2010) 70.17 years for males and 76.50 years for females. Infant mortality rate of 11.3 (male) 9.5(female) per 1000 live births (2018). Household income per capita per year (USD) 6192.8 = \$42,111.04 TTD i.e. \$516.07 USD = \$3,509.25 TTD per month (2008-2009) (conversion rate \$1.00USD = \$6.8TTD).[4, 5, 11]

Previous Risk Factor Survey (STEPS Survey 2011- conducted in age groups 15-64 years)

In 2011, the Ministry of Health of Trinidad and Tobago conducted a National STEPS Survey and released the findings in 2012. This survey highlighted that Trinidad and Tobago had the highest rates of non-communicable diseases (NCDs) in the Caribbean, with both morbidity and mortality rates likely to steadily increase. With a national population of approximately 1.3 million people, a representative sample size of 3,020 participants was calculated ranging in age from 15 to 64 years with a response rate of 90.2% (2,724). Of the 2,724 respondents, there were 1,610 (59.1%) females

37 and 1,114 (40.9%) males. Notably, a significant proportion of these diseases are preventable. An estimated 80% of heart disease, stroke and diabetes cases, as well as 40% of cancers, could potentially be avoided through lifestyle and healthcare interventions.

The 2011 National STEPS Survey revealed a high and growing burden of non-communicable diseases such as heart disease, stroke, diabetes and cancer. These NCDs accounted for more than 60% of premature deaths in persons under the age of 70, largely due to the widespread prevalence of modifiable risk factors within the population. The findings indicated that many cases of heart disease, stroke, diabetes and some cancers could be prevented through lifestyle changes and better health practices. This initial STEPS survey conducted in 2011 was essential for establishing a crucial baseline for tracking the impact of interventions and health policies aimed at reducing NCD rates in Trinidad and Tobago.[12]

Trinidad and Tobago and STEPS Survey 2024

Trinidad and Tobago with a population of approximately 1.37 million (2024), currently faces a significant public health challenge, as it has one of the highest prevalence, morbidity, and mortality rates for non-communicable diseases (NCDs) in the Caribbean. The leading NCDs in the country—*ischaemic heart disease, stroke, diabetes, and cancer*—have been steadily increasing in both incidence and impact over the past few decades. These diseases are now the primary drivers of mortality, accounting for approximately 62% of all deaths annually. Of particular concern is the alarming fact that three-quarters (75%) of these deaths occur prematurely, in individuals under the age of 70.

Several factors contribute to this growing burden of NCDs. The rise in NCD-related mortality also places a significant strain on the country's healthcare system, which is already challenged by resource limitations and a growing demand for medical services. The economic impact of these diseases is substantial, as they are associated with high treatment costs.

Excerpts from the National Strategic Plan for the Prevention and Control of Non-Communicable Diseases: Trinidad and Tobago 2017-2021, from the Ministry of Health, show the top NCDs along with their mortality rates shown in *Table 1* and the four leading causes of mortality in Trinidad and Tobago depicted in *Figure 1* below:

NCD	Number of deaths in 2015	% of Deaths in 2015	2015 Cause-specific death rates (per 100,000 population)
Heart Disease	2673	25%	198.0
Diabetes	1497	14%	110.9
Cancer	1390	13%	103.0
Cerebrovascular Disease	1069	10%	79.2
NCDs Overall	6629	62%	491.2

Table 1: Table Showing NCD Mortality Rates in Trinidad and Tobago

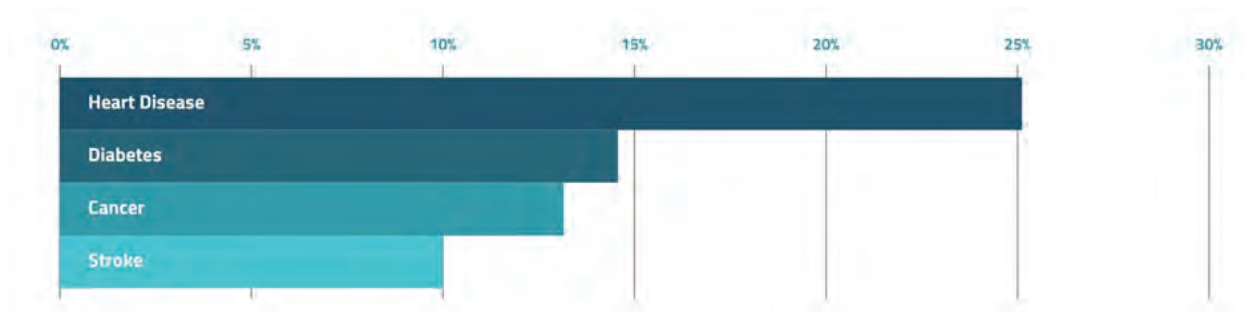


Figure 1: Showing the Four Leading Causes of Mortality in Trinidad and Tobago

Risk Factors in Trinidad and Tobago (2011 conducted in age groups 15-64 years)

Tobacco Use. The overall prevalence of smoking was 21.1%. The proportion of males was significantly higher than females, 33.5% and 9.4% respectively. Among the population aged 15-64 years, 85.6% were daily smokers and the mean age at which smoking started was 17.4 years.

Alcohol Consumption. The overall prevalence of drinking was 40.4%. The proportion of male drinkers was 50.6% and female drinkers was 30.9%. Among current drinkers, the average number of standard drinks consumed was five for men and three for females. Regarding binge drinking, 33.9% of males reported binge drinking whereas 16.8% of females report binge drinking.

Overweight and Obesity. The reported average BMI for males was 25.6 kg/m² compared to 27.4 kg/m² for females. Overall, 55.7% of the population aged 15-64, was overweight or obese, where

25.7% of the population was obese. Of the population 15-64 years, female obesity rates were higher than males, 31.7% and 19.4% respectively.

Diet: In Trinidad and Tobago, 91% of the population reported eating less than 5 servings of fruits and vegetables per day.

Physical Activity: In Trinidad and Tobago, the median total time for physical activity was 42.9 metmin/day.

High Blood Pressure and Cholesterol: 26.3% of the population, had raised blood pressure (SBP>140 or DBP>90 or currently on antihypertensive medication). The proportion of males was significantly higher than females, 29.8% and 23.1% respectively. The overall prevalence of elevated cholesterol was 28.3% for males and 18.9% for females.

Blood Glucose: Of the surveyed population, 630 persons consented to having biochemical measurements. The overall percentage of the sampled population with raised fasting blood glucose was 20.5%.

Infrastructure and Capacity

The Ministry of Health collaborated with the Central Statistical Office (CSO). The CSO has a wealth of experience in conducting several ad hoc and ongoing population-based surveys including the national census. The CSO also assisted in identifying experienced interviewers from its existing pool and sourced additional field supervisors and interviewers (enumerators) as required with the accompanying logistical support.

The PAHO/WHO provided integral technical cooperation and support as required. The team from the Ministry of Health provided the overall technical and logistical oversight while mobilizing human and financial resources for the planning and execution of this survey. Funding was made available for the purchasing of equipment and retention of additional staff as needed.

Rationale

- 41 million people die from NCDs worldwide, accounting for 71% of deaths annually.
- The disease burden from NCDs continues to increase rapidly and has significant social, economic and health consequences.
- Common, modifiable risk factors are associated with these non-communicable diseases.
- It is estimated that the burden of NCDs in low-income countries will exceed 80%.

- The prevalence of risk factors can be reduced through effective intervention programs.
- The continuous rise of NCDs threatens the goal of the WHO 2030 Agenda for Sustainable Development which is to reduce premature mortality from NCDs by one third.

The key to controlling the scourge of non-communicable diseases lies in primary healthcare and prevention. Comprehensive public health interventions are essential. Additionally, in order to better manage the impact of NCDs, it is important to monitor disease and risk factor trends over time.

Goals and Objectives

Goals

1. To obtain up to date data and assess the prevalence of risk factors for non-communicable diseases in the Trinidad and Tobago population
2. To assess the trends of risk factors for non-communicable diseases in the Trinidad and Tobago population by comparing the data collected for the standardized indicators of the current survey with that of the previously conducted survey.

Objectives

- To generate empirical data on risk factors for NCDs.
- To conduct a national survey utilizing standardized tools to enable comparisons over time and across countries.
- To help health services plan, monitor and evaluate public health policies, priorities and programs, including population-wide interventions.
- To make informed projections about future caseloads of non-communicable diseases.
- To facilitate advocacy for the introduction of policies for the prevention of NCDs in other government and social development programs, as well as in the private sector and in civil society, in order to influence their policies which, have direct impact on risk factors for death and disability in the population.

Scope

In 2024, Trinidad and Tobago implemented the PANAM STEPS Version 3.2, which included Core and Expanded Steps 1 (a behavioural questionnaire), 2 (physical measurements) and 3 (biochemical measurements)

A sample size of 5,404 was calculated with an assumed response rate of 85%. Data collection was conducted over a four-month period from May to August 2024.

Upon completion, a representative sample of 4,052 persons across Trinidad and Tobago from the ages of 18 to 69 years were surveyed, with an actual response rate of 75.1 %. Of the 4,052 respondents in the survey 1,837 were males (45.3 %) and 2,215 were females (54.7 %)

Ethics Committee Approvals Obtained

This proposal was approved by the Ethics Committee of the Ministry of Health and was also screened by the Pan American Health Organization Ethics Review Committee (PAHOERC).

METHODOLOGY

Scope

STEPS Survey 2024 (version 3.2)

The 2024 STEPS survey gathered key information with the use of a standardized survey instrument (questionnaire), followed by the collection of simple physical measurements and then the collection of biochemical data.

The components of each step are further outlined below:

Step 1: Core and expanded questions- demographic and risk factor behaviour (tobacco use, alcohol consumption, diet, physical activity, history of raised blood pressure, history of raised total cholesterol, history of cardiovascular disease, health screening and lifestyle advice) information was collected using a standardised approved questionnaire (PAHO/WHO)

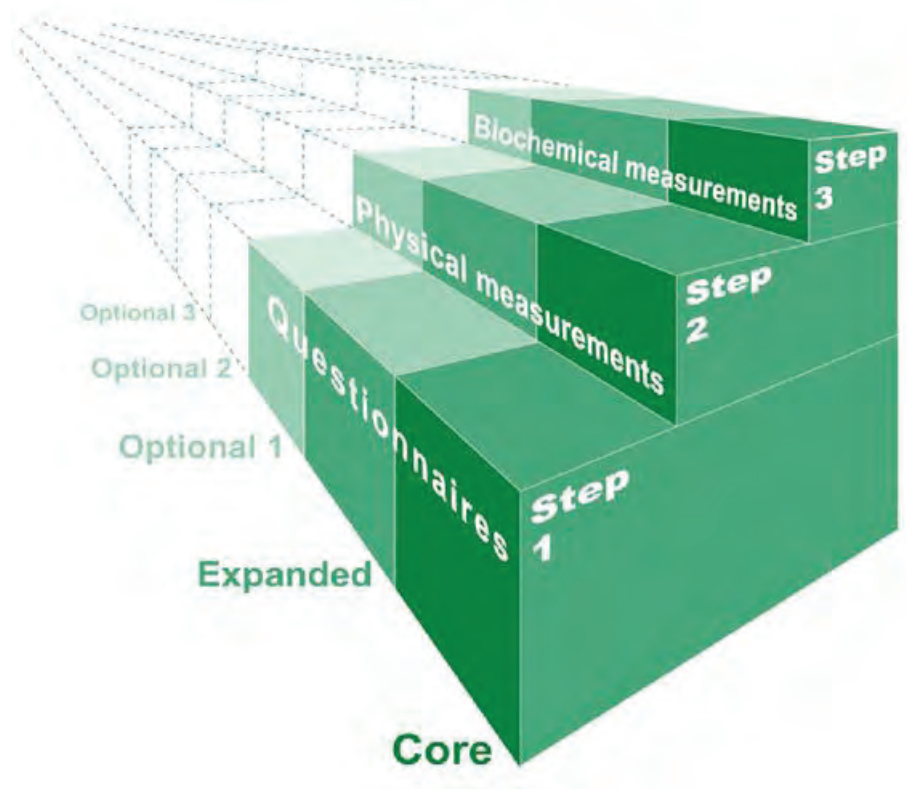
Optional modules: Screening for cancers (i.e. breast, cervix, prostate and colon) and Mental Health (Depression) - version 6.

Survey questions were adapted to reflect a local context and adjusted as agreed upon by the STEPS Survey Committee.

Step 2: Core and expanded physical measurements- height, weight, waist, hip circumference, pulse and blood pressure.

Step 3: Core and expanded biochemical measurements- total blood cholesterol, triglycerides, HDL cholesterol and fasting blood glucose

Figure 2 Below Shows Each of the Steps for the 2024 STEPS Survey.



Survey Population

The 2024 STEPS survey was a cross-sectional population-based survey. The target population comprised persons from the ages of 18 to 69 years, from the total non-institutionalized population of Trinidad and Tobago.

Geographical Coverage

The 2024 STEPS Survey was conducted nationally utilizing the updated Enumeration District (ED) listing of 2,992 EDs for Trinidad and Tobago obtained from and maintained by the Central Statistical Office (CSO). Sex and age strata were used based on the 2023 midyear population estimates obtained from the CSO. There were 8 strata of recommended age groups as follows: 18 — 29, 30 — 44, 45 — 59 and 60 — 69 for each of the 2 sexes.

Inclusion Criteria

- Non-institutionalized or non-hospitalized permanent residents from the ages of 18 to 69 years as of the time of the interview (Steps 1, 2 and 3), with birth years between 1954 and 2005.

Exclusion Criteria

- Physical inability to participate
- Chronic disability or cognitive impairment
- Language barrier or insufficient language proficiency
- Pregnancy (for physical measurements -only) ¹

Participants were randomly selected once they met the selection criteria and not because of their ease of availability, diminished autonomy, or any social bias.

Sample Size

The sample size allows for accurate reporting of the survey results for each of the aforementioned strata.

The total sample size estimated (obtained by summing across the age/sex strata) is adjusted for the design effect and for the expected non-response rate, margin of error and baseline levels of indicators from results of 2011 STEPS survey.

A minimum sample size of 5,404 individuals was calculated for the 2024 STEPS survey.

This sample size was calculated using the following sample size formula shown below:

$$n = Z^2 \frac{P(1 - P)}{e^2}$$

Where:

- Z = level of confidence
- P= baseline level of the indicators
- e= margin of error

Assumptions

1. Level of Confidence (Z) = 1.96 (95% Confidence Interval)
2. Margin of Error (e) = 0.05
3. Prevalence of risk factors at 53%

A 53% prevalence of risk factors for Non-Communicable Diseases based on data from the 2011 STEPS survey, was used. The risk factors included; daily smokers, consumption of less than 5 servings of fruits and vegetables per day, low level of physical activity, overweight or obesity and raised blood pressure.

4. Design effect 1.5. The country was first stratified by municipalities (strata). Proportional allocation of households was conducted to select the number of Communities from each municipality. A sample of Enumeration Districts (EDs) was then selected from each community. Households were then selected from within the chosen EDs only. Therefore, Community and EDs acted as clusters making a design effect of 1.5 necessary.
5. The projected non-response rate of 15% was recommended by the CSO based on their response rate for previous national surveys.

Sampling

The sampling design was a stratified, multi-stage (four stage) cluster sampling.

The country was first stratified by the 15 municipalities (14 in Trinidad and 1 in Tobago).

Proportional allocation was used so that the resulting sample of households were distributed across the municipalities. The sample size was calculated to be 5,404.

Stage 1: A total number 110 from 612 communities (clusters) were sampled whereby ‘communities’ acted as the primary sampling units (PSUs). Resources allowed for an average of 49 ($=5404/110$) households to be selected per community.

Stage 2: For the selected communities in each municipality, a sampling frame was created consisting of a list of Enumeration Districts (EDs) which acted as the secondary sampling units (SSUs) with the number of households in each ED. The total number of EDs in Trinidad and Tobago are 2,992 and 451 EDs to be sampled. Resources allowed for an average of 12 ($=5404/451$) households to be selected per ED. That is, on average, 5 ($=49/12$) EDs to be selected per community.

Stage 3: For each selected ED, a sampling frame was also created, consisting of a list of all households in the ED using the most updated list available. Resources allowed for an average of 12 households to be selected per ED using systematic sampling with random start and consecutive selection.

Stage 4: One participant was randomly selected per household using the STEPS application (app) on the interviewer's tablet device. All eligible household members were added to the app which randomly selected a participant to be interviewed.

There was no replacement. If the selected participant did not agree to participate, this was treated as a non- response.

Timeframes

- ❖ Formation of the STEPS Survey Committee- December 2023
- ❖ Ethics Approval- March 2024
- ❖ Training of recruited field staff- April 2024
- ❖ Commencement of Data Collection - May 2024
- ❖ Completion of Data Collection- August 2024
- ❖ Analysis and Reporting- September 2024 - January 2025

Staff Training

- A total number of 71 field staff were recruited and trained.
- There was 1-field coordinator, 15-field supervisors and 55- enumerators (interviewers).
- The Central Statistical Office assisted with identifying experienced field workers with a background in health care for the purpose of collecting data for the data collection phase of this survey.
- Training of field staff was conducted in April 2024 (on all steps 1,2 and 3) and an additional supplemental training session for step 3 was conducted in July 2024.
- Content templates for the training sessions were provided by PAHO/WHO.

Pilot Study

There was no pilot study conducted before conducting the actual survey.

Instrument and Data Collection

Survey Instrument (Step 1):

- The 2024 STEPS Survey instrument consisted of core and expanded questions as follows: demographic and risk factor behaviour (tobacco use, alcohol consumption, diet, physical activity, history of raised blood pressure, history of raised total cholesterol, history of cardiovascular disease, health screening and lifestyle advice) information was collected using a standardised approved questionnaire (PAHO/WHO)
- Optional modules: Screening for cancers (i.e. breast, cervix, prostate and colon) and Mental Health (Depression)-version 6.
- Survey questions were adapted to reflect a local context and adjusted as agreed upon by the STEPS Survey Committee. Showcards with pictures were also developed.
- Language used - English

Physical Measurements(Step 2):

Core and expanded physical measurements- height, weight, waist, hip circumference, pulse and blood pressure was collected using standardised validated portable equipment such as: stadiometers, scales, constant tension measuring tapes and validated home blood pressure monitoring devices.

Biochemical Measurements (Step 3):

Core and expanded biochemical measurements- total blood cholesterol, triglycerides, HDL cholesterol and fasting blood glucose were collected using a dry chemistry method i.e. standardised laboratory validated point of care equipment such as: validated home blood glucose monitoring devices and validated home blood cholesterol monitoring devices.

Data Collection:

- On the field, the nature of the survey was fully explained to the selected participant using the Participant Information Form.
 - For each selected participant, two copies of the Consent Form(s) were given to the participant to read or (in case of poor eyesight or illiteracy, field workers read the information out to the participant). Once the participant signed both forms (or provided a thumb print); one copy was provided for the participant's ease of

reference and the other copy was retained by the STEPS coordination site (MoH). Informed consent was considered as having been obtained after the participant provided both verbal and written consent before taking part in the STEPS survey and with the field worker having signed as witness.

- The STEPS survey was administered by trained field workers in a face-to-face setting using hand held computers (android tablets) over a period of 16 weeks.
 - All of Steps 1, 2 and 3 were conducted at the participants' homes
- The trained field workers met participants at home during a mutually arranged pre-determined time to conduct aspects of the Steps survey.
 - Participants were provided with clear and comprehensible information regarding the purpose of the survey, potential risks and benefits, and their right to refuse or withdraw at any stage without facing any negative consequences.
 - The survey took approximately 1 hour and 10 minutes (Step 1: 35 – 45 minutes, Step 2: 20 minutes, Step 3: 5 minutes) to administer.
 - Steps 1 and 2 (i.e. administration of the questionnaire and obtaining physical measurements) were completed on the first visit and step 3 was conducted on a second visit. A dry chemistry method was used to collect the biochemical data for step 3 which was also conveniently done in the participants' homes by appointment, using the Step 3 appointment cards.
 - Step 3 appointments were mainly conducted during the morning period as participants would have fasted overnight (approx. 8 hours - minimum).
 - The field supervisors provided support and follow up on appointments to ensure that the process was executed smoothly.
 - At the end of each day, supervisors ensured that enumerators uploaded the data collected on each tablet via the e-Steps application on the android tablets to the Ona Platform (cloud based)

Data Management:

- Data was kept secure and managed in alignment with the legal framework for Trinidad and Tobago.
- Access to the data repository on the Ona Platform was password protected and access was granted to key survey personnel at the Ministry of Health and PAHO/WHO

- The Ona platform allowed for real time monitoring of data capture, GPS location of tablets (which were GPS enabled) and field teams which were engaging in data collection; and for the periodic downloading of data spreadsheets for quality control and cleaning.
- During the data collection phase, meetings were held between MoH and PAHO /WHO to ensure quality control.

Data Analysis :

- Upon completion of the data collection phase, the data set was cleaned, weighted and anonymized i.e. all participant identification information was removed and not included in the final data set.
- The data was weighted to ensure that it was representative of the population
- Data preparation: The original data set contained 4,232 observations of which 4,052 were retained having satisfied all criteria. For step 2 (physical measurements), there were 3,849 valid observations; and 1,003 for step 3(biochemical measurements).
- Response rate: The overall response rate for step 1 was 75%, 71.2% for step 2 and 18.6% for step 3.
- Weighting: The final dataset included sample weights which accounted for the probability of selection at every stage of selection of the sample. To correct over- or underrepresentation in the sample of the targeted age-sex groups, sample weights needed to be calibrated using auxiliary data sources such as the census. For this purpose, population weights were calculated for each age/sex subgroup with information provided by the MoH on the distribution of the population by sex and age. Given the low response rate for step 3, separate population weights were calculated for step 1-2 and step 3. Following standard STEPS statistical procedures, sample weights and population weights were multiplied together to arrive at the overall weights. There were different overall weights for analyses of variables from each step of the survey.
- Analyses: Weighted descriptive analysis was provided for the data stratified by age groups and sex. Estimates are accompanied by a 95% confidence interval (CI). Stata/MP 18 was used by PAHO/WHO for weighting and preparation for analysis. The data book and factsheet were prepared by PAHO/WHO using scripts developed by WHO on R 4.4.1 and RStudio 2024.04.2.

RESULTS

Upon completion of the survey, there were 4,052 participants (consented and from 18 to 69 years of age) overall. 45.3% were male and 54.7% were female. 41.5% of respondents were of African descent, 33.4% of respondents were of East Indian descent, 24.6% of respondents were reportedly of Mixed ethnicity, 0.1% of respondents were of Caucasian descent (White), 0.1% of respondents were of Chinese descent and 0.3% of respondents reported their ethnicity as other.

For Step 2 (physical measurements) there were 3,849 valid observations; and 1,003 for Step 3 (biochemical measurements). Overall weights for each step of the survey were created. Population weights were calculated for each age/sex subgroup. Given the relatively low response rate for Step 3, separate population weights were calculated for Step 1-2 and Step 3 accordingly.

The overall response rate for Step 1 was 75.0%, 71.2 % for Step 2, and 18.6 % for Step 3.

Given the relatively low response rate for Step 3, the results for biochemical measurements were only stratified by sex and should be interpreted with caution. Weighted, descriptive analysis is provided in the tables below for the data stratified by age groups and sex. Estimates are accompanied by a 95% confidence interval (CI).

Summary of Key Findings

Step 1:

Tobacco Use- 17.0 % (CI 14.9-19.2) of persons (25 % (CI 22.2-28.1) males and 8.8% (CI 6.8-11.3) females) currently smoked tobacco daily.

Alcohol Consumption- 51.5% (CI 48.9-54.2) of persons (59.6% (CI 56.3-62.8) of males and 43.4% (CI 39.1-47.7) females currently drank alcohol (i.e. drank alcohol in the past 30 days)

Diet - 93.3% (CI 91.6 - 94.7) of persons (94.1 % (CI 91.8-95.8) of males and 92.5% (CI 90.4 - 94.3) females ate less than 5 servings of fruit and/or vegetables on average per day.

Physical Activity (*WHO requirement: Minimum of 150 mins per week*) - Persons spent a median time of 102.9 mins on average per day (IQR 17.9-296.0) (162.9minutes for males (IQR 39.3-368.6) and 55.7minutes (IQR 8.6-200.0) for females).

Step 2:

BMI - 61.2% of persons (CI 58.1 - 64.2) 55.3% (CI 51.7 - 58.8) males and 67.2% (CI 62.3- 71.7) females were overweight (i.e. BMI \geq 25kgm²)

BP - 29.0% of persons (CI 27.0 -31.2) 33.2% (CI 29.6 -37.1) males and 24.9% (CI 22.2 - 27.8) had raised BP [SBP \geq 140 and/ or DBP \geq 90 mmHg (viz. hypertension) or currently on medication for raised BP]

38.5% (CI 34.0-43.3) of persons with raised BP were receiving treatment on medication (24.6% males (CI 19.6-30.4) and 56.9% (CI 49.6-64.0) females)

18.5% (CI 14.6-23.2) of persons with raised BP had their condition controlled (10.2% (CI 7.6-13.7) males and (29.3% (CI 22.2-37.6) females).

Step 3:

FBG- 15.8% (CI 13.0-19.1) of persons (14.3% (CI 10.6-18.8) males and 17.3% (CI 13.8-21.5)) had raised fasting blood glucose (FBG) i.e. plasma venous value \geq 126 mg/dl (viz. diabetes) or were currently on medication for raised blood glucose.

Cholesterol- 39.6% (CI 35.6 - 43.8) of persons (42.9% (CI 37.5-48.6) and 36.4% (CI 30.6-42.5)) had raised total cholesterol (\geq 190mg/dl or currently on medication for raised cholesterol)

10-Year Cardiovascular Disease (CVD) Risk - 11.8% (CI 9.2 - 15.1) of persons 9.3% (CI 6.3-13.4) males and 14.4% (CI 10.4 -19.6) females aged 40-69 years had a 10 - year CVD risk \geq 20%, or with existing CVD

Combined NCD Risk Factors (*current daily smokers, < 5 servings of fruit & vegetables per day, low levels of physical activity, overweight, raised BP (SBP \geq 140 and or DBP \geq 90 mmHg or currently on medication for raised BP)* 1.6 % of persons (CI 1.0-2.5) 1.6% (CI 0.9-2.7) males and 1.6% (CI 0.9-3.0) females had none of the aforementioned combined risk factors.

38.4% of persons (CI 35.2-41.7) 38.0% (CI 34.1-42.1) males and 38.7% (CI 35.4-42.2) females had three or more of the aforementioned combined risk factors.

Note: Only weighted tables with the corresponding Confidence Intervals (CI 95%) for the respective survey questions are presented below.

Estimates based on less than 50 unweighted cases are not presented.

Demographic Information

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

Instrument question:

C1: Sex

C2. What is your date of birth?

Of the 4,052 participants, 45.3% were males and 54.7% were females. The 45-59 age group accounted for the largest group of males interviewed (46.2%) whereas the 30-44 age group accounted for the largest group of females interviewed (56.1%).

Table 1 shows the age groups and sex of the respondents. The largest proportion belonged to the 45-59 age group (30.7%) and was closely followed by the 30-44 age group (30.5%). The eldest age group (60-69 years) constituted 25.3% while the youngest age group (18-29 years) constituted 14.0 %.

Table 1

Age group and sex of respondents						
Age Group (years)	Male		Female		Both Sexes	
	n	%	n	%	n	%
18-29	263	46.5	302	53.5	565	100
30-44	539	43.9	688	56.1	1227	100
45-59	571	46.2	664	53.8	1235	100
60-69	464	45.3	561	54.7	1025	100
Total	1837	45.3	2215	54.7	4052	100.0

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

Instrument question:

C4: In total, how many years have you spent at school or in full-time study (excluding pre-school)?

Participants were asked the number of years spent at school and in full time study which confirmed the number of years of formal education (excluding pre-school years).

Table 2 shows the mean number of years of education. For both sexes, the mean number of years of education was 12.1. There was only a difference of 0.5 years between both sexes with females receiving 12.3 years and males 11.8 years. There was a steady decline observed for the mean number of years of schooling in age groups after 30-44 years, with the eldest age group receiving the least years of formal education (10.5 years).

Table 2

Mean number of years of education						
Male			Female		Both Sexes	
Age Group (years)	n	mean	n	mean	n	mean
18-29	263	12.6	301	13.2	564	12.9
30-44	538	12.8	687	13.4	1225	13.1
45-59	571	11.6	664	12.2	1235	12.0
60-69	463	10.2	559	10.7	1022	10.5
Total	1835	11.8	2211	12.3	4046	12.1

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

Instrument question:

C5: What is the highest level of education you have completed?

Tables 3, 4 and 5 show the highest level of education completed. Among all participants, 40.3% completed schooling until secondary school. Only 2.8% of the population completed post graduate degrees. A higher proportion of females (16.2%) completed university when compared to males (10.4%). Less than 1% (0.4%) of the respondents reported no formal education.

Table 3

Highest level of education								
Male								
Age Categories (Years)	n	% No formal schooling	% Less than primary school	% Primary school completed	% Secondary school completed	% Technical/Vocational completed	% University completed	% Post graduate degree
18-29	263	0.0	0.8	16.0	55.1	17.9	10.3	0.0
30-44	538	0.4	1.9	14.3	44.8	20.4	16.7	1.5
45-59	571	0.7	3.3	27.0	40.3	17.7	7.5	3.5
60-69	462	1.1	5.4	46.3	23.8	14.5	6.5	2.4
Total	1834	0.6	3.1	26.6	39.6	17.7	10.4	2.1

Table 4

Highest level of education								
Female								
Age Categories (Years)	n	% No formal schooling	% Less than primary school	% Primary school completed	% Secondary school completed	% Technical/Vocational completed	% University completed	% Post graduate degree
18-29	301	0.3	0.3	10.3	57.8	12.0	18.9	0.3
30-44	688	0.0	0.9	14.0	43.9	13.1	23.8	4.4
45-59	663	0.3	2.1	24.9	40.0	15.5	13.4	3.8
60-69	559	0.4	5.0	40.4	29.5	13.1	8.6	3.0
Total	2211	0.2	2.2	23.4	41.0	13.7	16.2	3.3

Table 5

Highest level of education								
Total								
Age Categories (Years)	n	% No formal schooling	% Less than primary school	% Primary school completed	% Secondary school completed	% Technical/Vocational completed	% University completed	% Post graduate degree
18-29	564	0.2	0.5	12.9	56.6	14.7	14.9	0.2
30-44	1226	0.2	1.3	14.1	44.3	16.3	20.7	3.1
45-59	1234	0.5	2.7	25.9	40.1	16.5	10.7	3.6
60-69	1021	0.7	5.2	43.1	26.9	13.7	7.6	2.7
Total	4045	0.4	2.6	24.8	40.3	15.5	13.5	2.8

Ethnicity Description: Summary results for the ethnicity of the respondents

Instrument question:

C6: What is your [insert relevant ethnic group/racial group/cultural subgroup/others] background?

Table 6 shows the ethnic representation of the survey population. The highest percentage of respondents were of African descent (41.5%) followed by East Indian descent (33.4%) and Mixed descent (24.6%). The remaining ethnic groups consisted of White (0.1%), Chinese (0.1%) and Other (0.3%).

Table 6

Ethnic group of respondents							
Total							
Age Categories (Years)	n	% African descent	% East Indian descent	% Mixed	% White	% Chinese	% Other
18-29	565	45.1	21.9	32.7	0.0	0.0	0.2
30-44	1227	44.8	29.3	25.1	0.3	0.0	0.4
45-59	1235	38.1	38.1	23.7	0.0	0.2	0.0
60-69	1024	39.6	39.2	20.4	0.2	0.2	0.5
Total	4051	41.5	33.4	24.6	0.1	0.1	0.3

Marital status Description: Marital status of survey respondents

Instrument question:

 C7: What is your marital status?

Tables 7, 8 and 9 shows that the majority of the survey population were reportedly single (44.1%). The second highest proportion showed 28.6% of respondents were married followed by 11.1% being in a common law relationship and 5.5% being divorced. Results showed an approximately 10% difference between males (49.5%) and females (39.6%) who were reportedly single. Whereas, a slightly greater percentage of females were either married and in a common law relationship.

Table 7

Marital status							
Male							
Age Categories (Years)	n	% Single	% Married	% Separated	% Divorced	% Widowed	% Common law
18-29	263	87.1	3.4	0.4	0.4	0.0	8.7
30-44	538	51.1	25.8	4.6	2.4	0.6	15.4
45-59	571	43.6	31.3	6.8	7.0	2.1	9.1
60-69	464	33.6	37.3	8.2	7.3	8.4	5.2
Total	1836	49.5	27.2	5.6	4.8	2.9	9.9

Table 8

Marital status							
Female							
Age Categories (Years)	n	% Single	% Married	% Separated	% Divorced	% Widowed	% Common law
18-29	302	75.5	6.0	1.3	0.0	0.0	17.2
30-44	687	41.6	31.3	4.9	3.8	1.5	16.9
45-59	662	31.7	36.4	6.6	8.6	6.2	10.4
60-69	559	27.2	33.1	4.8	9.5	20.0	5.4
Total	2210	39.6	29.8	4.9	6.2	7.4	12.1

Table 9

Marital status							
Total							
Age Categories (Years)	n	% Single	% Married	% Separated	% Divorced	% Widowed	% Common law
18-29	565	80.9	4.8	0.9	0.2	0.0	13.3
30-44	1225	45.8	28.9	4.8	3.2	1.1	16.2
45-59	1233	37.2	34.1	6.7	7.9	4.3	9.8
60-69	1023	30.1	35.0	6.4	8.5	14.8	5.3
Total	4046	44.1	28.6	5.2	5.5	5.4	11.1

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:

C8: Which of the following best describes your main work status over the past 12 months?

Tables 10, 11 and 12 show that overall, the largest proportion of participants were Non-Government Employees (25.3%) followed by Self-Employed (18.5%) and Government Employees (18.0%) accounting for the first, second and third largest proportions respectively. 27.2% of males were Non-Government Employees and 25.2% were Self-Employed. 23.7% of females were Non-Government Employees and 17.7% of females were Government Employees closely followed by female Homemakers at 17.0%. 15.6% of respondents were retired.

Table 10

Employment status									
Male									
Age Categories (Years)	n	% Government employee	% Non-government employee	% Self-employed	% Student	% Homemaker	% Retired	% Unemployed (able to work)	% Unemployed (unable to work)
18-29	263	12.2	41.8	14.8	12.2	0.0	0.0	18.6	0.4
30-44	538	28.3	35.1	30.9	0.2	0.2	0.0	3.0	2.4
45-59	570	22.1	27.9	33.5	0.0	0.0	5.4	5.8	5.3
60-69	463	5.4	8.9	14.3	0.0	0.0	65.0	3.0	3.5
Total	1834	18.3	27.2	25.2	1.8	0.1	18.1	6.1	3.3

Table 11

Employment status									
Female									
Age Categories (Years)	n	% Government employee	% Non-government employee	% Self-employed	% Student	% Homemaker	% Retired	% Unemployed (able to work)	% Unemployed (unable to work)
18-29	301	12.6	34.6	9.6	19.3	7.0	0.0	14.6	2.3
30-44	688	25.7	30.7	16.1	0.3	15.3	0.0	9.2	2.8
45-59	662	23.9	25.7	16.3	0.0	17.7	2.1	10.0	4.4
60-69	560	3.4	7.0	7.1	0.0	23.6	51.2	4.6	3.0
Total	2211	17.7	23.7	13.0	2.7	17.0	13.6	9.0	3.3

Table 12

Employment status									
Total									
Age Categories (Years)	n	% Government employee	% Non- government employee	% Self- employed	% Student	% Homemaker	% Retired	% Unemployed (able to work)	% Unemployed (unable to work)
18-29	564	12.4	37.9	12.1	16.0	3.7	0.0	16.5	1.4
30-44	1226	26.8	32.6	22.6	0.2	8.6	0.0	6.4	2.6
45-59	1232	23.1	26.7	24.3	0.0	9.5	3.7	8.0	4.8
60-69	1023	4.3	7.8	10.4	0.0	12.9	57.5	3.9	3.2
Total	4045	18.0	25.3	18.5	2.3	9.3	15.6	7.7	3.3

**Unpaid work
and
unemployed**

Description: Proportion of respondents in unpaid work

Instrument question:

C8: Which of the following best describes your main work status over the past 12 months?

Tables 13, 14 and 15 show that the majority of participants who are unpaid were homemakers (41.0%), followed by students (24.3%) and retirees (20.1%). For males, the highest percentage were homemakers (61.7%) followed by retirees (20.8%) and subsequently those listed as ‘unemployed able to work’ (11%). The top three categories for females engaging in unpaid work and unemployed were students, homemakers and retirees with proportions of 37.2%, 29.9% and 19.8% respectively. A small fraction of the sample population accounted for those who were self-reported as ‘unemployed able to work’ participants (8.5%) and ‘non paid’ participants (6.0%).

Table 13

Unpaid work and unemployed						
Male						
Age Categories (Years)	n	% Non-paid	% Student	% Homemaker	% Retired	% Unemployed able to work
18-29	82	39.0	0.0	0.0	59.8	1.2
30-44	31	-	-	-	-	-
45-59	94	0.0	0.0	33.0	35.1	31.9
60-69	331	0.0	0.0	90.9	4.2	4.8
Total	538	6.1	0.2	61.7	20.8	11.2

Table 14

Unpaid work and unemployed						
Female						
Age Categories (Years)	n	% Non-paid	% Student	% Homemaker	% Retired	% Unemployed able to work
18-29	130	44.6	16.2	0.0	33.8	5.4
30-44	189	1.1	55.6	0.0	33.3	10.1
45-59	226	0.0	51.8	6.2	29.2	12.8
60-69	462	0.0	28.6	62.1	5.6	3.7
Total	1007	6.0	37.2	29.9	19.8	7.1

Table 15

Unpaid work and unemployed						
Total						
Age Categories (Years)	n	% Non-paid	% Student	% Homemaker	% Retired	% Unemployed able to work
18-29	212	42.5	9.9	0.0	43.9	3.8
30-44	220	1.4	48.2	0.0	35.9	14.5
45-59	320	0.0	36.6	14.1	30.9	18.4
60-69	793	0.0	16.6	74.1	5.0	4.2
Total	1545	6.0	24.3	41.0	20.1	8.5

**Per capita
annual
income**

Description: Per capita annual income

Instrument question:

C9: How many people older than 18 years, including yourself, live in your household?

C10 per year: Taking the past year, can you tell me what the average earning of the household has been?

Across all age groups, 2,533 out of the 4,052 (62.5 %) participants provided responses.

Table 16

Mean annual per capita income		
Both Sexes		
Age Group (years)	n	mean \$
Total	2533	120365.2

**Estimated
household
earnings**

Description: Summary of participant household earnings by quintile

Instrument question:

C11: If you don't know the amount, can you give an estimate of the annual household income if I read some options to you?

Across all age groups, only 435 out of 4,052 (10.7%) participants provided responses.

Table 17 shows that 40.2% of the interviewed population reported having $\leq \$5,000$ in estimated annual household earnings. It was reported that 34.7% of respondents had an estimated annual household income of more than $\$5,000 \leq \$10,000$ followed by 13.6% having more than $\$10,000 \leq \$15,000$ and lastly, 11.5% having more than $\$15,000$.

Table 17

Estimated household earnings					
Total					
Age Categories (Years)	n	% $\leq \$5,000$	% More than \$5,000, $\leq \$10,000$	% More than \$10,000, $\leq \$15,000$	% More than \$15,000
18-29	67	44.8	37.3	16.4	1.5
30-44	149	29.5	40.3	18.1	12.1
45-59	126	40.5	31.7	12.7	15.1
60-69	93	53.8	28.0	5.4	12.9
Total	435	40.2	34.7	13.6	11.5

Tobacco Use

Current smoking

Description: Current smokers among all population

Instrument question:

T1: Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?

Table 18 shows that overall, 21.3% (CI 19.1-23.7) of the population were current smokers, with the 30-44 age group having the highest number of current smokers for both males and females i.e. 25.7% (CI 21.9-29.8). The results show that there were almost three times as many male smokers 31.5% (CI 28.6-34.6) when compared to female smokers 11.0% (CI 8.9-13.6).

Table 18

Percentage of current smokers									
Age Categories (Years)	Male			Female			Total		
	n	% Current smoker	95% CI	n	% Current smoker	95% CI	n	% Current smoker	95% CI
18-29	263	33.5	25.8 - 42.2	302	9.5	5.5 - 16.1	565	21.5	16.1 - 28.2
30-44	539	36.0	30.2 - 42.2	688	15.1	12.3 - 18.5	1227	25.7	21.9 - 29.8
45-59	571	26.1	22.7 - 29.8	664	10.3	7.1 - 14.7	1235	18.3	15.8 - 21.0
60-69	464	27.2	22.9 - 32.0	561	5.4	3.6 - 8.2	1025	16.4	13.5 - 19.7
Total	1837	31.5	28.6 - 34.6	2215	11.0	8.9 - 13.6	4052	21.3	19.1 - 23.7

Smoking Status Description: Smoking status among all population

Instrument question:

T1: Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?

T2: Do you currently smoke tobacco products daily?

T8: In the past, did you ever smoke any tobacco products?

As depicted in **Tables 19, 20, and 21**, 17% (CI 14.9-19.2) of the population were currently daily smokers, 13.6% (CI 11.4-16.1) of Non-Smokers were former smokers and 65.1% (CI 61.8-68.2) of Non-Smokers, never smoked. The prevalence of daily smoking among current smokers in males i.e. 25.0% (CI 22.2-28.1) was approximately almost triple the prevalence for daily smoking among current smokers in females i.e. 8.8% (CI 6.8-11.3).

Table 19

Smoking status									
Male									
Current smoker					Non-smokers				
Age Categories (Years)	n	% Daily	95% CI	% Non-Daily	95% CI	% Former smoker	95% CI	% Never smoker	95% CI
18-29	263	24.6	17.7 - 33.1	8.8	5.4 - 14.1	12.7	8.0 - 19.5	53.9	44.9 - 62.6
30-44	539	30.4	25.1 - 36.4	5.6	3.1 - 9.7	14.1	10.3 - 19.1	49.9	41.9 - 57.9
45-59	571	19.9	16.9 - 23.3	6.2	4.2 - 9.1	17.4	13.3 - 22.4	56.4	51.3 - 61.4
60-69	464	23.8	19.9 - 28.3	3.4	1.8 - 6.3	27.6	22.6 - 33.2	45.2	38.3 - 52.3
Total	1837	25.0	22.2 - 28.1	6.5	5.0 - 8.5	16.1	13.6 - 19.0	52.4	48.3 - 56.5

Table 20

Smoking status									
Female									
Current smoker					Non-smokers				
Age Categories (Years)	n	% Daily	95% CI	% Non-Daily	95% CI	% Former smoker	95% CI	% Never smoker	95% CI
18-29	302	7.2	3.6 - 13.9	2.3	1.1 - 5.1	12.7	7.5 - 20.7	77.8	68.6 - 84.9
30-44	688	11.8	9.4 - 14.6	3.3	2.1 - 5.2	11.8	8.3 - 16.6	73.1	68.0 - 77.6
45-59	664	9.0	5.8 - 13.7	1.3	0.6 - 2.8	7.7	5.4 - 10.8	82.0	77.3 - 86.0
60-69	561	4.3	2.8 - 6.7	1.1	0.3 - 4.4	13.3	9.2 - 18.8	81.3	75.7 - 85.8
Total	2215	8.8	6.8 - 11.3	2.2	1.5 - 3.2	11.1	8.4 - 14.5	77.9	73.9 - 81.5

Table 21

Smoking status									
Total									
Current smoker					Non-smokers				
Age Categories (Years)	n	% Daily	95% CI	% Non-Daily	95% CI	% Former smoker	95% CI	% Never smoker	95% CI
18-29	565	15.9	11.2 - 22.1	5.6	3.7 - 8.5	12.7	8.9 - 17.7	65.8	58.5 - 72.4
30-44	1227	21.2	17.9 - 24.9	4.5	2.9 - 6.7	13.0	9.9 - 16.9	61.3	55.6 - 66.7
45-59	1235	14.5	12.1 - 17.3	3.8	2.6 - 5.5	12.6	9.9 - 15.8	69.2	65.6 - 72.5
60-69	1025	14.1	11.5 - 17.2	2.3	1.3 - 4.0	20.4	17.0 - 24.4	63.2	58.1 - 68.0
Total	4052	17.0	14.9 - 19.2	4.4	3.5 - 5.5	13.6	11.4 - 16.1	65.1	61.8 - 68.2

**Daily
smoking**

Description: Percentage of current daily smokers among smokers

Instrument question:

T1: Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?

