



**ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF HEALTH**



**REPORT ON 2007 STEPS SURVEY FOR RISK FACTORS AND
PREVALENCE OF NONCOMMUNICABLE DISEASES
IN THIMPHU**

AUGUST 2009

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Cover design and layout: Wangchuk Dukpa

Printed @ KUENSEL Corporation Ltd.

www.health.gov.bt

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Publication of the Reports on 2007 STEPS Survey for Risk Factors and Prevalence of Noncommunicable Diseases in Thimphu can be obtained from Research & Epidemiology Unit, Policy and Planning Division, Ministry of Health, Thimphu Bhutan (Tel +975-2-328091/3280892, Fax : +975-2-322941, email: research@health.gov.bt). Request for permission to reproduce or translate for sale or non-commercial purpose should be addressed to the above address.

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FOREWORD

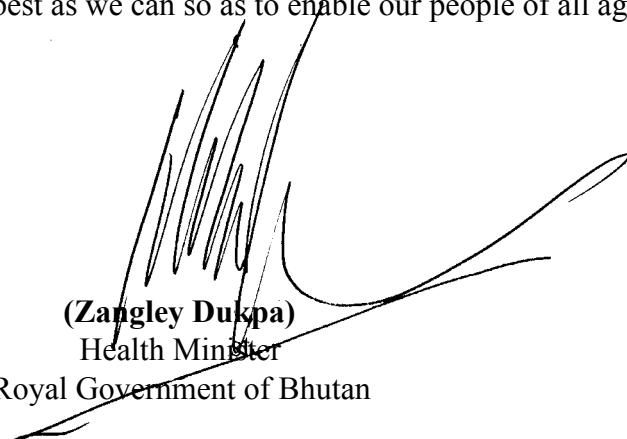
Although the survey was carried out in 2007, report could not be published for want of proper analysis of data. Given the importance of the findings, I am pleased to release the document on “STEPS survey for risk factors and prevalence of noncommunicable disease in Thimphu (2007)” with the hope to benefit the general public.

This survey of 2484 people is the first ever survey to assess risk factors and prevalence of NCDs in our Bhutanese population and provides valuable information that will assist the Government to build better strategies to control of NCDs.

I am particularly drawn by the fact that although the noncommunicable diseases prevalence may be comparatively lower than other countries, the survey reveals that the exposure to NCD risk factors is relatively high with 93.1% of the respondents were exposed to one of the risk factors; 56.5% exposed to 1-2 risk factors and 38.4% exposed to 3-5 risk factors. This, I speculate, will lead to further upsurge of NCDs in the future.

The Ministry of Health will urgently scale up our public health interventions on healthy lifestyle amongst our people. Habits are human's second nature and at times not easily changed, I hope that more Bhutanese will soon be physically active, have access to evidence based information on healthy dietary choices, and maintain status quo among non tobacco users and non-alcoholic groups.

Noncommunicable diseases have profound implication on the quality of life of the individuals, families and the society at large. Costs to health care financing also escalates. The only sustainable and cost effective method is prevention. Therefore, the Government will give due priority and provide financial support for multisectoral interventions to prevent and control noncommunicable diseases as best as we can so as to enable our people of all ages to lead healthier and happier life.



(Zangley Dukpa)
Health Minister
Royal Government of Bhutan

August, 2009

Acknowledgement:

Dr. Bhaktaraj Giri, Senior Medical Specialist, Jigme Dorji Wangchuck National Referral Hospital, acted as the principal investigator for the survey during the design and data collection processes.

We offer our appreciation posthumously to late Nima Yoezer, Epidemiologist, Ministry of Health, for coordinating during the conduct of the survey.

WR and the country office team, WHO country office in Bhutan, Dr. Jerzy Leowski, Regional Advisor for NCD, WHO, SEARO in New Delhi assisted the MoH with financial and technical support for the survey.

Department of Chronic Disease and Health Promotion, WHO, Head Quarters, Geneva assisted in the data analysis and report compilation.

World Diabetic Foundation for financial support for the survey.

Dasho (Dr.) Gado Tshering, Hon'ble Secretary, Dr. Dorji Wangchuk, Director General, Department of Medical Services, Dr. Ugen Dophu, Director, Department of Public Health, Ministry of Health for their guidance and keen support for the survey.