T2: Do you currently smoke tobacco products daily?

Table 22 shows that the prevalence of daily smokers among smokers is 79.5% (CI 74.8-83.5). There is no statistically significant difference between male and female smokers in this category with daily smoking rates being reported as 79.4% (CI 73.7-84.1) and 79.8% (71.1-86.3) respectively. The highest proportion of current daily smokers among smokers was reported in the 60-69 age group at 86.2% (CI 77.0-92.1).

Table 22

Current daily smokers among smokers									
Age Categories (Years)	Male			Female			Total		
	n	% Daily smokers	95% CI	n	% Daily smokers	95% CI	n	% Daily smokers	95% CI
18-29	88	73.6	60.1 - 83.7	31	-	-	119	74.0	62.8 - 82.7
30-44	196	84.6	74.6 - 91.1	123	77.9	68.6 - 85.0	319	82.6	75.2 - 88.2
45-59	177	76.1	67.0 - 83.3	64	87.4	72.3 - 94.8	241	79.3	70.7 - 85.8
60-69	146	87.5	78.3 - 93.2	27	-	-	173	86.2	77.0 - 92.1
Total	607	79.4	73.7 - 84.1	245	79.8	71.1 - 86.3	852	79.5	74.8 - 83.5

Initiation and duration 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 question:

T1: Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?

T2: Do you currently smoke tobacco products daily?

T3: How old were you when you first started smoking?

T4: Do you remember how long ago it was?

Tables 23 and 24 show the mean age in which persons began smoking and the mean duration of smoking. According to the data, the mean age of smoking initiation was 17.6 years (CI 17.2-18.1), with males initiating younger with a mean age of 17.1 years (CI 16.6-17.6) as compared to 19.2 years (CI 17.7-20.7) for females. The mean duration of smoking was 21.8 years (CI 19.9-23.7). Both males and females had similar mean smoking duration of 22.2 years (CI 19.8-24.6) and 20.6 years (CI 18.1-23.1) respectively.

Table 23

Mean age started smoking									
Male				Female			Total		
Age Categories (Years)	n	Mean age	95% CI	n	Mean age	95% CI	n	Mean age	95% CI
18-29	64	16.7	15.9 - 17.5	20	-	-	84	16.9	16.1 - 17.7
30-44	167	17.2	16.4 - 18.0	93	19.0	17.4 - 20.7	260	17.7	17.0 - 18.4
45-59	141	17.9	16.9 - 19.0	52	19.9	16.3 - 23.5	193	18.6	17.4 - 19.7
60-69	129	16.2	15.3 - 17.2	24	-	-	153	17.4	16.2 - 18.5
Total	501	17.1	16.6 - 17.6	189	19.2	17.7 - 20.7	690	17.6	17.2 - 18.1

Table 24

Mean duration of smoking									
Male				Female			Total		
Age Categories (Years)	n	Mean duration	95% CI	n	Mean duration	95% CI	n	Mean duration	95% CI
18-29	64	6.8	5.6 - 8.0	20	-	-	84	6.9	5.8 - 7.9
30-44	167	20.7	19.5 - 22.0	93	18.8	16.6 - 21.1	260	20.2	19.1 - 21.4
45-59	141	33.3	31.9 - 34.7	52	31.1	27.4 - 34.8	193	32.6	31.2 - 34.0
60-69	129	47.9	46.5 - 49.2	24	-	-	153	46.6	45.1 - 48.1
Total	501	22.2	19.8 - 24.6	189	20.6	18.1 - 23.1	690	21.8	19.9 - 23.7

Manufactured cigarette smokers

Description: Percentage of smokers who use manufactured cigarettes among daily smokers and among current smokers

Instrument question:

T1: Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?

T2: Do you currently smoke tobacco products daily?

T5: On average, how many of the following products do you smoke each day?

Tables 25 and 26 show the percent of manufactured cigarette smokers among daily and current smokers. Among daily smokers, 98.6% (CI 97.4-99.3) smoked manufactured cigarettes, with 100.0% (CI 100.0-100.0) males and females in the 45-59 age group smoking manufactured cigarettes. Among current smokers, 92.8% (89.3-95.2) smoke manufactured cigarettes 93.2% (CI 87.9-96.3) males and 91.6% (CI 85.4-95.3) females. The highest proportion of smokers of manufactured cigarettes among current smokers was reported to be in the 60-69 age group.

Table 25

Manufactured cigarette smokers among daily smokers									
Male				Female			Total		
Age Categories (Years)	n	% Manufactured cigarette smoker	95% CI	n	% Manufactured cigarette smoker	95% CI	n	% Manufactured cigarette smoker	95% CI
18-29	64	97.7	92.4 - 99.3	20	-	-	84	97.1	92.7 - 98.9
30-44	167	99.7	98.0 - 100.0	95	96.3	90.6 - 98.6	262	98.8	97.1 - 99.5
45-59	141	100.0	100.0 - 100.0	52	100.0	100.0 - 100.0	193	100.0	100.0 - 100.0
60-69	130	98.9	95.2 - 99.8	23	-	-	153	99.1	95.8 - 99.8
Total	502	99.1	97.7 - 99.7	190	97.3	93.6 - 98.9	692	98.6	97.4 - 99.3

Table 26

Manufactured cigarette smokers among current smokers									
Male				Female			Total		
Age Categories (Years)	n	% Manufactured cigarette smoker	95% CI	n	% Manufactured cigarette smoker	95% CI	n	% Manufactured cigarette smoker	95% CI
18-29	88	92.5	78.7 - 97.6	31	-	-	119	91.7	82.3 - 96.3
30-44	196	93.4	82.2 - 97.8	123	90.7	83.6 - 95.0	319	92.7	85.4 - 96.4
45-59	176	92.0	81.5 - 96.8	64	94.8	75.9 - 99.1	240	92.8	85.1 - 96.7
60-69	146	97.7	91.5 - 99.4	26	-	-	172	97.3	92.2 - 99.1
Total	606	93.2	87.9 - 96.3	244	91.6	85.4 - 95.3	850	92.8	89.3 - 95.2

Cigarette smokers Description: Cigarette smokers (manufactured or hand rolled)

Instrument question:

T1: Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?

T5: On average, how many of the following products do you smoke each day?

T5: On average, how many of the following products do you smoke each week?

Tables 27 and 28 show that 20.3 % (CI 18.3-22.4) of all persons in the population are current cigarette smokers. Males are approximately three times the amount of females who currently smoke cigarettes at 29.8 % (CI 27.0-32.7) and 10.6% (CI 8.5-13.3) respectively. Almost similar proportions of males [79.0% (CI 73.3-83.8)] and females [78.4% (69.6-85.2)] among the group of smokers currently smoke cigarettes daily.

Table 27

Current cigarette smokers among all population									
Male				Female			Total		
Age Categories (Years)	n	% Cigarette smoker	95% CI	n	% Cigarette smoker	95% CI	n	% Cigarette smoker	95% CI
18-29	263	31.7	24.5 - 40.0	302	9.4	5.3 - 16.0	565	20.6	15.8 - 26.4
30-44	539	34.0	28.4 - 40.1	688	14.6	11.9 - 17.9	1227	24.4	20.8 - 28.4
45-59	571	24.1	20.9 - 27.6	664	9.8	6.5 - 14.4	1235	17.0	14.7 - 19.5
60-69	464	26.8	22.5 - 31.5	561	5.2	3.3 - 8.0	1025	16.0	13.2 - 19.3
Total	1837	29.8	27.0 - 32.7	2215	10.6	8.5 - 13.3	4052	20.3	18.3 - 22.4

Table 28

Current daily cigarette smokers among smokers									
Male				Female			Total		
Age Categories (Years)	n	% Cigarette smoker	95% CI	n	% Cigarette smoker	95% CI	n	% Cigarette smoker	95% CI
18-29	88	72.9	59.3 - 83.2	31	-	-	119	73.1	61.7 - 82.1
30-44	196	84.2	74.1 - 90.8	123	76.6	67.1 - 84.0	319	82.0	74.4 - 87.7
45-59	177	76.1	67.0 - 83.3	64	87.4	72.3 - 94.8	241	79.3	70.7 - 85.8
60-69	146	87.3	78.1 - 93.0	27	-	-	173	84.8	75.4 - 91.0
Total	607	79.0	73.3 - 83.8	245	78.4	69.6 - 85.2	852	78.9	74.0 - 83.0

Amount of tobacco used among daily smokers by type

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

Instrument question:

T1: Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?

T2: Do you currently smoke tobacco products daily?

T5: On average, how many of the following products do you smoke each day?

Tables 29, 30, 31, 32, 33 and 34 show the mean amount of tobacco used by daily smokers by type. The most used type of tobacco was found to be manufactured cigarettes with the mean amount smoked daily being 10.1(CI 9.2-10.9). Both males and females smoked a similar number of manufactured cigarettes daily, 10.2(CI 9.2-11.2) and 9.8 (CI 8.4-11.1) respectively. Following manufactured cigarettes, the second most common type of tobacco used among the total population was hand-rolled cigarettes with the mean number smoked by daily users being 0.9(CI 0.4-1.3). This trend was also reflected in the male population with a mean of 1.0(CI 0.4-1.6) hand rolled cigarettes. However, the second most common type of tobacco used by females was reported to be other tobacco products with a mean of 0.6 (CI 0.0-1.5).

Table 29

Mean amount of tobacco used by daily smokers by type									
Male									
Age Categories (Years)	n	Mean # of manufactured cig.	95% CI	n	Mean # of hand-rolled cig.	95% CI	n	Mean # of pipes of tobacco	95% CI
18-29	64	6.1	4.6 - 7.7	64	0.8	0.2 - 1.5	64	0.0	0.0 - 0.0
30-44	167	11.4	9.7 - 13.1	165	1.5	0.1 - 2.9	166	0.0	0.0 - 0.0
45-59	141	12.7	11.4 - 13.9	142	0.6	0.2 - 0.9	141	0.0	0.0 - 0.0
60-69	130	12.4	10.6 - 14.1	129	0.8	0.1 - 1.5	129	0.0	0.0 - 0.0
Total	502	10.2	9.2 - 11.2	500	1.0	0.4 - 1.6	500	0.0	0.0 - 0.0

Table 30

Mean amount of tobacco used by daily smokers by type									
Male									
Age Categories (Years)	n	Mean # of cigars, cheroots, cigarillos	95% CI	n	Mean # of shisha sessions	95% CI	n	Mean # of other type of tobacco	95% CI
18-29	64	0.0	0.0 - 0.0	64	0.0	0.0 - 0.0	64	0.0	0.0 - 0.0
30-44	167	0.3	0.0 - 0.6	166	0.0	0.0 - 0.1	166	0.1	0.0 - 0.3
45-59	141	0.0	0.0 - 0.1	141	0.0	0.0 - 0.0	141	0.2	0.0 - 0.3
60-69	129	0.3	0.0 - 0.8	129	0.0	0.0 - 0.0	129	0.1	0.0 - 0.3
Total	501	0.1	0.0 - 0.3	500	0.0	0.0 - 0.0	500	0.1	0.0 - 0.2

Table 31

Mean amount of tobacco used by daily smokers by type									
Female									
Age Categories (Years)	n	Mean # of manufactured cig.	95% CI	n	Mean # of hand-rolled cig.	95% CI	n	Mean # of pipes of tobacco	95% CI
18-29	20	-	-	19	-	-	20	-	-
30-44	95	9.1	7.6 - 10.6	95	0.6	0.3 - 0.9	95	0.0	0.0 - 0.0
45-59	52	10.5	8.4 - 12.6	52	0.2	0.0 - 0.4	52	0.0	0.0 - 0.0
60-69	23	-	-	24	-	-	24	-	-
Total	190	9.8	8.4 - 11.1	190	0.4	0.2 - 0.7	191	0.0	0.0 - 0.0

Table 32

Mean amount of tobacco used by daily smokers by type									
Female									
Age Categories (Years)	n	Mean # of cigars, cheroots, cigarillos	95% CI	n	Mean # of shisha sessions	95% CI	n	Mean # of other type of tobacco	95% CI
18-29	20	-	-	20	-	-	20	-	-
30-44	95	0.1	0.0 - 0.2	95	0.0	0.0 - 0.0	95	0.4	0.0 - 0.9
45-59	52	0.0	0.0 - 0.0	52	0.9	0.0 - 2.4	52	0.0	0.0 - 0.1
60-69	24	-	-	24	-	-	24	-	-
Total	191	0.0	0.0 - 0.1	191	0.2	0.0 - 0.7	191	0.6	0.0 - 1.5

Table 33

Mean amount of tobacco used by daily smokers by type									
Total									
Age Categories (Years)	n	Mean # of manufactured cig.	95% CI	n	Mean # of hand-rolled cig.	95% CI	n	Mean # of pipes of tobacco	95% CI
18-29	84	7.0	5.4 - 8.5	83	0.8	0.2 - 1.3	84	0.0	0.0 - 0.0
30-44	262	10.8	9.4 - 12.1	260	1.2	0.2 - 2.2	261	0.0	0.0 - 0.0
45-59	193	12.0	10.9 - 13.1	194	0.5	0.2 - 0.7	193	0.0	0.0 - 0.0
60-69	153	12.1	10.5 - 13.7	153	0.8	0.2 - 1.4	153	0.0	0.0 - 0.1
Total	692	10.1	9.2 - 10.9	690	0.9	0.4 - 1.3	691	0.0	0.0 - 0.0

Table 34

Mean amount of tobacco used by daily smokers by type									
Total									
Age Categories (Years)	n	Mean # of cigars, cheroots, cigarillos	95% CI	n	Mean # of shisha sessions	95% CI	n	Mean # of other type of tobacco	95% CI
18-29	84	0.0	0.0 - 0.0	84	0.0	0.0 - 0.0	84	0.4	0.0 - 1.2
30-44	262	0.2	0.0 - 0.4	261	0.0	0.0 - 0.1	261	0.2	0.0 - 0.4
45-59	193	0.0	0.0 - 0.1	193	0.3	0.0 - 0.8	193	0.1	0.0 - 0.2
60-69	153	0.3	0.0 - 0.7	153	0.0	0.0 - 0.0	153	0.2	0.0 - 0.3
Total	692	0.1	0.0 - 0.2	691	0.1	0.0 - 0.2	691	0.2	0.0 - 0.5

Smoked tobacco consumption

Description: Percentage of current smokers who smoke each of the following products

Instrument question:

T1: Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?

T2: Do you currently smoke tobacco products daily?

T5: On average, how many of the following products do you smoke each day?

Tables 35, 36, 37, 38, 39 and 40 show that among the persons within the population who smoke daily, the most preferred type of tobacco was manufactured cigarettes 92.8% (CI 89.3-95.2). This was followed by hand rolled cigarettes 17.8% (CI 13.7-22.9), followed by ‘other’ 3.0% (CI 1.4-6.0). This trend was also observed among male and female current smokers with 93.2% (CI 87.9-96.3) 91.6% (CI 85.4-95.3) preferring manufactured cigarettes, 17.3% (CI 12.6-23.3) 19.5% (CI 13.0-28.3) hand rolled cigarettes and 1.8% (CI 0.9-3.5) 6.2% (CI 1.8-19.0) ‘other’ respectively. A similar proportion of male current smokers 93.2% (CI 87.9-96.3) preferred manufactured cigarettes as compared to females 91.6% (CI 85.4-95.3). A similar proportion of male current smokers 17.3% (CI 12.6-23.3) preferred hand rolled cigarettes as compared to females 19.5% (CI 13.0-28.3). Approximately three times the proportion of female current smokers preferred ‘other’ 6.2% (CI 1.8-19.0) as compared to males 1.8% (CI 0.9-3.5).

Table 35

Percentage of current smokers smoking each of the following products									
Male									
Age Categories (Years)	n	% Manuf. cigs.	95% CI	n	% Hand-rolled cigs.	95% CI	n	% Pipes of tobacco	95% CI
18-29	88	92.5	78.7 - 97.6	88	25.3	14.9 - 39.7	88	0.0	0.0 - 0.0
30-44	196	93.4	82.2 - 97.8	194	15.5	9.4 - 24.5	195	1.3	0.4 - 3.7
45-59	176	92.0	81.5 - 96.8	177	10.1	6.1 - 16.3	176	0.9	0.2 - 4.7
60-69	146	97.7	91.5 - 99.4	145	14.3	8.9 - 22.2	145	0.5	0.1 - 2.6
Total	606	93.2	87.9 - 96.3	604	17.3	12.6 - 23.3	604	0.7	0.3 - 1.8

Table 36

Percentage of current smokers smoking each of the following products									
Male									
Age Categories (Years)	n	% Cigars, cheroots, cigarillos	95% CI	n	% Shisha	95% CI	n	% Other	95% CI
18-29	88	0.5	0.1 - 3.6	88	0.0	0.0 - 0.0	88	1.4	0.3 - 5.7
30-44	196	1.7	0.5 - 5.1	195	4.0	0.7 - 19.6	195	1.4	0.4 - 5.1
45-59	176	0.4	0.1 - 3.0	176	0.5	0.1 - 3.8	176	2.5	1.1 - 5.6
60-69	145	1.5	0.4 - 6.1	145	0.0	0.0 - 0.0	145	3.4	1.5 - 7.7
Total	605	1.0	0.4 - 2.3	604	1.5	0.3 - 7.3	604	1.8	0.9 - 3.5

Table 37

Percentage of current smokers smoking each of the following products									
Female									
Age Categories (Years)	n	% Manuf. cigs.	95% CI	n	% Hand-rolled cigs.	95% CI	n	% Pipes of tobacco	95% CI
18-29	31	-	-	30	-	-	31	-	-
30-44	123	90.7	83.6 - 95.0	123	20.2	13.5 - 29.2	123	1.2	0.3 - 4.9
45-59	64	94.8	75.9 - 99.1	64	3.5	0.8 - 13.9	64	0.0	0.0 - 0.0
60-69	26	-	-	27	-	-	27	-	-
Total	244	91.6	85.4 - 95.3	244	19.5	13.0 - 28.3	245	1.7	0.7 - 4.5

Table 38

Percentage of current smokers smoking each of the following products									
Female									
Age Categories (Years)	n	% Cigars, cheroots, cigarillos	95% CI	n	% Shisha	95% CI	n	% Other	95% CI
18-29	31	-	-	31	-	-	31	-	-
30-44	123	1.0	0.2 - 4.1	123	0.4	0.1 - 2.9	123	2.6	1.0 - 7.0
45-59	64	0.0	0.0 - 0.0	64	9.3	1.3 - 44.0	64	1.2	0.2 - 8.1
60-69	27	-	-	27	-	-	27	-	-
Total	245	6.0	1.1 - 26.8	245	2.6	0.4 - 15.0	245	6.2	1.8 - 19.0

Table 39

Percentage of current smokers smoking each of the following products									
Total									
Age Categories (Years)	n	% Manuf. cigs.	95% CI	n	% Hand-rolled cigs.	95% CI	n	% Pipes of tobacco	95% CI
18-29	119	91.7	82.3 - 96.3	118	26.9	17.8 - 38.5	119	0.8	0.2 - 3.8
30-44	319	92.7	85.4 - 96.4	317	16.9	11.5 - 24.0	318	1.3	0.5 - 3.0
45-59	240	92.8	85.1 - 96.7	241	8.3	5.3 - 12.7	240	0.7	0.1 - 3.4
60-69	172	97.3	92.2 - 99.1	172	17.5	11.3 - 26.1	172	1.4	0.3 - 6.4
Total	850	92.8	89.3 - 95.2	848	17.8	13.7 - 22.9	849	1.0	0.5 - 2.0

Table 40

Percentage of current smokers smoking each of the following products									
Total									
Age Categories (Years)	n	% Cigars, cheroots, cigarillos	95% CI	n	% Shisha	95% CI	n	% Other	95% CI
18-29	119	4.9	0.9 - 22.2	119	0.0	0.0 - 0.0	119	4.7	1.3 - 15.9
30-44	319	1.5	0.6 - 3.8	318	2.9	0.6 - 14.1	318	1.8	0.8 - 4.1
45-59	240	0.3	0.0 - 2.2	240	3.0	0.5 - 14.8	240	2.1	0.9 - 4.8
60-69	172	1.9	0.7 - 5.5	172	0.0	0.0 - 0.0	172	4.3	1.8 - 9.9
Total	850	2.3	0.7 - 7.1	849	1.8	0.5 - 6.0	849	3.0	1.4 - 6.0

Frequency of daily cigarette smoking

Description: Percentage of daily cigarette smokers smoking given quantities of manufactured or hand-rolled cigarettes per day

Instrument question:

T1: Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?

T2: Do you currently smoke tobacco products daily?

T5 a - b: On average, how many of the following products do you smoke each day?

Tables 41, 42, 43, 44, 45 and 46 show that 27.9 % (CI 22.7-33.7) of daily smokers smoke 10-14 cigarettes of manufactured or hand rolled cigarettes per day. Approximately 10% more females i.e. 36.3% (CI 21.3-54.5) as compared to males 25.1% (CI 19.6-31.7) smoked 10-14 cigarettes of manufactured or hand rolled cigarettes per day.

Table 41

Percentage of daily smokers smoking given quantities of manufactured or hand-rolled cigarettes per day							
Male							
Age Categories (Years)	n	% <5 Cigs.	95% CI	% 5-9 Cigs	95% CI	% 10-14 Cigs	95% CI
18-29	63	43.1	26.1 - 62.0	28.0	15.6 - 45.1	18.2	7.9 - 36.5
30-44	163	17.5	9.2 - 30.7	21.5	12.6 - 34.1	26.6	18.7 - 36.4
45-59	141	8.3	4.5 - 14.9	16.1	8.5 - 28.5	32.8	23.5 - 43.7
60-69	128	14.5	8.3 - 24.0	21.4	12.9 - 33.4	23.2	15.8 - 32.6
Total	495	22.8	15.4 - 32.4	22.2	16.9 - 28.7	25.1	19.6 - 31.7

Table 42

Percentage of daily smokers smoking given quantities of manufactured or hand-rolled cigarettes per day					
Male					
Age Categories (Years)	n	% 15-24 Cigs	95% CI	% ≥ 25 Cigs	95% CI
18-29	63	10.1	4.1 - 22.8	0.6	0.1 - 4.2
30-44	163	25.6	18.5 - 34.4	8.8	4.2 - 17.5
45-59	141	36.4	28.4 - 45.2	6.3	2.8 - 13.5
60-69	128	31.9	23.2 - 42.2	9.0	4.1 - 18.6
Total	495	24.1	20.1 - 28.5	5.8	3.4 - 9.8

Table 43

Percentage of daily smokers smoking given quantities of manufactured or hand-rolled cigarettes per day							
Female							
Age Categories (Years)	n	% <5 Cigs.	95% CI	% 5-9 Cigs	95% CI	% 10-14 Cigs	95% CI
18-29	18	-	-	-	-	-	-
30-44	93	25.9	15.2 - 40.7	23.7	14.0 - 37.2	29.7	18.3 - 44.4
45-59	52	15.6	7.8 - 28.7	19.2	9.1 - 36.2	50.3	31.2 - 69.3
60-69	23	-	-	-	-	-	-
Total	186	22.4	13.9 - 34.0	21.8	14.0 - 32.2	36.3	21.3 - 54.5

Table 44

Percentage of daily smokers smoking given quantities of manufactured or hand-rolled cigarettes per day					
Female					
Age Categories (Years)	n	% 15-24 Cigs	95% CI	% ≥ 25 Cigs	95% CI
18-29	18	-	-	-	-
30-44	93	16.8	11.4 - 24.2	3.8	1.2 - 10.9
45-59	52	10.7	2.7 - 34.4	4.1	1.5 - 11.2
60-69	23	-	-	-	-
Total	186	14.1	8.5 - 22.5	5.5	2.2 - 13.2

Table 45

Percentage of daily smokers smoking given quantities of manufactured or hand-rolled cigarettes per day							
Total							
Age Categories (Years)	n	% <5 Cigs.	95% CI	% 5-9 Cigs	95% CI	% 10-14 Cigs	95% CI
18-29	81	39.8	27.3 - 53.9	26.3	15.0 - 42.0	21.3	10.9 - 37.6
30-44	256	19.8	12.3 - 30.4	22.1	14.8 - 31.6	27.5	21.6 - 34.4
45-59	193	10.6	7.0 - 15.8	17.1	10.7 - 26.2	38.2	28.4 - 49.2
60-69	151	15.2	8.9 - 24.7	22.9	14.4 - 34.5	21.9	15.4 - 30.2
Total	681	22.7	17.2 - 29.3	22.1	17.1 - 28.1	27.9	22.7 - 33.7

Table 46

Percentage of daily smokers smoking given quantities of manufactured or hand-rolled cigarettes per day					
Total					
Age Categories (Years)	n	% 15-24 Cigs	95% CI	% ≥ 25 Cigs	95% CI
18-29	81	9.8	4.2 - 21.4	2.7	0.5 - 13.6
30-44	256	23.2	17.7 - 29.8	7.4	3.8 - 13.9
45-59	193	28.5	21.1 - 37.1	5.6	2.9 - 10.8
60-69	151	32.1	23.1 - 42.7	7.9	3.6 - 16.4
Total	681	21.6	18.0 - 25.7	5.7	3.6 - 9.0

Former daily smokers and former smokers

Description: Percentage of former daily smokers among all population and among ever daily smokers, and the mean duration, in years, since former smokers quit smoking

Instrument question:

T1: Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?

T2: Do you currently smoke tobacco products daily?

T8: In the past did you ever smoke any tobacco products?

T9: In the past, did you ever smoke daily?

T10: How old were you when you stopped smoking?

Tables 47, 48 and 49 show that 6.6% (CI 5.5-7.8) of the population were former daily smokers (i.e. those who do not smoke currently). Additionally, among the entire population, the proportion of former daily male was 9.9% (CI 8.0-12.2); almost triple the proportion observed for former daily female smokers who were 3.2% (CI 2.4-4.3). For both males and females, the highest percentage of former daily smokers in the entire population were in the 60-69 age group at 6.6% (CI 5.5-7.8). Among former smokers who ever smoked daily, 28.0% (CI 23.3-33.1) were former daily smokers with males accounting for 28.3% (CI 23.3-34.0) and females 26.8% (CI 19.5-35.7). The male and female 60-69 age category also contained the largest proportion of former daily smokers among those who ever smoked daily i.e. 28% (CI 23.3-33.1).

The mean number of years since cessation was 15.0 (CI 13.0-17.0).

Table 47

Former daily smokers (who don't smoke currently) among all population									
		Male		Female			Total		
Age Categories (Years)	n	% Former daily smokers	95% CI	n	% Former daily smokers	95% CI	n	% Former daily smokers	95% CI
18-29	263	6.4	3.8 - 10.4	302	2.2	1.0 - 4.8	565	4.3	2.9 - 6.4
30-44	539	9.6	6.2 - 14.5	688	3.7	2.3 - 5.8	1227	6.7	4.6 - 9.7
45-59	571	9.6	7.2 - 12.6	664	3.1	1.6 - 5.9	1235	6.3	4.7 - 8.5
60-69	464	21.2	16.1 - 27.4	561	5.0	3.1 - 7.8	1025	13.1	10.1 - 16.8
Total	1837	9.9	8.0 - 12.2	2215	3.2	2.4 - 4.3	4052	6.6	5.5 - 7.8

Table 48

Former daily smokers (who don't smoke currently) among ever daily smokers									
Male				Female			Total		
Age Categories (Years)	n	% Former daily smokers	95% CI	n	% Former daily smokers	95% CI	n	% Former daily smokers	95% CI
18-29	87	20.5	12.0 - 32.8	30	-	-	117	21.3	13.5 - 31.9
30-44	216	24.0	16.7 - 33.2	127	23.9	15.9 - 34.4	343	24.0	17.7 - 31.6
45-59	205	32.5	25.3 - 40.7	74	25.4	12.4 - 44.9	279	30.4	23.0 - 39.1
60-69	224	47.1	39.4 - 55.0	54	53.4	37.8 - 68.4	278	48.2	41.7 - 54.8
Total	732	28.3	23.3 - 34.0	285	26.8	19.5 - 35.7	1017	28.0	23.3 - 33.1

Table 49

Mean years since cessation									
Male				Female			Total		
Age Categories (Years)	n	Mean years	95% CI	n	Mean years	95% CI	n	Mean years	95% CI
18-29	33	-	-	37	-	-	70	3.4	2.8 - 4.1
30-44	76	9.6	7.1 - 12.1	81	14.3	12.1 - 16.4	157	11.7	9.7 - 13.7
45-59	103	24.3	21.6 - 27.1	56	21.5	18.4 - 24.6	159	23.4	21.2 - 25.6
60-69	123	25.0	20.3 - 29.8	65	33.1	27.9 - 38.3	188	27.6	23.4 - 31.8
Total	335	15.4	12.8 - 18.0	239	14.3	11.5 - 17.1	574	15.0	13.0 - 17.0

Cessation Description: Percentage of current smokers who have tried to stop smoking during the past 12 months

Instrument question:

T1: Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?

T6: During the past 12 months, have you tried to stop smoking?

Table 50 shows that 46.2% (CI 40.7-51.8) were current smokers who have tried to stop smoking. Slightly more females [51.1% (CI 43.3-58.9)] as compared to males [44.5% (CI 38.1-51.0)], a difference of 6.6% have tried to stop smoking.

Table 50

Current smokers who have tried to stop smoking									
Male				Female			Total		
Age Categories (Years)	n	% Tried to stop smoking	95% CI	n	% Tried to stop smoking	95% CI	n	% Tried to stop smoking	95% CI
18-29	88	64.0	49.8 - 76.1	31	-	-	119	62.4	49.9 - 73.4
30-44	196	36.7	28.7 - 45.6	123	47.9	37.9 - 58.1	319	40.0	33.3 - 47.2
45-59	177	35.7	26.5 - 46.2	64	46.2	27.2 - 66.4	241	38.7	30.0 - 48.2
60-69	146	28.9	19.3 - 40.9	27	-	-	173	36.0	27.3 - 45.6
Total	607	44.5	38.1 - 51.0	245	51.1	43.3 - 58.9	852	46.2	40.7 - 51.8

Advice to stop smoking Description: Percentage of current smokers who have been advised by a doctor or other health worker to stop smoking, among those smokers who have had a visit to a doctor or other health worker in the past 12 months

Instrument question:

T1: Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?

T7: During any visit to a doctor or other health worker in the past 12 months, were you advised to quit smoking tobacco?

Table 51 shows that 32.3% (CI 27.4-37.6) were current smokers who had been advised by a doctor to stop smoking. Of these, 44.1% (CI 34.7-53.9) were females and 27.9% (CI 22.5-34.1) were males.

Table 51

Current smokers who have been advised by doctor to stop smoking									
Male				Female			Total		
Age Categories (Years)	n	% Advised to stop smoking	95% CI	n	% Advised to stop smoking	95% CI	n	% Advised to stop smoking	95% CI
18-29	62	16.3	8.1 - 30.1	26	-	-	88	22.1	13.6 - 33.7
30-44	146	30.2	21.6 - 40.6	104	42.7	30.5 - 55.8	250	34.1	26.3 - 42.8
45-59	140	35.4	26.6 - 45.4	55	45.2	27.3 - 64.4	195	38.3	30.0 - 47.3
60-69	117	39.1	27.6 - 52.1	25	-	-	142	43.1	31.8 - 55.1
Total	465	27.9	22.5 - 34.1	210	44.1	34.7 - 53.9	675	32.3	27.4 - 37.6

Current users of smokeless tobacco Description: Percentage of current users of smokeless tobacco among all population

Instrument question:
T12: Do you currently use any smokeless tobacco such as [snuff, chewing tobacco, betel]?

Table 52 shows that 0.3% (CI 0.1-0.7) were current users of smokeless tobacco. Among current users of smokeless tobacco, there was no statistically significant difference between males 0.3% (CI 0.1-1.1) and females 0.2% (CI 0.1-0.9). For both sexes, the 18-29 age group accounted for the largest proportion of users 0.4% (CI 0.1-1.5) of smokeless tobacco. whereas in males, the 30-44 age group accounts for the largest portion (0.6%).

Table 52

Current users of smokeless tobacco									
Male				Female			Total		
Age Categories (Years)	n	% Current users	95% CI	n	% Current users	95% CI	n	% Current users	95% CI
18-29	263	0.0	0.0 - 0.0	302	0.7	0.2 - 2.9	565	0.4	0.1 - 1.5
30-44	539	0.6	0.1 - 4.4	688	0.0	0.0 - 0.0	1227	0.3	0.0 - 2.2
45-59	571	0.4	0.1 - 1.5	664	0.0	0.0 - 0.0	1235	0.2	0.1 - 0.8
60-69	464	0.0	0.0 - 0.2	561	0.0	0.0 - 0.0	1025	0.0	0.0 - 0.1
Total	1837	0.3	0.1 - 1.1	2215	0.2	0.1 - 0.9	4052	0.3	0.1 - 0.7

**Status of
smokeless
tobacco use**

Description: Status of using smokeless tobacco among all population

Instrument question:

T12: Do you currently use any smokeless tobacco such as [snuff, chewing tobacco, betel]?

T13: Do you currently use smokeless tobacco products daily?

T15: In the past, did you ever use smokeless tobacco such as [snuff, chewing tobacco, betel]?

Tables 53, 54 and 55 : Overall, 99.2% (CI 98.2-99.6) of persons never used smokeless tobacco, while 0.1% (CI 0.0-0.6) of current users use smokeless tobacco daily.

Among males, 98.7% (CI 96.5-99.5) never used smokeless tobacco, 1.0% (CI 0.3-3.5) used smokeless tobacco in the past and no longer use it; while 0.2% (CI 0.0-1.2) of current users use smokeless tobacco daily.

Among females, 99.7% (CI 99.1-99.9) never used smokeless tobacco, 0.1% (CI 0.0-0.3) used smokeless tobacco in the past and no longer use it; while there were no females reportedly currently using smokeless tobacco daily.

Table 53

Smokeless tobacco use									
Male									
Current user					Non user				
Age Categories (Years)	n	% Daily	95% CI	% Non-daily	95% CI	% Past User	95% CI	% Never used	95% CI
18-29	263	0.0	0.0 - 0.0	0.0	0.0 - 0.0	0.5	0.1 - 2.5	99.5	97.5 - 99.9
30-44	539	0.6	0.1 - 4.4	0.0	0.0 - 0.0	2.2	0.6 - 8.2	97.2	91.7 - 99.1
45-59	571	0.1	0.0 - 0.9	0.3	0.1 - 1.2	0.5	0.2 - 1.3	99.1	98.0 - 99.6
60-69	464	0.0	0.0 - 0.2	0.0	0.0 - 0.0	0.2	0.1 - 0.9	99.7	99.1 - 99.9
Total	1837	0.2	0.0 - 1.2	0.1	0.0 - 0.3	1.0	0.3 - 3.5	98.7	96.5 - 99.5

Table 54

Smokeless tobacco use									
Female									
Current user					Non user				
Age Categories (Years)	n	% Daily	95% CI	% Non-daily	95% CI	% Past User	95% CI	% Never used	95% CI
18-29	302	0.0	0.0 - 0.0	0.7	0.2 - 2.9	0.1	0.0 - 0.9	99.1	97.1 - 99.7
30-44	688	0.0	0.0 - 0.0	0.0	0.0 - 0.0	0.1	0.0 - 0.6	99.9	99.4 - 100.0
45-59	664	0.0	0.0 - 0.0	0.0	0.0 - 0.0	0.0	0.0 - 0.0	100.0	100.0 - 100.0
60-69	561	0.0	0.0 - 0.0	0.0	0.0 - 0.0	0.0	0.0 - 0.0	100.0	100.0 - 100.0
Total	2215	0.0	0.0 - 0.0	0.2	0.1 - 0.9	0.1	0.0 - 0.3	99.7	99.1 - 99.9

Table 55

Smokeless tobacco use									
Total									
Current user					Non user				
Age Categories (Years)	n	% Daily	95% CI	% Non-daily	95% CI	% Past User	95% CI	% Never used	95% CI
18-29	565	0.0	0.0 - 0.0	0.4	0.1 - 1.5	0.3	0.1 - 1.2	99.3	98.3 - 99.7
30-44	1227	0.3	0.0 - 2.2	0.0	0.0 - 0.0	1.2	0.3 - 4.2	98.5	95.8 - 99.5
45-59	1235	0.1	0.0 - 0.5	0.2	0.0 - 0.6	0.2	0.1 - 0.7	99.5	99.0 - 99.8
60-69	1025	0.0	0.0 - 0.1	0.0	0.0 - 0.0	0.1	0.0 - 0.5	99.9	99.5 - 100.0
Total	4052	0.1	0.0 - 0.6	0.2	0.1 - 0.4	0.5	0.2 - 1.7	99.2	98.2 - 99.6

Former daily users of smokeless tobacco Description: Percentage of former daily users of smokeless tobacco among all population and among ever daily users

Instrument question:

T12: Do you currently use any smokeless tobacco such as [snuff, chewing tobacco, betel]?

T13: Do you currently use smokeless tobacco products daily?

T15: In the past, did you ever use smokeless tobacco such as [snuff, chewing tobacco, betel]?

T16: In the past, did you ever use smokeless tobacco such as [snuff, chewing tobacco, betel] daily?

Table 56 shows that only 0.1% (CI 0.0-0.1) of persons ages 30-44 were former daily smokeless tobacco users (who don't use tobacco currently).

Table 56

Former daily smokeless tobacco users (who don't use tobacco currently) among all population									
Age Categories (Years)	Male			Female			Total		
	n	% Former daily users	95% CI	n	% Former daily users	95% CI	n	% Former daily users	95% CI
18-29	263	0.0	0.0 - 0.0	302	0.0	0.0 - 0.0	565	0.0	0.0 - 0.0
30-44	539	0.2	0.0 - 0.8	688	0.0	0.0 - 0.3	1227	0.1	0.0 - 0.4
45-59	571	0.0	0.0 - 0.0	664	0.0	0.0 - 0.0	1235	0.0	0.0 - 0.0
60-69	464	0.0	0.0 - 0.0	561	0.0	0.0 - 0.0	1025	0.0	0.0 - 0.0
Total	1837	0.1	0.0 - 0.2	2215	0.0	0.0 - 0.1	4052	0.0	0.0 - 0.1

Current tobacco users

Description: Percentage of daily and current (daily plus non-daily) tobacco users, includes smoking and smokeless, among all population

Instrument question:

T1: Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?

T2: Do you currently smoke tobacco products daily?

T12: Do you currently use any smokeless tobacco such as [snuff, chewing tobacco, betel]?

T13: Do you currently use smokeless tobacco products daily?

Tables 57 and 58 show that for both sexes, 17.0% (CI 14.9-19.2) were daily tobacco users. Whereas, 21.4% (CI 19.2-23.8) were current tobacco users for both sexes. Approximately three times the proportion of males i.e. 31.6% (CI 28.6-34.7) were current tobacco users as compared to 11.1% (CI 9.0-13.6) were female. Of the daily users of tobacco, a similar trend was observed for males 25.1% (CI 22.2-28.1) as compared to females 8.8% (CI 6.8-11.3).

Table 57

Current tobacco users									
Male				Female			Total		
Age Categories (Years)	n	% Current users	95% CI	n	% Current users	95% CI	n	% Current users	95% CI
18-29	263	33.5	25.8 - 42.2	302	9.9	5.8 - 16.5	565	21.7	16.3 - 28.4
30-44	539	36.0	30.2 - 42.2	688	15.1	12.3 - 18.5	1227	25.7	21.9 - 29.8
45-59	571	26.3	22.9 - 30.0	664	10.3	7.1 - 14.7	1235	18.3	15.9 - 21.0
60-69	464	27.2	22.9 - 32.0	561	5.4	3.6 - 8.2	1025	16.4	13.5 - 19.7
Total	1837	31.6	28.6 - 34.7	2215	11.1	9.0 - 13.6	4052	21.4	19.2 - 23.8

Table 58

Daily tobacco users									
Male				Female			Total		
Age Categories (Years)	n	% Daily users	95% CI	n	% Daily users	95% CI	n	% Daily users	95% CI
18-29	263	24.6	17.7 - 33.1	302	7.2	3.6 - 13.9	565	15.9	11.2 - 22.1
30-44	539	30.4	25.1 - 36.4	688	11.8	9.4 - 14.6	1227	21.2	17.9 - 24.9
45-59	571	20.0	17.0 - 23.4	664	9.0	5.8 - 13.7	1235	14.5	12.1 - 17.3
60-69	464	23.8	19.9 - 28.3	561	4.3	2.8 - 6.7	1025	14.1	11.5 - 17.2
Total	1837	25.1	22.2 - 28.1	2215	8.8	6.8 - 11.3	4052	17.0	14.9 - 19.2

Tobacco use Status Description: Tobacco use status among all population

T1: Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?

T2: Do you currently smoke tobacco products daily?

T8: In the past, did you ever smoke any tobacco products?

T12: Do you currently use any smokeless tobacco such as [snuff, chewing tobacco, betel]?

T13: Do you currently use smokeless tobacco products daily?

T15: In the past, did you ever use smokeless tobacco such as [snuff, chewing tobacco, betel]?

Tables 59,60 and 61 show that among the total population, 17.0% (CI 14.9-19.2) were daily current tobacco users. Whereas 64.6% (CI 61.5-67.7) never used tobacco. Among males, 25.1% (CI 22.2-28.1) used tobacco daily, while 51.8% (CI 48.0-55.6) of males never used tobacco. Among females, 8.8% (CI 6.8-11.3) used tobacco daily, while 77.7% (CI 73.7-81.3) of females never used tobacco.

Table 59

Tobacco use status									
Male									
Age Categories (Years)	n	Current user				Non-user			
		% Daily	95% CI	% Non-Daily	95% CI	% Former user	95% CI	% Never user	95% CI
18-29	263	24.6	17.7 - 33.1	8.8	5.4 - 14.1	12.7	8.0 - 19.5	53.9	44.9 - 62.6
30-44	539	30.4	25.1 - 36.4	5.6	3.1 - 9.7	16.0	12.6 - 20.1	48.0	42.0 - 54.1
45-59	571	20.0	17.0 - 23.4	6.6	4.5 - 9.5	17.4	13.3 - 22.4	56.4	51.3 - 61.4
60-69	464	23.8	19.9 - 28.3	3.4	1.8 - 6.3	27.6	22.5 - 33.2	45.2	38.3 - 52.3
Total	1837	25.1	22.2 - 28.1	6.6	5.1 - 8.6	16.6	14.2 - 19.4	51.8	48.0 - 55.6

Table 60

Tobacco use status									
Female									
Age Categories (Years)	n	Current user				Non-user			
		% Daily	95% CI	% Non-Daily	95% CI	% Former user	95% CI	% Never user	95% CI
18-29	302	7.2	3.6 - 13.9	2.7	1.3 - 5.6	12.7	7.5 - 20.7	77.4	68.2 - 84.5
30-44	688	11.8	9.4 - 14.6	3.3	2.1 - 5.2	12.0	8.4 - 16.7	72.9	67.8 - 77.5
45-59	664	9.0	5.8 - 13.7	1.3	0.6 - 2.8	7.7	5.4 - 10.8	82.0	77.3 - 86.0
60-69	561	4.3	2.8 - 6.7	1.1	0.3 - 4.4	13.3	9.2 - 18.8	81.3	75.7 - 85.8
Total	2215	8.8	6.8 - 11.3	2.3	1.7 - 3.3	11.1	8.4 - 14.6	77.7	73.7 - 81.3

Table 61

Tobacco use status									
Total									
Age Categories (Years)	n	Current user				Non-user			
		% Daily	95% CI	% Non-Daily	95% CI	% Former user	95% CI	% Never user	95% CI
18-29	565	15.9	11.2 - 22.1	5.8	3.8 - 8.7	12.7	8.9 - 17.7	65.6	58.3 - 72.2
30-44	1227	21.2	17.9 - 24.9	4.5	2.9 - 6.7	14.0	11.4 - 17.1	60.3	55.7 - 64.8
45-59	1235	14.5	12.1 - 17.3	3.9	2.8 - 5.6	12.6	9.9 - 15.8	69.1	65.5 - 72.5
60-69	1025	14.1	11.5 - 17.2	2.3	1.3 - 4.0	20.4	17.0 - 24.4	63.2	58.1 - 68.0
Total	4052	17.0	14.9 - 19.2	4.5	3.6 - 5.6	13.9	11.8 - 16.4	64.7	61.5 - 67.7

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

Description: Percentage of population exposed second-hand smoke in the home in the past 30 days

Instrument question:

T17: In the past 30 days, did someone smoke in your home?

Table 62 shows that 24.7% (CI 22.2-27.3) of persons were exposed to second hand smoke. Of these, 26.3% (CI 23.1-29.8) were females and 23.1% (CI 19.4-27.2) were males. For both sexes, the highest proportion at 31.0% (25.0-37.7) were in the 18–29-year age group and were reportedly exposed to second hand smoke at home in the past 30 days.

Table 62

Exposed to second-hand smoke in home during the past 30 days									
Male				Female			Total		
Age Categories (Years)	n	% Exposed	95% CI	n	% Exposed	95% CI	n	% Exposed	95% CI
18-29	263	32.1	24.2 - 41.1	302	29.9	23.5 - 37.2	565	31.0	25.0 - 37.7
30-44	539	23.2	17.7 - 29.8	688	25.1	20.4 - 30.5	1227	24.2	20.5 - 28.3
45-59	571	15.0	11.7 - 19.2	664	24.9	18.9 - 32.1	1235	19.9	16.4 - 24.0
60-69	464	18.0	14.9 - 21.6	561	23.6	18.0 - 30.3	1025	20.8	17.3 - 24.8
Total	1837	23.1	19.4 - 27.2	2215	26.3	23.1 - 29.8	4052	24.7	22.2 - 27.3

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

Description: Percentage of population exposed second-hand smoke in the workplace in the past 30 days

Instrument question:

T18: During the past 30 days, did someone smoke in closed areas in your workplace (in the building, in a work area or a specific office)?

Table 63 shows that overall, 17.8% (CI 14.2-22.1) were exposed to second hand smoke in the workplace during the last 30 days. More than double the amount of males 25% (CI 20.1-30.7) were exposed to second hand smoke as compared to females 10.7% (CI 7.8-14.5).

Table 63

Exposed to second-hand smoke in the workplace during the past 30 days									
Male				Female			Total		
Age Categories (Years)	n	% Exposed	95% CI	n	% Exposed	95% CI	n	% Exposed	95% CI
18-29	230	30.6	20.7 - 42.5	276	11.2	6.6 - 18.4	506	20.7	14.1 - 29.2
30-44	497	28.5	22.1 - 35.9	626	10.9	7.4 - 15.8	1123	19.9	15.5 - 25.2
45-59	499	18.3	13.0 - 25.2	592	10.7	7.1 - 15.9	1091	14.5	11.1 - 18.7
60-69	383	15.6	8.8 - 26.2	471	8.3	4.4 - 15.0	854	11.9	7.1 - 19.4
Total	1609	25.0	20.1 - 30.7	1965	10.7	7.8 - 14.5	3574	17.8	14.2 - 22.1

**Current
electronic
cigarette use**

Description: Current electronic cigarette use among all population

Instrument question:

T19. Do you currently use electronic cigarettes or any other vaping device?

Table 64 shows the overall prevalence of electronic cigarette users was 4.9% (CI 3.4-6.9) with males constituting 7.3% (CI 5.0-10.5) and females 2.4% (CI 1.3-4.3). The use of electronic cigarettes was most common in the 18-29 age group for both sexes 11.2% (CI 7.4-16.5). Also, there was an observed decline in usage as the age groups increased.

Table 64

Percentage of current electronic cigarette users									
Male				Female			Total		
Age Categories (Years)	n	% Current e-cigarette users	95% CI	n	% Current e-cigarette users	95% CI	n	% Current e-cigarette users	95% CI
18-29	263	15.7	10.0 - 23.6	302	6.6	3.2 - 13.1	565	11.2	7.4 - 16.5
30-44	539	6.9	3.9 - 12.1	688	0.9	0.5 - 1.6	1227	4.0	2.4 - 6.5
45-59	571	1.1	0.5 - 2.5	664	0.4	0.2 - 1.0	1235	0.8	0.4 - 1.5
60-69	464	0.8	0.2 - 3.0	561	0.0	0.0 - 0.0	1025	0.4	0.1 - 1.5
Total	1837	7.3	5.0 - 10.5	2215	2.4	1.3 - 4.3	4052	4.9	3.4 - 6.9

Alcohol Consumption

Alcohol consumption status

Description: Alcohol consumption status of all population

Instrument question:

A1: Have you ever consumed any alcohol such as ...?

A2: Have you consumed any alcohol in the past 12 months?

A5: Have you consumed any alcohol in the past 30 days?

Tables 65, 66 and 67 show that more than half of the population 51.5% (CI 48.9-54.2) were current drinkers (past 30 days). Males had higher rates of alcohol consumption as current drinkers than females with 59.6% (CI 56.3-62.8) and 43.4% (CI 39.1-47.7) respectively. The age group 30-44 years had the highest percentage of current drinkers for males 67.3% (60.6-73.3) and females 49.8% (CI 44.8-54.8). For both sexes, 15.4% (CI 13.2-18.0) were lifetime abstainers and 14.8% (13.1-16.5) abstained from alcohol for the past 12 months.

Table 65

Alcohol consumption status									
Male									
Age Categories (Years)	n	% Current drinker (past 30 days)	95% CI	% Drank in past 12 months, not current	95% CI	% Past 12 months abstainer	95% CI	% Lifetime abstainer	95% CI
18-29	263	62.2	54.0 - 69.8	16.0	9.5 - 25.8	10.7	6.5 - 17.0	11.1	7.1 - 16.9
30-44	539	67.3	60.6 - 73.3	12.3	8.7 - 17.2	9.1	5.4 - 14.9	11.3	7.0 - 17.7
45-59	571	54.1	48.3 - 59.9	17.7	13.4 - 23.2	16.3	11.4 - 22.7	11.9	8.3 - 16.7
60-69	464	44.6	38.1 - 51.4	18.3	13.7 - 24.0	25.1	20.0 - 31.1	11.9	9.2 - 15.4
Total	1837	59.6	56.3 - 62.8	15.6	13.3 - 18.3	13.3	11.0 - 16.1	11.4	9.2 - 14.2

Table 66

Alcohol consumption status									
Female									
Age Categories (Years)	n	% Current drinker (past 30 days)	95% CI	% Drank in past 12 months, not current	95% CI	% Past 12 months abstainer	95% CI	% Lifetime abstainer	95% CI
18-29	302	48.3	38.2 - 58.4	22.4	16.3 - 29.9	13.6	9.3 - 19.5	15.8	8.8 - 26.7
30-44	688	49.8	44.8 - 54.8	23.2	19.2 - 27.7	10.3	7.9 - 13.4	16.7	12.9 - 21.3
45-59	664	37.5	32.1 - 43.2	17.9	14.2 - 22.4	22.2	16.4 - 29.3	22.4	17.5 - 28.3
60-69	561	26.8	21.3 - 33.1	18.8	14.0 - 24.7	24.4	19.7 - 29.8	30.0	23.9 - 37.0
Total	2215	43.4	39.1 - 47.7	21.0	18.2 - 24.1	16.2	13.8 - 18.9	19.5	15.8 - 23.7

Table 67

Alcohol consumption status									
Total									
Age Categories (Years)	n	% Current drinker (past 30 days)	95% CI	% Drank in past 12 months, not current	95% CI	% Past 12 months abstainer	95% CI	% Lifetime abstainer	95% CI
18-29	565	55.3	48.2 - 62.1	19.2	14.3 - 25.3	12.1	8.7 - 16.7	13.4	9.4 - 18.8
30-44	1227	58.6	54.3 - 62.9	17.7	15.1 - 20.7	9.7	7.5 - 12.5	13.9	10.9 - 17.6
45-59	1235	45.9	41.5 - 50.3	17.8	14.9 - 21.2	19.2	15.4 - 23.7	17.1	13.9 - 20.9
60-69	1025	35.7	32.0 - 39.6	18.5	15.2 - 22.4	24.8	20.8 - 29.1	21.0	17.0 - 25.6
Total	4052	51.5	48.9 - 54.2	18.3	16.5 - 20.2	14.8	13.1 - 16.5	15.4	13.2 - 18.0

Stopping drinking due to health reasons

Description: Percentage of former drinkers (those who did not drink during the past 12 months) who stopped drinking due to health reasons, such as a negative impact of drinking on your health or as per advice of a doctor or other health worker among those who drank in their lifetime, but not in the last 12 months

Instrument question:

A2: Have you consumed any alcohol in the past 12 months?

A3: Did you stop drinking due to health reasons, such as a negative impact of drinking on your health or as per advice of your doctor or other health worker?

Table 68 shows that 13.1 % (CI 9.9-17.1) of persons stopped drinking due to health reasons. Of these, similar proportions of males 13.3% (CI 8.4-20.4) as compared to females 12.9% (CI 9.6-17.1) reportedly stopped drinking due to health reasons.

Table 68

Stopping drinking due to health reasons									
Male				Female			Total		
Age Categories (Years)	n	% stopping due to health reasons	95% CI	n	% stopping due to health reasons	95% CI	n	% stopping due to health reasons	95% CI
18-29	21	-	-	35	-	-	56	4.4	1.6 - 11.6
30-44	44	-	-	76	5.7	2.4 - 12.9	120	11.3	5.3 - 22.4
45-59	97	11.9	5.0 - 25.5	131	14.5	8.5 - 23.7	228	13.4	8.6 - 20.2
60-69	114	25.3	15.8 - 38.0	137	26.8	15.9 - 41.6	251	26.1	18.4 - 35.6
Total	276	13.3	8.4 - 20.4	379	12.9	9.6 - 17.1	655	13.1	9.9 - 17.1

Frequency of alcohol consumption

Description: Frequency of alcohol consumption in the past 12 months among those who drank in the last 12 months

Instrument question:

A4: During the past 12 months, how frequently have you had at least one alcoholic drink?

Tables 69, 70, 71, 72, 73 and 74 show that within the past 12-month period, 2.1% (CI 1.6-2.8) of the population consumed alcohol on a daily basis. Also, within the past 12 months, 44.6% (CI 41.7-47.5) consumed alcohol less than once per month; followed by 27.9% (CI 24.8-31.2) consuming alcohol 1-3 days per month and 17.5% (CI 14.9-20.4) consuming alcohol 1-2 days per week.

Approximately nine times as many males 3.5% (CI 2.6-4.7) consumed alcohol daily when compared to females with a prevalence of 0.4% (CI 0.2-0.8). Among males, the eldest age category i.e. 60-69 years, accounted for the largest proportion of daily alcohol consumption whereas among females, the largest proportion of daily alcohol consumption was attributable to the 45-59 age group.

Table 69

Frequency of alcohol consumption in the past 12 months							
Male							
Age Categories (Years)	n	% Daily	95% CI	% 5-6 days/ week	95% CI	% 3-4 days/ week	95% CI
18-29	206	1.9	0.8 - 4.6	2.7	1.3 - 5.6	2.2	1.1 - 4.6
30-44	431	4.2	2.6 - 6.9	1.6	0.8 - 3.3	11.2	7.3 - 16.7
45-59	394	3.5	2.2 - 5.6	5.1	2.4 - 10.4	8.7	5.7 - 13.0
60-69	286	6.6	2.6 - 15.6	2.8	1.5 - 5.2	10.4	6.8 - 15.6
Total	1317	3.5	2.6 - 4.7	3.0	2.0 - 4.5	7.6	5.7 - 10.1

Table 70

Frequency of alcohol consumption in the past 12 months							
Male							
Age Categories (Years)	n	% 1-2 days/ week	95% CI	% 1-3 days/ month	95% CI	% < once a month	95% CI
18-29	206	27.2	18.1 - 38.8	26.2	18.9 - 35.2	39.5	30.7 - 49.2
30-44	431	20.9	15.4 - 27.6	26.0	20.2 - 32.9	35.4	29.8 - 41.4
45-59	394	19.1	14.8 - 24.4	29.5	23.6 - 36.1	33.9	27.8 - 40.6
60-69	286	16.8	12.6 - 22.1	25.9	17.9 - 35.9	37.0	29.7 - 44.9
Total	1317	22.0	18.1 - 26.6	27.0	23.1 - 31.3	36.4	32.6 - 40.4

Table 71

Frequency of alcohol consumption in the past 12 months							
Female							
Age Categories (Years)	n	% Daily	95% CI	% 5-6 days/ week	95% CI	% 3-4 days/ week	95% CI
18-29	222	0.2	0.1 - 0.9	1.1	0.4 - 3.3	1.7	0.6 - 4.6
30-44	495	0.4	0.1 - 1.4	1.1	0.5 - 2.4	3.6	1.9 - 6.5
45-59	387	0.8	0.3 - 1.8	0.9	0.3 - 2.6	2.6	1.2 - 5.7
60-69	257	0.6	0.2 - 2.0	0.4	0.1 - 1.6	0.8	0.3 - 2.0
Total	1361	0.4	0.2 - 0.8	1.0	0.5 - 1.8	2.5	1.5 - 4.0

Table 72

Frequency of alcohol consumption in the past 12 months							
Female							
Age Categories (Years)	n	% 1-2 days/ week	95% CI	% 1-3 days/ month	95% CI	% < once a month	95% CI
18-29	222	14.6	9.5 - 21.8	32.2	24.7 - 40.8	49.7	41.5 - 57.9
30-44	495	11.4	7.9 - 16.2	30.4	24.4 - 37.1	52.7	46.4 - 59.0
45-59	387	9.8	6.5 - 14.7	24.5	18.8 - 31.2	60.0	53.2 - 66.5
60-69	257	11.9	7.3 - 18.7	22.4	16.8 - 29.2	62.2	54.7 - 69.2
Total	1361	12.1	9.2 - 15.8	28.9	24.7 - 33.5	54.2	49.8 - 58.5

Table 73

Frequency of alcohol consumption in the past 12 months							
Total							
Age Categories (Years)	n	% Daily	95% CI	% 5-6 days/ week	95% CI	% 3-4 days/ week	95% CI
18-29	428	1.1	0.5 - 2.6	1.9	1.1 - 3.5	2.0	1.1 - 3.6
30-44	926	2.4	1.6 - 3.7	1.4	0.7 - 2.5	7.6	5.0 - 11.3
45-59	781	2.3	1.5 - 3.5	3.3	1.7 - 6.3	6.1	4.4 - 8.4
60-69	543	4.1	1.7 - 9.3	1.8	1.0 - 3.1	6.4	4.3 - 9.5
Total	2678	2.1	1.6 - 2.8	2.1	1.5 - 2.9	5.3	4.1 - 6.8

Table 74

Frequency of alcohol consumption in the past 12 months							
Total							
Age Categories (Years)	n	% 1-2 days/ week	95% CI	% 1-3 days/ month	95% CI	% < once a month	95% CI
18-29	428	21.3	15.8 - 28.0	29.1	23.9 - 34.8	44.3	37.9 - 50.9
30-44	926	16.4	12.9 - 20.6	28.1	23.3 - 33.5	43.6	39.7 - 47.6
45-59	781	15.1	12.3 - 18.4	27.3	22.6 - 32.6	45.2	40.5 - 49.9
60-69	543	14.7	11.2 - 19.1	24.4	19.0 - 30.7	47.6	41.4 - 53.8
Total	2678	17.5	14.9 - 20.4	27.9	24.8 - 31.2	44.6	41.7 - 47.5

Drinking occasions in the past 30 days

Description: Mean number of occasions with at least one drink in the past 30 days among current (past 30 days) drinkers

Instrument question:

A6: During the past 30 days, on how many occasions did you have at least one alcoholic drink?

Table 75 shows that the mean number of drinking occasions in the past 30 days among current drinkers was 4.5 (CI 4.1-4.8) with the 60-69 age category accounting for the highest mean number of drinking occasions 5.9 (CI 4.5-7.4). Males had almost double the mean number of drinking occasions when compared to females with 5.6(CI 5.1-6.1) and 2.9 (CI 2.6-3.1) respectively.

Table 75

Mean number of drinking occasions in the past 30 days among current (past 30 days) drinkers									
Age Categories (Years)	Male			Female			Total		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
18-29	164	4.7	3.8 - 5.6	149	2.7	2.3 - 3.0	313	3.8	3.3 - 4.4
30-44	345	5.9	5.0 - 6.7	342	3.1	2.6 - 3.6	687	4.7	4.1 - 5.3
45-59	301	5.7	4.8 - 6.5	255	2.8	2.3 - 3.2	556	4.5	3.9 - 5.0
60-69	208	7.8	5.6 - 10.0	152	2.9	2.2 - 3.5	360	5.9	4.5 - 7.4
Total	1018	5.6	5.1 - 6.1	898	2.9	2.6 - 3.1	1916	4.5	4.1 - 4.8

**Standard drinks
per drinking
occasion**

Description: Mean number of standard drinks consumed on a drinking occasion among current (past 30 days) drinkers

Instrument question:

A7: During the past 30 days, when you drank alcohol, on average, how many standard alcoholic drinks did you have during one occasion?

Table 76 shows that the mean number of standard drinks per drinking occasion among current drinkers (past 30 days) was 3.8(CI 3.5-4.0). Of these, males had a mean of 4.3 (CI 3.9-4.6) drinks and females had a mean of 3.1(CI 2.9-3.4) drinks per drinking occasion. For both sexes, persons in the age group 30-44 years had the highest mean number of standard drinks 4.1(CI 3.6-4.6) per drinking occasion in the past 30 days.

Table 76

Mean number of standard drinks per drinking occasion among current (past 30 days) drinkers									
Age Categories (Years)	Male			Female			Total		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
18-29	163	3.8	3.3 - 4.3	151	2.9	2.6 - 3.3	314	3.4	3.1 - 3.7
30-44	347	4.6	3.8 - 5.4	341	3.4	3.0 - 3.8	688	4.1	3.6 - 4.6
45-59	301	4.4	3.8 - 5.0	255	3.2	2.7 - 3.7	556	3.9	3.5 - 4.3
60-69	207	4.6	3.1 - 6.1	152	2.2	1.8 - 2.6	359	3.7	2.7 - 4.7
Total	1018	4.3	3.9 - 4.6	899	3.1	2.9 - 3.4	1917	3.8	3.5 - 4.0

**Average volume
drinking levels among
all population**

Description: Percentage of population with different drinking levels.

A standard drink contains approximately 10g of pure alcohol

Instrument question:

A7: During the past 30 days, when you drank alcohol, on average, how many standard alcoholic drinks did you have during one occasion?

High-end level drinking is defined as ≥ 60 g of pure alcohol on average per occasion among men and ≥ 40 g of pure alcohol on average per occasion among women.

Intermediate level drinking is defined as 40-59.9g of pure alcohol on average per occasion among men and 20-39.9g of pure alcohol on average per occasion among women.

Lower-end level drinking is defined as < 40 g of pure alcohol on average per occasion among men and < 20 g of pure alcohol on average per occasion among women.

Table 77 shows the prevalence of drinking at a high-end level among the total population. According to the results, 12.6% (CI 10.8-14.6) of persons engaged in high-end level drinking. More females 13.4% (CI 10.9-16.5) engaged in high-end level drinking when compared to males 11.7% (CI 9.7-14.0). Among both sexes, the leading age category for this level of drinking was the 30-44 age group with 16.3% (CI 13.5-19.7).

Table 77

Drinking at high-end level among all population (≥ 60 g of pure alcohol on average per occasion among men and ≥ 40 g of pure alcohol on average per occasion among women)

Age Categories (Years)	Male			Female			Total		
	n	% ≥ 60 g	95% CI	n	% ≥ 40 g	95% CI	n	% high-end level	95% CI
18-29	257	8.7	5.7 - 13.2	302	13.7	9.1 - 20.2	559	11.2	8.4 - 14.9
30-44	530	15.2	11.4 - 20.1	683	17.5	14.0 - 21.6	1213	16.3	13.5 - 19.7
45-59	567	11.3	8.4 - 15.0	660	12.5	9.1 - 16.9	1227	11.9	9.4 - 14.9
60-69	460	11.1	7.4 - 16.2	560	4.0	2.3 - 7.0	1020	7.5	5.4 - 10.5
Total	1814	11.7	9.7 - 14.0	2205	13.4	10.9 - 16.5	4019	12.6	10.8 - 14.6

Table 78 shows that 16.7% (CI 14.8-18.7) of the population drink at an intermediate level per occasion. The results reflect the same trend as high-end level drinking with more females 19.1% (CI 16.5-22.0) as compared to males 14.2% (CI 11.6-17.2) drinking at an intermediate level per occasion. The youngest age group (18-29 years) was the leading category for drinking at an intermediate level 22.2% (CI 18.1-27.0) for both sexes.

Table 78

Drinking at intermediate level among all population (40-59.9g of pure alcohol on average per occasion among men and 20-39.9g of pure alcohol on average per occasion among women)

Age Categories (Years)	Male			Female			Total		
	n	% 40-59.9g	95% CI	n	% 20-39.9g	95% CI	n	% intermediate level	95% CI
18-29	257	20.0	14.2 - 27.2	302	24.5	19.4 - 30.5	559	22.2	18.1 - 27.0
30-44	530	16.3	11.3 - 23.1	683	19.9	16.2 - 24.3	1213	18.1	14.9 - 21.9
45-59	567	9.7	6.9 - 13.3	660	15.1	11.6 - 19.3	1227	12.4	10.2 - 14.8
60-69	460	4.2	2.7 - 6.3	560	12.3	8.8 - 16.9	1020	8.2	6.3 - 10.6
Total	1814	14.2	11.6 - 17.2	2205	19.1	16.5 - 22.0	4019	16.7	14.8 - 18.7

Table 79 shows the results for drinking at a lower-end level for the population. 21.9%(CI 20.0-24.0) of persons consumed alcohol on the lower-end level per occasion. Contrary to the results for higher-end and intermediate level drinking, three times the amount of males 33.2%(CI 30.1-36.5) consumed alcohol at a lower-end level as compared to females 10.6%(CI 8.6-12.9).

Table 79

Drinking at lower-end level among all population (<40g of pure alcohol on average per occasion among men and <20g of pure alcohol on average per occasion among women)

Age Categories (Years)	Male			Female			Total		
	n	% <40g	95% CI	n	% <20g	95% CI	n	% lower-end level	95% CI
18-29	257	33.0	26.2 - 40.6	302	10.0	6.4 - 15.3	559	21.5	17.1 - 26.6
30-44	530	35.1	27.0 - 44.2	683	12.0	8.7 - 16.3	1213	23.7	19.3 - 28.6
45-59	567	33.0	27.2 - 39.2	660	9.7	7.2 - 13.0	1227	21.4	18.1 - 25.0
60-69	460	29.0	23.5 - 35.1	560	10.4	7.5 - 14.3	1020	19.7	16.8 - 22.9
Total	1814	33.2	30.1 - 36.5	2205	10.6	8.6 - 12.9	4019	21.9	20.0 - 24.0

Average volume drinking levels among current (past 30 days) drinkers

Description: Percentage of current (past 30 days) drinkers with different drinking levels.
A standard drink contains approximately 10g of pure alcohol.

Instrument question:

A7: During the past 30 days, when you drank alcohol, on average, how many standard alcoholic drinks did you have during one occasion?

High-end level drinking is defined as ≥ 60 g of pure alcohol on average per occasion among men and ≥ 40 g of pure alcohol on average per occasion among women.

Intermediate level drinking is defined as 40-59.9g of pure alcohol on average per occasion among men and 20-39.9g of pure alcohol on average per occasion among women.

Lower-end level drinking is defined as < 40 g of pure alcohol on average per occasion among men and < 20 g of pure alcohol on average per occasion among women.

Tables 80, 81 and 82 display the results for different levels of drinking among current drinkers. Of the current drinkers, it was observed that as the level of consumption of pure alcohol per occasion increases, the prevalence of persons engaging in drinking decreases with 42.9% (CI 39.0-46.8) consuming lower-end levels, 32.6% (CI 29.6-35.7) consuming intermediate levels and 24.6% (CI 21.4-28.1) consuming high-end levels respectively. A higher prevalence rate was recorded in females in the high end 31.2% (CI 26.0-36.8) and intermediate levels 44.3% (CI 39.7-49.0) of drinking. Whereas, more than double the amount of males 56.2% (CI 51.4-60.8) engaged in lower end levels of drinking than females 24.5% (CI 20.3-29.3). The leading age groups among current drinkers for high end, intermediate and lower-end levels of drinking were 30-44 years 28.1% (CI 23.2-33.6), 18-29 years 40.5% (CI 34.3-46.9) and 60-69 years 55.6% (CI 48.6-62.3) respectively.

Table 80

Drinking at high-end level among current drinkers (≥ 60 g of pure alcohol on average per occasion among men and ≥ 40 g of pure alcohol on average per occasion among women)

Age Categories (Years)	Male			Female			Total		
	n	% ≥ 60 g	95% CI	n	% ≥ 40 g	95% CI	n	% high-end level	95% CI
18-29	163	14.1	9.1 - 21.4	151	28.4	21.1 - 37.1	314	20.4	15.9 - 25.9
30-44	347	22.8	16.9 - 30.1	341	35.4	27.9 - 43.6	688	28.1	23.2 - 33.6
45-59	301	20.9	15.8 - 27.2	255	33.5	25.0 - 43.3	556	26.1	21.3 - 31.5
60-69	207	25.0	17.0 - 35.3	152	15.0	8.4 - 25.5	359	21.3	15.4 - 28.6
Total	1018	19.8	16.3 - 23.8	899	31.2	26.0 - 36.8	1917	24.6	21.4 - 28.1

Table 81

Drinking at intermediate level among current drinkers (40-59.9g of pure alcohol on average per occasion among men and 20-39.9g of pure alcohol on average per occasion among women)

Age Categories (Years)	Male			Female			Total		
	n	% 40-59.9g	95% CI	n	% 20-39.9g	95% CI	n	% intermediate level	95% CI
18-29	163	32.3	23.9 - 42.1	151	50.8	42.6 - 59.0	314	40.5	34.3 - 46.9
30-44	347	24.5	17.0 - 33.9	341	40.4	33.5 - 47.6	688	31.2	25.9 - 37.0
45-59	301	17.9	12.5 - 25.0	255	40.5	32.6 - 48.9	556	27.1	22.3 - 32.5
60-69	207	9.4	6.5 - 13.5	152	45.9	35.7 - 56.4	359	23.2	18.3 - 28.9
Total	1018	24.0	20.2 - 28.4	899	44.3	39.7 - 49.0	1917	32.6	29.6 - 35.7

Table 82

Drinking at lower-end level among current drinkers (<40g of pure alcohol on average per occasion among men and <20g of pure alcohol on average per occasion among women)

Age Categories (Years)	Male			Female			Total		
	n	% <40g	95% CI	n	% <20g	95% CI	n	% lower-end level	95% CI
18-29	163	53.5	44.3 - 62.5	151	20.7	13.9 - 29.8	314	39.1	32.1 - 46.6
30-44	347	52.7	41.4 - 63.7	341	24.3	18.4 - 31.4	688	40.7	33.9 - 47.9
45-59	301	61.1	54.0 - 67.8	255	26.0	20.1 - 33.0	556	46.9	41.7 - 52.1
60-69	207	65.5	56.5 - 73.6	152	39.1	31.0 - 47.7	359	55.6	48.6 - 62.3
Total	1018	56.2	51.4 - 60.8	899	24.5	20.3 - 29.3	1917	42.9	39.0 - 46.8

Largest number of drinks in the past 30 days

Description: Largest number of drinks consumed during a single occasion in the past 30 days among current (past 30 days) drinkers

Instrument question:

A8: During the past 30 days, what was the largest number of standard alcoholic drinks you had on a single occasion, counting all types of alcoholic drinks together?

Table 83 shows that the mean maximum number of standard drinks consumed on one occasion in the past 30 days for both sexes was 4.9(CI 4.3-5.4). Of these, males had 5.7(CI 5.0-6.4) while females had 3.7(CI 3.4-4.0). The highest mean number of drinks was observed in the 30-44 years age group for both sexes.

Table 83

Mean maximum number of standard drinks consumed on one occasion in the past 30 days									
Age Categories (Years)	Male			Female			Total		
	n	Mean maximum number	95% CI	n	Mean maximum number	95% CI	n	Mean maximum number	95% CI
18-29	163	5.7	3.9 - 7.4	151	3.7	3.2 - 4.2	314	4.8	3.6 - 6.0
30-44	348	5.9	4.9 - 7.0	341	4.0	3.5 - 4.5	689	5.1	4.4 - 5.8
45-59	302	5.4	4.8 - 6.0	255	3.7	3.2 - 4.3	557	4.7	4.3 - 5.2
60-69	206	5.7	4.1 - 7.4	152	2.5	2.1 - 2.8	358	4.5	3.4 - 5.6
Total	1019	5.7	5.0 - 6.4	899	3.7	3.4 - 4.0	1918	4.9	4.3 - 5.4

Six or more drinks on a single occasion (“heavy episodic drinking”)

Description: Percentage of population who had six or more drinks on any occasion in the past 30 days during a single occasion among the total population.

Instrument question:

A9: During the past 30 days, how many times did you have six or more standard alcoholic drinks in a single drinking occasion?

Table 84 shows that 20.4% (CI 18.0-23.1) of persons drank ≥ 6 drinks on a single occasion at least once during the past 30 days among the total population. Of these, 29.4% (CI 25.9-33.3) of males and 12% (CI 9.2-15.5) of females drank ≥ 6 drinks on a single occasion at least once during the past 30 days among the total population. For both sexes, the 30-44 age group had the highest prevalence of consumption of six or more drinks 28.0% (CI 23.5-33.0).

Table 84

Six or more drinks on a single occasion at least once during the past 30 days among total population									
Age Categories (Years)	Male			Female			Total		
	n	% ≥ 6 drinks	95% CI	n	% ≥ 6 drinks	95% CI	n	% ≥ 6 drinks	95% CI
18-29	148	24.8	16.6 - 35.3	169	14.3	7.5 - 25.5	317	19.4	13.9 - 26.4
30-44	321	40.3	32.8 - 48.4	423	16.5	12.9 - 20.9	744	28.0	23.5 - 33.0
45-59	377	27.6	22.5 - 33.5	448	9.9	6.9 - 13.9	825	18.4	15.7 - 21.5
60-69	319	19.4	13.9 - 26.3	419	1.9	0.9 - 4.0	738	10.3	7.4 - 14.2
Total	1165	29.4	25.9 - 33.3	1459	12.0	9.2 - 15.5	2624	20.4	18.0 - 23.1

**Six or more
drinks on a single
occasion**

Description: Mean number of times in the past 30 days on which current (past 30 days) drinkers consumed six or more drinks during a single occasion.

Instrument question:

A9: During the past 30 days, how many times did you have six or more standard alcoholic drinks in a single drinking occasion?

Table 85 shows that the mean number of times six or more drinks were consumed during a single occasion in the past 30 days among current drinkers was 4.2(CI 3.5-4.8) times for both sexes. Men drank six or more drinks on average, 4.7 (CI 3.9-5.6) times and women drank 2.9(CI 2.4-3.4) times on a single occasion in the past 30 days.

Table 85

Mean number of times with six or more drinks during a single occasion in the past 30 days among current drinkers									
Age Categories (Years)	Male			Female			Total		
	n	Mean number of times	95% CI	n	Mean number of times	95% CI	n	Mean number of times	95% CI
18-29	54	3.8	1.7 - 5.9	18	-	-	72	3.4	2.1 - 4.7
30-44	138	4.7	3.4 - 5.9	81	3.5	2.5 - 4.4	219	4.3	3.5 - 5.1
45-59	111	4.8	3.5 - 6.2	43	-	-	154	4.2	3.2 - 5.2
60-69	66	7.8	4.0 - 11.7	11	-	-	77	7.0	3.4 - 10.6
Total	369	4.7	3.9 - 5.6	153	2.9	2.4 - 3.4	522	4.2	3.5 - 4.8

Past 7 days drinking Description: Frequency of alcohol consumption in the past 7 days by current (past 30 days) drinkers

Instrument question:
A10a-g: During each of the past 7 days, how many standard drinks of any alcoholic drink did you have each day?

Tables 86, 87, 88, 89, 90 and 91 show that for both sexes, 55.5% (CI 51.0-59.9) of persons consume alcohol 1-2 days out of the past 7 days; 30.5% (CI 26.3-35.1) of persons did not consume alcohol any of the days out of the past 7 days; 8.3%(CI6.4-10.6) of persons consumed alcohol 3-4 days out of the past 7 days and 3.0% (CI 2.0-4.3) of persons consumed alcohol daily. The prevalence of alcohol consumption in males 3-4 days out of the past 7 days [10.5% (CI 7.9-13.7)] and daily [4.7% (CI 3.2-7.0)] was greater than that observed for females [5.3% (CI 3.3-8.4)] and [0.5% (CI 0.3-1.0)] respectively. More females 26.4% (CI 21.4-32.0) did not consume alcohol for any of the days within the past 7 days as compared to males 36.2% (CI 30.2-42.8).

Table 86

Frequency of alcohol consumption in the past 7 days							
Male							
Age Categories (Years)	n	% Daily	95% CI	% 5-6 days	95% CI	% 3-4 days	95% CI
18-29	164	0.0	0.0 - 0.0	3.3	1.5 - 7.1	10.3	4.7 - 21.0
30-44	349	7.5	4.1 - 13.3	2.8	1.0 - 7.1	9.0	5.6 - 14.1
45-59	304	4.8	2.9 - 7.9	2.9	1.5 - 5.6	11.4	7.7 - 16.7
60-69	209	10.8	4.9 - 22.0	4.8	2.4 - 9.5	14.5	9.4 - 21.8
Total	1026	4.7	3.2 - 7.0	3.1	2.1 - 4.8	10.5	7.9 - 13.7

Table 87

Frequency of alcohol consumption in the past 7 days					
Male					
Age Categories (Years)	n	% 1-2 days	95% CI	% 0 days	95% CI
18-29	164	59.0	45.9 - 70.9	27.4	16.6 - 41.7
30-44	349	54.4	45.0 - 63.4	26.4	19.1 - 35.4
45-59	304	55.6	48.2 - 62.7	25.3	19.0 - 32.9
60-69	209	44.1	33.2 - 55.7	25.7	15.2 - 40.1
Total	1026	55.3	49.1 - 61.3	26.4	21.4 - 32.0

Table 88

Frequency of alcohol consumption in the past 7 days							
Female							
Age Categories (Years)	n	% Daily	95% CI	% 5-6 days	95% CI	% 3-4 days	95% CI
18-29	151	0.1	0.0 - 1.0	1.3	0.2 - 6.2	6.9	2.9 - 15.4
30-44	342	0.4	0.1 - 1.4	2.0	1.0 - 4.3	5.7	3.6 - 9.2
45-59	255	1.0	0.4 - 2.6	3.8	0.8 - 16.0	3.3	1.7 - 6.5
60-69	152	1.0	0.3 - 3.5	1.0	0.3 - 3.4	2.2	0.8 - 5.6
Total	900	0.5	0.3 - 1.0	2.1	1.0 - 4.3	5.3	3.3 - 8.4

Table 89

Frequency of alcohol consumption in the past 7 days					
Female					
Age Categories (Years)	n	% 1-2 days	95% CI	% 0 days	95% CI
18-29	151	56.3	42.7 - 68.9	35.4	23.3 - 49.8
30-44	342	52.5	43.6 - 61.2	39.3	30.0 - 49.4
45-59	255	59.3	51.0 - 67.2	32.5	25.0 - 41.1
60-69	152	58.1	47.0 - 68.4	37.7	27.8 - 48.9
Total	900	55.8	49.8 - 61.6	36.2	30.2 - 42.8

Table 90

Frequency of alcohol consumption in the past 7 days							
Total							
Age Categories (Years)	n	% Daily	95% CI	% 5-6 days	95% CI	% 3-4 days	95% CI
18-29	315	0.1	0.0 - 0.5	2.4	1.2 - 4.8	8.8	4.9 - 15.4
30-44	691	4.5	2.4 - 8.3	2.5	1.3 - 4.7	7.6	5.2 - 10.9
45-59	559	3.2	2.1 - 5.1	3.2	1.5 - 6.9	8.2	5.9 - 11.1
60-69	361	7.1	3.3 - 14.4	3.4	1.8 - 6.2	9.9	6.8 - 14.2
Total	1926	3.0	2.0 - 4.3	2.7	1.9 - 3.8	8.3	6.4 - 10.6

Table 91

Frequency of alcohol consumption in the past 7 days					
Total					
Age Categories (Years)	n	% 1-2 days	95% CI	% 0 days	95% CI
18-29	315	57.8	48.4 - 66.6	30.9	22.6 - 40.8
30-44	691	53.6	46.9 - 60.1	31.8	25.6 - 38.8
45-59	559	57.1	51.0 - 63.0	28.3	22.9 - 34.3
60-69	361	49.4	41.5 - 57.3	30.2	22.9 - 38.8
Total	1926	55.5	51.0 - 59.9	30.5	26.3 - 35.1

**Standard drinks
per day in the past
7 days**

Description: Mean number of standard drinks consumed on average per day in the past 7 days among current (past 30 days) drinkers

Instrument question:

A10a-g: During each of the past 7 days, how many standard drinks of any alcoholic drink did you have each day?

According to **Table 92**, the mean number of standard drinks consumed on average per day in the past 7 days among current drinkers was 0.7 (CI 0.6-0.8). Of these, males drank more than twice the number of standard drinks than females 0.9 (CI 0.8-1.1) and 0.4 (CI 0.4-0.5) respectively.

Table 92

Mean number of standard drinks consumed on average per day in the past 7 days among current drinkers									
Age Categories (Years)	Male			Female			Total		
	n	Mean number	95% CI	n	Mean number	95% CI	n	Mean number	95% CI
18-29	164	0.7	0.5 - 0.9	151	0.3	0.3 - 0.4	315	0.5	0.4 - 0.7
30-44	349	1.0	0.7 - 1.2	342	0.5	0.3 - 0.6	691	0.8	0.6 - 0.9
45-59	304	0.9	0.8 - 1.1	255	0.6	0.4 - 0.8	559	0.8	0.7 - 0.9
60-69	209	1.5	0.6 - 2.4	152	0.3	0.2 - 0.4	361	1.1	0.5 - 1.6
Total	1026	0.9	0.8 - 1.1	900	0.4	0.4 - 0.5	1926	0.7	0.6 - 0.8

Consumption of unrecorded alcohol

Description: Percentage of population that consumed unrecorded alcohol (defined as -homebrewed alcohol, alcohol brought over the border, not intended for drinking or other untaxed alcohol) during the past 7 days among current (past 30 days) drinkers

Instrument question:

A5: Have you consumed any alcohol within the past 30 days?

A11: During the past 7 days, did you consume any homebrewed alcohol, any alcohol brought over the border, not intended for drinking or other untaxed alcohol?

Table 93 shows that only 2.8% (CI 1.8-4.3) of current drinkers (past 30 days) consumed unrecorded alcohol during the past 7 days. The prevalence of consuming unrecorded alcohol was relatively the same for both males and females i.e. 2.8% (CI 1.5-4.9) and 2.9% (CI 1.5-5.6).

Table 93

Consumption of unrecorded alcohol									
Male				Female			Total		
Age Categories (Years)	n	% consuming unrecorded alcohol	95% CI	n	% consuming unrecorded alcohol	95% CI	n	% consuming unrecorded alcohol	95% CI
18-29	130	3.4	1.4 - 8.2	108	0.8	0.1 - 5.6	238	2.4	1.1 - 5.2
30-44	275	1.7	0.8 - 3.7	226	5.5	2.2 - 13.1	501	3.1	1.7 - 5.8
45-59	246	3.4	1.6 - 6.9	180	2.6	0.9 - 7.2	426	3.1	1.8 - 5.3
60-69	169	2.5	1.0 - 6.0	100	2.4	0.3 - 16.3	269	2.5	1.0 - 6.0
Total	820	2.8	1.5 - 4.9	614	2.9	1.5 - 5.6	1434	2.8	1.8 - 4.3

Frequency of impaired control over drinking

Description: Frequency of not being able to stop drinking once started during the past 12 months among past 12-month drinkers

Instrument question:

A2: Have you consumed any alcohol within the past 12 months?

A13: How often during the past 12 months have you found that you were not able to stop drinking once you had started?

Tables 94, 95 and 96 show that 94.2% (CI 92.4-95.6) of past 12-month drinkers reported ‘never’ not being able to stop drinking once they started drinking during the past 12 months. Of these, the prevalence was slightly greater in females 97.4% (CI 96.3-98.2) than males 91.4% (CI 88.1-93.9).

Table 94

Frequency of not being able to stop drinking once started during the past 12 months among past 12-month drinkers							
Male							
Age Categories (Years)	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI
18-29	206	4.9	1.9 - 11.9	6.0	2.0 - 16.3	89.2	79.0 - 94.7
30-44	431	3.1	1.5 - 6.5	3.3	1.7 - 6.2	93.6	90.6 - 95.7
45-59	394	7.4	4.6 - 11.9	1.7	0.5 - 6.0	90.8	85.4 - 94.3
60-69	286	6.0	3.4 - 10.1	0.8	0.2 - 2.9	93.2	89.1 - 95.8
Total	1317	5.1	3.3 - 7.7	3.5	1.9 - 6.3	91.4	88.1 - 93.9

Table 95

Frequency of not being able to stop drinking once started during the past 12 months among past 12-month drinkers							
Female							
Age Categories (Years)	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI
18-29	222	1.0	0.2 - 4.3	1.3	0.5 - 3.6	97.7	94.5 - 99.0
30-44	495	0.6	0.2 - 1.7	2.1	1.0 - 4.5	97.3	95.0 - 98.5
45-59	387	1.7	0.8 - 3.7	1.4	0.6 - 3.1	96.9	94.4 - 98.3
60-69	257	0.5	0.1 - 3.2	1.4	0.4 - 5.1	98.1	94.5 - 99.4
Total	1361	1.0	0.5 - 1.8	1.6	1.0 - 2.6	97.4	96.3 - 98.2

Table 96

Frequency of not being able to stop drinking once started during the past 12 months among past 12-month drinkers							
Total							
Age Categories (Years)	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI
18-29	428	3.0	1.4 - 6.7	3.8	1.5 - 9.3	93.2	87.6 - 96.4
30-44	926	1.9	1.0 - 3.6	2.7	1.6 - 4.6	95.3	93.7 - 96.5
45-59	781	5.0	3.2 - 7.7	1.6	0.7 - 3.6	93.5	90.2 - 95.7
60-69	543	3.7	2.2 - 6.1	1.1	0.4 - 2.6	95.3	92.6 - 97.0
Total	2678	3.2	2.2 - 4.6	2.6	1.7 - 4.1	94.2	92.4 - 95.6

Frequency of failing to do what was normally expected because of drinking

Description: Frequency of failing to do what was normally expected from you because of drinking during the past 12 months among past 12-month drinkers

Instrument question:

A2: Have you consumed any alcohol within the past 12 months?

A14: How often during the past 12 months have you failed to do what was normally expected from you because of drinking?

Tables 97, 98 and 99 show that 97.5% (CI 96.3-98.4) of past 12-month drinkers, reported ‘never’ failing to do what was normally expected of them during the past 12 months. Of these, there was no statistically significant difference between males 96.6% (CI 94.5-97.9) and females 98.7% (CI 97.6-99.3).

Table 97

Frequency of failing to do what was normally expected from you during the past 12 months among past 12-month drinkers							
Male							
Age Categories (Years)	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI
18-29	206	0.3	0.1 - 1.2	2.3	0.8 - 6.3	97.4	93.6 - 99.0
30-44	431	2.4	1.0 - 5.9	1.3	0.6 - 2.9	96.3	93.4 - 98.0
45-59	394	2.8	1.1 - 7.0	0.7	0.3 - 2.0	96.4	91.9 - 98.5
60-69	286	3.4	1.4 - 7.8	1.4	0.5 - 3.7	95.2	90.8 - 97.5
Total	1317	2.0	1.0 - 3.9	1.5	0.8 - 2.7	96.6	94.5 - 97.9

Table 98

Frequency of failing to do what was normally expected from you during the past 12 months among past 12-month drinkers							
Female							
Age Categories (Years)	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI
18-29	222	0.1	0.0 - 1.0	1.2	0.3 - 3.9	98.7	96.1 - 99.6
30-44	495	0.6	0.3 - 1.5	1.1	0.3 - 3.5	98.3	96.3 - 99.2
45-59	387	0.6	0.2 - 1.8	0.4	0.1 - 1.5	99.1	97.7 - 99.6
60-69	257	0.8	0.1 - 5.6	0.2	0.1 - 1.0	98.9	95.1 - 99.8
Total	1361	0.5	0.2 - 0.9	0.9	0.4 - 1.8	98.7	97.6 - 99.3

Table 99

Frequency of failing to do what was normally expected from you during the past 12 months among past 12-month drinkers							
Total							
Age Categories (Years)	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI
18-29	428	0.2	0.1 - 0.7	1.7	0.8 - 3.8	98.0	96.1 - 99.0
30-44	926	1.6	0.7 - 3.5	1.2	0.6 - 2.4	97.3	95.6 - 98.3
45-59	781	1.9	0.8 - 4.2	0.6	0.3 - 1.3	97.6	95.0 - 98.8
60-69	543	2.3	1.2 - 4.6	0.9	0.4 - 2.2	96.8	94.5 - 98.1
Total	2678	1.3	0.7 - 2.3	1.2	0.7 - 2.0	97.5	96.3 - 98.4

Frequency of morning drinking

Description: Frequency of needing a first drink in the morning to get going after a heavy drinking session during the past 12 months among past 12-month drinkers

Instrument question:

A2: Have you consumed any alcohol within the past 12 months?