Officials of the Ministry of Health, research assistants, enumerators and laboratory technicians who were directly or indirectly involved in making this survey come to light.

EXECUTIVE SUMMARY

Bhutan is situated in the eastern Himalayas, bordered by Tibet (China's Xizang Autonomous Region) to north and the Indian State of Sikkim to the west, West Bengal to the southwest, Assam to the south and south east and Arunachal Pradesh to the east. The total land surface area of the country is 38,816 sq. km.

By the end of 2007, the total population was projected at 658,888 from the population and housing census of 2005. Over 69.1% reside in rural areas while 30.9 % live in urban settlements. The highest urban settlers are found in Thimphu, the capital city of the country with 79,185 persons (80.3%) of the population living in urban Thimphu.

Main objective of the survey was to study the exposure to risk factors namely: tobacco, alcohol, physical inactivity, diet and establish baseline for prevalence of raised blood pressure, raised blood glucose, raised blood cholesterol level of population in Thimphu city.

This cross sectional study was conducted with slight modification of the WHO STEP survey chronic disease risk factor surveillance tool. Out of projected sample of 2500 among 25- 74 years, 2484 (male=45.8%, female=54.2%) participated in the survey. Out of 46 sampling blocks, 19 were selected through probability proportionate to size (PPS). Participants were selected through two stage cluster sampling. Survey was done in August through September 2007 by the Ministry of Health with the technical and financial assistance of WHO.

The pre-survey information was disseminated to the people through mass media and households selected for the survey was informed through office of *thrompon*, the mayor of the city.

Ethical clearance was approved by the ethical board of the Ministry of Health. Individual consent was taken and participants could withdraw voluntarily on their choice although no people withdrew from the study.

The three step survey collected the following information:

Step 1: Socio-demographic information and behaviors (tobacco use, alcohol consumption, diet and physical activity) and history of hypertension and diabetes.

Step 2: Physical measurement (height, weight, waist, hip circumference ratio, blood pressure, and heart rate)

Step 3: Biochemical measurement (blood glucose, serum cholesterol, triglycerides, high density lipoprotein). Participants whose blood pressure, blood sugar and cholesterol levels were detected to be abnormal were counseled and advised to attend the nearest health facility.

Results:

Tobacco use:

Although the overall prevalence of smokers was relatively low (6.8%), most people who smoked did so on a daily basis (82.2%). Among the daily smokers, the mean age of initiating daily smoking was

20.9 years with no statistically significant difference between males and females. The prevalence of daily smoking was significantly greater among the youngest age group 25-34 years (9.8%) than in any of the other age groups suggesting a potential for an increase in overall smoking prevalence.

About one fifth (19.4%) used smokeless tobacco products, most of whom (83.0%) used daily (combined exposure to through daily consumption is very high (83.3%). Among daily smokeless tobacco users, betel nut was used 7.5 times per day on average and chewing tobacco was used 7.2 times per day on average.

Overall nearly 20 %(19.6%) of Thimphu population is exposed to health risk through tobacco use most of whom were using the smokeless form even though the Bhutanese law restricts sale of all tobacco products.

Alcohol

Of the total respondents 30.8% drank alcohol in the last 30 days with significantly higher prevalence of consumption of alcohol in males as compared to females (34.9% vs 25.5%). There was also significant difference in drinking frequency with 7.9% of males drinking 5-6 days per week as compared to 3.2 % of females drinking 5-6 days per week (see figure 3).

Among those who drank in the last 12 months, while the mean standard drink on a drinking day was 2.6, with the majority of respondents (45.2%) consuming 2-3 standard drinks per drinking day. Males were significantly heavy drinkers with 29.2% of males drinking more than 4 standard drinks as opposed to only 11.1% of the females on a drinking day (see figure 4).

Of those who drank in the last 7 days, 11.9% of men and 12.1% of females had a binge-drink on any day. There is a general trend of greater prevalence of binge drinking with increasing age.

Dietary habits, fruits and vegetable consumption

Overall two third of the population (66.6%) are not eating enough fruits and vegetables (less than five combined servings per day). The consumptions of fruit are particularly low (1.2 serving a day) and not very frequent (3.7 days per week). The mean number of vegetable consumption is 3.2 servings per day, and the mean number of days in of vegetable consumption in a week is 6.4.

Of the 1133 households, vegetable oil was most widely used (96.8%) for meal preparation followed by ghee or butter (1.5%). The mean consumption of fat/oil in a month is 1.6 litres per adult per house hold. Over half the population consumed *ezay* (56.7%) and *suja* (55.5%) at least once a week. *Suja* use may increase the consumption of butter and salt while *ezay* may be a good source of salt and other harmful preservatives. Over quarter (25.1%) eat dried meat at least once a week. However, the study did not collect the practice of whether there was consumption of smoked or burnt dried meat, which in case is a known risk factor for cancers.

Physical activity

The majority of the population (58.6%) is not attaining the minimum requirement of health enhancing physical activity. In addition, 17.7% are just barely attaining this level of physical activity. Half the population is only getting 17.1 minutes or less physical activity on average per day.

Females are significantly more inactive than males. Almost two third (63.2%) are not getting any physical activity from transport (eg, they do not walk or cycle to transport themselves). Over three quarters (78.7%) do not get any physical activity during their recreation time or free time.

While there was general trend towards increasing prevalence of no vigorous physical activity with increasing age, the only consecutive age groups that were significantly different were 35-44 and 45-54 years (80.4% vs 88.3%).

50% of the respondents spent 2 hours or more in sedentary activities on average per day. This includes 25% of respondents who spent 4 hours or more in sedentary activities on average per day.

Blood pressure and diabetes history

Nearly one fifth (17.1%) of the respondents had raised blood pressure while 2.5% of the respondents were diagnosed for diabetes in the last 12 months by health worker or doctor. Besides seeking medical treatment and advice from the health workers, people consult traditional healers for raised blood pressure (1.0%) and diabetes (0.2%).

Physical measurement

Prevalence of obesity ($BMI \geq 30.0 \text{ kg/m}^2$) was relatively low (12.1%), while over half the population was over weight ($BMI \geq 24.9 \text{ kg/m}^2$) in both the sexes, males (51.5%) and females (53.5%).

22.1% of the population had raised blood pressure ($SBP \geq 140 \text{ mmHg}$ and/or $DBP \geq 90 \text{ mmHg}$) on physical measurement. This was significantly higher in males than females (24.8% vs 18.6%).

6.9% had raised blood pressure level with $SBP \geq 160 \text{ mmHg}$ and /or $DBP \geq 100 \text{ mmHg}$. Mean waist circumference for males was 83.7 cm and 82.1 cm for females.

Biochemical measurement

44.3% had a cholesterol level $\geq 5.0 \text{ mmol/L}$ ($\geq 190 \text{ mg/dl}$) while 9.2% of the respondents had cholesterol level of $\geq 6.2 \text{ mmol/L}$ ($\geq 240 \text{ mg/dl}$). 18.4% of males had $HDL < 1.03 \text{ mmol/L}$ ($< 40 \text{ mg/dl}$). 47.0% of females had $HDL < 1.29 \text{ mmol/L}$ ($< 50 \text{ mg/dl}$).

Among all respondents, 30.4% had triglycerides $\geq 1.7 \text{ mmol/L}$ ($\geq 150 \text{ mg/dl}$).

Males (36.9 %) were significantly more likely than females (21.8%) to have triglycerides elevated at this level. 21.5% among all respondents had triglycerides $\geq 2.0 \text{ mmol/L}$ ($\geq 180 \text{ mg/dl}$). Males (27.2%) were significantly more likely than females (14.0%) to have triglycerides elevated at this level.

Raised risks

Majority of the population was exposed to at least one of the risk factors (93.1%). Categorically, 56.5% were exposed to 1-2 risk factors and 38.4% had 3-5 risk factors.

Significantly women (38.4%) are more likely to be exposed than males (31.9%) to multiple risk factors. Exposure to risk is also higher among older age group of people as compared to younger group with nearly half (46.2%) aged between 45-74 years had 3 or more risk factors while over a quarter (28.1%) of 25-44 age group had 3 or more risk factors.