A15: How often during the past 12 months have you needed a first drink in the morning to get yourself going after a heavy drinking session?

Tables 100, 101 and 102 show that 97.6% (CI 96.8-98.1) of past 12-month drinkers reported ‘never’ needing a first drink in the morning to get going during the past 12 months. Of these, the prevalence among females 99.4% (CI 98.8-99.7) was slightly greater (2.4) than males 96.0% (CI 94.8-97.0).

Table 100

Frequency of needing a first drink in the morning to get going during the past 12 months among past 12-month drinkers							
Male							
Age Categories (Years)	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI
18-29	206	0.4	0.1 - 1.3	2.1	0.9 - 4.8	97.5	94.9 - 98.8
30-44	431	2.9	1.3 - 6.3	1.9	1.0 - 3.8	95.2	92.3 - 97.0
45-59	394	3.6	1.9 - 6.8	0.4	0.1 - 1.8	96.0	92.8 - 97.8
60-69	286	4.3	2.0 - 9.1	1.6	0.5 - 5.4	94.1	89.2 - 96.9
Total	1317	2.4	1.7 - 3.6	1.5	0.8 - 2.8	96.0	94.8 - 97.0

Table 101

Frequency of needing a first drink in the morning to get going during the past 12 months among past 12-month drinkers							
Female							
Age Categories (Years)	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI
18-29	222	0.1	0.0 - 0.7	0.6	0.2 - 2.4	99.3	97.6 - 99.8
30-44	495	0.6	0.2 - 1.5	0.2	0.1 - 0.7	99.2	98.4 - 99.6
45-59	387	0.3	0.1 - 1.3	0.0	0.0 - 0.0	99.7	98.7 - 99.9
60-69	257	0.0	0.0 - 0.0	0.1	0.0 - 0.9	99.9	99.1 - 100.0
Total	1361	0.3	0.2 - 0.6	0.3	0.1 - 0.8	99.4	98.8 - 99.7

Table 102

Frequency of needing a first drink in the morning to get going during the past 12 months among past 12-month drinkers							
Total							
Age Categories (Years)	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI
18-29	428	0.3	0.1 - 0.7	1.4	0.7 - 2.8	98.4	96.9 - 99.1
30-44	926	1.8	0.9 - 3.5	1.1	0.6 - 2.0	97.1	95.5 - 98.1
45-59	781	2.2	1.2 - 4.1	0.2	0.1 - 1.0	97.6	95.6 - 98.7
60-69	543	2.5	1.2 - 5.3	1.0	0.3 - 3.1	96.5	93.6 - 98.1
Total	2678	1.5	1.0 - 2.1	1.0	0.6 - 1.6	97.6	96.8 - 98.1

Frequency of problems with family/ partner due to someone else's drinking

Description: Frequency of having had problems with family or partner due to someone else's drinking in the past 12 months among all population

Instrument question:

A16: Have you had family problems or problems with your partner due to someone else's drinking within the past 12 months?

Tables 103,104 and 105 show that 96.2% (CI 95.0-97.2) of the population reported 'never' having problems with family/partner due to someone else's drinking during the past 12 months. Of these, there was no statistically significant difference between females 97.5% (CI 96.6-98.1) and males 95.0% (CI 92.5-96.8).

Table 103

Frequency of family/partner problems due to someone else's drinking during the past 12 months among all population							
Male							
Age Categories (Years)	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI
18-29	263	1.1	0.2 - 5.4	7.4	3.3 - 15.9	91.4	83.2 - 95.8
30-44	539	0.4	0.1 - 1.6	3.6	1.9 - 6.7	96.0	93.0 - 97.7
45-59	571	0.1	0.0 - 0.5	2.5	1.1 - 5.5	97.3	94.4 - 98.8
60-69	464	0.1	0.0 - 0.5	3.5	1.6 - 7.3	96.4	92.7 - 98.3
Total	1837	0.5	0.2 - 1.6	4.4	2.8 - 7.1	95.0	92.5 - 96.8

Table 104

Frequency of family/partner problems due to someone else's drinking during the past 12 months among all population							
Female							
Age Categories (Years)	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI
18-29	302	0.4	0.1 - 1.8	2.4	1.3 - 4.3	97.2	95.2 - 98.4
30-44	688	0.3	0.1 - 0.9	1.6	0.8 - 3.0	98.1	96.7 - 98.9
45-59	664	1.0	0.4 - 2.3	2.2	1.2 - 4.1	96.8	94.8 - 98.0
60-69	561	0.9	0.2 - 4.5	0.9	0.4 - 1.8	98.2	95.6 - 99.3
Total	2215	0.6	0.3 - 1.1	1.9	1.3 - 2.8	97.5	96.6 - 98.1

Table 105

Frequency of family/partner problems due to someone else's drinking during the past 12 months among all population							
Total							
Age Categories (Years)	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI
18-29	565	0.8	0.2 - 2.6	4.9	2.6 - 9.1	94.3	90.2 - 96.8
30-44	1227	0.4	0.2 - 0.9	2.6	1.5 - 4.4	97.0	95.2 - 98.1
45-59	1235	0.5	0.2 - 1.2	2.4	1.5 - 3.8	97.1	95.7 - 98.0
60-69	1025	0.5	0.1 - 2.2	2.2	1.2 - 4.1	97.3	95.2 - 98.5
Total	4052	0.6	0.3 - 1.1	3.2	2.3 - 4.4	96.2	95.0 - 97.2

Diet

Mean number of days of fruit and vegetable consumption

Description: mean number of days fruit and vegetables consumed

Instrument question:

D1: In a typical week, on how many days do you eat fruit?

D3: In a typical week, on how many days do you eat vegetables?

Tables 106 and 107 show that fruit was consumed on 3.3 days (CI 3.2-3.4) and vegetables on 4.3 days (CI 4.1-4.5) in a typical week. There was no significant difference in fruit and vegetable consumption for males 3.3days (CI 3.1-3.4) and 4.2days (3.9-4.4) as compared to females 3.3days (CI 3.2-3.5) and 4.5days (CI 4.3-4.6) respectively.

Table 106

Mean number of days fruit consumed in a typical week									
Male				Female			Total		
Age Categories (Years)	n	Mean number of days	95% CI	n	Mean number of days	95% CI	n	Mean number of days	95% CI
18-29	263	2.8	2.3 - 3.2	301	2.6	2.3 - 2.9	564	2.7	2.4 - 3.0
30-44	537	3.1	2.8 - 3.4	688	3.4	3.0 - 3.8	1225	3.3	3.1 - 3.4
45-59	570	3.6	3.3 - 3.9	663	3.6	3.4 - 3.9	1233	3.6	3.4 - 3.8
60-69	462	4.0	3.7 - 4.3	559	4.5	4.2 - 4.7	1021	4.3	4.1 - 4.5
Total	1832	3.3	3.1 - 3.4	2211	3.3	3.2 - 3.5	4043	3.3	3.2 - 3.4

Table 107

Mean number of days vegetables consumed in a typical week									
Male				Female			Total		
Age Categories (Years)	n	Mean number of days	95% CI	n	Mean number of days	95% CI	n	Mean number of days	95% CI
18-29	263	4.0	3.5 - 4.5	302	3.9	3.5 - 4.3	565	3.9	3.6 - 4.3
30-44	536	4.3	4.0 - 4.7	688	4.7	4.4 - 5.0	1224	4.5	4.3 - 4.7
45-59	570	4.1	3.8 - 4.4	664	4.7	4.4 - 4.9	1234	4.4	4.2 - 4.6
60-69	464	4.5	4.1 - 4.8	560	4.8	4.6 - 5.1	1024	4.6	4.4 - 4.9
Total	1833	4.2	3.9 - 4.4	2214	4.5	4.3 - 4.6	4047	4.3	4.1 - 4.5

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 question:

D1: In a typical week, on how many days do you eat fruit?

D2: How many servings of fruit do you eat on one of those days?

D3: In a typical week, on how many days do you eat vegetables?

D4: How many servings of vegetables do you eat on one of those days?

Tables 108, 109 and 110 show the mean number of servings of fruit, vegetables and fruit and/or vegetables per day. Results showed that the average number of servings of fruit per day was 1, vegetables per day was 1.2 and fruit and/or vegetables per day was 2.2. There was no noteworthy difference in the mean number of servings among men and women and it was observed that as age increased, the mean number of servings also increased.

Table 108

Mean number of servings of fruit on average per day									
Male				Female			Total		
Age Categories (Years)	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI	n		95% CI
18-29	263	0.8	0.6 - 1.0	301	0.7	0.6 - 0.8	564	0.8	0.6 - 0.9
30-44	536	1.0	0.8 - 1.1	688	1.0	0.8 - 1.2	1224	1.0	0.8 - 1.1
45-59	570	1.1	0.9 - 1.2	663	1.0	0.9 - 1.1	1233	1.0	0.9 - 1.1
60-69	462	1.2	1.0 - 1.5	559	1.3	1.0 - 1.6	1021	1.3	1.1 - 1.5
Total	1831	1.0	0.9 - 1.1	2211	0.9	0.9 - 1.0	4042	1.0	0.9 - 1.0

Table 109

Mean number of servings of vegetables on average per day									
Male				Female			Total		
Age Categories (Years)	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI	n		95% CI
18-29	263	1.1	0.9 - 1.2	302	0.9	0.8 - 1.1	565	1.0	0.9 - 1.1
30-44	536	1.2	1.0 - 1.4	688	1.3	1.0 - 1.6	1224	1.3	1.1 - 1.5
45-59	569	1.1	1.0 - 1.2	664	1.4	1.2 - 1.7	1233	1.3	1.1 - 1.4
60-69	463	1.3	1.1 - 1.5	560	1.5	1.1 - 1.8	1023	1.4	1.1 - 1.6
Total	1831	1.1	1.0 - 1.3	2214	1.3	1.1 - 1.4	4045	1.2	1.1 - 1.3

Table 110

Mean number of servings of fruit and/or vegetables on average per day									
		Male		Female			Total		
Age Categories (Years)	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI	n		95% CI
18-29	263	1.9	1.6 - 2.1	302	1.6	1.4 - 1.9	565	1.8	1.6 - 1.9
30-44	536	2.2	1.8 - 2.5	688	2.3	1.8 - 2.8	1224	2.2	1.9 - 2.5
45-59	571	2.2	1.9 - 2.4	664	2.4	2.1 - 2.8	1235	2.3	2.1 - 2.5
60-69	464	2.5	2.1 - 2.9	560	2.8	2.2 - 3.3	1024	2.6	2.2 - 3.0
Total	1834	2.1	1.9 - 2.3	2214	2.2	2.0 - 2.4	4048	2.2	2.0 - 2.3

Fruit and vegetable consumption per day

Description: Frequency of fruit and/or vegetable consumption

Instrument question:

D1: In a typical week, on how many days do you eat fruit?

D2: How many servings of fruit do you eat on one of those days?

D3: In a typical week, on how many days do you eat vegetables?

D4: How many servings of vegetables do you eat on one of those days?

Tables 111, 112, 113 and 114 show the number of servings of fruit and/or vegetables on average per day. Almost half of the population i.e. 49.6% (CI 46.5-52.8) consume 1-2 servings of fruit and/or vegetables per day. There was no significant difference observed for males 48.4% (CI 44.2-52.6) as compared to females 50.9% (CI 47.6-54.2) with regards to consuming 1-2 servings of fruit and/or vegetables per day. For both sexes combined only 6.7% (CI 5.3-8.4) consumed five or more than five servings on average per day of fruits and/or vegetables. Whereas, 26.2% (CI 23.2-29.3) consumed no fruit and/or vegetables at all per day. The prevalence of persons consuming five or more servings of fruits and/or vegetables appears to increase with increasing age.

93.3% (CI 91.6-94.7) of persons consumed less than five servings of fruit and/ vegetables per day, with no statistically significant difference observed between males 94.1% (CI 91.8-95.8) and females 92.5% (CI 90.4-94.3).

Table 111

Number of servings of fruit and/or vegetables on average per day									
Male									
Age Categories (Years)	n	% no fruit and/or vegetables	95% CI	% 1-2 servings	95% CI	% 3-4 servings	95% CI	% ≥5 servings	95% CI
18-29	263	28.5	22.9 - 34.8	51.8	42.5 - 61.0	15.1	9.1 - 24.1	4.6	2.4 - 8.4
30-44	536	26.0	21.6 - 31.1	48.3	43.2 - 53.4	19.2	14.8 - 24.5	6.5	4.3 - 9.6
45-59	571	28.6	23.0 - 35.0	43.4	37.8 - 49.2	23.1	18.3 - 28.8	4.9	3.1 - 7.5
60-69	464	18.6	11.9 - 28.1	52.3	44.6 - 59.8	18.4	13.4 - 24.6	10.7	7.3 - 15.4
Total	1834	26.7	23.3 - 30.3	48.4	44.2 - 52.6	19.0	15.3 - 23.3	5.9	4.2 - 8.2

Table 112

Number of servings of fruit and/or vegetables on average per day									
Female									
Age Categories (Years)	n	% no fruit and/or vegetables	95% CI	% 1-2 servings	95% CI	% 3-4 servings	95% CI	% ≥5 servings	95% CI
18-29	302	35.3	26.6 - 45.2	50.5	43.1 - 57.8	12.8	8.4 - 18.8	1.4	0.6 - 3.3
30-44	688	27.1	21.1 - 34.1	47.9	42.5 - 53.4	15.8	12.6 - 19.7	9.1	5.5 - 14.8
45-59	664	18.5	14.4 - 23.3	53.3	46.0 - 60.4	17.7	13.4 - 23.0	10.5	7.0 - 15.4
60-69	560	12.9	9.5 - 17.4	54.1	47.0 - 61.1	21.3	15.8 - 28.1	11.6	6.4 - 20.2
Total	2214	25.6	22.0 - 29.6	50.9	47.6 - 54.2	16.0	13.4 - 19.1	7.5	5.7 - 9.6

Table 113

Number of servings of fruit and/or vegetables on average per day									
Total									
Age Categories (Years)	n	% no fruit and/or vegetables	95% CI	% 1-2 servings	95% CI	% 3-4 servings	95% CI	% ≥5 servings	95% CI
18-29	565	31.9	27.0 - 37.3	51.1	45.8 - 56.5	13.9	10.0 - 19.1	3.0	1.8 - 5.0
30-44	1224	26.6	22.7 - 30.8	48.1	44.6 - 51.6	17.5	14.3 - 21.3	7.8	5.6 - 10.8
45-59	1235	23.6	19.4 - 28.3	48.3	42.9 - 53.7	20.5	16.9 - 24.5	7.7	5.7 - 10.3
60-69	1024	15.8	11.0 - 22.1	53.2	48.2 - 58.1	19.8	16.3 - 23.9	11.1	7.3 - 16.6
Total	4048	26.2	23.2 - 29.3	49.6	46.5 - 52.8	17.5	14.7 - 20.7	6.7	5.3 - 8.4

Table 114

Less than five servings of fruit and/or vegetables on average per day									
Male				Female			Total		
Age Categories (Years)	n	% < five servings per day	95% CI	n	% < five servings per day	95% CI	n	% < five servings per day	95% CI
18-29	263	95.4	91.6 - 97.6	302	98.6	96.7 - 99.4	565	97.0	95.0 - 98.2
30-44	536	93.5	90.4 - 95.7	688	90.9	85.2 - 94.5	1224	92.2	89.2 - 94.4
45-59	571	95.1	92.5 - 96.9	664	89.5	84.6 - 93.0	1235	92.3	89.7 - 94.3
60-69	464	89.3	84.6 - 92.7	560	88.4	79.8 - 93.6	1024	88.9	83.4 - 92.7
Total	1834	94.1	91.8 - 95.8	2214	92.5	90.4 - 94.3	4048	93.3	91.6 - 94.7

**Adding
salt at
meal**

Description: Percentage of population who always or often add salt or salty sauce to their food before eating or as they are eating

Instrument question:

D5: How often do you add salt or a salty sauce such as soya sauce to your food right before you eat it or as you are eating it?

Table 115 shows that 6.3% (CI 5.0-8.0) of persons add salt often or before eating or when eating. Of these, the prevalence of this behaviour between males 6.3% (CI 4.7-8.5) and females 6.3% (CI 4.7-8.4) was comparable.

Table 115

Add salt always or often before eating or when eating									
Age Categories (Years)	Male			Female			Total		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	262	10.5	5.9 - 18.2	302	9.5	5.8 - 15.1	564	10.0	6.7 - 14.6
30-44	538	4.6	2.6 - 7.8	688	6.2	3.8 - 9.9	1226	5.4	3.6 - 8.0
45-59	570	4.4	2.7 - 7.0	663	4.0	2.3 - 6.8	1233	4.2	2.8 - 6.1
60-69	462	4.8	2.9 - 7.9	559	3.8	1.6 - 8.9	1021	4.3	2.6 - 7.0
Total	1832	6.3	4.7 - 8.5	2212	6.3	4.7 - 8.4	4044	6.3	5.0 - 8.0

Adding salt Description: NA

when

cooking

Instrument question:

D6: How often is salt, salty seasoning or a salty sauce added in cooking or preparing foods in your household?

Table 116 shows that 65.4% (CI 61.2-69.3) of the population always or often add salt when cooking or preparing food at home. Of these, a relatively similar prevalence was observed for males 64.7 % (CI 59.9-69.3) as compared to females 66.0% (CI 61.2-70.5).

Table 116

Add salt always or often when cooking or preparing food at home									
Age Categories (Years)	Male			Female			Total		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	261	73.6	65.0 - 80.7	301	65.9	57.2 - 73.7	562	69.7	64.1 - 74.8
30-44	537	63.4	55.1 - 70.9	688	73.1	67.7 - 77.8	1225	68.2	63.5 - 72.5
45-59	567	61.0	54.5 - 67.1	663	61.1	53.2 - 68.5	1230	61.1	55.2 - 66.6
60-69	462	53.9	45.1 - 62.4	560	59.3	52.0 - 66.2	1022	56.6	49.8 - 63.2
Total	1827	64.7	59.9 - 69.3	2212	66.0	61.2 - 70.5	4039	65.4	61.2 - 69.3

Salty processed food consumption

Description: Percentage of population who always or often eat processed foods high in salt

Instrument question:

D7: How often do you eat processed food high in salt?

Table 117 shows that 24.3% (CI 21.8-26.9) of the population always or often consume processed food high in salt. Of these a relatively similar prevalence was observed for males 24.9 % (CI 21.2-29.0) as compared to females 23.6% (CI 20.4-27.2).

Table 117

Always or often consume processed food high in salt									
Male				Female			Total		
Age Categories (Years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	262	37.5	28.0 - 48.0	302	38.3	31.2 - 45.8	564	37.9	31.8 - 44.3
30-44	537	27.4	20.8 - 35.3	688	25.6	20.9 - 31.0	1225	26.5	22.9 - 30.5
45-59	570	14.3	11.0 - 18.4	663	12.1	8.4 - 17.1	1233	13.2	10.6 - 16.3
60-69	464	10.2	7.4 - 14.0	560	7.2	4.8 - 10.6	1024	8.7	6.6 - 11.3
Total	1833	24.9	21.2 - 29.0	2213	23.6	20.4 - 27.2	4046	24.3	21.8 - 26.9

Salt consumption Description: Percentage of population who think they consume far too much or too much salt

Instrument question:

D8: How much salt or salty sauce do you think you consume?

Tables 118, 119, 120, 121, 122, 123 and 124 show that 15.6% (CI 13.5-17.9) of the population think they consume far too much or too much salt. Of these, there was no difference observed between males 15.5% (CI 13.3-18.1) and females 15.6% (CI 12.8-18.9). For both sexes combined, 74.0% (CI 71.0-76.9) self-reported consuming ‘just the right amount’ of salt in their diet. While, 13.1% (CI 11.2-15.3) self-reported consuming ‘too much’ salt in their diet. 8.3% (CI 6.3-10.9) self-reported consuming ‘too little’ salt in their diet.

Table 118

Think they consume far too much or too much salt									
Male				Female			Total		
Age Categories (Years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	260	21.2	15.0 - 29.1	298	20.8	14.6 - 28.6	558	21.0	15.9 - 27.2
30-44	535	16.6	12.9 - 21.2	681	19.0	14.0 - 25.3	1216	17.8	14.5 - 21.7
45-59	558	11.5	7.6 - 16.9	652	9.0	6.3 - 12.8	1210	10.3	7.7 - 13.5
60-69	454	7.1	4.6 - 10.7	558	8.5	5.5 - 13.0	1012	7.8	5.8 - 10.5
Total	1807	15.5	13.3 - 18.1	2189	15.6	12.8 - 18.9	3996	15.6	13.5 - 17.9

Table 119

Self-reported quantity of salt consumed							
Male							
Age Categories (Years)	n	% Far too much	95% CI	% Too much	95% CI	% Just the right amount	95% CI
18-29	260	2.6	1.1 - 6.0	18.6	12.4 - 27.0	72.0	64.3 - 78.6
30-44	535	3.1	1.1 - 8.5	13.6	9.5 - 19.0	73.2	64.4 - 80.5
45-59	558	1.2	0.6 - 2.4	10.3	6.6 - 15.7	77.5	71.8 - 82.3
60-69	454	1.4	0.6 - 3.0	5.7	3.6 - 8.8	80.2	73.9 - 85.2
Total	1807	2.2	1.3 - 3.9	13.3	11.0 - 16.0	74.8	71.7 - 77.7

Table 120

Self-reported quantity of salt consumed					
Male					
Age Categories (Years)	n	% Too little	95% CI	% Far too little	95% CI
18-29	260	6.7	3.8 - 11.5	0.1	0.0 - 1.0
30-44	535	8.2	3.9 - 16.4	2.0	1.0 - 3.8
45-59	558	9.1	6.4 - 12.7	2.0	0.9 - 4.5
60-69	454	9.3	6.5 - 13.0	3.5	1.6 - 7.4
Total	1807	8.1	6.1 - 10.7	1.6	1.0 - 2.5

Table 121

Self-reported quantity of salt consumed							
Female							
Age Categories (Years)	n	% Far too much	95% CI	% Too much	95% CI	% Just the right amount	95% CI
18-29	298	2.7	1.3 - 5.2	18.1	12.5 - 25.6	69.6	59.6 - 78.0
30-44	681	4.4	1.3 - 14.0	14.6	11.6 - 18.2	71.3	65.0 - 76.8
45-59	652	1.5	0.6 - 3.4	7.6	5.3 - 10.7	77.0	71.6 - 81.6
60-69	558	1.0	0.5 - 2.1	7.6	4.6 - 12.1	79.7	73.7 - 84.6
Total	2189	2.7	1.3 - 5.4	12.9	10.5 - 15.8	73.3	69.0 - 77.2

Table 122

Self-reported quantity of salt consumed					
Female					
Age Categories (Years)	n	% Too little	95% CI	% Far too little	95% CI
18-29	298	9.2	4.0 - 19.7	0.5	0.1 - 1.8
30-44	681	7.8	5.0 - 11.9	1.9	1.0 - 3.6
45-59	652	7.7	5.2 - 11.4	6.3	3.3 - 11.6
60-69	558	10.5	6.8 - 15.8	1.3	0.6 - 2.7
Total	2189	8.5	6.0 - 12.0	2.6	1.7 - 4.1

Table 123

Self-reported quantity of salt consumed							
Total							
Age Categories (Years)	n	% Far too much	95% CI	% Too much	95% CI	% Just the right amount	95% CI
18-29	558	2.6	1.5 - 4.5	18.3	13.5 - 24.4	70.8	65.0 - 76.0
30-44	1216	3.7	1.2 - 10.9	14.1	11.4 - 17.3	72.2	67.6 - 76.5
45-59	1210	1.3	0.7 - 2.4	8.9	6.6 - 11.9	77.2	72.9 - 81.1
60-69	1012	1.2	0.6 - 2.2	6.6	4.8 - 9.2	79.9	75.6 - 83.7
Total	3996	2.5	1.3 - 4.4	13.1	11.2 - 15.3	74.0	71.0 - 76.9

Table 124

Self-reported quantity of salt consumed					
Total					
Age Categories (Years)	n	% Too little	95% CI	% Far too little	95% CI
18-29	558	7.9	4.8 - 12.7	0.3	0.1 - 1.0
30-44	1216	8.0	5.1 - 12.2	1.9	1.1 - 3.3
45-59	1210	8.4	6.4 - 10.9	4.1	2.4 - 6.8
60-69	1012	9.9	7.3 - 13.1	2.4	1.3 - 4.4
Total	3996	8.3	6.3 - 10.9	2.1	1.5 - 3.0

Lowering salt Description: Percentage of population who think lowering salt in diet is very, somewhat or not at all important

Instrument question:

D9: How important to you is lowering the salt in your diet?

Tables 125,126 and 127 show that for both sexes and across all age groups, 55.6% (CI 51.6-59.5) of the population think that lowering salt in the diet is very important, while 28.4% (CI 25.5-31.4) think that lowering salt in the diet is somewhat important and 16.0% (CI 13.2-19.2) think that it is not important at all.

Table 125

Importance of lowering salt in diet							
Male							
Age Categories (Years)	n	% Very important	95% CI	% Somewhat important	95% CI	% Not at all important	95% CI
18-29	255	37.1	30.9 - 43.7	36.9	28.7 - 46.0	26.0	17.9 - 36.2
30-44	528	51.6	43.4 - 59.8	27.6	22.4 - 33.6	20.8	15.1 - 27.8
45-59	566	59.0	53.3 - 64.4	27.7	22.9 - 33.2	13.3	9.1 - 19.0
60-69	459	73.8	67.7 - 79.1	16.6	12.9 - 21.0	9.6	6.4 - 14.2
Total	1808	51.8	47.3 - 56.2	29.2	25.4 - 33.4	19.0	14.9 - 23.9

Table 126

Importance of lowering salt in diet							
Female							
Age Categories (Years)	n	% Very important	95% CI	% Somewhat important	95% CI	% Not at all important	95% CI
18-29	297	42.2	33.3 - 51.7	40.5	32.4 - 49.1	17.3	12.5 - 23.4
30-44	683	61.4	55.2 - 67.2	24.5	20.3 - 29.4	14.1	10.8 - 18.2
45-59	657	68.9	62.1 - 74.9	20.2	15.0 - 26.5	11.0	7.8 - 15.3
60-69	552	77.9	73.7 - 81.6	18.6	15.5 - 22.2	3.5	2.1 - 5.7
Total	2189	59.5	54.9 - 63.9	27.5	23.7 - 31.7	13.0	10.8 - 15.6

Table 127

Importance of lowering salt in diet							
Total							
Age Categories (Years)	n	% Very important	95% CI	% Somewhat important	95% CI	% Not at all important	95% CI
18-29	552	39.7	33.9 - 45.7	38.7	32.9 - 44.8	21.6	16.6 - 27.7
30-44	1211	56.5	50.6 - 62.2	26.1	22.3 - 30.3	17.4	13.9 - 21.6
45-59	1223	63.9	59.8 - 67.8	24.0	20.6 - 27.7	12.2	9.5 - 15.4
60-69	1011	75.9	71.9 - 79.4	17.6	15.1 - 20.3	6.5	4.6 - 9.2
Total	3997	55.6	51.6 - 59.5	28.4	25.5 - 31.4	16.0	13.2 - 19.2

Salt knowledge Description: Percentage of population who think consuming too much salt could cause a serious health problem

Instrument question:

D10: Do you think that too much salt or salty sauce in your diet could cause a health problem?

Table 128 shows that 93.7% (CI 92.4-94.8) of the population think that consuming too much salt could cause a serious health problem. Of these, slightly more females 95.3% (CI 93.2-96.8) when compared to males 92.2% (CI 89.9-94.0) think that consuming too much salt could cause serious health problems. However, this difference between the prevalences reported for the two sexes was not found to be statistically significant.

Table 128

Think consuming too much salt could cause serious health problem									
Age Categories (Years)	Male			Female			Total		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	263	92.3	86.9 - 95.6	302	94.0	87.4 - 97.3	565	93.1	89.7 - 95.5
30-44	539	91.1	87.3 - 93.9	688	95.8	93.5 - 97.3	1227	93.4	91.3 - 95.1
45-59	571	92.5	88.7 - 95.0	664	95.5	92.7 - 97.3	1235	94.0	91.8 - 95.6
60-69	464	94.0	89.8 - 96.6	561	96.9	94.7 - 98.2	1025	95.5	92.6 - 97.2
Total	1837	92.2	89.9 - 94.0	2215	95.3	93.2 - 96.8	4052	93.7	92.4 - 94.8

Controlling salt intake Description: Percentage of population who take specific action on a regular basis to control salt intake

Instrument question:

D11a-f: Do you do any of the following on a regular basis to control your salt intake?

Tables 129,130,131,132,133 and 134 show that 71.2% (CI 67.6-74.5) of the population limit their consumption of processed foods. 36.2% (CI 33.4-39.0) of the population look at the salt or sodium content on food labels. 33.8% (CI 30.6-37.1) of the population buy low salt/sodium alternatives. 73.2% (CI 68.4-77.6) of the population use spices other than salt when cooking. 55.2% (CI 51.9-58.4) of the population avoid eating foods prepared outside of a home. 12.4% (CI 9.9-15.3) of the population do other things specifically to control their salt intake. For all the above-mentioned categories, there was no significant difference observed between males and females.

Table 129

Limit consumption of processed foods									
Male				Female			Total		
Age Categories (Years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	263	59.3	51.5 - 66.7	302	61.9	53.9 - 69.3	565	60.6	55.5 - 65.5
30-44	539	67.8	60.5 - 74.4	688	75.5	70.9 - 79.5	1227	71.6	67.3 - 75.5
45-59	571	73.9	66.8 - 79.9	664	81.2	74.3 - 86.6	1235	77.5	72.5 - 81.8
60-69	464	81.4	74.5 - 86.7	561	84.7	79.2 - 89.0	1025	83.1	77.7 - 87.3
Total	1837	68.4	63.9 - 72.7	2215	74.0	70.0 - 77.6	4052	71.2	67.6 - 74.5

Table 130

Look at the salt or sodium content on food labels									
Male				Female			Total		
Age Categories (Years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	263	26.5	19.3 - 35.1	302	27.4	20.9 - 35.1	565	27.0	21.6 - 33.0
30-44	539	35.6	27.9 - 44.2	688	42.2	37.3 - 47.2	1227	38.9	33.8 - 44.2
45-59	571	35.2	29.5 - 41.5	664	44.0	38.3 - 49.9	1235	39.6	35.1 - 44.3
60-69	464	40.5	33.6 - 47.8	561	50.5	44.2 - 56.8	1025	45.5	41.4 - 49.6
Total	1837	33.3	29.7 - 37.1	2215	39.1	35.8 - 42.6	4052	36.2	33.4 - 39.0

Table 131

Buy low salt/sodium alternatives									
Male				Female			Total		
Age Categories (Years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	263	18.4	12.5 - 26.1	302	21.0	15.3 - 28.0	565	19.7	15.3 - 24.8
30-44	539	37.6	30.0 - 45.9	688	38.6	33.5 - 43.8	1227	38.1	33.2 - 43.2
45-59	571	38.9	32.3 - 45.9	664	43.7	38.3 - 49.3	1235	41.3	36.6 - 46.2
60-69	464	36.2	29.7 - 43.2	561	47.5	41.7 - 53.5	1025	41.8	36.7 - 47.1
Total	1837	32.0	27.7 - 36.7	2215	35.6	32.0 - 39.5	4052	33.8	30.6 - 37.1

Table 132

Use spices other than salt when cooking									
Male				Female			Total		
Age Categories (Years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	263	65.2	56.5 - 72.9	302	76.5	69.2 - 82.4	565	70.8	64.8 - 76.1
30-44	539	69.9	61.8 - 77.0	688	80.3	74.4 - 85.1	1227	75.1	68.8 - 80.4
45-59	571	70.8	63.8 - 77.0	664	76.4	69.4 - 82.2	1235	73.6	67.8 - 78.6
60-69	464	69.4	62.5 - 75.5	561	78.4	72.9 - 83.0	1025	73.9	68.8 - 78.3
Total	1837	68.7	62.6 - 74.2	2215	77.8	73.3 - 81.8	4052	73.2	68.4 - 77.6

Table 133

Avoid eating foods prepared outside of a home									
Male				Female			Total		
Age Categories (Years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	263	39.1	32.6 - 45.9	302	42.6	35.4 - 50.3	565	40.8	35.7 - 46.2
30-44	539	51.1	44.9 - 57.4	688	58.7	52.6 - 64.4	1227	54.9	50.5 - 59.1
45-59	571	60.9	55.2 - 66.3	664	65.0	58.2 - 71.3	1235	62.9	58.6 - 67.1
60-69	464	70.9	63.6 - 77.2	561	81.0	75.0 - 85.8	1025	75.9	70.3 - 80.7
Total	1837	52.4	48.7 - 56.1	2215	58.0	53.7 - 62.3	4052	55.2	51.9 - 58.4

Table 134

Do other things specifically to control your salt intake									
Male				Female			Total		
Age Categories (Years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	263	10.2	5.8 - 17.3	302	10.2	6.8 - 15.2	565	10.2	6.9 - 14.9
30-44	539	11.5	7.7 - 16.8	688	11.9	8.4 - 16.6	1227	11.7	8.5 - 15.9
45-59	571	14.0	9.5 - 20.1	664	16.5	13.0 - 20.8	1235	15.2	12.0 - 19.1
60-69	464	12.1	8.1 - 17.7	561	13.4	9.6 - 18.6	1025	12.8	9.6 - 16.8
Total	1837	11.9	9.0 - 15.4	2215	12.9	10.2 - 16.1	4052	12.4	9.9 - 15.3

Physical Activity

Not meeting WHO recommendations on physical activity for health (“Insufficient physical activity”)

Description: Percentage of population not meeting WHO recommendations on physical activity for health (population doing less than 150 minutes of moderate-intensity physical activity per week, or equivalent)

Instrument question:

P1 - P15b: activity at work, travel to and from places, and recreational activities

Table 135 shows that approximately one quarter 25.3% (CI 22.0-29.1) of the population did not meet the WHO’s minimum recommendation for physical activity to maintain health. Almost double the amount of females 34.1% (CI 29.4-39.0) as compared to males 16.6% (CI 13.7-19.8) were reported to have insufficient levels of physical activity. The least amount of physical activity was recorded in the eldest age group of 60-69years for both sexes combined.

Table 135

Not meeting WHO recommendations on physical activity for health									
Male				Female			Total		
Age Categories (Years)	n	% not meeting recs	95% CI	n	% not meeting recs	95% CI	n	% not meeting recs	95% CI
18-29	255	11.5	7.1 - 18.0	299	36.9	28.8 - 45.9	554	24.4	18.9 - 30.8
30-44	513	12.9	9.7 - 17.1	679	31.3	25.6 - 37.7	1192	22.2	18.7 - 26.0
45-59	559	18.7	14.4 - 24.0	661	34.1	27.2 - 41.7	1220	26.4	21.5 - 32.1
60-69	463	34.3	25.9 - 43.9	555	33.6	27.8 - 40.0	1018	34.0	29.0 - 39.4
Total	1790	16.6	13.7 - 19.8	2194	34.1	29.4 - 39.0	3984	25.3	22.0 - 29.1

Levels of total physical activity according to former recommendations

Description: Percentage of population classified into three categories of total physical activity according to aforementioned WHO recommendations

Instrument question:

P1 - P15b: activity at work, travel to and from places, and recreational activities

Tables 136, 137 and 138 show that for both sexes combined, across all age groups, 45.4% (CI 40.9-49.9) of the population engage in High total levels of physical activity according to the WHO recommendations. While, 19.5% (CI 17.5-21.7) engage in Moderate total levels of physical activity. Whereas, 35.1% (CI 31.0-39.4) of the population engage in Low total levels of physical activity according to WHO recommendations. The majority of females i.e. 43.5% (CI 38.5-48.6) engage in Low levels of physical activity as opposed to males where 56.6% (CI 51.9-61.1) engage in High levels of physical activity.

Table 136

Level of total physical activity according to former recommendations							
Male							
Age Categories (Years)	n	% Low	95% CI	% Moderate	95% CI	% High	95% CI
18-29	255	21.7	14.3 - 31.6	14.3	9.4 - 21.1	64.0	53.4 - 73.5
30-44	513	23.8	18.4 - 30.3	13.1	9.7 - 17.3	63.1	56.9 - 68.9
45-59	559	27.6	21.9 - 34.1	21.7	17.0 - 27.3	50.7	43.4 - 57.9
60-69	463	45.4	36.7 - 54.3	21.1	15.9 - 27.5	33.5	26.7 - 41.1
Total	1790	26.7	22.8 - 31.0	16.8	14.0 - 19.9	56.6	51.9 - 61.1

Table 137

Level of total physical activity according to former recommendations							
Female							
Age Categories (Years)	n	% Low	95% CI	% Moderate	95% CI	% High	95% CI
18-29	299	46.8	37.7 - 56.2	21.9	16.3 - 28.7	31.3	23.5 - 40.3
30-44	679	40.2	33.4 - 47.4	22.6	17.4 - 28.8	37.3	31.9 - 42.9
45-59	661	43.5	36.9 - 50.4	21.1	16.9 - 26.1	35.3	29.6 - 41.5
60-69	555	43.1	36.0 - 50.5	25.7	20.3 - 31.9	31.2	24.1 - 39.3
Total	2194	43.5	38.5 - 48.6	22.3	19.7 - 25.1	34.2	29.3 - 39.6

Table 138

Level of total physical activity according to former recommendations							
Total							
Age Categories (Years)	n	% Low	95% CI	% Moderate	95% CI	% High	95% CI
18-29	554	34.4	27.7 - 41.8	18.1	14.2 - 22.8	47.5	39.6 - 55.5
30-44	1192	32.0	27.7 - 36.6	17.8	14.7 - 21.4	50.1	45.5 - 54.8
45-59	1220	35.6	30.3 - 41.3	21.4	17.8 - 25.6	42.9	37.7 - 48.4
60-69	1018	44.3	38.4 - 50.3	23.4	19.6 - 27.6	32.4	26.4 - 39.0
Total	3984	35.1	31.0 - 39.4	19.5	17.5 - 21.7	45.4	40.9 - 49.9

Total physical activity- mean Description: Mean minutes of total physical activity on average per day

Instrument question:
P1 - P15b: activity at work, travel to and from places, and recreational activities

Table 139 shows the mean minutes of total physical activity per day (i.e. activity: at work, travel to and from places, and recreational activities) among the population was found to be 181.2 minutes (CI 165.5-196.8) among the total population. A mean of 232.1 minutes (CI 215.4-248.8) was observed among males and a mean of 130.7 minutes (CI 112.8-148.6) was observed among females. Males in the 30-44 age group spent the most amount of time on physical activity per day with a mean of 286.0 minutes (CI 258.6-313.4) whereas for females, the 45-59 age group were the most active i.e. 147.4 minutes (CI 120.4-174.4). As expected, the eldest (60-69) group spent the least amount of time per day engaging in physical activity for both sexes.

Table 139

Mean minutes of total physical activity on average per day									
Male				Female			Total		
Age Categories (Years)	n	Mean minutes	95% CI	n	Mean minutes	95% CI	n	Mean minutes	95% CI
18-29	255	242.0	206.3 - 277.6	299	115.0	89.0 - 140.9	554	177.8	150.3 - 205.3
30-44	513	286.0	258.6 - 313.4	679	140.1	118.3 - 162.0	1192	212.8	195.9 - 229.7
45-59	559	211.1	183.0 - 239.2	661	147.4	120.4 - 174.4	1220	179.1	156.1 - 202.1
60-69	463	111.7	90.4 - 133.0	555	105.1	84.2 - 126.0	1018	108.5	91.5 - 125.4
Total	1790	232.1	215.4 - 248.8	2194	130.7	112.8 - 148.6	3984	181.2	165.5 - 196.8

Total physical activity-median Description: Median minutes of total physical activity on average per day

Instrument question:
P1 - P15b: activity at work, travel to and from places, and recreational activities

As depicted in **Table 140**, the median minutes of total physical activity on average per day was found to be 102.9 minutes (IQR 17.9-296.0). Males were reported to have a median amount of 162.9 minutes (IQR 39.3-368.6), which was almost triple that of females who were reported to have a median amount of 55.7 minutes (IQR 8.6-200.0).

Table 140

Median minutes of total physical activity on average per day									
Male				Female			Total		
Age Categories (Years)	n	Median minutes	Inter-quartile range	n	Median minutes	Inter-quartile range	n	Median minutes	Inter-quartile range
18-29	255	171.4	60.0 - 358.6	299	51.4	4.3 - 171.4	554	115.7	21.4 - 291.4
30-44	513	240.0	60.0 - 435.0	679	64.3	10.0 - 210.0	1192	132.9	25.7 - 350.0
45-59	559	145.7	29.3 - 355.7	661	51.4	8.6 - 257.1	1220	92.1	17.1 - 302.1
60-69	463	51.4	9.9 - 145.7	555	51.4	5.7 - 158.6	1018	51.4	8.6 - 150.0
Total	1790	162.9	39.3 - 368.6	2194	55.7	8.6 - 200.0	3984	102.9	17.9 - 296.0

**Domain-specific
physical activity-
mean**

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

Instrument question:

P1 - P15b: activity at work, travel to and from places, and recreational activities

Tables 141, 142 and 143 show the mean minutes of work related, transport related and recreation related physical activity on average per day. The results show that the mean amount of minutes spent on work related physical activity per day was 130.5 minutes (CI 117.1-143.8) with 167.5(CI 151.7-183.4) for males and 93.7minutes (CI 78.5-108.9) for females. Males were found to be most active at work related activities when compared to females, with the most active age groups being 30-44 years and 45-59 years respectively. The mean number of minutes of transport related physical activity was 27.0 minutes (CI 23.2-30.7) and the mean number of minutes spent in recreation related activity was 23.8 minutes (CI 21.3-26.2). On average, males [32.2 minutes (CI 28.5-36.0)] spent approximately double the amount of time on recreational physical activities than females [15.4 minutes (CI 12.9-17.8)].

Table 141

Mean minutes of work-related physical activity on average per day									
Male				Female			Total		
Age Categories (Years)	n	Mean minutes	95% CI	n	Mean minutes	95% CI	n	Mean minutes	95% CI
18-29	255	154.0	120.2 - 187.8	299	76.6	55.8 - 97.3	554	114.9	91.2 - 138.6
30-44	513	223.0	198.1 - 247.9	679	104.3	85.5 - 123.2	1192	163.4	147.3 - 179.6
45-59	559	158.5	133.6 - 183.4	661	108.6	83.1 - 134.0	1220	133.4	112.9 - 153.8
60-69	463	76.0	58.0 - 94.1	555	73.3	54.2 - 92.3	1018	74.7	60.0 - 89.3
Total	1790	167.5	151.7 - 183.4	2194	93.7	78.5 - 108.9	3984	130.5	117.1 - 143.8

Table 142

Mean minutes of transport-related physical activity on average per day									
Male				Female			Total		
Age Categories (Years)	n	Mean minutes	95% CI	n	Mean minutes	95% CI	n	Mean minutes	95% CI
18-29	255	38.6	26.6 - 50.7	299	23.0	16.1 - 29.9	554	30.7	23.0 - 38.5
30-44	513	28.8	20.3 - 37.3	679	18.7	14.0 - 23.3	1192	23.7	19.8 - 27.6
45-59	559	32.9	26.0 - 39.9	661	25.0	19.9 - 30.1	1220	28.9	24.5 - 33.3
60-69	463	23.5	17.7 - 29.2	555	17.8	12.9 - 22.7	1018	20.7	16.3 - 25.1
Total	1790	32.3	27.0 - 37.6	2194	21.7	17.9 - 25.4	3984	27.0	23.2 - 30.7

Table 143

Mean minutes of recreation-related physical activity on average per day									
Male				Female			Total		
Age Categories (Years)	n	Mean minutes	95% CI	n	Mean minutes	95% CI	n	Mean minutes	95% CI
18-29	255	49.3	39.6 - 59.0	299	15.4	10.6 - 20.2	554	32.2	26.5 - 37.9
30-44	513	34.3	25.1 - 43.4	679	17.1	13.1 - 21.2	1192	25.7	21.5 - 29.9
45-59	559	19.7	16.3 - 23.1	661	13.9	10.4 - 17.3	1220	16.8	13.9 - 19.6
60-69	463	12.2	9.5 - 15.0	555	14.0	10.3 - 17.7	1018	13.1	10.9 - 15.3
Total	1790	32.2	28.5 - 36.0	2194	15.4	12.9 - 17.8	3984	23.8	21.3 - 26.2

**Domain-specific
physical activity-
median**

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

Instrument question:

P1 - P15b: activity at work, travel to and from places, and recreational activities

Tables 144, 145 and 146 show the median amount of minutes spent on physical activity based on daily activities. The median amount of minutes spent on work related physical activity was 25.7minutes (IQR 0.0-214.3) whereas the median amount of minutes spent on transport related activity and recreation related physical activity was 0.0(IQR 0.0-25.7) and 0.0(IQR 0.0-34.3) respectively for both sexes combined, across all age groups.

Table 144

Median minutes of work-related physical activity on average per day									
Male				Female			Total		
Age Categories (Years)	n	Median minutes	Inter-quartile range	n	Median minutes	Inter-quartile range	n	Median minutes	Inter-quartile range
18-29	255	85.7	0.0 - 257.1	299	0.0	0.0 - 120.0	554	12.9	0.0 - 192.9
30-44	513	171.4	0.0 - 360.0	679	8.6	0.0 - 171.4	1192	60.0	0.0 - 274.3
45-59	559	64.3	0.0 - 278.6	661	0.0	0.0 - 180.0	1220	25.7	0.0 - 257.1
60-69	463	0.0	0.0 - 102.9	555	0.0	0.0 - 102.9	1018	0.0	0.0 - 102.9
Total	1790	77.1	0.0 - 300.0	2194	0.0	0.0 - 137.1	3984	25.7	0.0 - 214.3

Table 145

Median minutes of transport-related physical activity on average per day									
Male				Female			Total		
Age Categories (Years)	n	Median minutes	Inter-quartile range	n	Median minutes	Inter-quartile range	n	Median minutes	Inter-quartile range
18-29	255	8.6	0.0 - 51.4	299	2.9	0.0 - 25.7	554	5.7	0.0 - 34.3
30-44	513	0.0	0.0 - 25.7	679	0.0	0.0 - 17.1	1192	0.0	0.0 - 20.0
45-59	559	0.0	0.0 - 32.1	661	0.0	0.0 - 25.0	1220	0.0	0.0 - 28.6
60-69	463	0.0	0.0 - 25.7	555	0.0	0.0 - 17.1	1018	0.0	0.0 - 20.0
Total	1790	0.0	0.0 - 34.3	2194	0.0	0.0 - 21.4	3984	0.0	0.0 - 25.7

Table 146

Median minutes of recreation-related physical activity on average per day									
Male				Female			Total		
Age Categories (Years)	n	Median minutes	Inter-quartile range	n	Median minutes	Inter-quartile range	n	Median minutes	Inter-quartile range
18-29	255	32.1	0.0 - 68.6	299	0.0	0.0 - 17.1	554	0.0	0.0 - 42.9
30-44	513	8.6	0.0 - 42.9	679	0.0	0.0 - 25.7	1192	0.0	0.0 - 34.3
45-59	559	0.0	0.0 - 25.7	661	0.0	0.0 - 14.3	1220	0.0	0.0 - 21.4
60-69	463	0.0	0.0 - 14.3	555	0.0	0.0 - 17.1	1018	0.0	0.0 - 17.1
Total	1790	8.6	0.0 - 40.7	2194	0.0	0.0 - 17.1	3984	0.0	0.0 - 34.3

No physical activity by domain

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

Instrument question:

P1 - P15b: activity at work, travel to and from places, and recreational activities

Tables 147, 148 and 149 show the results obtained for the population who were classified as having no work-, transport- and recreational- related physical activity. 44.5% (CI 40.3-48.7) reported no work-related activity, 51.5% (CI 47.1-55.8) reported no transport related activity and 55.4% (CI 52.0-58.8) reported no recreation related physical activity. In all three categories, females were less physically active than males. 63.5% (CI 59.4-67.5) of females did not participate in recreational physical activity.

Table 147

No work-related physical activity									
Male				Female			Total		
Age Categories (Years)	n	% no activity	95% CI	n	% no activity	95% CI	n	% no activity	95% CI
18-29	255	36.2	26.3 - 47.4	299	57.3	47.9 - 66.2	554	46.9	38.9 - 54.9
30-44	513	26.9	21.1 - 33.6	679	48.5	42.7 - 54.4	1192	37.8	33.4 - 42.3
45-59	559	38.5	33.0 - 44.3	661	51.9	45.3 - 58.4	1220	45.2	40.5 - 50.0
60-69	463	55.3	46.3 - 63.9	555	53.5	45.8 - 61.1	1018	54.4	47.6 - 61.0
Total	1790	36.2	31.7 - 40.8	2194	52.7	47.1 - 58.2	3984	44.5	40.3 - 48.7

Table 148

No transport-related physical activity									
Male				Female			Total		
Age Categories (Years)	n	% no activity	95% CI	n	% no activity	95% CI	n	% no activity	95% CI
18-29	255	41.1	29.6 - 53.7	299	47.1	37.3 - 57.1	554	44.2	35.4 - 53.3
30-44	513	57.9	49.8 - 65.6	679	56.3	49.4 - 62.9	1192	57.1	51.8 - 62.2
45-59	559	51.6	46.1 - 57.1	661	52.9	46.7 - 59.1	1220	52.3	47.7 - 56.8
60-69	463	53.7	47.0 - 60.2	555	54.3	47.8 - 60.6	1018	54.0	49.2 - 58.7
Total	1790	50.6	45.0 - 56.2	2194	52.3	47.0 - 57.6	3984	51.5	47.1 - 55.8

Table 149

No recreation-related physical activity									
Age Categories (Years)	Male			Female			Total		
	n	% no activity	95% CI	n	% no activity	95% CI	n	% no activity	95% CI
18-29	255	34.2	26.9 - 42.3	299	68.2	60.4 - 75.1	554	51.4	45.4 - 57.3
30-44	513	45.9	40.3 - 51.6	679	58.0	50.3 - 65.3	1192	51.9	47.7 - 56.1
45-59	559	55.9	49.3 - 62.3	661	65.3	58.9 - 71.1	1220	60.6	55.8 - 65.2
60-69	463	63.7	54.6 - 71.8	555	61.5	54.5 - 68.1	1018	62.6	55.7 - 69.1
Total	1790	47.2	43.3 - 51.1	2194	63.5	59.4 - 67.5	3984	55.4	52.0 - 58.8

Composition of total physical activity

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

Instrument question:

P1 - P15b: activity at work, travel to and from places, and recreational activities

Tables 150, 151 and 152 show that for men, the largest percentage of physical activity was due to work 55.1% (CI 51.4-58.7) followed by leisure 22.7% (CI 20.0-25.4) and transport 22.2% (CI 19.1-25.4). The highest level of physical activity reported for women was due to activity from work 48.5% (CI 43.8-53.2) followed by activity for transport 29.7% (CI 26.1-33.3) and lastly, activity during leisure time 21.8% (CI 18.9-24.6).

Table 150

Composition of total physical activity							
Male							
Age Categories (Years)	n	Activity from work	95% CI	Activity for transport	95% CI	Activity during leisure time	95% CI
18-29	235	47.0	38.4 - 55.6	26.4	18.7 - 34.0	26.6	21.1 - 32.2
30-44	468	66.5	60.6 - 72.3	13.5	9.8 - 17.2	20.1	15.9 - 24.3
45-59	481	55.8	50.9 - 60.7	23.7	20.3 - 27.1	20.5	15.6 - 25.5
60-69	366	43.2	35.2 - 51.3	32.3	26.3 - 38.3	24.5	17.5 - 31.4
Total	1550	55.1	51.4 - 58.7	22.2	19.1 - 25.4	22.7	20.0 - 25.4

Table 151

Composition of total physical activity							
Female							
Age Categories (Years)	n	Activity from work	95% CI	Activity for transport	95% CI	Activity during leisure time	95% CI
18-29	250	43.8	35.7 - 51.9	35.1	27.3 - 42.8	21.1	16.0 - 26.3
30-44	540	52.7	47.3 - 58.1	24.8	20.1 - 29.5	22.5	18.2 - 26.9
45-59	527	49.2	42.2 - 56.2	29.5	23.7 - 35.3	21.3	16.2 - 26.5
60-69	420	48.0	40.3 - 55.7	29.6	23.5 - 35.7	22.4	16.0 - 28.7
Total	1737	48.5	43.8 - 53.2	29.7	26.1 - 33.3	21.8	18.9 - 24.6

Table 152

Composition of total physical activity							
Total							
Age Categories (Years)	n	Activity from work	95% CI	Activity for transport	95% CI	Activity during leisure time	95% CI
18-29	485	45.5	39.1 - 52.0	30.4	24.4 - 36.3	24.1	20.6 - 27.6
30-44	1008	60.1	56.1 - 64.0	18.7	15.8 - 21.6	21.2	18.2 - 24.2
45-59	1008	52.6	48.2 - 57.1	26.5	23.0 - 29.9	20.9	17.3 - 24.5
60-69	786	45.5	39.0 - 52.0	31.0	26.5 - 35.5	23.5	17.7 - 29.2
Total	3287	52.0	48.9 - 55.1	25.7	23.1 - 28.4	22.3	20.1 - 24.4

**No vigorous
physical
activity**

Description: Percentage of population not engaging in vigorous physical activity

Instrument question:

P1 - P15b: activity at work, travel to and from places, and recreational activities

Results displayed in **Table 153** show that 70.8% of the population do not engage in vigorous physical activity. A higher proportion of females 89.5% (CI 87.1-91.5) had no vigorous activity, as compared to males 52.0% (48.2-55.8).

Table 153

No vigorous physical activity															
		Male					Female						Total		
Age Categories (Years)	n	% no vigorous activity	95% CI				n	% no vigorous activity	95% CI				n	% no vigorous activity	95% CI
18-29	255	42.9	33.6 - 52.7				299	88.8	81.9 - 93.3				554	66.1	59.0 - 72.6
30-44	513	41.2	35.4 - 47.2				679	86.9	82.4 - 90.4				1192	64.1	60.8 - 67.3
45-59	559	60.8	53.7 - 67.4				661	90.2	84.7 - 93.9				1220	75.6	71.2 - 79.5
60-69	463	83.7	79.1 - 87.4				555	97.0	94.6 - 98.4				1018	90.2	87.6 - 92.4
Total	1790	52.0	48.2 - 55.8				2194	89.5	87.1 - 91.5				3984	70.8	68.1 - 73.4

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

Instrument question:

P16a-b: How much time do you usually spend sitting or reclining on a typical day?

Table 154 shows that the mean number of minutes spent in sedentary activities on a typical day was 280.9 minutes (CI 267.1-294.8). There was no significant difference in the mean minutes spent on sedentary activities per day for males 279.6 (CI 261.0-298.3) as compared to females 282.2(CI 266.5-298.0). For both sexes, the youngest age group (18-29 years) was found to be the most sedentary 317.4 (CI 290.8-343.9).

Table 154

Minutes spent in sedentary activities on average per day									
Male				Female			Total		
Age Categories (Years)	n	Mean minutes	95% CI	n	Mean minutes	95% CI	n	Mean minutes	95% CI
18-29	261	312.9	272.6 - 353.3	302	321.8	293.0 - 350.5	563	317.4	290.8 - 343.9
30-44	536	240.3	215.7 - 265.0	686	267.6	246.4 - 288.8	1222	253.8	235.3 - 272.3
45-59	571	279.8	258.3 - 301.3	662	257.4	236.0 - 278.7	1233	268.7	251.6 - 285.8
60-69	464	299.2	281.6 - 316.7	556	276.5	258.1 - 294.9	1020	287.9	274.4 - 301.4
Total	1832	279.6	261.0 - 298.3	2206	282.2	266.5 - 298.0	4038	280.9	267.1 - 294.8

History of Raised Blood Pressure

Blood pressure measurement and diagnosis

Description: Blood pressure measurement and diagnosis among all population

Instrument question:

H1: Have you ever had your blood pressure measured by a doctor or other health worker?

H2a: Have you ever been told by a doctor or other health worker that you have raised blood pressure or hypertension?

H2b: Have you been told in the past 12 months?

Tables 155, 156 and 157 show blood pressure measurement and diagnosis. According to the data presented, 6.3% (CI 5.2-7.7) of the population was diagnosed with raised blood pressure within the past 12 months with 5.7% of males (CI 4.3-7.4) and 7.0% of females (CI 5.4-9.0). 16.6% (CI 14.3-19.3) of the population was diagnosed with raised blood pressure but not within the past 12 months with 15.6% (CI 12.7-19.1) of males and 17.6% (CI 15.2-20.3) of females. The prevalence of persons who were measured but not diagnosed was 67.9% (CI 65.1-70.7) and the prevalence of those who never had their blood pressure taken was 9.1% (CI 7.7-10.9). Overall, females had higher rates of diagnosed high blood pressure than males which aligned with the results which showed that there was approximately a three-fold greater prevalence among males 13.1% (CI 10.5-16.3) who were never measured for blood pressure as compared to females 5.2% (CI 3.7-7.2). Of the total population, the prevalence of persons diagnosed with high blood pressure appeared to generally increase with increasing age.

Table 155

Blood pressure measurement and diagnosis									
Male									
Age Categories (Years)	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	263	27.6	20.0 - 36.7	62.3	52.1 - 71.5	8.3	3.2 - 20.0	1.8	0.7 - 4.9
30-44	539	8.5	5.0 - 14.3	76.4	69.1 - 82.4	10.8	7.1 - 16.2	4.3	2.3 - 7.6
45-59	571	6.4	4.0 - 9.9	63.2	57.0 - 69.0	20.4	16.5 - 24.9	10.0	6.4 - 15.3
60-69	464	3.2	1.9 - 5.3	50.7	45.2 - 56.1	37.0	31.6 - 42.8	9.1	6.1 - 13.3
Total	1837	13.1	10.5 - 16.3	65.6	61.5 - 69.5	15.6	12.7 - 19.1	5.7	4.3 - 7.4

Table 156

Blood pressure measurement and diagnosis									
Female									
Age Categories (Years)	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	302	11.8	7.4 - 18.3	81.6	74.9 - 86.8	3.8	1.6 - 8.6	2.7	1.3 - 5.6
30-44	688	3.1	2.1 - 4.6	78.8	73.6 - 83.2	11.3	8.5 - 14.8	6.8	4.5 - 10.2
45-59	664	1.9	0.8 - 4.4	59.0	52.0 - 65.6	29.1	22.9 - 36.1	10.0	6.7 - 14.8
60-69	561	0.6	0.3 - 1.4	43.8	38.4 - 49.4	44.3	38.6 - 50.2	11.2	8.1 - 15.3
Total	2215	5.2	3.7 - 7.2	70.3	67.2 - 73.1	17.6	15.2 - 20.3	7.0	5.4 - 9.0

Table 157

Blood pressure measurement and diagnosis									
Total									
Age Categories (Years)	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	565	19.7	15.7 - 24.5	71.9	67.2 - 76.2	6.1	3.2 - 11.3	2.3	1.2 - 4.4
30-44	1227	5.9	3.9 - 8.8	77.6	73.6 - 81.1	11.1	8.7 - 14.0	5.5	4.1 - 7.4
45-59	1235	4.2	2.8 - 6.2	61.1	56.6 - 65.5	24.7	20.9 - 28.9	10.0	7.7 - 13.0
60-69	1025	1.9	1.3 - 2.9	47.3	43.3 - 51.2	40.7	36.4 - 45.1	10.1	7.6 - 13.4
Total	4052	9.1	7.7 - 10.9	67.9	65.1 - 70.7	16.6	14.3 - 19.3	6.3	5.2 - 7.7

Blood pressure treatment among those diagnosed

Description: Raised blood pressure treatment results among those previously diagnosed with raised blood pressure

Instrument question:

H1: Have you ever had your blood pressure measured by a doctor or other health worker?

H2a: Have you ever been told by a doctor or other health worker that you have raised blood pressure or hypertension?

H3: In the past two weeks, have you taken any drugs (medication) for raised blood pressure prescribed by a doctor or other health worker?

Table 158 shows that approximately half of the diagnosed population, 49.1% (CI 44.3-53.9) were currently taking medication for raised blood pressure prescribed by a doctor or health worker. A higher proportion of females 57.9% (CI 52.1-63.6) were on medication as compared to males 39.0% (CI 32.7-45.6). The eldest age group (60-69 years) had the highest proportion of diagnosed persons taking medication.

Table 158

Currently taking drugs (medication) for raised blood pressure prescribed by doctor or health worker among those diagnosed									
Male				Female			Total		
Age Categories (Years)	n	% taking meds	95% CI	n	% taking meds	95% CI	n	% taking meds	95% CI
18-29	19	-	-	19	-	-	38	-	-
30-44	75	17.9	11.2 - 27.5	135	35.8	23.1 - 50.9	210	27.6	18.8 - 38.5
45-59	180	41.8	30.9 - 53.5	254	64.6	53.7 - 74.1	434	54.5	46.9 - 61.9
60-69	187	75.9	67.2 - 82.9	299	76.7	67.7 - 83.8	486	76.3	69.6 - 81.9
Total	461	39.0	32.7 - 45.6	707	57.9	52.1 - 63.6	1168	49.1	44.3 - 53.9

**Blood pressure
advice by a
traditional healer**

Description: Percentage of population who have sought advice or received treatment from a traditional healer for raised blood pressure among those previously diagnosed with raised blood pressure

Instrument question:

H1: Have you ever had your blood pressure measured by a doctor or other health worker?

H2a: Have you ever been told by a doctor or other health worker that you have raised blood pressure or hypertension?

H4: Have you ever seen a traditional healer for raised blood pressure?

H5: Are you currently taking any herbal or traditional remedy for your high blood pressure?

Tables 159 and 160 show that 3.1% (CI 2.1-4.4) of those previously diagnosed had seen or received treatment from a traditional healer for high blood pressure and 7.8% (CI 5.3-11.2) of those previously diagnosed were currently taking herbal or traditional remedies for raised blood pressure. According to the results, more females as compared to males have seen a traditional healer and are currently on herbal/traditional remedies for raised blood pressure i.e. 3.3% (CI 2.1-5.2) and 9.1% (CI 5.2-15.6) of females and 2.8% (CI 1.6-4.8) and 6.2% (CI 4.0-9.3) of males, respectively. Among the previously diagnosed population, the 45-59 age group accounted for the majority of persons who saw a traditional healer whereas the 30-44 age group accounted for the majority of persons who were currently taking herbal or traditional remedies.

Table 159

Seen a traditional healer among those previously diagnosed									
Male				Female			Total		
Age Categories (Years)	n	% seen trad. Healer	95% CI	n	% seen trad. Healer	95% CI	n	% seen trad. Healer	95% CI
18-29	19	-	-	19	-	-	38	-	-
30-44	75	0.0	0.0 - 0.0	135	3.7	1.1 - 11.5	210	2.0	0.7 - 5.8
45-59	180	4.8	2.4 - 9.4	254	3.3	1.7 - 6.3	434	4.0	2.6 - 6.2
60-69	187	3.5	1.3 - 9.0	299	4.1	2.3 - 7.4	486	3.8	2.2 - 6.7
Total	461	2.8	1.6 - 4.8	707	3.3	2.1 - 5.2	1168	3.1	2.1 - 4.4

Table 160

Currently taking herbal or traditional remedy for raised blood pressure among those previously diagnosed									
Male				Female			Total		
Age Categories (Years)	n	% taking trad. meds	95% CI	n	% taking trad. meds	95% CI	n	% taking trad. meds	95% CI
18-29	19	-	-	19	-	-	38	-	-
30-44	75	4.0	1.1 - 13.1	135	15.6	6.6 - 32.5	210	10.3	4.5 - 21.7
45-59	180	7.9	4.7 - 12.9	254	8.2	4.5 - 14.3	434	8.0	5.5 - 11.6
60-69	187	6.9	3.3 - 13.9	299	8.0	4.7 - 13.2	486	7.5	4.8 - 11.3
Total	461	6.2	4.0 - 9.3	707	9.1	5.2 - 15.6	1168	7.8	5.3 - 11.2

History of Diabetes

Blood sugar measurement and diagnosis

Description: Blood sugar measurement and diagnosis among all population

Instrument question:

H6: Have you ever had your blood sugar measured by a doctor or other health worker?

H7a: Have you ever been told by a doctor or other health worker that you have raised blood sugar or diabetes?

H7b: Have you been told in the past 12 months?

Tables 161, 162 and 163 show that 2.5% (CI 1.9-3.2) of the population was diagnosed with raised blood sugar within the past 12 months [1.6% (CI 1.1-2.4) of males and 3.3% (CI 2.4-4.6) of females] and 8.5% (CI 7.3-10.0) of the population was diagnosed but not within the past 12 months [8.0% (CI 6.3-10.2) of males and 9.0% (CI 7.7-10.5) of females]. Approximately two thirds 67.6% (CI 65.0-70.1) of persons were measured but not diagnosed and approximately one fifth 21.4% (CI 18.9-24.2) never had their blood sugar measured. Overall, females had higher rates of diagnosed raised blood sugar in comparison to males, however, almost twice as many males 27.9% (CI 24.5-31.7) were never measured for raised blood sugar when compared to females 14.9% (CI 12.0-18.3). In general, the prevalence of persons diagnosed with high blood sugar appeared to increase with increasing age.

Table 161

Blood sugar measurement and diagnosis									
Male									
Age Categories (Years)	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	263	47.6	39.2 - 56.2	50.3	41.3 - 59.4	1.8	0.6 - 5.7	0.2	0.0 - 1.3
30-44	539	24.6	19.4 - 30.6	70.0	64.2 - 75.2	4.5	2.6 - 7.7	1.0	0.4 - 2.4
45-59	571	17.5	13.0 - 23.3	66.8	61.8 - 71.5	12.5	8.7 - 17.6	3.2	1.7 - 5.8
60-69	464	9.8	7.3 - 13.1	63.0	56.0 - 69.6	23.8	17.5 - 31.7	3.3	1.8 - 5.8
Total	1837	27.9	24.5 - 31.7	62.4	58.6 - 66.1	8.0	6.3 - 10.2	1.6	1.1 - 2.4

Table 162

Blood sugar measurement and diagnosis									
Female									
Age Categories (Years)	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	302	27.1	20.1 - 35.6	71.0	62.7 - 78.2	0.8	0.2 - 3.2	1.1	0.4 - 2.9
30-44	688	10.3	8.1 - 12.9	80.6	76.0 - 84.4	6.1	4.0 - 9.4	3.0	1.3 - 6.9
45-59	664	9.8	6.6 - 14.3	71.3	66.4 - 75.7	14.6	11.6 - 18.2	4.3	2.8 - 6.6
60-69	561	6.5	4.2 - 10.0	60.3	52.8 - 67.3	25.5	20.5 - 31.2	7.7	4.0 - 14.6
Total	2215	14.9	12.0 - 18.3	72.8	69.2 - 76.1	9.0	7.7 - 10.5	3.3	2.4 - 4.6

Table 163

Blood sugar measurement and diagnosis									
Total									
Age Categories (Years)	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	565	37.4	31.6 - 43.7	60.7	54.2 - 66.8	1.3	0.5 - 3.6	0.6	0.3 - 1.5
30-44	1227	17.5	14.6 - 20.9	75.2	71.6 - 78.5	5.3	3.8 - 7.3	2.0	1.0 - 3.9
45-59	1235	13.7	10.8 - 17.3	69.0	65.3 - 72.5	13.5	10.8 - 16.8	3.7	2.6 - 5.4
60-69	1025	8.2	6.4 - 10.4	61.7	57.2 - 65.9	24.7	20.4 - 29.4	5.5	3.3 - 9.0
Total	4052	21.4	18.9 - 24.2	67.6	65.0 - 70.1	8.5	7.3 - 10.0	2.5	1.9 - 3.2

Diabetes treatment among those diagnosed

Description: Diabetes treatment results among those previously diagnosed with raised blood sugar or diabetes

Instrument question:

H6: Have you ever had your blood sugar measured by a doctor or other health worker?

H7a: Have you ever been told by a doctor or other health worker that you have raised blood sugar or diabetes?

H8: In the past two weeks, have you taken any drugs (medication) for diabetes prescribed by a doctor or other health worker?

H9: Are you currently taking insulin for diabetes prescribed by a doctor or other health worker?

Tables 164 and 165 show the number of previously diagnosed persons currently taking prescribed medication for diabetes. 65.8% (CI 59.1-72.0) were currently on prescribed drugs (medication) and 17.7% (CI 14.6-21.3) were currently taking insulin. More females were currently on medication and insulin in comparison to males [69.0% (CI 61.0-76.0) and 19.7% (CI 14.9-25.6) of females and 61.8% (CI 50.3-72.1) and 15.1% (CI 10.3-21.7) of males respectively). The prevalence of persons currently taking medication and insulin appeared to increase as age increased.

Table 164

Currently taking drugs (medication) prescribed for diabetes among those previously diagnosed									
Age Categories (Years)	Male			Female			Total		
	n	% taking meds	95% CI	n	% taking meds	95% CI	n	% taking meds	95% CI
18-29	5	-	-	7	-	-	12	-	-
30-44	30	-	-	60	28.9	16.1 - 46.2	90	29.6	19.0 - 43.0
45-59	90	70.6	53.7 - 83.3	123	80.2	69.0 - 88.1	213	75.8	64.4 - 84.5
60-69	103	74.2	59.0 - 85.2	176	84.7	76.1 - 90.6	279	80.0	71.0 - 86.7
Total	228	61.8	50.3 - 72.1	366	69.0	61.0 - 76.0	594	65.8	59.1 - 72.0

Table 165

Currently taking insulin prescribed for diabetes among those previously diagnosed									
Age Categories (Years)	Male			Female			Total		
	n	% taking insulin	95% CI	n	% taking insulin	95% CI	n	% taking insulin	95% CI
18-29	5	-	-	7	-	-	12	-	-
30-44	30	-	-	60	5.5	1.7 - 16.5	90	10.3	5.0 - 20.0
45-59	90	8.5	4.3 - 16.0	123	24.5	15.9 - 35.8	213	17.2	11.8 - 24.3
60-69	103	21.3	11.7 - 35.6	176	20.5	13.1 - 30.6	279	20.9	14.9 - 28.4
Total	228	15.1	10.3 - 21.7	366	19.7	14.9 - 25.6	594	17.7	14.6 - 21.3

**Diabetes advice
by traditional
healer**

Description: Percentage of population who are have sought advice or treatment from a traditional healer for diabetes among those previously diagnosed

Instrument question:

H6: Have you ever had your blood sugar measured by a doctor or other health worker?

H7a: Have you ever been told by a doctor or other health worker that you have raised blood sugar or diabetes?

H10: Have you ever seen a traditional healer for diabetes or raised blood sugar?

H11: Are you currently taking any herbal or traditional remedy for your diabetes?

Table 166 shows that 3.1% (CI 1.6-5.9) of the population previously diagnosed had seen a traditional healer for diabetes. An equal proportion of males 3.2% (CI 1.3-7.7) and females 3.1% (CI 1.3-7.2) had seen a traditional healer.

Table 166

Seen a traditional healer for diabetes among those previously diagnosed									
Male				Female			Total		
Age Categories (Years)	n	% seen trad. Healer	95% CI	n	% seen trad. Healer	95% CI	n	% seen trad. Healer	95% CI
18-29	5	-	-	7	-	-	12	-	-
30-44	30	-	-	60	6.3	1.2 - 26.5	90	5.6	1.6 - 17.6
45-59	90	4.4	1.4 - 13.3	123	1.8	0.6 - 5.4	213	3.0	1.2 - 7.1
60-69	103	1.3	0.2 - 6.6	176	2.9	0.6 - 12.5	279	2.2	0.7 - 7.1
Total	228	3.2	1.3 - 7.7	366	3.1	1.3 - 7.2	594	3.1	1.6 - 5.9

History of Raised Total Cholesterol

Cholesterol measurement and diagnosis

Description: Total cholesterol measurement and diagnosis among all population

Instrument question:

H12: Have you ever had your cholesterol (fat levels in your blood) measured by a doctor or other health worker?

H13a: Have you ever been told by a doctor or other health worker that you have raised cholesterol?

H13b: Have you been told in the past 12 months?

According to *Tables 167, 168 and 169*, 4.0% (CI 3.2-5.0) of the total population was diagnosed with high cholesterol within the past 12 months [5.0% (CI 3.8-6.5) of females and 3.0% (CI 2.2-4.2) of males] and 8.6% (CI 7.6-9.7) of the population was diagnosed but not within the past 12 months [10.5% (CI 8.8-12.5) of females and 6.6% (CI 5.3-8.2) of males]. The prevalence of persons diagnosed appeared to increase with increasing age, therefore, the 18-29 age group had the lowest and the 60-69 age group had the highest. There was a 10% difference in the prevalence of males 55.3% (CI 51.3-59.2) and females 45.2% (CI 41.7-48.7) who never measured their cholesterol levels. More than one third of the population [37.2% (CI 34.6-39.8); 35.1% (CI 31.7-38.6) males and 39.3% (CI 36.0-42.7) females] were measured but not diagnosed.

Table 167

Total cholesterol measurement and diagnosis									
Male									
Age Categories (Years)	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	263	81.7	74.8 - 87.0	15.7	11.0 - 22.1	2.2	0.6 - 7.1	0.4	0.2 - 1.1
30-44	539	53.6	47.0 - 60.0	39.9	33.8 - 46.4	3.2	1.9 - 5.3	3.3	1.8 - 6.0
45-59	571	39.2	34.4 - 44.2	45.4	40.6 - 50.2	10.1	7.5 - 13.4	5.4	3.4 - 8.4
60-69	464	28.6	23.7 - 34.0	48.3	41.2 - 55.5	19.7	14.1 - 26.9	3.4	2.0 - 5.8
Total	1837	55.3	51.3 - 59.2	35.1	31.7 - 38.6	6.6	5.3 - 8.2	3.0	2.2 - 4.2

Table 168

Total cholesterol measurement and diagnosis									
Female									
Age Categories (Years)	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	302	74.4	67.0 - 80.6	23.4	17.6 - 30.2	2.1	0.8 - 5.8	0.1	0.0 - 0.6
30-44	688	45.0	40.4 - 49.7	45.4	40.4 - 50.5	6.6	4.2 - 10.4	3.0	1.7 - 5.1
45-59	664	23.6	19.8 - 27.9	47.7	42.4 - 53.1	19.0	14.0 - 25.3	9.7	6.4 - 14.3
60-69	561	20.0	15.3 - 25.6	45.1	37.9 - 52.5	23.0	17.8 - 29.2	11.9	8.8 - 15.8
Total	2215	45.2	41.7 - 48.7	39.3	36.0 - 42.7	10.5	8.8 - 12.5	5.0	3.8 - 6.5

Table 169

Total cholesterol measurement and diagnosis									
Total									
Age Categories (Years)	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	565	78.0	72.3 - 82.9	19.5	15.3 - 24.5	2.2	1.0 - 4.6	0.3	0.1 - 0.6
30-44	1227	49.3	45.1 - 53.6	42.6	38.3 - 47.0	4.9	3.4 - 7.0	3.1	2.2 - 4.6
45-59	1235	31.5	28.3 - 34.8	46.5	43.2 - 49.9	14.5	11.5 - 18.1	7.5	5.4 - 10.3
60-69	1025	24.3	20.5 - 28.5	46.7	40.8 - 52.7	21.4	17.1 - 26.3	7.7	5.9 - 9.9
Total	4052	50.3	47.4 - 53.1	37.2	34.6 - 39.8	8.6	7.6 - 9.7	4.0	3.2 - 5.0

**Cholesterol
treatment among
those diagnosed**

Description: Cholesterol treatment results among those previously diagnosed with raised cholesterol

Instrument question:

H12: Have you ever had your cholesterol (fat levels in your blood) measured by a doctor or other health worker?

H13a: Have you ever been told by a doctor or other health worker that you have raised cholesterol?

H14: In the past two weeks, have you taken oral treatment (medication) for raised total cholesterol prescribed by a doctor or other health worker?

Results displayed in **Table 170** show that 35.8% (CI 29.4-42.7) of the population previously diagnosed were currently taking prescribed oral medication for raised total cholesterol. There was no significant difference in males in comparison to females taking prescribed oral medication [35.4% (CI 27.2-44.6) and 36.0% (CI 27.5-45.5) respectively]. The proportion of the diagnosed population currently taking oral medication for raised cholesterol appeared to increase with increasing age, thus the 60-69 age group accounted for the highest proportion with 55.9% (CI 47.6-63.8).

Table 170

Currently taking oral treatment (medication) prescribed for raised total cholesterol among those previously diagnosed									
Male				Female			Total		
Age Categories (Years)	n	% taking meds	95% CI	n	% taking meds	95% CI	n	% taking meds	95% CI
18-29	7	-	-	7	-	-	14	-	-
30-44	46	-	-	59	10.2	3.2 - 27.9	105	17.2	9.7 - 28.6
45-59	90	33.4	21.5 - 47.9	148	38.6	25.9 - 53.0	238	36.8	27.2 - 47.5
60-69	96	54.4	41.8 - 66.4	199	56.9	46.0 - 67.1	295	55.9	47.6 - 63.8
Total	239	35.4	27.2 - 44.6	413	36.0	27.5 - 45.5	652	35.8	29.4 - 42.7

**Cholesterol
advice by
traditional healer**

Description: Percentage of population who have sought advice or treatment from a traditional healer for raised cholesterol among those previously diagnosed

Instrument question:

H12: Have you ever had your cholesterol (fat levels in your blood) measured by a doctor or other health worker?

H13a: Have you ever been told by a doctor or other health worker that you have raised cholesterol?

H15: Have you ever seen a traditional healer for raised cholesterol?

H16: Are you currently taking any herbal or traditional remedy for your raised cholesterol?

According to *Tables 171 and 172*, 4.7% (CI 1.8-12.0) of those previously diagnosed had seen a traditional healer for raised total cholesterol levels and 5.5% (CI 2.9-10.4) of those previously diagnosed with raised cholesterol were currently taking herbal or traditional remedies for their raised cholesterol. More females 5.7% (CI 1.6-18.1) than males 3.1% (CI 1.1-8.3) had seen a traditional healer. A higher percentage of males 6.5% (CI 3.5-11.9) were currently on herbal/traditional medicine in comparison to females 4.9% (CI 1.7-13.7).

Table 171

Seen a traditional healer for raised cholesterol among those previously diagnosed									
Male				Female			Total		
Age Categories (Years)	n	% seen trad. healer	95% CI	n	% seen trad. healer	95% CI	n	% seen trad. healer	95% CI
18-29	7	-	-	7	-	-	14	-	-
30-44	46	-	-	59	7.9	1.4 - 33.9	105	5.9	1.4 - 21.6
45-59	90	5.4	2.0 - 14.2	148	8.0	2.1 - 25.9	238	7.1	2.6 - 17.9
60-69	96	0.0	0.0 - 0.0	199	0.5	0.1 - 3.4	295	0.3	0.0 - 2.1
Total	239	3.1	1.1 - 8.3	413	5.7	1.6 - 18.1	652	4.7	1.8 - 12.0

Table 172

Currently taking herbal or traditional treatment for raised cholesterol among those previously diagnosed									
Male				Female			Total		
Age Categories (Years)	n	% taking trad. meds	95% CI	n	% taking trad. meds	95% CI	n	% taking trad. meds	95% CI
18-29	7	-	-	7	-	-	14	-	-
30-44	46	-	-	59	7.9	1.4 - 33.9	105	9.1	3.0 - 24.4
45-59	90	6.8	3.0 - 14.8	148	4.6	1.5 - 13.1	238	5.4	2.6 - 10.7
60-69	96	4.6	1.1 - 17.3	199	4.3	2.4 - 7.7	295	4.4	2.2 - 8.8
Total	239	6.5	3.5 - 11.9	413	4.9	1.7 - 13.7	652	5.5	2.9 - 10.4

History of Cardiovascular Diseases

History of cardio-vascular diseases

Description: Percentage of population who have ever had a heart attack or chest pain from heart disease (angina) or a stroke among all population

Instrument question:

H17: Have you ever had a heart attack or chest pain from heart disease (angina) or a stroke (cerebrovascular accident or incident)?

Table 173 shows the percentage of the survey population who ever had a heart attack or chest pain from heart disease or a stroke. 5.3% (CI 4.4-6.2) of persons have a CVD history [4.2% (CI 3.3-5.3) of males and 6.4% (CI 4.8-8.4) females]. The highest proportion of persons with a CVD history were in the 60-69 age group for both sexes.

Table 173

Having ever had a heart attack or chest pain from heart disease or a stroke									
Male				Female			Total		
Age Categories (Years)	n	% CVD history	95% CI	n	% CVD history	95% CI	n	% CVD history	95% CI
18-29	263	0.9	0.3 - 2.4	302	4.0	1.4 - 10.8	565	2.4	1.1 - 5.4
30-44	539	2.6	1.6 - 4.3	688	2.9	1.7 - 4.8	1227	2.7	1.9 - 3.9
45-59	571	6.0	4.3 - 8.3	664	9.9	7.3 - 13.3	1235	7.9	6.3 - 9.9
60-69	464	12.8	9.3 - 17.3	561	13.8	9.9 - 18.8	1025	13.3	10.5 - 16.6
Total	1837	4.2	3.3 - 5.3	2215	6.4	4.8 - 8.4	4052	5.3	4.4 - 6.2

Prevention and treatment of heart disease

Description: Percentage of population who are currently taking aspirin or statins regularly to prevent or treat heart disease

Instrument question:

H18: Are you currently taking aspirin regularly to prevent or treat heart disease?

H19: Are you currently taking statins

(Lovastatin/Simvastatin/Atorvastatin or any other statin) regularly to prevent or treat heart disease?

Tables 174 and 175 show that 6.8% (CI 5.5-8.3) of the population were currently taking aspirin regularly to prevent or treat heart diseases and 3.4% (CI 2.7-4.3) of the population were currently taking statins regularly to prevent or treat heart disease. A higher proportion of females in comparison to males were currently on aspirin and statins regularly to prevent or treat heart disease [7.8% (CI 6.2-9.8) and 4.3% (CI 3.2-5.7) of females and 5.8% (CI 4.5-7.3) and 2.6% (CI 1.9-3.4) of males]. The highest observed use of aspirin and statins to prevent or treat heart disease occurred in the 60-69 age group [25.6% (CI 20.5-31.6) and 13.6% (CI 10.7-17.2) respectively]. There was little to no use of aspirin and statins reported in the 18-29 age group 1.0% (CI 0.2-4.3) and 0.0% (CI 0.0-0.3) respectively.

Table 174

Currently taking aspirin regularly to prevent or treat heart disease									
Male				Female			Total		
Age Categories (Years)	n	% taking aspirin	95% CI	n	% taking aspirin	95% CI	n	% taking aspirin	95% CI
18-29	263	0.3	0.0 - 2.1	302	1.7	0.3 - 8.5	565	1.0	0.2 - 4.3
30-44	539	1.5	0.5 - 4.5	688	2.8	1.6 - 4.9	1227	2.1	1.2 - 3.7
45-59	571	8.4	6.1 - 11.3	664	13.1	9.9 - 17.2	1235	10.7	8.5 - 13.4
60-69	464	26.2	20.3 - 33.2	561	25.0	19.5 - 31.4	1025	25.6	20.5 - 31.6
Total	1837	5.8	4.5 - 7.3	2215	7.8	6.2 - 9.8	4052	6.8	5.5 - 8.3

Table 175

Currently taking statins regularly to prevent or treat heart disease									
Male				Female			Total		
Age Categories (Years)	n	% taking statins	95% CI	n	% taking statins	95% CI	n	% taking statins	95% CI
18-29	263	0.0	0.0 - 0.0	302	0.1	0.0 - 0.6	565	0.0	0.0 - 0.3
30-44	539	0.7	0.2 - 2.0	688	1.1	0.4 - 3.3	1227	0.9	0.4 - 1.9
45-59	571	3.8	2.4 - 5.9	664	8.0	5.0 - 12.4	1235	5.9	4.1 - 8.3
60-69	464	11.8	8.4 - 16.3	561	15.5	11.2 - 21.1	1025	13.6	10.7 - 17.2
Total	1837	2.6	1.9 - 3.4	2215	4.3	3.2 - 5.7	4052	3.4	2.7 - 4.3

Lifestyle Advice

Lifestyle advice

Description: Percentage of population who received lifestyle advice from a doctor or health worker during the past three years among all population

Instrument question:

H20a-f: During the past three years, has a doctor or other health worker advised you to do any of the following?

Tables 176,177,178,179,180,181 and 182 show that during the past three years:

- 13.8% (CI 11.6-16.4) of the population reported that they received advice from a doctor or health worker to quit using tobacco or don't start [16.1% (CI 13.0-19.7) males and 12.1% (CI 9.1-15.8) females)].
- 26.4% (CI 23.4-29.6) of the population reported that they received advice from a doctor or health worker to reduce salt in their diet [24.0% (CI 20.0-28.6) males and 28.2% (CI 23.4-33.7) females)].
- 40.7% (CI 37.1-44.3) of the population reported that they received advice from a doctor or health worker to eat at least five servings of fruit and/or vegetables each day [33.6% (CI 28.9-38.7) males and 46.2% (CI 41.0-51.5) females)].
- 30.1% (CI 27.2-33.2) of the population reported that they received advice from a doctor or health worker to reduce fat in their diet [24.9% (CI 21.2-29.1) males and 34.2% (CI 29.4-39.4) females)].
- 44.1% (CI 40.7-47.5) of the population reported that they received advice from a doctor or health worker to start or do more physical activity [34.8% (CI 30.5-39.3) males and 51.5% (CI 45.8-57.1) females)].
- 44.0% (CI 40.6-47.4) of the population reported that they received advice from a doctor or health worker to maintain a healthy body weight or to lose weight [36.5% (CI 32.6-40.6) males and 49.9% (CI 45.2-54.6) females)].
- 34.2% (CI 31.0-37.5) of the population reported that they received advice from a doctor or health worker to reduce sugary beverages in their diet [30.3% (CI 26.6-34.2) males and 37.3% (CI 32.2-42.6) females)].

Table 176

Advised by doctor or health worker to quit using tobacco or don't start									
Male				Female			Total		
Age Categories (Years)	n	% advised	95% CI	n	% advised	95% CI	n	% advised	95% CI
18-29	107	16.0	8.9 - 27.1	175	11.9	6.2 - 21.7	282	13.6	9.1 - 19.9
30-44	264	15.6	10.7 - 22.3	413	11.2	7.4 - 16.5	677	13.2	9.6 - 17.8
45-59	296	16.0	11.3 - 22.1	421	13.5	8.8 - 20.1	717	14.6	10.6 - 19.8
60-69	301	17.2	12.5 - 23.3	425	11.4	5.3 - 22.6	726	14.2	10.0 - 19.7
Total	968	16.1	13.0 - 19.7	1434	12.1	9.1 - 15.8	2402	13.8	11.6 - 16.4

Table 177

Advised by doctor or health worker to reduce salt in the diet									
Male				Female			Total		
Age Categories (Years)	n	% advised	95% CI	n	% advised	95% CI	n	% advised	95% CI
18-29	107	14.6	7.8 - 25.7	175	11.2	6.4 - 18.9	282	12.6	8.3 - 18.7
30-44	264	23.5	14.6 - 35.6	413	28.7	20.1 - 39.3	677	26.4	20.8 - 32.8
45-59	296	27.1	20.1 - 35.6	421	38.3	30.7 - 46.5	717	33.2	27.7 - 39.2
60-69	301	35.8	28.9 - 43.4	425	44.4	38.6 - 50.3	726	40.3	35.7 - 45.0
Total	968	24.0	20.0 - 28.6	1434	28.2	23.4 - 33.7	2402	26.4	23.4 - 29.6

Table 178

Advised by doctor or health worker to eat at least five servings of fruit and/or vegetables each day									
Male				Female			Total		
Age Categories (Years)	n	% advised	95% CI	n	% advised	95% CI	n	% advised	95% CI
18-29	107	24.4	15.3 - 36.6	175	36.0	25.7 - 47.8	282	31.2	24.3 - 39.0
30-44	264	33.5	24.4 - 44.1	413	45.1	35.1 - 55.5	677	39.9	35.1 - 45.0
45-59	296	35.9	28.3 - 44.3	421	52.1	45.1 - 59.0	717	44.8	39.2 - 50.5
60-69	301	45.6	37.8 - 53.6	425	59.7	53.8 - 65.3	726	53.0	47.5 - 58.4
Total	968	33.6	28.9 - 38.7	1434	46.2	41.0 - 51.5	2402	40.7	37.1 - 44.3

Table 179

Advised by doctor or health worker to reduce fat in the diet									
Male				Female			Total		
Age Categories (Years)	n	% advised	95% CI	n	% advised	95% CI	n	% advised	95% CI
18-29	107	13.4	7.0 - 24.0	175	18.9	12.5 - 27.6	282	16.6	11.4 - 23.6
30-44	264	28.3	19.2 - 39.7	413	35.6	25.3 - 47.3	677	32.3	27.0 - 38.2
45-59	296	26.6	20.6 - 33.7	421	41.4	34.4 - 48.9	717	34.7	29.6 - 40.3
60-69	301	35.0	28.5 - 42.2	425	50.4	43.5 - 57.3	726	43.1	38.2 - 48.1
Total	968	24.9	21.2 - 29.1	1434	34.2	29.4 - 39.4	2402	30.1	27.2 - 33.2

Table 180

Advised by doctor or health worker to start or do more physical activity									
Male				Female			Total		
Age Categories (Years)	n	% advised	95% CI	n	% advised	95% CI	n	% advised	95% CI
18-29	107	12.6	7.2 - 21.1	175	44.8	33.1 - 57.0	282	31.5	23.6 - 40.6
30-44	264	42.4	32.4 - 53.1	413	51.0	42.0 - 59.9	677	47.2	43.5 - 50.9
45-59	296	41.3	33.0 - 50.3	421	56.1	50.0 - 62.1	717	49.4	44.0 - 54.9
60-69	301	45.6	38.6 - 52.9	425	57.6	49.9 - 65.0	726	51.9	46.6 - 57.2
Total	968	34.8	30.5 - 39.3	1434	51.5	45.8 - 57.1	2402	44.1	40.7 - 47.5

Table 181

Advised by doctor or health worker to maintain a healthy body weight or to lose weight									
Male				Female			Total		
Age Categories (Years)	n	% advised	95% CI	n	% advised	95% CI	n	% advised	95% CI
18-29	107	20.4	12.6 - 31.2	175	42.5	30.9 - 54.9	282	33.3	25.8 - 41.9
30-44	264	43.2	32.5 - 54.7	413	47.7	39.8 - 55.8	677	45.7	41.1 - 50.5
45-59	296	40.3	31.4 - 49.9	421	57.4	50.3 - 64.1	717	49.6	44.2 - 55.1
60-69	301	43.8	37.0 - 50.9	425	56.0	48.5 - 63.1	726	50.2	45.2 - 55.2
Total	968	36.5	32.6 - 40.6	1434	49.9	45.2 - 54.6	2402	44.0	40.6 - 47.4

Table 182

Advised by doctor or health worker to reduce sugary beverages in diet									
Male				Female			Total		
Age Categories (Years)	n	% advised	95% CI	n	% advised	95% CI	n	% advised	95% CI
18-29	107	17.2	9.8 - 28.5	175	25.9	18.5 - 35.0	282	22.3	16.3 - 29.8
30-44	264	33.9	24.4 - 44.9	413	37.1	27.5 - 47.8	677	35.7	30.5 - 41.2
45-59	296	31.7	25.5 - 38.5	421	43.2	35.7 - 51.0	717	38.0	32.1 - 44.3
60-69	301	43.3	36.4 - 50.5	425	50.7	43.2 - 58.1	726	47.2	41.9 - 52.5
Total	968	30.3	26.6 - 34.2	1434	37.3	32.2 - 42.6	2402	34.2	31.0 - 37.5

Cervical Cancer Screening

Cervical cancer screening

Description: Percentage of female population 30 to 49 who have ever had a screening test for cervical cancer

Instrument question:

CX1: Have you ever had a screening test for cervical cancer, using any of these methods described above?

Table 183 shows that 58.1% (CI 51.1-64.7) of females aged 30-49 ever tested for cervical cancer.

Table 183

Cervical cancer screening prevalence among women aged 30-49 years			
Female			
Age Categories (Years)	n	% ever tested	95% CI
30-49	857	58.1	51.1 - 64.7
Total	857	58.1	51.1 - 64.7

**Cervical cancer
screening last
test**

Description: Most recent screening test for cervical cancer

Instrument question:

CX1: Have you ever had a screening test for cervical cancer, using any of these methods described above?

CX2. When was your last test for cervical cancer?

Table 184 shows that among those females aged 30-49 who ever had a test to screen for cervical cancer, most of them i.e. 28.7% (CI 22.6-35.8) had their last test 1-2 years ago. Whereas, 27.9% (CI 22.6-33.9) of them had their last test more than 2 years ago. One quarter of them i.e. 25.4% (CI 20.0-31.6) had their last test less than 1 year ago and 17.7% (CI 12.7-24.1) had their last test more than 5 years ago.

Table 184

Last cervical cancer screening test									
Female									
Age Categories (Years)	n	% Less than 1 year ago	95% CI	% 1-2 years ago	95% CI	% >2-5 years ago	95% CI	% More than 5 years ago	95% CI
30-49	489	25.4	20.0 - 31.6	28.7	22.6 - 35.8	27.9	22.6 - 33.9	17.7	12.7 - 24.1
Total	489	25.4	20.0 - 31.6	28.7	22.6 - 35.8	27.9	22.6 - 33.9	17.7	12.7 - 24.1

Mental Health - Depression

Depression Description: Percentage of population with depression

Instrument question:

MH1. In the last 12 months, have you, for a period of at least 2 weeks, felt sad or depressed for most of the day, nearly every day?

MH2. In the last 12 months, have you, for at least 2 weeks, been a lot less interested in, or experienced a lot less pleasure from, doing the things you normally enjoy?

MH3. When in the last 12 months was this (LOW MOOD and/or LOSS OF INTEREST OR PLEASURE) at its/their worst?

The next questions I am going to ask you will refer specifically to this time, that is the month of (MH3)

MH4. During this time in which your [LOW MOOD and/or LOSS OF INTEREST] were at its worst, did you have more trouble concentrating and staying focused on things than usual OR did you struggle more than usual to make decisions?

MH5. Did you feel less valuable as a person or even worthless?

MH6. Did you feel you let yourself or others down?

MH7. Did you feel more hopeless about the future, like things would never turn out well for you?

MH8. The next questions can be a sensitive question. Did you think often about death, or suicide, or did you try to end your life?

MH9. Did you have more trouble sleeping than usual (for example falling or staying asleep), or sleeping a lot more than you usually do?

MH10. Did you not want to eat even when food was available, OR did you eat more than before your [LOW MOOD and/or LOSS OF INTEREST] started?

MH11. Did you have less energy than before your [Low mood, and/or Loss of Interest] started OR were you much more tired than usual even when doing some small task?

MH12. Were you moving or speaking more slowly than is normal for you, OR the opposite, where you fidgeting or pacing around a lot?

MH13. During this time when you experienced the above symptoms, did these

difficulties affect your ability to function in daily life (for example your work or school, your social life, your relationships) OR did these bother you a lot?

Table 185 Shows that the prevalence of depression was 13.6% (CI 11.4-16.2) with 9.9% (CI 7.8-12.5) in males and 17.3% (CI 14.3-20.9) in females.

Table 185

Prevalence of depression									
Male				Female			Total		
Age Categories (Years)	n	% Mental Health	95% CI	n	% Mental Health	95% CI	n	% Mental Health	95% CI
18-29	263	13.0	8.1 - 20.1	302	27.3	19.6 - 36.6	565	20.1	14.5 - 27.3
30-44	539	11.3	8.2 - 15.2	688	16.0	11.5 - 21.8	1227	13.6	10.9 - 16.8
45-59	571	6.3	4.0 - 10.0	664	12.1	9.5 - 15.2	1235	9.2	7.5 - 11.2
60-69	464	6.6	3.9 - 10.7	561	6.8	4.2 - 10.8	1025	6.7	4.6 - 9.6
Total	1837	9.9	7.8 - 12.5	2215	17.3	14.3 - 20.9	4052	13.6	11.4 - 16.2

Depression medication

Description: Frequency of depression medication on those with depression

Instrument question:

MH14. In the past 12 months, have you taken medications for the difficulties we've just talked about?

Tables 186, 187 and 188 show that for those with depression, 85.7% (CI 79.0-90.5) reported not taking any medication for their condition within the past 12 months. Additionally, 8.2% (CI 4.7-13.9) reported taking medication for 3 months or more for their condition within the past 12 months and 6.1% (CI 3.1-11.7) reported taking medication for less than 3 months within the past 12 months.

Table 186

Frequency of medication							
Male							
Age Categories (Years)	n	% Yes, for less than 3 months	95% CI	% Yes, for 3 months or more	95% CI	% No	95% CI
18-29	35	-	-	-	-	-	-
30-44	49	-	-	-	-	-	-
45-59	37	-	-	-	-	-	-
60-69	23	-	-	-	-	-	-
Total	144	3.2	0.8 - 11.5	8.6	2.7 - 24.7	88.2	73.0 - 95.4

Table 187

Frequency of medication							
Female							
Age Categories (Years)	n	% Yes, for less than 3 months	95% CI	% Yes, for 3 months or more	95% CI	% No	95% CI
18-29	72	7.3	1.5 - 29.3	7.1	2.2 - 20.4	85.7	66.7 - 94.7
30-44	116	8.0	3.5 - 17.5	9.3	3.8 - 21.0	82.7	69.1 - 91.1
45-59	85	9.3	3.0 - 25.8	7.0	2.8 - 16.2	83.7	69.2 - 92.1
60-69	40	-	-	-	-	-	-
Total	313	7.8	3.5 - 16.3	7.9	4.6 - 13.4	84.3	76.4 - 89.9

Table 188

Frequency of medication							
Total							
Age Categories (Years)	n	% Yes, for less than 3 months	95% CI	% Yes, for 3 months or more	95% CI	% No	95% CI
18-29	107	6.3	1.6 - 21.1	6.3	2.3 - 16.1	87.4	73.5 - 94.5
30-44	165	5.8	2.9 - 11.3	11.1	3.9 - 27.7	83.0	68.8 - 91.6
45-59	122	6.9	2.5 - 17.9	8.0	3.7 - 16.4	85.1	74.2 - 91.9
60-69	63	3.9	0.6 - 20.0	7.5	2.8 - 18.5	88.6	74.7 - 95.3
Total	457	6.1	3.1 - 11.7	8.2	4.7 - 13.9	85.7	79.0 - 90.5

Depression therapy Description: Frequency of psychological therapy/counselling

Instrument question:

MH15. In the past 12 months, have you received psychological therapy/counselling sessions for the difficulties we've just talked about?

Tables 189, 190 and 191 show that 79.7% (CI 74.9-83.8) of persons with depression received no psychological therapy/counselling sessions within the past 12 months. 12.5% (CI 8.8-17.4) of persons with depression received 1 to 3 psychological therapy / counselling sessions within the past 12 months. While, 7.9% (CI 5.6-11.0) of persons with depression received 4 or more psychological therapy/counselling sessions within the past 12 months.

Table 189

Frequency of therapy/counselling							
Male							
Age Categories (Years)	n	% Yes, 1 to 3 sessions	95% CI	% Yes, 4 sessions or more	95% CI	% No	95% CI
18-29	35	-	-	-	-	-	-
30-44	49	-	-	-	-	-	-
45-59	37	-	-	-	-	-	-
60-69	23	-	-	-	-	-	-
Total	144	9.8	5.0 - 18.2	7.9	3.7 - 15.9	82.3	72.1 - 89.4

Table 190

Frequency of therapy/counselling							
Female							
Age Categories (Years)	n	% Yes, 1 to 3 sessions	95% CI	% Yes, 4 sessions or more	95% CI	% No	95% CI
18-29	72	17.6	8.5 - 33.1	6.0	2.5 - 13.9	76.3	61.3 - 86.8
30-44	116	13.3	5.8 - 27.8	13.0	6.6 - 23.9	73.7	57.0 - 85.6
45-59	85	6.0	2.4 - 14.2	6.3	2.5 - 15.3	87.7	78.0 - 93.4
60-69	40	-	-	-	-	-	-
Total	313	13.9	8.5 - 22.1	7.9	5.4 - 11.2	78.2	70.9 - 84.1

Table 191

Frequency of therapy/counselling							
Total							
Age Categories (Years)	n	% Yes, 1 to 3 sessions	95% CI	% Yes, 4 sessions or more	95% CI	% No	95% CI
18-29	107	15.5	8.2 - 27.3	6.8	3.2 - 13.7	77.8	65.5 - 86.5
30-44	165	10.6	5.6 - 19.0	11.1	6.3 - 18.7	78.4	67.5 - 86.4
45-59	122	9.8	3.8 - 23.0	7.0	3.1 - 15.1	83.2	70.9 - 91.0
60-69	63	6.5	2.7 - 14.7	2.0	0.5 - 7.0	91.5	81.6 - 96.3
Total	457	12.5	8.8 - 17.4	7.9	5.6 - 11.0	79.7	74.9 - 83.8

Health Screening

Fecal occult blood test	<p><u>Description:</u> Percentage of population who have ever had their stool examined to look for hidden blood</p> <p><u>Instrument question:</u> S1. Have you ever had your stool examined to look for hidden blood?</p>
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Table 192 shows that 8.6% (CI 7.2-10.3) of the population have ever had their stool examined to look for hidden blood. There was no significant difference between males [8.1% (CI 6.4-10.3)] and females [9.1% (CI 7.3-11.4)] in this regard.

Table 192

Age Categories (Years)	Fecal occult blood test								
	Male			Female			Total		
	n	% ever tested	95% CI	n	% ever tested	95% CI	n	% ever tested	95% CI
18-29	261	1.3	0.4 - 4.1	300	3.4	1.6 - 7.0	561	2.3	1.2 - 4.3
30-44	531	6.5	4.3 - 9.8	687	8.3	5.3 - 12.8	1218	7.4	5.3 - 10.3
45-59	565	13.7	9.8 - 18.7	659	12.9	9.7 - 16.8	1224	13.3	11.0 - 15.9
60-69	457	17.7	13.2 - 23.4	556	18.0	14.3 - 22.5	1013	17.9	14.7 - 21.6
Total	1814	8.1	6.4 - 10.3	2202	9.1	7.3 - 11.4	4016	8.6	7.2 - 10.3

Colon cancer screening Description: Percentage of population who have ever had a colonoscopy
Instrument question:
S2. Have you ever had a colonoscopy?

Table 193 shows that 5.4% (CI 4.4-6.6) of the population ever had a colonoscopy. There was no significant difference between males [5.5% (CI 4.4-6.9)] and females [5.3% (CI 4.2-6.8)].

Table 193

Colon cancer screening									
Age Categories (Years)	Male			Female			Total		
	n	% ever tested	95% CI	n	% ever tested	95% CI	n	% ever tested	95% CI
18-29	263	0.7	0.2 - 2.3	302	0.6	0.1 - 3.3	565	0.6	0.2 - 1.8
30-44	539	1.5	0.7 - 3.2	688	4.6	2.3 - 8.7	1227	3.0	1.7 - 5.2
45-59	571	11.2	7.6 - 16.2	664	8.3	5.9 - 11.5	1235	9.7	7.2 - 13.0
60-69	464	15.3	11.1 - 20.7	561	13.0	9.6 - 17.3	1025	14.1	11.2 - 17.6
Total	1837	5.5	4.4 - 6.9	2215	5.3	4.2 - 6.8	4052	5.4	4.4 - 6.6

**Prostate
cancer
screening**

Description: Percentage of male population who have ever had a prostate examination

Instrument question:

S3. Have you ever had an examination of your prostate?

Table 194 shows that 19.2% (17.1-21.6) of the male population ever had a prostate examination.

Table 194

Prostate cancer screening			
		Male	
Age Categories (Years)	n	% ever tested	95% CI
18-29	263	2.8	1.3 - 5.8
30-44	539	10.8	7.3 - 15.7
45-59	571	33.7	29.0 - 38.8
60-69	464	51.6	44.4 - 58.7
Total	1837	19.2	17.1 - 21.6

Breast self-examination

Description: Percentage of female population who have ever been shown how to examine their breasts

Instrument question:

S4. Have you ever been shown how to examine your breasts?

Table 195 shows that 59.9% (CI 55.7-63.9) of the female population reported that they have ever been shown how to examine their breasts.

Table 195

Breast self-examination			
Age Categories (Years)	n	Female	
		% have been shown	95% CI
18-29	302	39.4	31.6 - 47.7
30-44	688	67.7	62.2 - 72.7
45-59	664	69.3	63.0 - 74.9
60-69	561	70.6	63.5 - 76.8
Total	2215	59.9	55.7 - 63.9

Last breast examination Description: Most recent breasts examination

Instrument question:

S5. When was the last time you had an examination of your breasts?

Table 196 shows that 44.1% (CI 39.8-48.5) of females reported never having a breast examination. Whereas, 24.4% (CI 22.0-27.0) of females had their last breast examination more than 2 years ago. 20.7% (CI 17.5-24.2) of females had their last breast examination 1 year ago or less than 1 year ago and 10.4% (CI 8.6-12.5) of females had their last breast examination between 1 and 2 years ago.

Table 196

Last breast examination									
Female									
Age Categories (Years)	n	% 1 year or less	95% CI	% Between 1 and 2 years	95% CI	% More than 2 years	95% CI	% Never	95% CI
18-29	302	14.3	9.1 - 21.8	7.1	4.6 - 10.6	12.0	8.0 - 17.7	66.6	58.4 - 73.9
30-44	688	23.1	18.6 - 28.4	11.8	8.5 - 16.1	26.8	23.5 - 30.4	37.9	32.9 - 43.2
45-59	664	23.9	19.5 - 29.0	11.9	8.4 - 16.5	30.7	26.1 - 35.8	33.1	27.1 - 39.7
60-69	561	23.2	17.0 - 30.8	12.0	8.8 - 16.2	36.1	30.5 - 42.1	27.5	21.3 - 34.6
Total	2215	20.7	17.5 - 24.2	10.4	8.6 - 12.5	24.4	22.0 - 27.0	44.1	39.8 - 48.5

Last Description: Most recent mammogram
mammogram

Instrument question:

S6. When was the last time you had a mammogram?

Table 197 shows that 72.4% (CI 69.1-75.6) of females never had a mammogram. 13.5% (CI 11.8-15.3) of females had their last mammogram more than 2 years ago. While, 8.4% (CI 6.8-10.4) of females had their last mammogram 1 year ago or less than 1 year ago and 4.9% (CI 3.7-6.6) of females had their last mammogram between 1 and 2 years ago.

Table 197

Last mammogram									
Female									
Age Categories (Years)	n	% 1 year or less	95% CI	% Between 1 and 2 years	95% CI	% More than 2 years	95% CI	% Never	95% CI
18-29	302	2.3	1.2 - 4.6	0.4	0.1 - 2.1	1.5	0.5 - 4.3	93.8	88.1 - 96.8
30-44	688	7.7	4.9 - 11.9	4.9	2.7 - 8.8	10.3	7.4 - 14.3	76.8	70.7 - 82.0
45-59	664	14.4	10.8 - 18.8	8.8	5.5 - 13.7	22.1	18.4 - 26.3	54.4	48.1 - 60.7
60-69	561	11.8	8.6 - 16.1	7.7	5.5 - 10.8	32.9	28.0 - 38.3	47.0	41.0 - 53.1
Total	2215	8.4	6.8 - 10.4	4.9	3.7 - 6.6	13.5	11.8 - 15.3	72.4	69.1 - 75.6

Physical Measurements

Blood pressure Description: Mean blood pressure among all population, including those currently on medication for raised blood pressure

Instrument question:

M4-6 (a-b): Reading 1-3 systolic and diastolic blood pressure

Tables 198 and 199 show that the mean systolic blood pressure among the population, including those currently on medication for raised blood pressure was 124.4mmHg (CI 123.2-125.5) [128.3mmHg (CI 126.9-129.7) in males and 120.5mmHg (CI 119.1-121.8) in females].

The mean diastolic blood pressure among the population, including those currently on medication for raised blood pressure was 79.8mmHg (CI 78.9-80.7) [82.5 mmHg (CI 81.5-83.6) in males and 77.1mmHg (CI 76.1-78.1) in females].

Table 198

Mean systolic blood pressure (mmHg)									
Male				Female			Total		
Age Categories (Years)	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
18-29	247	121.2	119.3 - 123.1	291	109.8	107.7 - 111.8	538	115.3	113.8 - 116.8
30-44	499	127.7	124.6 - 130.7	656	119.6	117.2 - 122.0	1155	123.6	121.7 - 125.6
45-59	530	133.3	130.4 - 136.1	631	128.3	126.2 - 130.4	1161	130.8	128.8 - 132.8
60-69	434	136.4	132.6 - 140.2	527	133.3	131.1 - 135.5	961	134.9	132.3 - 137.4
Total	1710	128.3	126.9 - 129.7	2105	120.5	119.1 - 121.8	3815	124.4	123.2 - 125.5

Table 199

Mean diastolic blood pressure (mmHg)									
Male				Female			Total		
Age Categories (Years)	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
18-29	247	76.5	75.3 - 77.6	291	71.1	69.6 - 72.5	538	73.7	72.6 - 74.8
30-44	499	84.1	81.7 - 86.6	656	78.4	76.3 - 80.5	1155	81.3	79.7 - 82.8
45-59	530	86.5	84.6 - 88.4	631	81.5	80.1 - 83.0	1161	84.0	82.6 - 85.4
60-69	434	84.4	81.2 - 87.6	527	79.2	78.0 - 80.5	961	81.8	80.0 - 83.6
Total	1710	82.5	81.5 - 83.6	2105	77.1	76.1 - 78.1	3815	79.8	78.9 - 80.7

**Raised
blood
pressure**

Description: Percentage of population with raised blood pressure

Instrument question:

Reading 1-3 systolic and diastolic blood pressure

During the past two weeks, have you been treated for raised blood pressure with drugs (medication) prescribed by a doctor or other health worker?

Tables 200, 201, 202 and 203 show that 23.7% (CI 21.4-26.1) of the population had raised blood pressure readings SBP \geq 140 and/or DBP \geq 90mmHg [29.8% (CI 26.2-33.7) males and 17.6% (CI 14.8-20.7) females].

8.3% (CI 7.1-9.8) of the population had raised blood pressure readings SBP \geq 160 and/or DBP \geq 100mmHg [10.7% (CI 8.7-12.9) males and 6.1% (CI 4.5-8.0) females].

29.0% (CI 27.0-31.2) of the population had raised blood pressure readings SBP \geq 140 and/ or currently on medication for raised blood pressure [33.2% (CI 29.6-37.1) males and 24.9% (CI 22.2-27.8) females].

16.9% (CI 15.5-18.4) of the population had raised blood pressure readings SBP \geq 160 and/or DBP \geq 100 mmHg or currently on medication for raised blood pressure [16.4% (CI 14.2-18.9) males and 17.4% (CI 15.3-19.8) females].

Table 200

SBP \geq 140 and/or DBP \geq 90 mmHg									
Male				Female			Total		
Age Categories (Years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	247	9.4	6.5 - 13.4	291	1.7	0.6 - 4.3	538	5.4	3.7 - 7.8
30-44	499	32.3	25.8 - 39.5	656	14.0	10.2 - 19.0	1155	23.2	18.8 - 28.1
45-59	530	42.9	36.9 - 49.2	631	31.7	25.2 - 39.0	1161	37.3	32.7 - 42.2
60-69	434	44.2	37.6 - 51.1	527	36.9	29.9 - 44.5	961	40.6	35.3 - 46.0
Total	1710	29.8	26.2 - 33.7	2105	17.6	14.8 - 20.7	3815	23.7	21.4 - 26.1

Table 201

SBP \geq 160 and/or DBP \geq 100 mmHg									
Male				Female			Total		
Age Categories (Years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	247	1.2	0.5 - 3.0	291	0.2	0.0 - 1.3	538	0.7	0.3 - 1.6
30-44	499	11.9	7.5 - 18.5	656	7.1	3.9 - 12.6	1155	9.5	7.0 - 12.8
45-59	530	15.4	11.7 - 20.0	631	10.2	6.7 - 15.2	1161	12.8	10.2 - 16.0
60-69	434	20.5	14.3 - 28.4	527	9.2	6.7 - 12.5	961	14.8	11.6 - 18.8
Total	1710	10.7	8.7 - 12.9	2105	6.1	4.5 - 8.0	3815	8.3	7.1 - 9.8

Table 202

SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised blood pressure									
Age Categories (Years)	Male			Female			Total		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	247	9.6	6.6 - 13.8	291	3.3	1.3 - 8.6	538	6.4	4.3 - 9.4
30-44	499	32.8	26.4 - 39.9	656	16.0	12.1 - 21.0	1155	24.4	20.3 - 29.1
45-59	530	46.4	40.5 - 52.5	631	44.1	37.5 - 50.9	1161	45.2	40.8 - 49.7
60-69	434	63.8	58.3 - 69.0	527	62.0	55.1 - 68.5	961	62.9	58.7 - 67.0
Total	1710	33.2	29.6 - 37.1	2105	24.9	22.2 - 27.8	3815	29.0	27.0 - 31.2

Table 203

SBP ≥ 160 and/or DBP ≥ 100 mmHg or currently on medication for raised blood pressure									
Age Categories (Years)	Male			Female			Total		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	247	1.4	0.6 - 3.5	291	1.9	0.4 - 8.3	538	1.6	0.6 - 4.4
30-44	499	12.7	8.3 - 19.1	656	10.0	6.6 - 14.9	1155	11.4	8.9 - 14.3
45-59	530	24.3	20.0 - 29.2	631	31.2	25.8 - 37.2	1161	27.8	24.1 - 31.7
60-69	434	46.7	41.3 - 52.2	527	47.1	40.6 - 53.8	961	46.9	42.4 - 51.6
Total	1710	16.4	14.2 - 18.9	2105	17.4	15.3 - 19.8	3815	16.9	15.5 - 18.4

Blood pressure diagnosis Description: Raised blood pressure diagnosis among those with raised blood pressure (SBP \geq 140 and/or DBP \geq 90 mmHg) or on medication for raised blood pressure

Instrument question:

Have you ever had your blood pressure measured by a doctor or other health worker?

Have you ever been told by a doctor or other health worker that you have raised blood pressure or hypertension?

Table 204 shows that 58.4% (CI 53.4-63.3) of those with raised blood pressure (SBP \geq 140 and/or DBP \geq 90 mmHg) or on medication for raised blood pressure had been previously diagnosed [47.4% (CI 41.9-53.0) males and 72.9% (CI 66.9-78.2) females].

Table 204

Raised blood pressure diagnosis among those with raised blood pressure (SBP \geq 140 and/or DBP \geq 90 mmHg) or on medication for raised blood pressure

Age Categories (Years)	Male			Female			Total		
	n	% previously diagnosed	95% CI	n	% previously diagnosed	95% CI	n	% previously diagnosed	95% CI
18-29	30	-	-	8	-	-	38	-	-
30-44	144	38.2	25.9 - 52.2	107	59.3	41.9 - 74.7	251	45.1	36.7 - 53.8
45-59	230	49.1	40.6 - 57.6	259	75.4	65.2 - 83.4	489	61.9	54.9 - 68.4
60-69	269	68.2	60.0 - 75.4	315	81.5	75.1 - 86.6	584	74.7	70.0 - 78.9
Total	673	47.4	41.9 - 53.0	689	72.9	66.9 - 78.2	1362	58.4	53.4 - 63.3

HTN treatment Description: Treatment of raised blood pressure among those with raised BP or under medication

Instrument question:

Have you ever had your blood pressure measured by a doctor or other health worker?

Have you ever been told by a doctor or other health worker that you have raised blood pressure or hypertension?

During the past two weeks, have you been treated for raised blood pressure with drugs (medication) prescribed by a doctor or other health worker?

Reading 1-3 systolic and diastolic blood pressure

Table 205 shows that of those with raised BP or receiving treatment with medication 38.5% (CI 34.0-43.3) received treatment with medication [24.6% (CI 19.6-30.4) males and 56.9% (CI 49.6-64.0) females].

Table 205

		Hypertension treatment								
		Male			Female			Total		
Age Categories (Years)	n	% under medication	95% CI	n	% under medication	95% CI	n	% under medication	95% CI	
18-29	30	-	-	8	-	-	38	-	-	
30-44	144	8.5	4.7 - 14.7	107	39.6	23.3 - 58.6	251	18.7	13.2 - 25.8	
45-59	230	25.4	18.2 - 34.2	259	57.8	47.2 - 67.8	489	41.2	34.2 - 48.4	
60-69	269	54.8	46.2 - 63.2	315	68.7	61.3 - 75.2	584	61.6	55.7 - 67.3	
Total	673	24.6	19.6 - 30.4	689	56.9	49.6 - 64.0	1362	38.5	34.0 - 43.3	

HTN control Description: Control of raised blood pressure among those with raised BP or under medication

Instrument question:

Have you ever had your blood pressure measured by a doctor or other health worker?

Have you ever been told by a doctor or other health worker that you have raised blood pressure or hypertension?

During the past two weeks, have you been treated for raised blood pressure with drugs (medication) prescribed by a doctor or other health worker?

Reading 1-3 systolic and diastolic blood pressure

Table 206 shows that of those with raised BP receiving treatment with medication 18.5% (CI 14.6-23.2) were controlled [10.2% (CI 7.6-13.7) males and 29.3% (CI 22.2-37.6) females]

Table 206

Hypertension control									
Age Categories (Years)	Male			Female			Total		
	n	% controlled	95% CI	n	% controlled	95% CI	n	% controlled	95% CI
18-29	30	-	-	8	-	-	38	-	-
30-44	144	1.6	0.3 - 7.0	107	12.6	6.5 - 23.0	251	5.2	2.5 - 10.5
45-59	230	7.5	4.1 - 13.3	259	28.0	19.0 - 39.1	489	17.5	12.5 - 23.8
60-69	269	30.7	22.9 - 39.7	315	40.5	32.2 - 49.4	584	35.5	29.0 - 42.6
Total	673	10.2	7.6 - 13.7	689	29.3	22.2 - 37.6	1362	18.5	14.6 - 23.2

Mean heart rate Description: Mean heart rate (beats per minute)

Instrument question:

M16 a-c: Reading 1-3 heart rate

Table 207 shows the mean heart rate (beats per minute) was 82.4 (CI 81.6-83.1) [80.3 (CI 79.2-81.3) males and 84.5 (CI 83.8-85.2) females].

Table 207

Mean heart rate (beats per minute)									
Age Categories (Years)	Male			Female			Total		
	n	mean	95% CI	n	mean	95% CI	n	mean	95% CI
18-29	243	77.9	76.0 - 79.8	291	86.8	84.9 - 88.7	534	82.5	80.9 - 84.1
30-44	494	81.6	79.7 - 83.4	652	85.6	84.6 - 86.7	1146	83.6	82.6 - 84.6
45-59	528	81.7	80.1 - 83.2	623	82.7	81.5 - 83.9	1151	82.2	81.2 - 83.2
60-69	431	79.3	77.9 - 80.7	521	79.0	77.8 - 80.2	952	79.1	78.2 - 80.1
Total	1696	80.3	79.2 - 81.3	2087	84.5	83.8 - 85.2	3783	82.4	81.6 - 83.1

Height, weight and BMI	<u>Description:</u> Mean height, weight, and body mass index among all population (excluding pregnant women) <u>Instrument question:</u> M8: For women: Are you pregnant? M11: Height M12: Weight
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Table 208, 209 and 210 show a mean height, weight, and body mass index among the population (excluding pregnant women).

The mean height was 168.4cm (CI 167.7-169.2), 174.7cm (CI 173.8-175.6) in males and 162.1cm (CI 161.4-162.8) in females.

The mean weight was 79.7kg (CI 78.0-81.4), 82.1kg (CI 80.4-83.7) in males and 77.3kg (CI 75.0-79.6) in females.

The mean BMI (kg/m²) was 27.8 (CI 27.3-28.2), 26.6 (CI 26.2-27.0) in males and 28.9 (CI 28.2-29.6) in females.

Table 208

Mean height (cm)									
Male				Female			Total		
Age Categories (Years)	n	mean	95% CI	n	mean	95% CI	n	mean	95% CI
18-29	249	175.6	173.7 - 177.6	282	161.9	160.6 - 163.3	531	168.8	167.3 - 170.2
30-44	502	176.1	175.3 - 177.0	647	163.7	162.8 - 164.6	1149	170.0	169.2 - 170.9
45-59	536	173.7	172.6 - 174.9	634	161.8	160.3 - 163.3	1170	167.8	166.8 - 168.8
60-69	435	170.6	168.6 - 172.6	530	159.3	158.1 - 160.4	965	165.0	163.7 - 166.3
Total	1722	174.7	173.8 - 175.6	2093	162.1	161.4 - 162.8	3815	168.4	167.7 - 169.2

Table 209

Mean weight (kg)									
Male				Female			Total		
Age Categories (Years)	n	mean	95% CI	n	mean	95% CI	n	mean	95% CI
18-29	248	77.3	74.2 - 80.4	282	71.2	66.6 - 75.9	530	74.2	71.4 - 77.1
30-44	501	86.9	84.3 - 89.5	648	80.0	77.6 - 82.5	1149	83.5	81.5 - 85.5
45-59	534	83.1	80.6 - 85.7	634	82.1	79.2 - 85.1	1168	82.6	80.5 - 84.8
60-69	435	78.8	75.6 - 82.0	529	74.5	72.3 - 76.7	964	76.7	74.4 - 78.9
Total	1718	82.1	80.4 - 83.7	2093	77.3	75.0 - 79.6	3811	79.7	78.0 - 81.4

Table 210

Mean BMI (kg/m2)									
Age Categories (Years)	Male			Female			Total		
	n	mean	95% CI	n	mean	95% CI	n	mean	95% CI
18-29	245	25.0	24.2 - 25.7	279	26.6	25.0 - 28.1	524	25.8	25.0 - 26.6
30-44	494	27.7	26.9 - 28.4	642	29.7	28.9 - 30.6	1136	28.7	28.1 - 29.3
45-59	525	27.3	26.7 - 28.0	620	30.7	30.0 - 31.4	1145	29.0	28.4 - 29.5
60-69	429	26.4	25.5 - 27.3	519	29.0	28.4 - 29.6	948	27.7	27.1 - 28.3
Total	1693	26.6	26.2 - 27.0	2060	28.9	28.2 - 29.6	3753	27.8	27.3 - 28.2

BMI categories Description: Percentage of population (excluding pregnant women) in each BMI category (kg/m²)

Instrument question:

M8: For women: Are you pregnant?

M11: Height

M12: Weight

Tables 211, 212 and 213 show the percentage of population (excluding pregnant women) in each BMI category.

For both sexes combined the majority i.e. 34.5% (CI 31.8-37.4) had a normal BMI while 31.6% (CI 28.5-34.9) were Obese. 28.9% (CI 26.3-31.5) were overweight (BMI 25.0-29.9kg/m²) and 5.0% (CI 3.7-6.8) were underweight.

More males 40.3% (CI 37.3-43.4) than females 28.6% (CI 24.6-33.1) were of normal BMI (BMI 18.5-24.9 kg/m²). Whereas more females 38.3% (CI 34.4-42.4) than males 24.9% (CI 21.5-28.8) were obese (BMI ≥ 30.0 kg/m²).

Table 211

BMI classifications									
Male									
Age Categories (Years)	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	% BMI 25.0-29.9	95% CI	% Obese ≥ 30.0	95% CI
18-29	245	9.1	4.7 - 17.0	52.2	44.2 - 60.2	20.8	12.6 - 32.3	17.9	12.5 - 24.8
30-44	494	4.1	2.7 - 6.3	34.5	29.2 - 40.3	30.4	24.1 - 37.6	31.0	25.5 - 37.0
45-59	525	2.6	1.5 - 4.3	33.5	27.5 - 40.2	37.1	31.2 - 43.5	26.7	21.8 - 32.4
60-69	429	5.8	3.6 - 9.1	41.3	32.7 - 50.4	29.9	24.0 - 36.6	23.0	17.4 - 29.7
Total	1693	5.4	3.7 - 7.7	40.3	37.3 - 43.4	29.3	25.1 - 33.9	24.9	21.5 - 28.8

Table 212

BMI classifications									
Female									
Age Categories (Years)	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	% BMI 25.0-29.9	95% CI	% Obese ≥ 30.0	95% CI
18-29	279	12.0	7.7 - 18.2	39.4	32.2 - 47.0	21.6	15.8 - 28.8	27.1	19.2 - 36.7
30-44	642	1.7	0.9 - 3.3	25.1	20.2 - 30.8	30.8	26.2 - 35.9	42.3	36.8 - 48.0
45-59	620	0.8	0.4 - 1.7	22.1	16.5 - 29.0	31.0	25.0 - 37.8	46.0	40.3 - 51.9
60-69	519	2.1	1.0 - 4.2	24.9	20.3 - 30.1	33.7	28.4 - 39.5	39.3	34.4 - 44.5
Total	2060	4.7	3.2 - 6.7	28.6	24.6 - 33.1	28.4	25.0 - 32.0	38.3	34.4 - 42.4

Table 213

BMI classifications									
Total									
Age Categories (Years)	n	% Under- weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	% BMI 25.0-29.9	95% CI	% Obese ≥30.0	95% CI
18-29	524	10.6	6.7 - 16.2	45.8	40.7 - 51.0	21.2	16.8 - 26.3	22.5	17.9 - 27.9
30-44	1136	2.9	2.1 - 4.2	29.9	25.8 - 34.3	30.6	26.3 - 35.3	36.6	31.9 - 41.5
45-59	1145	1.7	1.2 - 2.5	27.9	23.2 - 33.2	34.1	29.4 - 39.2	36.3	32.3 - 40.5
60-69	948	3.9	2.7 - 5.7	33.1	28.0 - 38.6	31.8	27.6 - 36.3	31.1	27.6 - 34.9
Total	3753	5.0	3.7 - 6.8	34.5	31.8 - 37.4	28.9	26.3 - 31.5	31.6	28.5 - 34.9

BMI ≥ 25 kg/m² Description: Percentage of population (excluding pregnant women) classified as overweight (BMI ≥ 25 kg/m²)

Instrument question:

M8: For women: Are you pregnant?

M11: Height

M12: Weight

Table 214 shows that 61.2% (CI 58.1-64.2) of the population (excluding pregnant women) were classified as overweight (BMI ≥ 25 kg/m²). Of these, 55.3% (CI 51.7-58.8) were males and 67.2% (CI 62.3-71.7) were females.

Table 214

BMI ≥ 25									
Male				Female			Total		
Age Categories (Years)	n	% BMI ≥ 25	95% CI	n	% BMI ≥ 25	95% CI	n	% BMI ≥ 25	95% CI
18-29	245	42.0	34.2 - 50.2	279	50.2	41.9 - 58.5	524	46.1	41.0 - 51.3
30-44	494	61.3	55.6 - 66.8	642	73.1	67.4 - 78.1	1136	67.2	62.8 - 71.3
45-59	525	63.9	57.6 - 69.8	620	77.0	70.3 - 82.6	1145	70.4	65.3 - 75.0
60-69	429	53.0	44.5 - 61.3	519	73.0	67.5 - 77.9	948	63.0	57.7 - 67.9
Total	1693	55.3	51.7 - 58.8	2060	67.2	62.3 - 71.7	3753	61.2	58.1 - 64.2

Waist circumference Description: Mean waist circumference among all population (excluding pregnant women)

Instrument question:

M8: For women: Are you pregnant?

M14: Waist circumference measurement

Table 215 shows that the mean waist circumference in the population (excluding pregnant women) was 90.5cm (CI 89.2-91.9) in females and 91.2cm (CI 89.8-92.6) in males.

Table 215

		Waist circumference (cm)				
		Male		Female		
Age Categories (Years)	n	Mean	95% CI	n	Mean	95% CI
18-29	248	85.8	83.4 - 88.2	280	83.6	80.5 - 86.7
30-44	499	93.3	91.4 - 95.1	648	91.7	90.2 - 93.3
45-59	531	94.1	91.7 - 96.4	634	95.8	93.9 - 97.7
60-69	434	92.7	90.5 - 94.8	526	93.1	90.1 - 96.1
Total	1712	91.2	89.8 - 92.6	2088	90.5	89.2 - 91.9

Hip circumference Description: Mean hip circumference among all population (excluding pregnant women)

Instrument question:

M8: For women: Are you pregnant?

M15: Hip circumference measurement

Table 216 shows that the mean hip circumference in the population (excluding pregnant women) was 106.7cm (CI 105.3-108.2) in females and 101.3cm (CI 100.1-102.4) in males.

Table 216

Hip circumference (cm)						
Male				Female		
Age Categories (Years)	n	Mean	95% CI	n	Mean	95% CI
18-29	248	99.0	97.0 - 101.0	280	102.5	99.4 - 105.7
30-44	498	104.2	102.3 - 106.0	648	108.4	106.9 - 110.0
45-59	528	101.2	99.6 - 102.9	634	110.2	108.3 - 112.2
60-69	433	99.5	97.5 - 101.5	526	104.9	102.7 - 107.1
Total	1707	101.3	100.1 - 102.4	2088	106.7	105.3 - 108.2

Waist/hip ratio Description: Mean waist-to-hip ratio among all population (excluding pregnant women)

Instrument question:

M8: For women: Are you pregnant?

M14: Waist circumference measurement

M15: Hip circumference measurement

Table 217 shows that the mean waist-to-hip ratio in the population (excluding pregnant women) was the same for both males 0.9 (CI 0.9-0.9) and females 0.9 (CI 0.8-0.9).

Table 217

		Mean waist / hip ratio				
		Male		Female		
Age Categories (Years)	n	Mean	95% CI	n	Mean	95% CI
18-29	248	0.9	0.8 - 0.9	280	0.8	0.8 - 0.8
30-44	498	0.9	0.9 - 0.9	648	0.9	0.8 - 0.9
45-59	528	0.9	0.9 - 0.9	634	0.9	0.9 - 0.9
60-69	433	0.9	0.9 - 0.9	526	0.9	0.9 - 0.9
Total	1707	0.9	0.9 - 0.9	2088	0.9	0.8 - 0.9

Biochemical Measurements

Mean fasting blood glucose Description: Mean fasting blood glucose results including those currently on medication for diabetes (non-fasting recipients excluded)

Instrument question:

B1: During the last 12 hours have you had anything to eat or drink, other than water?

B5: Blood glucose measurement

Table 218 shows that the mean fasting blood glucose including those currently on medication for diabetes (non-fasting recipients excluded) was 110.5mg/dl (107.2-113.7). Of these, the mean was 112.2mg/dl (CI 107.9-116.5) in females and 108.7mg/dl (CI 105.0-112.4) in males.

Table 218

Mean fasting blood glucose (mg/dl)									
Male			Female			Total			
n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI	
Total	413	108.7	105.0 - 112.4	584	112.2	107.9 - 116.5	997	110.5	107.2 - 113.7

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

Instrument question:

H8: In the past two weeks, have you taken any drugs (medication) for diabetes prescribed by a doctor or other health worker?

H9: Are you currently taking insulin for diabetes prescribed by a doctor or other health worker?

B1: During the last 12 hours have you had anything to eat or drink, other than water?

B5: Blood glucose measurement

Tables 219, 220, 221 and 222 show the categorization of the population into blood glucose level categories and percentage of population currently on medication for raised blood glucose (non-fasting recipients excluded)

- 11.3% (CI 8.4-14.9) of the population were categorised as having impaired fasting glycaemia with more males 12.8% (CI 8.0-19.9) as compared to females 9.7% (CI 7.3-12.9).
- 15.8% (CI 13.0-19.1) of the population were categorised as having raised blood glucose or currently on medication for diabetes with more females 17.3% (CI 13.8-21.5) as compared to males 14.3% (CI 10.6-18.8).
- 58.3% (CI 46.5-69.2) were diagnosed with diabetes among those with raised blood glucose or currently on medication. There was no significant difference between males 57.1% (CI 43.6-69.7) and females 59.2% (CI 45.2-71.9) diagnosed.
- 54.9% (CI 43.6-65.6) were currently on treatment for diabetes among those with raised blood glucose or currently on medication. There was no significant difference between males 55.0% (CI 41.5-67.9) and females 54.7% (CI 41.7-67.1).

Table 219

Impaired Fasting Glycaemia*									
Male				Female			Total		
	n	%	95% CI		n	%	95% CI	n	%
Total	413	12.8	8.0 - 19.9		584	9.7	7.3 - 12.9	997	11.3
									8.4 - 14.9

Table 220

Raised blood glucose or currently on medication for diabetes											
Male				Female			Total				
	n	%	95% CI		n	%	95% CI		n	%	95% CI
Total	413	14.3	10.6 - 18.8		584	17.3	13.8 - 21.5		997	15.8	13.0 - 19.1

Table 221

Diagnosed with diabetes among those with raised BG or currently on medication									
Male				Female			Total		
	n	% diagnosed	95% CI	n	% diagnosed	95% CI	n	% diagnosed	95% CI
Total	85	57.1	43.6 - 69.7	126	59.2	45.2 - 71.9	211	58.3	46.5 - 69.2

Table 222

Currently on treatment for diabetes among those with raised BG or currently on medication									
Male				Female			Total		
	n	% on medication	95% CI	n	% on medication	95% CI	n	% on medication	95% CI
Total	85	55.0	41.5 - 67.9	126	54.7	41.7 - 67.1	211	54.9	43.6 - 65.6

Total cholesterol Description: Mean total cholesterol among all population including those currently on medication for raised cholesterol

Instrument question:

B8: Total cholesterol measurement

Table 223 shows that the mean total cholesterol among the population including those currently on medication for raised cholesterol was 185.5 mg/dl (CI 182.1-188.8) [188.6mg/dl (CI 183.9-193.3) in males and 182.3mg/dl (CI 176.4-188.2) in females].

Table 223

Mean total cholesterol (mg/dl)									
Male			Female			Total			
n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI	
Total	390	188.6	183.9 - 193.3	569	182.3	176.4 - 188.2	959	185.5	182.1 - 188.8

Raised total cholesterol Description: Percentage of population with raised total cholesterol

Instrument question:

B8: Total cholesterol measurement

Tables 224 and 225 show that 39.6% (CI 35.6-43.8) of the population had a total cholesterol ≥ 5.0 mmol/L or ≥ 190 mg/dl [42.9% (CI 37.5-48.6) males and 36.4% (CI 30.6-42.5) females]. 11.4% (CI 9.0-14.3) of the population had a total cholesterol ≥ 6.2 mmol/L or ≥ 240 mg/dl [12.7% (CI 9.3-17.2) males and 10.0% (CI 6.8-14.5) females].

Table 224

Total cholesterol ≥ 5.0 mmol/L or ≥ 190 mg/dl									
Male				Female			Total		
n	%	95% CI		n	%	95% CI	n	%	95% CI
Total	390	42.9	37.5 - 48.6	569	36.4	30.6 - 42.5	959	39.6	35.6 - 43.8

Table 225

Total cholesterol ≥ 6.2 mmol/L or ≥ 240 mg/dl									
Male				Female			Total		
n	%	95% CI		n	%	95% CI	n	%	95% CI
Total	390	12.7	9.3 - 17.2	569	10.0	6.8 - 14.5	959	11.4	9.0 - 14.3

Raised total cholesterol or on medication

Description: Percentage of population with raised total cholesterol

Instrument question:

B8: Total cholesterol measurement
B9: During the past two weeks, have you been treated for raised cholesterol with drugs (medication) prescribed by a medical doctor or other health worker?

Tables 226 and 227 show that 41.3% (CI 37.2-45.6) of the population had a total cholesterol \geq 5.0mmol/L or \geq 190mg/dl or on medication [44.9% (CI 39.1-50.7) males and 37.8% (CI 31.9-44.0) females].

14.6% (CI 11.9-17.7) of the population had a total cholesterol \geq 6.2 mmol/L or \geq 240mg/dl or on medication [15.2% (CI 11.5-19.9) males and 13.9% (CI 10.1-18.8) females].

Table 226

Total cholesterol \geq 5.0 mmol/L or \geq 190 mg/dl or on medication									
Male				Female			Total		
	n	%	95% CI		n	%	95% CI	n	%
Total	390	44.9	39.1 - 50.7		569	37.8	31.9 - 44.0	959	41.3
									37.2 - 45.6

Table 227

Total cholesterol \geq 6.2 mmol/L or \geq 240 mg/dl or on medication									
Male				Female			Total		
	n	%	95% CI		n	%	95% CI	n	%
Total	390	15.2	11.5 - 19.9		569	13.9	10.1 - 18.8	959	14.6
									11.9 - 17.7

Cardiovascular Disease Risk

CVD risk Description: 10-year cardiovascular disease (CVD) risk* among population aged 40-69 years

Instrument question:

Gender, age

Smoking status

Systolic blood pressure measurements

History of diabetes

Total cholesterol measurements

Body mass index

Tables 228 and 229 show that the majority of persons i.e. 81.5% (CI 74.7-86.7) of males in comparison to 83.4% (CI 78.8-87.3) of females had a 10-year cardiovascular disease risk < 10%. Whereas, 1.7% (CI 0.7-3.9) of males in comparison to 2.1% (1.0-4.4) of females had a 10-year cardiovascular disease risk of $\geq 20\%$.

Table 228

Percentage of population by level of 10-year CVD risk							
Male							
Age Categories (Years)	n	% <10%	95% CI	% 10-20%	95% CI	% $\geq 20\%$	95% CI
40-54	126	94.2	85.3 - 97.8	5.3	1.8 - 14.5	0.5	0.1 - 2.2
55-69	138	63.5	49.8 - 75.2	33.2	22.2 - 46.5	3.3	1.2 - 9.1
Total	264	81.5	74.7 - 86.7	16.9	11.7 - 23.6	1.7	0.7 - 3.9

Table 229

Percentage of population by level of 10-year CVD risk							
Female							
Age Categories (Years)	n	% <10%	95% CI	% 10-20%	95% CI	% $\geq 20\%$	95% CI
40-54	195	98.8	96.2 - 99.6	1.2	0.4 - 3.8	0.0	0.0 - 0.0
55-69	189	56.2	48.3 - 63.8	37.9	29.5 - 47.1	5.9	2.7 - 12.3
Total	384	83.4	78.8 - 87.3	14.4	10.5 - 19.5	2.1	1.0 - 4.4

**CVD risk of
≥20% or
existing CVD**

Description: Percentage of population aged 40-69 years with a 10-year cardiovascular disease (CVD) risk* ≥20% or with existing CVD

Instrument question:

Gender, age

Smoking status

Systolic blood pressure measurements

History of diabetes

Total cholesterol measurements

Body mass index

Table 230 shows that 11.8% (CI 9.2-15.1) of the population aged 40-69 years had a 10-year cardiovascular disease risk of ≥20% or had existing CVD [9.3% (CI 6.3-13.4) males and 14.4% (CI 10.4-19.6) females].

Table 230

Percentage of population with a 10-year CVD risk ≥20% or with existing CVD									
Age Categories (Years)	Male				Female			Total	
	n	%	95% CI	N	%	95% CI	n	%	95%CI
Total	264	9.3	6.3 - 13.4	384	14.4	10.4 - 19.6	648	11.8	9.2-15.1

Summary of Combined Risk Factors

Summary of Combined Risk Factors	<p><u>Description:</u> Percentage of population with 0, 1-2, or 3-5 of the following risk factors</p> <p><u>Instrument question:</u></p> <p>Current daily smoking</p> <p>Less than five servings of fruit and/or vegetables per day</p> <p>Not meeting WHO recommendations on physical activity for health (<150 minutes of moderate activity per week, or equivalent)</p> <p>Overweight or obese (BMI \geq 25 kg/m²)</p> <p>Raised BP (SBP \geq 140 and/or DBP \geq 90 mmHg or currently on medication for raised BP).</p>
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Risk factors referred to are as follows:

- Current daily smoking
- Less than five servings of fruit and/or vegetables per day
- Not meeting WHO recommendations on physical activity for health (<150 minutes of moderate activity per week, or equivalent)
- Overweight or obese (BMI \geq 25 kg/m²)
- Raised BP (SBP \geq 140 and/or DBP \geq 90 mmHg or currently on medication for raised BP).

Table 231, 232, 233, 234 and 235 show that 1.6% (CI 1.0-2.5) of the population had 0 of the above-mentioned risk factors. There was no difference observed between males 1.6(CI 0.9-2.7) and females 1.6(CI 0.9-3.0) with 0 risk factors.

38.4% (CI 35.2-41.7) of the population had 3-5 risk factors. There was no difference between males 38.0% (CI 34.1-42.1) and females 38.7% (CI 35.4-42.2) with 3-5 risk factors.

More persons in the 45–69-year age group had 3-5 risk factors i.e. 53.7% (CI 49.9-57.6) when compared to the proportion of persons in the younger 18-44year age group who also had 3-5 risk factors i.e. 28.4% (CI 24.4-32.9).

Table 231

Summary of Combined Risk Factors							
Male							
Age Categories (Years)	n	% with 0 risk factors	95% CI	% with 1-2 risk factors	95% CI	% with 3-5 risk factors	95% CI
18-44	703	1.9	1.0 - 3.6	69.8	65.2 - 74.1	28.3	23.8 - 33.3
45-69	932	1.1	0.6 - 2.1	46.1	41.5 - 50.8	52.8	47.9 - 57.6
Total	1635	1.6	0.9 - 2.7	60.4	56.7 - 64.1	38.0	34.1 - 42.1

Table 232

Summary of Combined Risk Factors							
Female							
Age Categories (Years)	n	% with 0 risk factors	95% CI	% with 1-2 risk factors	95% CI	% with 3-5 risk factors	95% CI
18-44	905	1.5	0.5 - 4.2	69.9	64.8 - 74.6	28.6	23.8 - 33.9
45-69	1124	1.9	1.0 - 3.5	43.4	39.0 - 48.0	54.7	50.2 - 59.2
Total	2029	1.6	0.9 - 3.0	59.7	56.3 - 62.9	38.7	35.4 - 42.2

Table 233

Summary of Combined Risk Factors							
Total							
Age Categories (Years)	n	% with 0 risk factors	95% CI	% with 1-2 risk factors	95% CI	% with 3-5 risk factors	95% CI
18-44	1608	1.7	0.9 - 3.0	69.9	65.7 - 73.8	28.4	24.4 - 32.9
45-69	2056	1.5	0.9 - 2.4	44.8	41.1 - 48.4	53.7	49.9 - 57.6
Total	3664	1.6	1.0 - 2.5	60.0	56.9 - 63.1	38.4	35.2 - 41.7

Table 234

Summary of Combined Risk Factors									
Male				Female			Total		
Age Categories (Years)	n	% with 3-5 risk factors	95% CI	N	% with 3-5 risk factors	95% CI	n	% with 3-5 risk factors	95% CI
18-44	703	28.3	23.8 - 33.3	905	28.6	23.8 - 33.9	1608	28.4	24.4 - 32.9
45-69	0	-	-	0	-	-	0	-	-
Total	703	28.3	23.8 - 33.3	905	28.6	23.8 - 33.9	1608	28.4	24.4 - 32.9

Table 235

Summary of Combined Risk Factors									
Male				Female			Total		
Age Categories (Years)	n	% with 3-5 risk factors	95% CI	N	% with 3-5 risk factors	95% CI	n	% with 3-5 risk factors	95% CI
18-44	0	-	-	0	-	-	0	-	-
45-69	932	52.8	47.9 - 57.6	1124	54.7	50.2 - 59.2	2056	53.7	49.9 - 57.6
Total	932	52.8	47.9 - 57.6	1124	54.7	50.2 - 59.2	2056	53.7	49.9 - 57.6

DISCUSSION

Non-communicable diseases (NCDs) such as cardiovascular diseases, cancer, diabetes, and chronic respiratory illnesses are the leading causes of morbidity and mortality worldwide. NCDs account for 71 million deaths globally per year, with 5.5 million deaths occurring in the region of the Americas, inclusive of the Caribbean.[1] NCDs disproportionately affect individuals in low- and middle-income countries, causing a significant impact on productivity and healthcare systems. Of the premature deaths (deaths occurring before the age of 70) from NCDs, 82% are persons living in low- and middle-income countries. [2]

These diseases are often associated with lifestyle factors such as unhealthy diets, physical inactivity (sedentary lifestyle), excessive consumption of alcohol and tobacco use. Cardiovascular diseases are the leading cause of death among persons with non-communicable diseases, claiming 19 million lives annually worldwide. Cancers account for 10 million of these deaths followed by chronic respiratory diseases – 4 million deaths and diabetes, which accounts for over 2 million deaths globally. [2]

The Caribbean faces an alarmingly high NCD rate, with this group of diseases making up the majority of deaths in the region. Risk factors such as obesity, physical inactivity, excessive alcohol consumption, tobacco use and high sodium intake all contribute to the prevalence of NCDs. In Trinidad and Tobago, NCDs are rapidly rising, accounting for over 60% of deaths annually. Diseases such as ischemic heart disease, diabetes, stroke, and certain cancers are the primary contributors to NCD-related mortality. [3]

Thus, the 2024 STEPS Survey provides fundamental data on the prevalence of key NCD risk factors in the population of Trinidad and Tobago. Data collected provides critical up to date evidence for identifying at-risk groups and evaluating the impact of interventions while also serving as a foundation for the development of further health policies and interventions. Evidence from the survey shows that addressing the NCD epidemic in Trinidad and Tobago requires a multifaceted and multisectoral approach, catering specifically to certain age groups and gender. It is imperative that resources are focused on early detection, primary and preventative healthcare and health promotion to mitigate the long-term health and economic impact of these diseases.

Demographics

The National STEPS Survey 2024 represents the adult population from the ages of 18 to 69 years. Among the 4,052 participants, 1,837 were male and 2,215 were female.

The major ethnic groups in Trinidad and Tobago were represented in this survey with persons of African descent accounting for 41.5%, persons of East Indian descent accounting for 33.4% and persons of mixed ethnicity accounting for 24.6% of the survey population. This information is useful for customizing NCD programs and interventions as ethnicity plays an important role in an individual's genetic predisposition to certain NCDs. For example, persons of South Asian descent are more at risk for developing diabetes and cardiovascular diseases whereas persons of African descent are at a higher risk for hypertension and its associated complications. [13, 14]

Smoking

Over one fifth i.e. 21.3% (CI 19.1-23.7) of the population were current smokers, 17.0% (CI 14.9-19.2) of persons engaged in smoking tobacco daily. The proportion of current daily tobacco smokers who were male was almost three times higher than females, with the highest prevalence of smoking observed in the 30-44 age group.

Over ninety percent i.e. 92.8% (CI 89.3-95.2) of persons engaged in smoking factory manufactured cigarettes, as compared to ninety-five percent i.e. 95.6% (CI 93.6-97.7) recorded in STEPS 2011 (for age groups 15-64 years in STEPS 2011). In 2024, almost five percent i.e. 4.9% (CI 3.4-6.9) of the population reported the use of electronic cigarettes. The recent rise in the popularity of e-cigarettes in the 21st century may account for the subtle decrease in the use of factory manufactured cigarettes between 2011 and 2024. As such, an increase of electronic cigarette users warrants close monitoring and further research to implement useful policies and strategies.

17.8% (CI 14.2-22.1) of the population reported that they were exposed to secondhand smoke in the workplace within the past 30 days. These statistics indicate the need for more stringent workplace policies regarding smoking, as inhaling secondhand smoke also carries significant health risks.

Alcohol Consumption

Over half of the population, 51.5% (CI 48.9-54.2) were current drinkers (consumed alcohol within the past 30 days). This suggests a significant increase in the prevalence of alcohol consumption by 11.1% in the population between 2011 (for age groups 15-64 years in STEPS 2011) [40.4% (CI 37.6-43.2)] and 2024. In 2024, males accounted 59.6% (CI 56.3-62.8) of current drinkers and females, 43.4% (CI 39.1-47.7). It was also observed, however, that from 2011 to 2024, the proportion of female drinkers in 2024 i.e. 43.4% (CI 39.1-47.7) significantly increased as compared

to the proportion of female drinkers in 2011 (for age groups 15-64 years in STEPS 2011) (i.e. 30.9% (CI 27.8-34.0) by 12.5%. Just over double the amount of males [29.4% (CI 25.9-33.3)] compared to females [12.0% (CI 9.2-15.5)] engaged in binge drinking within the last 30 days. These findings suggest that excessive alcohol consumption remains a public health issue, particularly among males. The high prevalence of heavy episodic /binge drinking (6 or more drinks on any drinking occasion in the past 30 days) highlights the need for interventions to reduce harmful alcohol consumption behaviours.

The age group with the highest rate of high-end level drinking (≥ 60 g of pure alcohol on average per occasion among men and ≥ 40 g of pure alcohol on average per occasion among women) was the 30-44 age group. This suggests the need for health promotion interventions specifically targeted to adults in this age category. The average maximum number of drinks for males on one occasion was 5.7 drinks (CI 5.0-6.4) and 3.7 drinks for females (CI 3.4-4.0).

Fruit and Vegetable Consumption

The daily recommended intake of fruits and vegetables is five (5) servings per day. The average number of servings of fruit and vegetables consumed by the population was approximately one (1) serving per day, with 93.3% (CI 91.6-94.7) of the population consuming less than the recommended amount. The findings were similar for both males and females, with no significant difference in the average daily consumption rates. According to the WHO, incorporating servings of fruits and vegetables into your daily diet may reduce the risk of developing some NCDs. Additional findings show that a small proportion of the population, 6.3% (CI 5.0-8.0) always add salt or salty sauce to their food prior to eating, however, almost one quarter of the population i.e. 24.3% (CI 21.8-26.9) often or always consumed processed foods high in salt.

Overall, these 2024 findings show no significant difference between the findings reported in the 2011 STEPS report (for age groups 15-64 years in STEPS 2011), suggesting that over the past thirteen (13) years there had been no major change in the dietary habits among members of the Trinidad and Tobago population. A diet rich in sodium and highly processed foods, combined with a low daily intake of fruit and vegetables among the population is closely linked to NCD related health complications and thus increases the overall risk of developing a non-communicable disease. Together, these findings display the need for more rigorous health promotion campaigns, geared towards educating the population of Trinidad and Tobago on the importance of eating balanced healthy meals daily.

Physical Activity

According to the data collected, one quarter of the population i.e. 25.3% (CI 22.0-29.1) displayed insufficient levels of physical activity, that is, attaining less than the WHO defined 150 minutes of moderate intensity activity per week. Just over twice as many females i.e. 34.3% (CI 29.4-39.0) as compared to males i.e. 16.1% (CI 13.7-19.8) had insufficient levels of physical activity. The median time spent on total physical activity (i.e. activity: at work, travel to and from places, and recreational activities) on average per day for males i.e. 162.9 minutes (IQR 39.3-368.6) was approximately triple that of the median time per day for females i.e. 55.7 minutes (IQR 8.6-200.0). When assessing the median time spent on various related forms of physical activity, such as work related, transport related or leisure related physical activity, males obtained their greatest median time i.e. 77.1 minutes (IQR (0.0-300.0) from work related physical activity in comparison to females for all of the previously mentioned related forms of physical activity. A substantial increase was observed in the median time spent on physical activity per day for both sexes combined in 2024 i.e. 102.9 minutes (IQR 17.9-296.0) when compared to the median time of 42.9 minutes (IQR 4.3-137.1) presented in the 2011 report (for age groups 15-64 years in STEPS 2011). Even though there appears to be an increase in median time is still significantly below the amount of time recommended by WHO for proper health maintenance.

Overall low rates of physical activity levels put the population at risk for non-communicable diseases. This suggests the need for age and gender specific public health programs and interventions to increase physical activity levels, particularly in females. Initiatives can be implemented and promoted as community-based activities at the primary healthcare level to foster increased participation. The data suggest that there is room for a gender-based approach towards addressing this issue.

Mental Health - Depression

In Trinidad and Tobago, mental health is considered a non-communicable disease. As such, this 2024 survey included a newly introduced module on mental health.

According to the WHO in 2023, an estimated 3.8% of the population globally, experienced depression, including 5% of adults (4% among men and 6% among women), and 5.7% of adults older than 60 years.[15] Approximately 280 million people in the world have depression. The Center for Disease Control (CDC) in the United States of America reported that during 2020, 18.4% of U.S. adults reported having ever been diagnosed with depression.[16]

In Trinidad and Tobago, the 2024 STEPS survey results show that the prevalence of depression in the population was 13.6% (CI 11.4-16.2). A higher prevalence was observed in females i.e. 17.3% (CI 14.3-20.9) in comparison to males 9.9% (CI 7.8-12.5). A low engagement in treatment options was also observed, with 85.7% (CI 79.0-90.5) of individuals with depression having not taken medication within the past 12 months and 79.7% (CI 74.9-83.8) having never attended psychotherapy or counselling sessions within the same period. Short-term treatments were the most common among those who sought help, with 8.2% (CI 4.7-13.9) of persons taking medication for three months or more and 7.9% (CI 5.6-11.0) of persons attending four or more psychotherapy/ counselling sessions within the past 12 months.

A high prevalence of untreated depression can lead to increased morbidity, mortality, reduced levels of productivity and greater healthcare costs due to its close association with and impact on other NCDs. Integrating mental health into NCD risk factor assessment is essential for designing effective and comprehensive public health interventions. Programmes, policies and interventions should be gender specific and facilitate public awareness and education while addressing the barriers to care such as stigma surrounding mental health, lack of awareness and delivery of mental health services. This approach not only enhances the quality of life for individuals affected but also reduces the overall burden on the healthcare system.

Overweight and Obesity

Almost two thirds ($\frac{2}{3}$) of the population i.e. 61.2% (CI 58.1-64.2) were overweight or obese (BMI ≥ 25 kg/m²) whereas, one third ($\frac{1}{3}$) i.e. 31.6% (CI 28.5-34.9) were obese (BMI ≥ 30 kg/m²). The prevalence of overweight and obesity (BMI ≥ 25 kg/m²) was 55.3% (CI 51.7-58.8) in males and 67.2% (CI 62.3-71.7) in females. When comparing these findings to that of the 2011 STEPS report (for age groups 15-64 years in STEPS 2011), i.e. 36.9% (CI 34.3-39.4) there was a significant increase in the prevalence by 24.3% for overweight and obese persons, BMI ≥ 25 kg/m² from 2011 to 2024.

The average waist circumference was 91.2 cm (CI 89.8-92.6) in males and 90.5 cm (CI 89.2-91.9) in females. In 2011 (for age groups 15-64 years in STEPS 2011), the average waist circumference in males was 104.9 cm (CI 102.9-107.1) and 89.3cm (CI 88.3-90.3) females. A decrease is observed in the waist circumference for males in 2024 when compared to the waist circumference for males in 2011. Though multifactorial, it may be inferred that this decrease may be associated with the increase in time spent on physical activity per day in males, thus increasing the number of calories expended on a daily basis leading to a reduction in waist circumference measurements

observed for males over the period 2011 to 2024.

A waist circumference > 94 cm in men and >80 cm in women increases the risk of obesity related health complications. A higher accumulation of abdominal fat is associated with an increased risk for Type 2 diabetes, cardiovascular diseases, high blood pressure and high cholesterol. A lack of physical activity and unhealthy eating habits, such as a diet high in fats and processed foods, also contribute to high waist circumference and abdominal obesity.

In 2024, a waist to hip ratio of 0.9 (CI 0.9-0.9) was observed for males and 0.9 (CI 0.8-0.9) for females. The WHO advises that a waist to hip ratio ≥ 0.85 cm for women and ≥ 0.9 for men is associated with a substantially increased risk of NCDs such as metabolic complications, for example type 2 diabetes, hypercholesterolaemia and other conditions such as hypertension, cardiovascular diseases and increased overall mortality.[17]

Raised Blood Pressure

29.0% (CI 27.0-31.2) of the population had raised blood pressure i.e. SBP ≥ 140 and/or DBP ≥ 90 mmHg (viz. hypertension) or currently on medication for raised blood pressure. In 2011(for age groups 15-64 years in STEPS 2011), 26.3% (CI 24.1-28.5) of the population had raised blood pressure i.e. SBP ≥ 140 and/or DBP ≥ 90 mmHg (viz. hypertension) or currently on medication for raised blood pressure. Even though the prevalence in 2024 appeared to be 2.7% more than that of 2011(for age groups 15-64 years in STEPS 2011), this difference was not found to be statistically significant.

33.2 % (CI 29.6-37.1) of males and 24.9% (CI 22.2-27.8) of females had raised blood pressure. 18.5% (CI 14.6-23.2) of all persons diagnosed with high blood pressure(hypertension) have achieved control. A total prevalence of 38.5% (34.0-43.3) of persons who were diagnosed with high blood pressure, were receiving treatment with medication for their condition. Seeing that only one fifth($\frac{1}{5}$) of persons diagnosed with hypertension had achieved control of their condition, the proportion of persons with uncontrolled hypertension was concerning, considering the health risks associated with having uncontrolled high blood pressure.

Uncontrolled high blood pressure can lead to long term health complications for example, cardiovascular diseases such as ischaemic heart disease, heart failure and stroke. National health promotion campaigns and screening initiatives should be prioritized to continue to encourage persons to monitor and ‘know their numbers’ thereby empowering persons to better manage their health status and reduce their risk of NCDs and related complications.

Biochemical Measurements

15.8% (CI 13.0-19.1) of persons had a raised fasting blood glucose (plasma venous value $\geq 126\text{mg/dl}$) viz. diabetes or currently on medication for raised blood glucose. When compared to data from the STEPS 2011 (for age groups 15-64 years in STEPS 2011) report i.e. 20.5% (CI 16.6-24.4), a slightly reduced proportion of persons had raised blood glucose levels as compared to 2024. However, this difference was not found to be statistically significant.

In 2011(for age groups 15-64 years in STEPS 2011), 50.3% (CI 45.1-55.4), of the population, had raised total cholesterol levels as compared to 39.6% (CI 35.6-43.8). A statistically significant decrease in total cholesterol levels of 10.7% was observed for the period 2011 to 2024.

The biochemical measurements obtained indicate the need for strengthening of continued health promotion campaigns with particular emphasis being placed on healthy dietary practices, increasing levels of physical activity and the associated health benefits in order to reduce the prevalence of diabetes, high cholesterol and by extension, heart disease in the future. The population should continue to be encouraged to get screened and to familiarise themselves with their health metrics for example blood glucose and cholesterol levels to increase early detection and hence early intervention of potential conditions to avoid long term health complications.

10- year Cardiovascular Disease (CVD) Risk

For this survey, 10-year cardiovascular disease risk was estimated utilizing WHO CVD Risk Charts (2019).[19] To support the expansion of CVD prevention and control efforts, WHO developed tools and guidance, inclusive of risk predication charts. [20] Unlike previously developed risk prediction models, these validated risk prediction charts have been adapted for the needs of low -income and middle – income countries. According to the WHO, widespread use of these charts could enhance the accuracy, practicability and sustainability to reduce the burden of cardiovascular diseases worldwide which account for the most common NCDs and are responsible for millions of premature deaths, mainly in low- and middle-income countries.[19, 20] Risk prediction models can help to identify people at high risk of cardiovascular disease who should benefit the most from preventative interventions.[18]

Data collected during the 2024 STEPS Survey on age, sex, total cholesterol, systolic blood pressure, BMI, history of diabetes and smoking status were utilized to estimate 10-year cardiovascular disease risk among the population aged 40-69 years.

It was observed that 16.9% (CI 11.7-23.6) of the male population and 14.4% (CI 10.5-19.5) of the female population aged 40-69 years were found to have a 10-20% risk of developing CVD within the next 10 years (intermediate). Additionally, this risk increased six-fold with advancing age when observing from the 40-54 age group - 5.3% (CI 1.8-14.5) to the 55-69 age group 33.2% (CI 22.2-46.5) in males. Whereas in females, this risk increased even more significantly from the 40-54 age group 1.2% (CI 0.4-3.8) to the 55-69 age group 37.9% (CI 29.5-47.1).

81.5% (CI 74.7-86.7) of males and 83.4% (CI 78.8-87.3) of females were found to have < 10% risk of developing CVD in 10 years.

9.3% (CI 6.3-13.4) of males and 14.4% (CI 10.4-19.6) of females aged 40-69 years had a 10-year CVD risk \geq 20% or with existing CVD.

These results can have far reaching implications not only for individuals but also the country, for example the nation's future work force and future health care costs. For those already diagnosed, there is still opportunity to employ targeted secondary preventative measures to prevent reoccurrence of acute emergencies or prevent / reduce the rate of complications, morbidity and mortality from cardiovascular diseases and ultimately reduce the associated public health burdens.

Combined Risk for NCDs

The five (5) NCD risk factors assessed for combined risk in this survey are as follows: (i)current daily smoking, (ii)less than five servings of fruits & vegetables per day, (iii) not meeting WHO recommendations on physical activity for health(<150 minutes of moderate intensity activity per week, or equivalent), (iv)overweight or obese ($BMI \geq 25 \text{ kg/m}^2$) and (v) raised BP ($SBP \geq 140$ and/or $DBP \geq 90 \text{ mmHg}$ or currently on medication for raised BP).

38.4% (CI 35.2-41.7) of the population had three to five risk factors (aged 18-69 years). This value is relatively unchanged when compared to that obtained in the STEPS 2011 (for age groups 15-64 years in STEPS 2011) survey i.e. 41.5% (CI 37.2-45.8).

Only 1.6% (CI 1.0-2.5) of the population had none of the five risk factors.

This trend suggests that there is still room for continued population engagement with regards to stimulating and inculcating healthier lifestyle practices.

These results underscore a need for more robust public health promotion initiatives geared towards encouraging persons to take ownership of their health and reduce their risk of developing non-communicable diseases.

CONCLUSION

The findings of this 2024 STEPS survey provide critical insights into the prevalence of non-communicable disease risk factors within the Trinidad and Tobago population and highlight the need to strengthen and support current public health interventions. Opportunities for targeted approaches have been revealed and will be essential in guiding future policies and interventions including screenings, health promotion and disease prevention initiatives. With a tobacco smoking prevalence of 21.3% (CI 19.1-23.7), a considerable proportion of the population remains at risk of tobacco-related illnesses, such as cardiovascular diseases and cancers. Approximately a quarter of the population i.e. 25.3% (CI 22.0-29.1) did not meet the WHO minimum recommendation on physical activity and 93.3% (CI 91.6-94.7) of the population did not consume the recommended minimum of 5 daily servings of fruit and vegetables. The prevalence of alcohol consumption was 51.5% (CI 48.9-54.2). Even though males continued to consume more alcohol than females, it was also observed, however, that from 2011 to 2024, the proportion of female drinkers in 2024 i.e. 43.4% (CI 39.1-47.7) significantly increased as compared to the proportion of female drinkers in 2011 by 12.5% (for age groups 15-64 years in STEPS 2011) i.e. 30.9% (CI 27.8-34.0). The aforementioned, highlights the key risk factors to be further targeted in future efforts by policy makers to effect lifestyle modification among members of the population.

The survey also revealed substantial prevalence rates of metabolic and biological risk factors, with 31.6% (CI 28.5-34.9) of the population being classified as obese ($\text{BMI} \geq 25\text{kg/m}^2$) and 29.0% (CI 27.0-31.2) with raised blood pressure ($\text{SBP} \geq 140$ and/or $\text{DBP} \geq 90\text{mmHg}$ or currently on medication for raised BP). Data showing that 38.4% (CI 35.2-41.7) of the population had three to five risk factors for NCDs is a matter of concern as further efforts are required to reverse this trend.

In light of these results, a multi-disciplinary, whole of society and holistic approach is recommended. Public health campaigns should continue to focus on educating, promoting healthy lifestyles as well

as focusing on key messaging to encourage the population to reduce alcohol consumption and increase smoking cessation. It was revealed that there is opportunity for a gender specific approach geared towards increasing physical activity levels particularly in women.

Strengthening primary healthcare systems is essential for the early detection and management of NCDs while supporting policy measures, for example, on e-cigarettes and excess alcohol consumption can serve to increase effective barriers for these harmful behaviours.

The 2024 STEPS survey conducted by the Ministry of Health, demonstrates the commitment by Ministry to take an evidence-based approach to addressing the issue of non-communicable diseases in Trinidad and Tobago. Technical support provided by PAHO/WHO and CSO ensured that the survey was conducted scientifically and that the results can be generalized to the population. The physical and biochemical results obtained were made immediately available to the respective participants along with guidance to review and follow up with their doctor or the nearest health facility.

This report emphasizes that addressing NCDs and its risk factors is not only vital for improving individual health outcomes but also for achieving national goals and strategic priorities. By utilising the data from this 2024 STEPS survey, policymakers and stakeholders can design and implement evidence-based interventions that will lead to a healthier, more productive and resilient population.

RECOMMENDATIONS

PUBLIC HEALTH AND CLINICAL INTERVENTIONS

An integrated approach, combining public health and clinical strategies is necessary for tackling NCDs at the primary care level. Focusing on prevention, early detection and effective management can increase public awareness and participation; thus, reducing the burden of NCDs and sustainably improving population health outcomes.

- Educating the population on healthy lifestyles while emphasizing nutrition, physical activity and the health risks of tobacco use and excess alcohol consumption.
- Continue mass media campaigns to raise awareness about risk factors and the importance of early screening.
- Encourage routine screenings for hypertension, diabetes and hypercholesterolemia at the primary care level.
- Strengthen smoking cessation counselling in primary care
- Encourage corporate policies that promote physical activity, mental health support and healthy eating.
- Promote urban agriculture and community gardens to increase access to fresh affordable local produce.
- Further develop gender specific mental health support programmes and interventions.
- Mass media campaigns to educate the public about the health risks associated with excessive alcohol consumption and tobacco use.
- Promote community initiatives and programs to encourage persons to reduce alcohol consumption.
- Monitor and address the rise of alternative tobacco products, such as e-cigarettes, with policy and regulation.
- Develop or implement policies for regulation of alcohol consumption.
- Implement strategies and policies to provide a supportive environment for healthy eating; such as, increasing access and availability of fruits and vegetables for the population
- Strengthen training of healthcare workers in the multidisciplinary management of NCDs, addressing both physiological and mental health needs (including skills such as smoking cessation, motivational interviewing for alcohol dependence and other behaviour change strategies).

INFRASTRUCTURE

Infrastructure is fundamental for managing NCDs as it creates the foundation for effective prevention, diagnosis, treatment and management of these conditions.

- Ensure that primary healthcare centers are equipped to provide preventive, diagnostic, and management services for NCDs, including hypertension, diabetes and mental health conditions.
- Build capacity for healthcare workers to screen, diagnose and manage NCDs effectively, with a focus on holistic care.
- Further integration of mental health within the framework of primary healthcare to address mental health comorbidities associated with chronic diseases.
- Further use of mobile health units to reach remote populations for screening, early detection and follow-up care.
- Advocate for sustainable funding to support the implementation of strategies for NCD, prevention, intervention, monitoring and control
- Continue to build and foster external stakeholder partnerships with NGOs (Non-Governmental Organizations), CBOs (Community Based Organizations), faith based organizations, academia and other stakeholders in advocacy and action for preventing and controlling NCDs and its risk factors.
- Develop further targeted health promotion/public health initiatives to address NCDs.

SURVEILLANCE

Effective surveillance plays a key role in managing non-communicable diseases in a country. It provides essential data for understanding disease trends, evaluating interventions and informing public health policies.

- Expand the use of Electronic Health Records to capture patient data on NCDs and their management at the primary care level.
- Conduct regular surveys at the national level such as the WHO STEPwise Approach to Surveillance (STEPS), to monitor behavioural, environmental and metabolic risk factors such as tobacco use, physical inactivity, diet, blood pressure, cholesterol and obesity.
- Integrate mental health indicators into NCD surveillance to address its strong link with chronic conditions.

- Focus on demographic groups with higher risk, such as low-income communities, rural populations and gender and specific age groups for example children and the elderly.

DISSEMINATION AND UTILIZATION OF STEPS SURVEY FINDINGS

1. Dissemination to Policymakers and International Agencies

- Wide dissemination of STEPS findings and recommendations to national policymakers through briefings, reports, and meetings to integrate survey data into public health strategies.
- Collaboration with international agencies to ensure that the global health frameworks reflect the STEPS data and contribute to informing regional and international policy decisions on NCD prevention and control.
- Formal presentations and policy papers shared with governmental bodies and international stakeholders to guide policy development, resource allocation, and international health initiatives.

2. Dissemination to the Public

- Use of mass media (television, radio, newspapers, online platforms) to present key findings and recommendations from the STEPS survey in an easily digestible format for public awareness.
- Social media campaigns to reach broader, younger audiences and engage the public with real-time information about chronic disease risk factors and prevention strategies.
- Community forums and town hall meetings organized to engage local populations, raise awareness, and discuss STEPS findings with community-based stakeholders and the public.
- Public health awareness materials (e.g., brochures, posters, videos) distributed at community centers, healthcare facilities, schools, and public events to educate the population on chronic disease risk factors.

3. Dissemination to the Scientific Community

- Presentations at national and international scientific meetings to share STEPS findings, methodologies, and implications for chronic disease prevention and control.

- Peer-reviewed publications in reputable journals, including epidemiological, public health, and clinical journals, to contribute to the scientific understanding of chronic disease risk factors and trends.
- Collaborative research projects with academic and research institutions to further analyze and publish STEPS data, providing evidence to inform global health research and policy.

4. Stakeholder Engagement and Consultation

- Continuous dialogue with key stakeholders, including other ministries, NGOs, faith based organizations, international health organizations, academic institutions, and the private sector, to ensure ongoing collaboration and effective use of STEPS data.
- Regular stakeholder meetings to review STEPS findings, discuss their implications, and jointly determine priority areas for intervention and policy actions.
- Workshops and seminars involving experts, health workers, and policymakers to help interpret STEPS findings and apply them effectively in local, national, and global contexts.

5. Integration into National Health Planning

- Incorporation of STEPS data into national Non-Communicable Disease (NCD) plans to support evidence-based decision-making and identify priority areas for intervention.
- Use of STEPS data in evaluating the effectiveness of NCD-related policies and programs by tracking progress on health outcomes and chronic disease risk factors.
- Inclusion of STEPS results in national health indicators and reporting systems to guide long-term health planning and monitor the status of NCD prevention and control.
- Support for developing new national policies or revising existing policies based on the findings of the STEPS survey, especially in terms of addressing chronic disease risk factors like tobacco use, alcohol consumption, physical inactivity, and unhealthy diets.

6. Program Development and Monitoring

- Design of targeted public health programs based on STEPS findings to address the most pressing risk factors for chronic diseases in the population.
- Use of STEPS data to monitor trends in chronic disease risk factors over time, allowing for the assessment of changes in population health and the effectiveness of interventions.
- Support for evaluation frameworks to measure the impact of health programs, ensuring that interventions align with STEPS data and are improving health outcomes.

7. Capacity Building and Training

- Training of public health officials and healthcare providers on how to use STEPS data to design, implement, and evaluate NCD prevention programs.

8. Feedback Mechanisms and Continuous Improvement

- Establishing mechanisms for feedback from stakeholders (e.g., policymakers, health professionals, the public) to improve the accuracy and utility of future chronic disease risk factor surveys.
- Surveys and consultations with communities to understand the real-world impact of public health policies and programs based on STEPS data.

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APPENDICES



WHO STEPS for Non-communicable Disease Risk Factor Surveillance

TRINIDAD AND TOBAGO

Survey Information

Location and Date	Response	Code
Enumeration District	<input type="text"/>	I1
Address	<input type="text"/>	I2
Interviewer ID	<input type="text"/>	I3
Date of completion of the instrument	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> dd mm year	I4

Consent, Interview Language and Name	Response	Code
Consent has been read and obtained	Yes 1 No 2 If NO, END	I5
Time of interview (24 hour clock)	<input type="text"/> <input type="text"/> : <input type="text"/> <input type="text"/> hrs mins	I7
Surname	<input type="text"/>	I8
First Name	<input type="text"/>	I9
Additional Information that may be helpful		
Contact phone number where possible	<input type="text"/>	I10

Step 1 Demographic Information

CORE: Demographic Information	
1. Name	
2. Age	
3. Gender	
4. Ethnicity	
5. Religion	
6. Education Level	
7. Marital Status	
8. Number of Children	
9. Employment Status	
10. Annual Income	
11. Home Ownership	
12. Health Insurance	
13. Social Security Number	
14. Driver's License	
15. Voting History	
16. Criminal Record	
17. Credit Score	
18. Bankruptcy History	
19. Tax Filing Status	
20. Other Demographic Data	

Question	Response	Code
Sex	<div>Male 1</div> <div>Female 2</div>	C1
What is your date of birth? <i>Don't Know 77 77 7777</i>	<div> <div> <div> <div></div> <div></div> </div> <div> <div></div> <div></div> </div> <div> <div></div> <div></div> <div></div> <div></div> </div> </div> <div><i>If known, Go to C4</i></div> <div> <div>dd</div> <div>mm</div> <div>year</div> </div> </div>	C2
How old are you?	<div>Years</div> <div> <div></div> <div></div> </div>	C3
In total, how many years have you spent at school and in full-time study (excluding pre-school)?	<div>Years</div> <div> <div></div> <div></div> </div>	C4

EXPANDED: Demographic Information	
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What is the highest level of education you have completed?	No formal schooling 1 Less than primary school 2 Primary school completed 3 Secondary school completed 4 Technical / Vocational completed 5 University completed 6 Post graduate degree 7 Refused 88	C5
What is your <i>[ethnic background]</i> ?	African descent 1 East Indian descent 2 Mixed 3 White 4 Chinese 5 Other 6 Refused 88	C6
What is your marital status ?	Single 1 Married 2 Separated 3 Divorced 4 Widowed 5 Common Law 6 Refused 88	C7
Which of the following best describes your main work status over the past 12 months?	Government employee 1 Non-government employee 2 Self-employed 3 Student 4 Homemaker 5	C8

	Retired 6 Unemployed (able to work) 7 Unemployed (unable to work) 8 Refused 88	
How many people older than 18 years, including yourself, live in your household?	Number of people <div style="display: flex; align-items: center;"> <div style="border-bottom: 1px solid black; width: 40px; margin-right: 5px;"></div> <div style="margin-right: 5px;">If Not Known, Go</div> </div> to C11	C9
EXPANDED: Demographic Information, Continued		
Question	Response	Code
Taking the past year , can you tell me what the average earnings of the household have been? <i>(RECORD ONLY ONE, NOT ALL 3)</i>	Per week <div style="display: flex; align-items: center;"> <div style="border-bottom: 1px solid black; width: 40px; margin-right: 5px;"></div> <div style="margin-right: 5px;">Go to T1</div> </div>	C10a
	OR per month <div style="display: flex; align-items: center;"> <div style="border-bottom: 1px solid black; width: 40px; margin-right: 5px;"></div> <div style="margin-right: 5px;">Go to T1</div> </div>	C10b
	OR per year <div style="display: flex; align-items: center;"> <div style="border-bottom: 1px solid black; width: 40px; margin-right: 5px;"></div> <div style="margin-right: 5px;">Go to T1</div> </div>	C10c
	Refused 88	C10d
If you don't know the amount, can you give an estimate of the monthly household income if I read some options to you? Is it	<div style="display: flex; flex-direction: column; align-items: flex-end;"> <div>≤ \$5,000 1</div> <div>More than \$5,000, ≤ \$10,000 2</div> <div>More than \$10,000, ≤ \$15,000 3</div> <div>More than \$15,000 4</div> <div>Don't Know 77</div> <div>Refused 88</div> </div>	C11

Step 1 Behavioural Measurements

CORE: Tobacco Use

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 tobacco.

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

In the past, did you ever smoke any tobacco products? <i>(I WILL SHOW)</i>	Yes 1 No 2 <i>If No, go to T12</i>	T8
In the past, did you ever smoke daily ?	Yes 1 <i>If T1=Yes, go to T12, else go to T10</i> No 2 <i>If T1=Yes, go to T12, else go to T10</i>	T9

EXPANDED: Tobacco Use		
Question	Response	Code
How old were you when you stopped smoking?	Age (years) Don't Know 77 <input type="text"/> <i>If Known, go to T12</i>	T10
How long ago did you stop smoking? <i>(RECORD ONLY 1, NOT ALL 3)</i> <i>Don't Know 77</i>	Years ago <input type="text"/> <i>If Known, go to T12</i>	T11a
	OR Months ago <input type="text"/> <i>If Known, go to T12</i>	T11b
	OR Weeks ago <input type="text"/>	T11c
Do you currently use any smokeless tobacco products such as <i>[snuff, chewing tobacco, betel]</i> ? <i>(I WILL SHOW)</i>	Yes 1 No 2 <i>If No, go to T15</i>	T12
Do you currently use smokeless tobacco products daily ?	Yes 1 No 2 <i>If No, go to T14aw</i>	T13
On average, how many times a day/week do you use <i>(IF LESS THAN DAILY, RECORD WEEKLY)</i> <i>(RECORD FOR EACH TYPE, I WILL SHOW)</i> <i>Don't Know 7777</i>	DAILY↓ WEEKLY↓	
	Snuff, by mouth <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	T14a/ T14aw
	Snuff, by nose <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	T14b/ T14bw
	Chewing tobacco <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	T14c/ T14cw
	Betel, quid <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	T14d/ T14dw
	Other <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <i>If Other, go to T14other, if T13=No, go to T16, else go to T17</i>	T14e/ T14ew
	Other (please specify): <input type="text"/> <i>If T13=No, go to T16, else go to T17</i>	T14other/ T14otherw
	Yes 1	

In the past , did you ever use smokeless tobacco products such as <i>[snuff, chewing tobacco, or betel]</i> ?	No 2 <i>If No, go to T17</i>	T15
In the past , did you ever use smokeless tobacco products such as <i>[snuff, chewing tobacco, or betel]</i> daily ?	Yes 1 No 2	T16
During the past 30 days, did someone smoke in your home ?	Yes 1 No 2	T17
During the past 30 days, did someone smoke in closed areas in your workplace (in the building, in a work area or a specific office)?	Yes 1 No 2 Don't work in a closed area 3	T18

EXPANDED: Tobacco Use, continued		
Now I will ask you about electronic cigarettes, which are also called e-cigarettes or vaping. These devices are battery powered and heat a liquid to produce vapour aerosol of smoke. <i>(I WILL SHOW)</i>		
Question	Response	Code
Do you currently use electronic cigarettes or any other vaping device?	Yes 1	T19
	No 2 <i>If No, go to A1</i>	
Do you currently use electronic cigarettes or any other vaping devices daily ?	Yes 1	T20
	No 2	

CORE: Alcohol Consumption		
The next questions ask about the consumption of alcohol.		
Question	Response	Code
Have you ever consumed any alcohol such as beer, wine, and spirits?	Yes 1 No 2 <i>If No, go to A16</i>	A1
Have you consumed any alcohol within the past 12 months ?	Yes 1 <i>If Yes, go to A4</i> No 2	A2
Have you stopped drinking due to health reasons, such as a negative impact on your health or on the advice of your doctor or other health worker?	Yes 1 <i>If Yes, go to A16</i> No 2 <i>If No, go to A16</i>	A3
During the past 12 months, how frequently have you had at least one standard alcoholic drink ? <i>(READ RESPONSES, I WILL SHOW)</i>	Daily 1 5-6 days per week 2 3-4 days per week 3 1-2 days per week 4 1-3 days per month 5 Less than once a month 6 Never 7	A4
Have you consumed any alcohol within the past 30 days ?	Yes 1 No 2 <i>If No, go to A13</i>	A5
During the past 30 days, on how many occasions did you have at least one standard alcoholic drink?	Number Don't know 77 <input type="text"/> <input type="text"/> <i>If Zero, go to A13</i>	A6
During the past 30 days, when you drank alcohol, how many standard drinks on average did you have during one drinking occasion? <i>(I WILL SHOW)</i>	Number Don't know 77 <input type="text"/> <input type="text"/>	A7
During the past 30 days, what was the largest number of standard drinks you had on a single occasion, counting all types of alcoholic drinks together?	Largest number Don't Know 77 <input type="text"/> <input type="text"/>	A8
During the past 30 days, how many times did you have six or more standard drinks in a single drinking occasion?	Number of times Don't Know 77 <input type="text"/> <input type="text"/>	A9

CORE: Alcohol Consumption, continued		
Question	Response	Code
During each of the past 7 days , how many standard drinks did you have each day? <i>(I WILL SHOW)</i> <i>Don't Know 77</i>	Monday <input type="text"/>	A10a
	Tuesday <input type="text"/>	A10b
	Wednesday <input type="text"/>	A10c
	Thursday <input type="text"/>	A10d
	Friday <input type="text"/>	A10e
	Saturday <input type="text"/>	A10f
	Sunday <input type="text"/>	A10g
I have just asked you about your consumption of alcohol during the past 7 days. The questions were about alcohol in general, while the next questions refer to your consumption of homebrewed alcohol, alcohol brought over the border/from another country, any alcohol not intended for drinking or other untaxed alcohol. Please only think about these types of alcohol when		
During the past 7 days , did you consume any homebrewed alcohol, any alcohol brought over the border/from another country , any alcohol not intended for drinking or other untaxed alcohol? <i>(I WILL SHOW)</i>	Yes 1 No 2 <i>If No, go to A13</i>	A11
On average, how many standard drinks of the following did you consume during the past 7 days ? <i>[INSERT COUNTRY-SPECIFIC EXAMPLES]</i> <i>(I WILL SHOW)</i> <i>Don't Know 77</i>	Homebrewed spirits, e.g. moonshine <input type="text"/>	A12a
	Homebrewed beer or wine, e.g. beer, palm or fruit wine <input type="text"/>	A12b
	Alcohol brought over the border/from another <input type="text"/>	A12c
	Alcohol not intended for drinking, e.g. alcohol-based medicines, perfumes, after shaves <input type="text"/>	A12d
	Other untaxed alcohol in the country <input type="text"/>	A12e

EXPANDED: Alcohol Consumption		
During the past 12 months , how often have you found that you were not able to stop drinking once you had started?	Daily or almost daily 1 Weekly 2 Monthly 3 Less than monthly 4 Never 5	A13
During the past 12 months , how often have you failed to do what was normally expected from you because of drinking?	Daily or almost daily 1 Weekly 2 Monthly 3 Less than monthly 4 Never 5	A14
During the past 12 months , how often have you needed a first drink in the morning to get yourself going after a heavy drinking session?	Daily or almost daily 1 Weekly 2 Monthly 3 Less than monthly 4 Never 5	A15
	Yes, more than monthly 1	

During the past 12 months , have you had family problems or problems with your partner due to someone else's drinking?	Yes, monthly 2 Yes, several times but less 3 Yes, once or twice 4 No 5	A16
CORE: Diet		
The next questions ask about the fruits and vegetables that you usually eat. I have a nutrition card here that shows you some examples of local fruits and vegetables. Each picture represents the size of a serving. As you answer these questions please think of a typical week in the last year.		
Question	Response	Code
In a typical week, on how many days do you eat fruit ? (I WILL SHOW)	Number of days Don't Know 77 <div style="display: flex; align-items: center;"> <div style="border-bottom: 1px solid black; width: 20px; margin-right: 5px;"></div> <div style="border-bottom: 1px solid black; width: 20px; margin-right: 5px;"></div> <div style="margin-left: 10px;">If Zero days, go to D3</div> </div>	D1
How many servings of fruit do you eat on one of those days? (I WILL SHOW)	Number of servings Don't Know 77 <div style="display: flex; align-items: center;"> <div style="border-bottom: 1px solid black; width: 20px; margin-right: 5px;"></div> <div style="border-bottom: 1px solid black; width: 20px;"></div> </div>	D2
In a typical week, on how many days do you eat vegetables ? (I WILL SHOW)	Number of days Don't Know 77 <div style="display: flex; align-items: center;"> <div style="border-bottom: 1px solid black; width: 20px; margin-right: 5px;"></div> <div style="border-bottom: 1px solid black; width: 20px; margin-right: 5px;"></div> <div style="margin-left: 10px;">If Zero days, go to D5</div> </div>	D3
How many servings of vegetables do you eat on one of those days? (I WILL SHOW)	Number of servings Don't know 77 <div style="display: flex; align-items: center;"> <div style="border-bottom: 1px solid black; width: 20px; margin-right: 5px;"></div> <div style="border-bottom: 1px solid black; width: 20px;"></div> </div>	D4
Dietary salt		
With the next questions, we would like to learn more about salt in your diet. Dietary salt includes ordinary table salt, unrefined salt such as sea salt, iodized salt, salty stock cubes and powders, and salty sauces such as soy sauce or fish sauce. Please answer the questions even if you consider yourself to eat a diet low in salt.		
How often do you add salt or a salty sauce such as soy sauce to your food right before you eat it or as you are eating it? (SELECT ONLY ONE) (I WILL SHOW).	Always 1 Often 2 Sometimes 3 Rarely 4 Never 5 Don't know 77	D5
How often is salt, salty seasoning or a salty sauce added in cooking or preparing foods in your household?.	Always 1 Often 2 Sometimes 3 Rarely 4 Never 5 Don't know 77	D6
How often do you eat processed food high in salt ? By processed food high in salt, I mean foods that have been altered from their natural state, such as packaged salty snacks, canned salty food including pickles and preserves, salty food prepared at a fast food restaurant,	Always 1 Often 2 Sometimes 3 Rarely 4 Never 5	D7

cheese, bacon and processed meat [salt fish, salt prunes/mango, potato chips, sausages]	Don't know	77	
How much salt or salty sauce do you think you consume?	Far too much	1	D8
	Too much	2	
	Just the right amount	3	
	Too little	4	
	Far too little	5	
	Don't know	77	
EXPANDED: Diet			
Question	Response		Code
How important to you is lowering the salt in your diet?	Very important	1	D9
	Somewhat important	2	
	Not at all important	3	
	Don't know	77	
Do you think that too much salt or salty sauce in your diet could cause a health problem ?	Yes	1	D10
	No	2	
	Don't know	77	
Do you do any of the following on a regular basis to control your salt intake ? <i>(RECORD FOR EACH)</i>			
Limit consumption of processed foods	Yes	1	D11a
	No	2	
Look at the salt or sodium content on food labels	Yes	1	D11b
	No	2	
Buy low salt/sodium alternatives	Yes	1	D11c
	No	2	
Use spices other than salt when cooking	Yes	1	D11d
	No	2	
Avoid eating foods prepared outside of a home	Yes	1	D11e
	No	2	
Do other things specifically to control your salt intake	Yes	1 If Yes, go to D11other	D11f
	No	2	
Other (please specify)	_ _ _ _ _ _ _ _ _		D11other

CORE: Physical Activity		
<p>Next I am going to ask you about the time you spend doing different types of physical activity in a typical week. Please answer these questions even if you do not consider yourself to be a physically active person.</p> <p>Think first about the time you spend doing work. Think of work as the things that you have to do such as paid or unpaid work, study/training, household chores, harvesting food/crops, fishing or hunting for food, seeking employment. In answering the following questions 'vigorous-intensity activities' are activities that require hard physical effort and cause large increases in breathing or heart rate, 'moderate-intensity activities' are activities that require moderate physical effort and cause small increases in breathing or heart rate.</p>		
Question	Response	Code
Work		
Does your work involve vigorous-intensity activity that causes large increases in breathing or heart rate like <i>[carrying or lifting heavy loads, digging or construction work]</i> ? (I WILL SHOW)	Yes 1 No 2 If No, go to P 4	P1
In a typical week, on how many days do you do vigorous-intensity activities as part of your work?	Number of days <div style="border: 1px solid black; width: 20px; height: 15px; margin-left: 100px;"></div>	P2
How much time do you spend doing vigorous-intensity activities at work on a typical day?	Hours : minutes <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; width: 20px; height: 15px;"></div> : <div style="border: 1px solid black; width: 20px; height: 15px;"></div> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="margin-left: 100px;">hrs</div> <div style="margin-left: 100px;">mins</div> </div>	P3 (a-b)
Does your work involve moderate-intensity activity, that causes small increases in breathing or heart rate such as brisk walking <i>[or carrying light loads]</i> ? (I WILL SHOW)	Yes 1 No 2 If No, go to P 7	P4
In a typical week, on how many days do you do moderate-intensity activities as part of your work?	Number of days <div style="border: 1px solid black; width: 20px; height: 15px; margin-left: 100px;"></div>	P5
How much time do you spend doing moderate-intensity activities at work on a typical day?	Hours : minutes <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; width: 20px; height: 15px;"></div> : <div style="border: 1px solid black; width: 20px; height: 15px;"></div> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="margin-left: 100px;">hrs</div> <div style="margin-left: 100px;">mins</div> </div>	P6 (a-b)
Travel to and from places		
<p>The next questions exclude the physical activities at work that you have already mentioned.</p> <p>Now I would like to ask you about the usual way you travel to and from places. For example to work, for shopping, to market, to place of worship.</p>		
Do you walk or use a bicycle (<i>pedal cycle</i>) to get to and from places?	Yes 1 No 2 If No, go to P 10	P7
In a typical week, on how many days do you walk or bicycle to get to and from places?	Number of days <div style="border: 1px solid black; width: 20px; height: 15px; margin-left: 100px;"></div>	P8

CORE: Physical Activity, Continued		
Question	Response	Code
How much time do you spend walking or bicycling for travel on a typical day?	Hours : minutes <input type="text"/> : <input type="text"/> hrs mins	P9 (a-b)
Recreational activities		
The next questions exclude the work and transport activities that you have already mentioned. Now I would like to ask you about sports, fitness and recreational activities (leisure).		
Do you do any vigorous-intensity sports, fitness or recreational (leisure) activities that cause large increases in breathing or heart rate like [running or football]? (I WILL SHOW)	Yes 1 No 2 If No, go to P 13	P10
In a typical week, on how many days do you do vigorous-intensity sports, fitness or recreational (leisure) activities?	Number of days <input type="text"/>	P11
How much time do you spend doing vigorous-intensity sports, fitness or recreational activities on a typical day?	Hours : minutes <input type="text"/> : <input type="text"/> hrs mins	P12 (a-b)
Do you do any moderate-intensity sports, fitness or recreational (leisure) activities that cause a small increase in breathing or heart rate such as brisk walking, [cycling, swimming, volleyball]? (I WILL SHOW)	Yes 1 No 2 If No, go to P16	P13
In a typical week, on how many days do you do moderate-intensity sports, fitness or recreational (leisure) activities?	Number of days <input type="text"/>	P14
How much time do you spend doing moderate-intensity sports, fitness or recreational (leisure) activities on a typical day?	Hours : minutes <input type="text"/> : <input type="text"/> hrs mins	P15 (a-b)

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

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

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

PANAM CORE: History of Diabetes		
Have you received at least two HbA1C (glycated hemoglobin) tests in the past year as part of diabetes control?	Yes 1 No 2 Don't know 77	H11a
When was the last time your eyes were examined as part of your diabetes control?	Within the past 2 year 1 More than 2 years ago 2 Never 3 Don't know 77	H11b
	Within the past year 1	H11c

When was the last time your feet was examined as part of your diabetes control?	More than 1 year ago	2	
	Never	3	
	Don't know	77	

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

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

CORE: Lifestyle Advice		
Question	Response	Code
During the past 12 months, have you visited a doctor or other health worker?	Yes 1 No 2 <i>If No and C1=1, go to M1</i> <i>If No and C1=2, go to CX1</i>	H20
During any of your visits to a doctor or other health worker in the past 12 months, were you advised to do any of the following? (RECORD FOR EACH)		
Quit using tobacco or don't start	Yes 1 No 2	H20a
Reduce salt in your diet	Yes 1 No 2	H20b
Eat at least five servings of fruit and/or vegetables each day	Yes 1 No 2	H20c
Reduce fat in your diet	Yes 1 No 2	H20d
Start or do more physical activity	Yes 1 No 2	H20e
Maintain a healthy body weight or lose weight	Yes 1 No 2	H20f
Reduce sugary beverages in your diet	Yes 1 <i>If C1=1 go to M1</i> No 2 <i>If C1=1 go to M1</i>	H20g

CORE (for women only): Cervical Cancer Screening		
The next question asks about cervical cancer prevention. Screening tests for cervical cancer prevention can be done in different ways, including Visual Inspection with Acetic Acid/vinegar (VIA), pap smear and Human Papillomavirus (HPV) test. VIA is an inspection of the surface of the uterine cervix after acetic acid (or vinegar) has been applied to it. For both pap smear and HPV test, a doctor or nurse uses a swab to wipe from inside your vagina, take a sample and send it to a laboratory. It is even possible that you were given the swab yourself and asked to swab the inside of your vagina. The laboratory checks for abnormal cell changes if a pap smear is done, and for the HP virus if an HPV test is done.		
Have you ever had a screening test for cervical cancer, using any of these methods described above?	Yes 1 No 2 Don't know 77	CX1
When was your last test for cervical cancer?	Less than 1 year ago 1 1-2 years ago 2 3-5 years ago 3 More than 5 years ago 4 Don't know 77 Refused 88	CX2

Pan-Am Optional module

Section: Health Screening		
Have you ever had your stool examined to look for hidden blood?	Yes 1 No 2 Don't know 77	S1
Have you ever had a colonoscopy?	Yes 1 No 2	S2
<u>This question is for men only:</u> Have you ever had an examination of your prostate?	Yes 1 No 2	S3
<u>The following questions are for women only:</u> Have you been shown how to examine your breasts?	Yes 1 No 2	S4
When was the last time you had an examination of your breasts?	1 year or less 1 Between 1 and 2 years 2 More than 2 years 3 Never 4 Don't know 77	S5
When was the last time you had a mammogram?	1 year or less 1 Between 1 and 2 years 2 More than 2 years 3 Never 4 Don't know 77	S6

Mental health (depression)

Mental health		
The next questions are about feelings of sadness, depression, and loss of interest and pleasure.		
Question	Response	Code
In the last 12 months, have you, for a period of at least 2 weeks, felt sad or depressed for most of the day, nearly every day ?	Yes 1 No 2 Refused 88	MH1
In the last 12 months, have you, for a period of at least 2 weeks, been a lot less interested in, or experienced a lot less pleasure from, doing the things you normally enjoy?	Yes 1 No 2 <i>If No and MH1=2, go to next module</i> Refused 88	MH2
When in the last 12 months was this [LOW MOOD and/or LOSS OF INTEREST OR PLEASURE] at its/their worst ?		MH3

	Period (e.g., month): _____	
The next questions I am going to ask you will refer specifically to this time, that is [INSERT ANSWER TO MH3]		
During this time in which your [LOW MOOD and/or LOSS OF INTEREST] were at its worst, did you have more trouble concentrating and staying focused on things than usual OR did you struggle more than usual to make decisions ?	Yes 1 No 2 Refused 88	MH4
Did you feel less valuable as a person or even worthless ?	Yes 1 <i>Go to MH7</i> No 2 Refused 88	MH5
Did you feel you let yourself or others down ?	Yes 1 No 2 Refused 88	MH6
Did you feel more hopeless about the future, like things would never turn out well for you?	Yes 1 No 2 Refused 88	MH7
The next question can be a sensitive question. Did you think often about death or suicide, or did you try to end your life?	Yes 1 No 2 Refused 88	MH8
Did you have more trouble sleeping than usual (for example falling or staying asleep), or sleeping a lot more than you usually do?	Yes 1 No 2 Refused 88	MH9
Did you not want to eat even when food was available, OR did you eat more than before your [LOW MOOD, and/or LOSS OF INTEREST] started?	Yes 1 No 2 Refused 88	MH10
Did you have less energy than before your [LOW MOOD, and/or LOSS OF INTEREST] started OR were you much more tired than usual even when doing some small task?	Yes 1 No 2 Refused 88	MH11
Were you moving or speaking more slowly than is normal for you, OR the opposite —	Yes 1	

were you fidgeting or pacing around a lot?	No 2 Refused 88	MH12
If less than five of the following symptoms are coded Yes: [MH1], [MH2], [MH4], [MH5 OR MH6], [MH7], [MH8], [MH9], [MH10], [MH11], [MH12], go to next module		
During this time when you experienced [LIST ALL ENDORSED SYMPTOMS], did these difficulties affect your ability to function in daily life (for example your work or school, your social life, your relationships) OR did these difficulties bother you a lot?	Yes 1 No 2 <i>Go to next module</i> Refused 88	MH13
Treatment coverage		
In the past 12 months, have you taken medications prescribed by a doctor or nurse for the difficulties we've just talked about?	Yes, for less than 3 months 1	MH14
	Yes, for 3 months or more 2	
	No 3	
	Refused 88	
In the past 12 months, have you received psychological therapy/counselling sessions for the difficulties we've just talked about?	Yes: 1 to 3 sessions 1	MH15
	Yes, 4 sessions or more 2	
	No 3	
	Refused 88	

Step 2 Physical Measurements

CORE: Blood Pressure		
Interviewer ID	<div> <div></div> <div></div> <div></div> <div></div> </div>	M1
Device ID for blood pressure	<div> <div></div> <div></div> </div>	M2
Cuff size used	Small 1 Medium 2 Extra Large 3	M3
Reading 1	Systolic (<div> <div></div> <div></div> <div></div> <div></div> </div> mmHg)	M4a
	Diastolic (mmHg) <div> <div></div> <div></div> <div></div> <div></div> </div>	M4b
Reading 2	Systolic (mmHg) <div> <div></div> <div></div> <div></div> <div></div> </div>	M5a
	Diastolic (mmHg) <div> <div></div> <div></div> <div></div> <div></div> </div>	M5b
Reading 3	Systolic (mmHg) <div> <div></div> <div></div> <div></div> <div></div> </div>	M6a
	Diastolic (mmHg) <div> <div></div> <div></div> <div></div> <div></div> </div>	M6b
During the past two weeks, have you been treated for raised blood pressure with drugs (medication) prescribed by a doctor or other health worker?	Yes 1 No 2	M7

EXPANDED: Hip Circumference and Heart Rate

Hip circumference	in Centimeters (cm) <u> </u> <u> </u> <u> </u> <u> </u> . <u> </u>	M15
Heart Rate		
Reading 1	Beats per minute <u> </u> <u> </u> <u> </u> <u> </u>	M16a
Reading 2	Beats per minute <u> </u> <u> </u> <u> </u> <u> </u>	M16b
Reading 3	Beats per minute <u> </u> <u> </u> <u> </u> <u> </u>	M16c

CORE: Height and Weight

Question	Response	Code
For women: Are you pregnant?	Yes 1 <i>If Yes, go to M16</i> No 2	M8
Interviewer ID	<div><div></div><div></div><div></div><div></div></div>	M9
Device IDs for height and weight	Height <div><div></div><div></div></div>	M10a
	Weight <div><div></div><div></div></div>	M10b
Height	in Centimetres (cm) <div><div></div><div></div><div></div><div></div><div>.</div><div></div></div>	M11
Weight <i>If too large for scale 666.6</i>	in Kilograms (kg) <div><div></div><div></div><div></div><div></div><div>.</div><div></div></div>	M12
CORE: Waist		
Device ID for waist	<div><div></div><div></div></div>	M13
Waist circumference	in Centimetres (cm) <div><div></div><div></div><div></div><div></div><div>.</div><div></div></div>	M14

Step 3

Biochemical Measurements

CORE: Blood Glucose

Question	Response	Code
During the past 12 hours have you had anything to eat or drink, other than water?	Yes 1 No 2	B1

Technician ID	<div> <div></div> <div></div> <div></div> <div></div> </div>	B2
Device ID	<div> <div></div> <div></div> </div>	B3
Time of day blood specimen taken (24 hour clock)	<div> <div> <div></div> <div></div> <div></div> </div> <div>:</div> <div> <div></div> <div></div> <div></div> </div> </div> <div>Hours : minutes</div> <div>hrs mins</div>	B4
Fasting blood glucose	mmol/l <div> <div></div> <div></div> <div></div> <div></div> </div>	B5
<i>[CHOOSE ACCORDINGLY: MMOL/L OR MG/DL]</i>	mg/dl <div> <div></div> <div></div> <div></div> <div></div> </div>	
Today, have you taken insulin or other drugs (medication) that have been prescribed by a doctor or other health worker for raised blood glucose?	<div>Yes 1</div> <div>No 2</div>	B6

CORE: Blood Lipids

Device ID	<div> <div></div> <div></div> </div>	B7
Total cholesterol	mmol/l <div> <div></div> <div></div> <div></div> <div></div> </div>	B8
<i>[CHOOSE ACCORDINGLY: MMOL/L OR MG/DL]</i>	mg/dl <div> <div></div> <div></div> <div></div> <div></div> </div>	
During the past two weeks, have you been treated for raised cholesterol with drugs (medication) prescribed by a doctor or other health worker?	<div>Yes 1</div> <div>No 2</div>	B9

EXPANDED: Triglycerides and HDL Cholesterol

Triglycerides	mmol/l <div> <div></div> <div></div> <div></div> <div></div> </div>	B16
<i>[CHOOSE ACCORDINGLY: MMOL/L OR MG/DL]</i>	mg/dl <div> <div></div> <div></div> <div></div> <div></div> </div>	
HDL Cholesterol	mmol/l <div> <div></div> <div></div> <div></div> </div>	B17
<i>[CHOOSE ACCORDINGLY: MMOL/L OR MG/DL]</i>	mg/dl <div> <div></div> <div></div> <div></div> <div></div> </div>	

2024 STEPS SURVEY SHOWCARDS

Tobacco Show Card

Smoked tobacco products



Manufactured cigarettes



Hand-rolled cigarettes



Pipe



Cigars, e.g., cigarillos, double coronas, cheroots, stumphen, chutts and dhuntis



Shisha

Smokeless tobacco products



Snuff, available in wet and dry form



Chewing tobacco



Betel nut, quid

Electronic cigarettes/e-cigarettes/vaping



E-cigarette



Electronic Cigar

Alcohol - Standard drink

1 standard drink =



1 standard bottle
of **regular beer**
(285ml)



1 single measure
of **spirits** (30ml)



1 medium size
glass of wine
(120ml)



1 measure of
aperitif (60ml)

Note: net alcohol content of a **standard drink** is **approximately 10g** of ethanol.



Beer



Wine



Spirits




Homebrewed Alcohol




Alcohol not intended for drinking

Typical Fruit and Vegetables and Serving Sizes

VEGETABLES are considered to be:	1 Serving =	Examples
Raw green leafy vegetables	1 cup	Spinach, salad, etc.
Other vegetables, cooked or chopped raw	½ cup	Tomatoes, carrots, pumpkin, corn, Chinese cabbage, fresh beans, onion, etc.
		

Vegetable juice

½ cup

FRUIT Is considered to be:	1 Serving =	Examples
Apple, banana, orange	1 medium size piece	
Chopped, cooked, canned fruit	½ cup	
		flavoured

Serving size

One standard serving = 80 grams (translated into different units of cups depending on type of vegetable and standard cup measures available in the country).

Note: Tubers such as potatoes and cassava should not be included.

Dietary Salt

Table salt
and sea salt



Salty stock
cubes and
powders



Soya sauce and
fish sauce



**Examples for
processed
food high in
salt**

Packaged salty food and snacks, canned salty food, salty food prepared at a fast food restaurant.



Physical Activity

Vigorous Physical Activity at Work

Examples for vigorous activities at WORK

VIGOROUS Intensity Activities

Make you breathe much harder than normal



**Other
examples for
VIGOROUS
activities
at WORK**

- Forestry (cutting, chopping, carrying wood)
 - Sawing hardwood
 - Ploughing
 - Cutting crops (sugar cane)
 - Gardening (digging)
 - Grinding (with pestle)
 - Labouring (shoveling sand)
 - Loading furniture (stoves, fridge)
 - Instructing spinning (fitness)
 - Instructing sports aerobics
 - Sorting postal parcels (fast pace)
 - Cycle rickshaw driving
-

Moderate Physical Activity at Work

Examples for MODERATE Intensity Activities
MODERATE Make you breathe somewhat harder than
 normal activities at work



Other examples for MODERATE activities at WORK

- Cleaning (vacuuming, mopping, polishing, scrubbing, sweeping, ironing)
 - Washing (beating and brushing carpets, wringing clothes (by hand))
 - Gardening
 - Milking cows (by hand)
 - Planting and harvesting crops
 - Digging dry soil (with spade)
 - Weaving
 - Woodwork (chiselling, sawing softwood)
 - Mixing cement (with shovel)
 - Labouring (pushing loaded wheelbarrow, operating jackhammer)
 - Walking with load on head
 - Drawing water
 - Tending animals
-

Vigorous Physical Activity during Leisure Time

Examples for VIGOROUS normal activities during LEISURE TIME

VIGOROUS Intensity Activities
Make you breathe much harder than



Other examples For VIGOROUS activities during LEISURE TIME

- ☐ Soccer
 - ☐ Rugby
 - ☐ Tennis
 - ☐ High-impact aerobics
 - ☐ Aqua aerobics
 - ☐ Ballet dancing
 - ☐ Fast swimming
-

Moderate Physical Activity during Leisure Time

Examples for
MODERATE
normal activities
during
LEISURE
TIME

MODERATE Intensity Activities

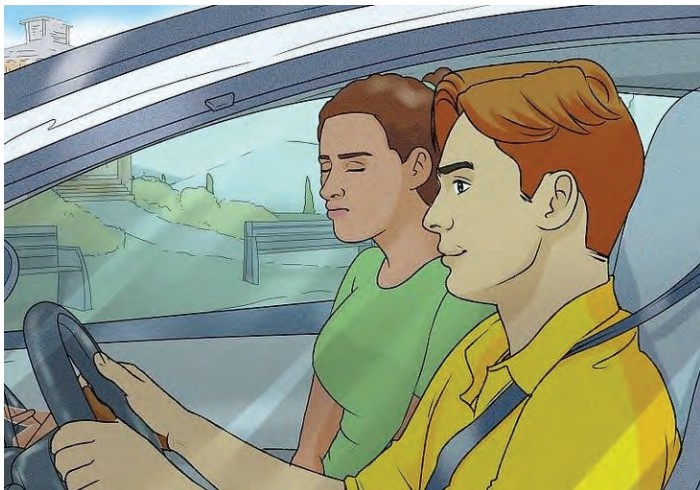
Make you breathe somewhat harder than



Other examples ☐ For MODERATE activities at WORK

- . Cycling
- Jogging
- Dancing
- Horse-riding
- Tai chi
- Yoga
- Pilates
- Low-impact aerobics
- Cricket

Sedentary Behaviour





Trinidad and Tobago STEPS Survey 2024

Fact Sheet

The STEPS survey of noncommunicable disease (NCD) risk factors in Trinidad and Tobago was carried out from May to August 2024. Trinidad and Tobago carried out Step 1, Step 2 and Step 3. Socio demographic and behavioural information was collected in Step 1. Physical measurements such as height, weight and blood pressure were collected in Step 2. Biochemical measurements were collected to assess blood glucose and cholesterol levels in Step 3. The survey was a population-based survey of adults aged 18-69. A stratified multistage sample design was used to produce representative data for that age range in Trinidad and Tobago. A total of 4,052 adults participated in the survey. The overall response rate was 75.0%. A repeat survey is planned for 2029 if funds permit.

Results for adults aged 18-69 years (incl. 95% CI)	Both Sexes	Males	Females
Step 1 Tobacco Use			
Percentage who currently smoke tobacco	21.3% (19.1 - 23.7)	31.5% (28.6 - 34.6)	11.0% (8.9 - 13.6)
Percentage who currently smoke tobacco daily	17.0% (14.9 - 19.2)	25.0% (22.2 - 28.1)	8.8% (6.8 - 11.3)
Percentage of current smokers who smoke manufactured cigarettes	92.8% (89.3 - 95.2)	93.2% (87.9 - 96.3)	91.6% (85.4 - 95.3)
Percentage who currently use electronic cigarettes	4.9% (3.4 - 6.5)	7.3% (5.0 - 10.5)	2.4% (1.3 - 4.3)
Percentage exposed to second-hand smoke in the workplace in the past 30 days	17.8% (14.2 - 22.1)	25.0% (20.1 - 30.7)	17.8% (14.2 - 22.1)
Step 1 Alcohol Consumption			
Percentage who are lifetime abstainers	15.4% (13.2 - 18.0)	11.4% (9.2 - 14.2)	19.5% (15.8 - 23.7)
Percentage who are past-12-month abstainers	14.8% (13.1 - 16.5)	13.3% (11.0 - 16.1)	16.2% (13.8 - 18.9)
Percentage who currently drink (drank alcohol in the past 30 days)	51.5% (48.9 - 54.2)	59.6% (56.3 - 62.8)	43.4% (39.1 - 47.7)
Percentage who engage in heavy episodic drinking (6 or more drinks on any occasion in the past 30 days)	20.4% (18.0 - 23.1)	29.4% (25.9 - 33.3)	12.0% (9.2 - 15.5)
Step 1 Diet			
Mean number of days fruit consumed in a typical week	3.3 (3.2 - 3.4)	3.3 (3.1 - 3.4)	3.3 (3.2 - 3.5)
Mean number of servings of fruit consumed on average per day	1.0 (0.9 - 1.0)	1.0 (0.9 - 1.1)	0.9 (0.9 - 1.0)
Mean number of days vegetables consumed in a typical week	4.3 (4.1 - 4.5)	4.2 (3.9 - 4.4)	4.5 (4.3 - 4.6)
Mean number of servings of vegetables consumed on average per day	1.2 (1.1 - 1.3)	1.1 (1.0 - 1.3)	1.3 (1.1 - 1.4)
Percentage who ate less than 5 servings of fruit and/or vegetables on average per day	93.3% (91.6 - 94.7)	94.1% (91.8 - 95.8)	92.5% (90.4 - 94.3)
Percentage who always or often add salt or salty sauce to their food before eating or as they are eating	6.3% (5.0 - 8.0)	6.3% (4.7 - 8.5)	6.3% (4.7 - 8.4)
Percentage who always or often eat processed foods high in salt	24.3% (21.8 - 26.9)	24.9% (21.2 - 29.0)	23.6% (20.4 - 27.2)
Step 1 Physical Activity			
Percentage with insufficient physical activity (defined as < 150 minutes of moderate-intensity activity per week, or equivalent)*	25.3% (22.0 - 29.1)	16.6% (13.7 - 19.8)	34.1% (29.4 - 39.0)

Results for adults aged 18–69 years (incl. 95% CI)	Both Sexes	Males	Females
Median time spent in physical activity on average per day (minutes) (presented with inter-quartile range)	102.9 (17.9 - 296.0)	162.9 (39.3 - 368.6)	55.7 (8.6 - 200.0)
Percentage not engaging in vigorous activity	70.8% (68.1 - 73.4)	52.0% (48.2 - 55.8)	89.5% (87.1 - 91.5)
Step 1 Cervical Cancer Screening			
Percentage of women aged 30–49 years who have ever had a screening test for cervical cancer	58.3% (51.5 - 64.8)	NA% (NA - NA)	58.3% (51.5 - 64.8)
Percentage of screened women 30–49 who were last screened within the past year	25.4% (20.0 – 31.6)	NA% (NA - NA)	25.4% (20.0 – 31.6)
Step 2 Physical Measurements			
Mean body mass index - BMI (kg/m ²)	27.8 (27.3 - 28.2)	26.6 (26.2 - 27.0)	28.9 (28.2 - 29.6)
Percentage who are overweight (BMI ≥ 25 kg/m ²)	61.2% (58.1 - 64.2)	55.3% (51.7 - 58.8)	67.2% (62.3 - 71.7)
Percentage who are obese (BMI ≥ 30 kg/m ²)	31.6% (28.5 - 34.9)	24.9% (21.5 - 28.8)	38.3% (34.4 - 42.4)
Average waist circumference (cm)	90.9 (89.7 - 92.0)	91.2 (89.8 - 92.6)	90.5 (89.2 - 91.9)
Mean systolic blood pressure - SBP (mmHg), including those currently on medication for raised BP	124.4 (123.2 - 125.5)	128.3 (126.9 - 129.7)	120.5 (119.1 - 121.8)
Mean diastolic blood pressure - DBP (mmHg), including those currently on medication for raised BP	79.8 (78.9 - 80.7)	82.5 (81.5 - 83.6)	77.1 (76.1 - 78.1)
Percentage with raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)	29.0% (27.0 - 31.2)	33.2% (29.6 - 37.1)	24.9% (22.2 - 27.8)
Percentage with raised BP on medication	38.5% (34.0 - 43.3)	24.6% (19.6 - 30.4)	56.9% (49.6 - 64.0)
Percentage with raised BP controlled	18.5% (14.6 - 23.2)	10.2% (7.6 - 13.7)	29.3% (22.2 - 37.6)
Step 3 Biochemical Measurements			
Mean fasting blood glucose, including those currently on medication for raised blood glucose (mg/dl)	110.5 (107.2 – 113.7)	108.7 (105.0 – 112.4)	112.2 (107.9 – 116.5)
Percentage with impaired fasting blood glucose (FBG) (plasma venous value ≥ 110 mg/dl and <126 mg/dl)	11.3% (8.4 - 14.9)	12.8% (8.0 - 19.9)	9.7% (7.3 - 12.9)
Percentage with raised FBG (plasma venous value ≥ 126 mg/dl) or currently on medication for raised blood glucose	15.8% (13.0 - 19.1)	14.3% (10.6 - 18.8)	17.3% (13.8 - 21.5)
Percentage with raised FBG diagnosed	58.3% (46.5 - 69.2)	57.1% (43.6 - 69.7)	59.2% (45.2 - 71.9)
Percentage with raised FBG on medication	54.9% (43.6 - 65.6)	55.0% (41.5 - 67.9)	54.7% (41.7 - 67.1)
Mean total blood cholesterol, including those currently on medication for raised cholesterol (mg/dl)	185.5 (182.1 – 188.8)	188.6 (183.9 – 193.3)	182.3 (176.4 – 188.2)
Percentage with raised total cholesterol (≥ 190 mg/dl or currently on medication for raised cholesterol)	39.6% (35.6 - 43.8)	42.9% (37.5 - 48.6)	36.4% (30.6 - 42.5)
Cardiovascular disease risk			
Percentage aged 40–69 years with a 10-year CVD risk ≥ 20%, or with existing CVD**	11.8% (9.2 - 15.1)	9.3% (6.3 - 13.4)	14.4% (10.4 - 19.6)
Summary of Combined Risk Factors			
Percentage with none of the above risk factors	1.6% (1.0 - 2.5)	1.6% (0.9 - 2.7)	1.6% (0.9 - 3.0)
Percentage with three or more of the above risk factors, aged 18 to 44 years	28.4% (24.4 - 32.9)	28.3% (23.8 - 33.3)	28.6% (23.8 - 33.9)

Results for adults aged 18–69 years (incl. 95% CI)	Both Sexes	Males	Females
Median time spent in physical activity on average per day (minutes) (presented with inter-quartile range)	102.9 (17.9 - 296.0)	162.9 (39.3 - 368.6)	55.7 (8.6 - 200.0)
Percentage not engaging in vigorous activity	70.8% (68.1 - 73.4)	52.0% (48.2 - 55.8)	89.5% (87.1 - 91.5)
Step 1 Cervical Cancer Screening			
Percentage of women aged 30–49 years who have ever had a screening test for cervical cancer	58.3% (51.5 - 64.8)	NA% (NA - NA)	58.3% (51.5 - 64.8)
Percentage of screened women 30–49 who were last screened within the past year	25.4% (20.0 – 31.6)	NA% (NA - NA)	25.4% (20.0 – 31.6)
Step 2 Physical Measurements			
Mean body mass index - BMI (kg/m ²)	27.8 (27.3 - 28.2)	26.6 (26.2 - 27.0)	28.9 (28.2 - 29.6)
Percentage who are overweight (BMI ≥ 25 kg/m ²)	61.2% (58.1 - 64.2)	55.3% (51.7 - 58.8)	67.2% (62.3 - 71.7)
Percentage who are obese (BMI ≥ 30 kg/m ²)	31.6% (28.5 - 34.9)	24.9% (21.5 - 28.8)	38.3% (34.4 - 42.4)
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Mean diastolic blood pressure - DBP (mmHg), including those currently on medication for raised BP	79.8 (78.9 - 80.7)	82.5 (81.5 - 83.6)	77.1 (76.1 - 78.1)
Percentage with raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)	29.0% (27.0 - 31.2)	33.2% (29.6 - 37.1)	24.9% (22.2 - 27.8)
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Percentage with three or more of the above risk factors, aged 18 to 44 years	28.4% (24.4 - 32.9)	28.3% (23.8 - 33.3)	28.6% (23.8 - 33.9)

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STEPS Key Findings (2024)

The STEPS survey of Non-Communicable Diseases (NCD) risk factors in Trinidad and Tobago was conducted from May to August 2024, for Step 1, Step 2 and Step 3. Sociodemographic and behavioural information was collected in Step 1. Physical measurements such as height, weight and blood pressure were collected in Step 2. Biochemical measurements were collected to assess blood glucose and cholesterol levels in Step 3. The survey was a population-based survey of resident adults aged 18-69. A total of 4,052 adults participated in the survey.

The following are the key findings from the 2024 STEPS Survey.

TOBACCO AND ALCOHOL USE

★ Prevalence among the adult population



21.3% of the population currently reported smoking tobacco daily

SMOKING

31.5%
higher among
males



11.0%
lower among
females



51.5% of the population currently reported drinking alcohol in the last 30 days

ALCOHOL

59.6%
higher among
males



43.4%
lower among
females



★ The figures represent the prevalence of the NCD risk factors within the age group 18-69, weighted to represent the entire adult population of Trinidad and Tobago.



DIET AND PHYSICAL ACTIVITY

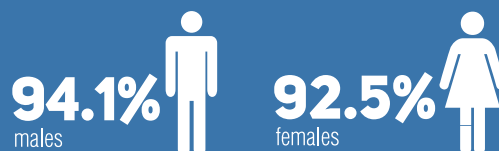
DIET



93.3% eat less than 5 servings of fruit and/or vegetables per day

* Prevalence among the adult population

DAILY DIET



PHYSICAL ACTIVITY



25.3% engage in less than 150 minutes of moderate activity weekly. (i.e. insufficient activity)

MEDIAN DAILY ACTIVITY (102.9 MINUTES)

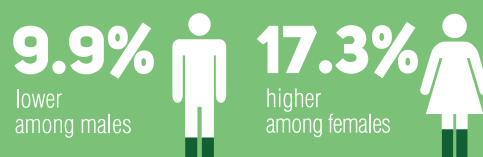


MENTAL HEALTH



13.6% experience symptoms of depression within the last 12 months.

DEPRESSION



* The figures represent the prevalence of the NCD risk factors within the age group 18-69, weighted to represent the entire adult population of Trinidad and Tobago.



COMBINED RISK FACTORS

RISK FACTORS - (1) CURRENT DAILY SMOKERS, (2) < 5 SERVINGS OF FRUIT AND/OR VEGETABLES PER DAY, (3) LOW LEVELS OF PHYSICAL ACTIVITY, (4) OVERWEIGHT, (5) RAISED BP (SBP ≥ 140 AND OR DBP ≥ 90 MMHG OR CURRENTLY ON MEDICATION FOR RAISED BP)



only **1.6%** of adults have none of the 5 combined risk factors

THREE OR MORE RISK FACTORS



38.4% More than a third of our population have 3 or more risk factors

BODY MASS INDEX (BMI)

MEAN BMI (KG/M²):

27.8

26.6
mean bmi
among
males



28.9
mean bmi
among females



ADULTS:

61.2%

* Prevalence among the adult population

of adults were overweight or obese ie BMI ≥ 25 kgm²

55.3%
of males were
overweight



67.2%
of females
were
overweight



* The figures represent the prevalence of the NCD risk factors within the age group 18-69, weighted to represent the entire adult population of Trinidad and Tobago.



BLOOD PRESSURE AND FASTING BLOOD SUGAR (GLUCOSE)

RAISED BLOOD PRESSURE

[BP (SBP \geq 140 AND/OR DBP \geq 90MMHG OR CURRENTLY ON MEDICATION FOR RAISED BLOOD PRESSURE)

★ Prevalence among the adult population

29.0%

of the population
have raised blood
pressure



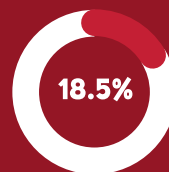
33.0%
males



24.9%
females



Only 18.5% have their raised BP under control.



10.2%
males



29.3%
females



RAISED FASTING BLOOD SUGAR (GLUCOSE)

(PLASMA VENOUS VALUE \geq 126 MG/DL) OR CURRENTLY ON MEDICATION FOR RAISED BLOOD GLUCOSE

★ Prevalence among the adult population



15.8% have a raised
fasting blood glucose

14.3%
males



12.3%
females



★ The figures represent the prevalence of the NCD risk factors within the age group 18-69, weighted to represent the entire adult population of Trinidad and Tobago.



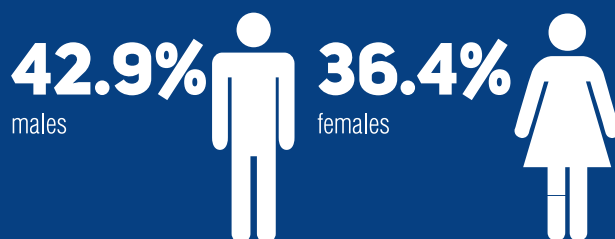
RAISED TOTAL CHOLESTEROL AND 10 YEAR CARDIOVASCULAR DISEASE RISK

RAISED TOTAL CHOLESTEROL
(≥ 190 MG/DL OR CURRENTLY ON
MEDICATION FOR RAISED CHOLESTEROL)

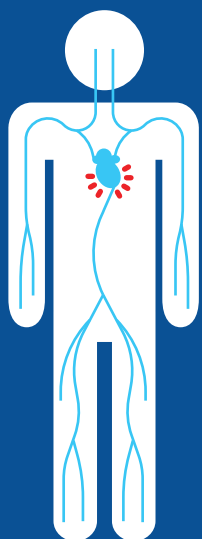


39.6% have raised total cholesterol

* Prevalence among the adult population



10-YEAR CVD RISK:
($\geq 20\%$ OR WITH EXISTING CVD)



* Prevalence among the adult population

9.3%
risk among
males



14.4%
risk among
females



11.8%

of adults aged 40-69 years have a $\geq 20\%$ risk of cardiovascular disease in the next 10 years.

* The figures represent the prevalence of the NCD risk factors within the age group 18-69, weighted to represent the entire adult population of Trinidad and Tobago.