Recommendations

The Thimphu survey though limited to Thimphu city dwellers, suggests that high proportion of Bhutanese may be exposed to multiple NCD risk factors. In order to reduce the health risks, intense health promotion to prevent from NCDs and to minimize exposure of population to NCD risks is imperative. In particular, good strategies must be designed and implemented to promote physical activity, healthy diet, safer use of alcohol, and tobacco cessation across communities in Bhutan.

Due to the multi-factorial determinants of the NCDs, prevention is most effective when tackled through a true multi-sectoral approach. The current information of the NCD risk factors must be disseminated to wide ranging audiences of policy makers, relevant institutions, dzongkhag multi-sectoral task forces for HIV, health professionals, rural and urban communities to generate greater understanding for multi-sectoral collaboration in future.

Analytical epidemiological studies must be conducted in future to understand more on behavioral and attitudes to tobacco, alcohol, physical activity and dietary practices and other NCD risk factors so that appropriate behavioral interventions can be designed among the population.

Conclusion

Given that vast majority of the population in Thimphu is exposed to at least one of the risk factors (93.1%) or 56.5% exposed to 1-2 risk factors and 38.4% exposed to 3-5 risk factors, it can be speculated that there is a huge potential of upsurge of NCDs.

Bhutan must pay attention to implement evidence based public health interventions urgently to prevent and control the epidemic of NCD looming over the population.



Bhutan (Thimphu) STEPS Survey 2007

Fact Sheet

Results for adults aged 25-64 years (incl. 95% CI)	Both Sexes	Males	Females
Step 1 Tobacco Use			
Percentage who currently smoke tobacco	7.0% (5.7-8.3)	8.7% (6.7-10.7)	4.9% (3.5-6.3)
Percentage who currently smoke tobacco daily	5.8% (4.6-7.0)	7.2% (5.4-9.0)	4.1% (2.7-5.4)
<i>For those who smoke tobacco daily</i>			
Average age started smoking (years)	20.8 (19.4-22.1)	20.8 (19.1-22.5)	*
Percentage smoking manufactured cigarettes	62.0% (51.8-72.1)	68.1% (55.7-80.4)	*
Mean number of manufactured cigarettes smoked per day	4.5 (3.6-5.5)	*	*
Step 1 Alcohol Consumption			
Percentage of abstainers (who did not drink alcohol in the last year)	63.3% (61.1-65.6)	59.6% (56.3-62.9)	68.1% (65.1-71.0)
Percentage of current drinkers (who drank alcohol in the past 30 days)	31.1% (28.9-33.3)	35.2% (32.0-38.4)	25.9% (23.2-28.7)
<i>Among current drinkers</i>			
Percentage who drank alcohol on 4 or more days in the last week	34.7% (29.7-39.8)	39.2% (32.4-45.9)	26.1% (19.2-32.9)
Percentage who binge drink (men who had 5 or more / women who had 4 or more drinks on any day in the last week)	--	11.4% (7.2-15.5)	12.2% (7.4-16.9)
Step 1 Fruit and Vegetable Consumption (in a typical week)			
Mean number of days fruit consumed	3.7 (3.6-3.9)	3.7 (3.5-3.8)	3.8 (3.7-4.0)
Mean number of servings of fruit consumed on average per day	1.2 (1.1-1.3)	1.2 (1.1-1.3)	1.2 (1.1-1.3)
Mean number of days vegetables consumed	6.4 (6.3-6.5)	6.4 (6.3-6.5)	6.4 (6.3-6.5)
Mean number of servings of vegetables consumed on average per day	3.3 (3.2-3.4)	3.4 (3.3-3.6)	3.1 (3.0-3.2)

Percentage who ate less than 5 combined servings of fruit and/or vegetables on average per day	66.0% (63.7-68.3)	64.4% (61.1-67.8)	67.9% (64.9-70.9)
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Step 1 Physical Activity

Percentage with low levels of activity (defined as < 600 MET-minutes per week) ⁺	57.7% (55.3-60.1)	48.6% (45.2-52.1)	69.0% (66.0-72.0)
Percentage with high levels of activity (defined as ≥ 3000 MET-minutes per week) ⁺	24.3% (22.2-26.4)	30.0% (26.8-33.3)	17.2% (14.8-19.6)
Median time spent in physical activity per day (minutes), with interquartile range	20.0 (0.0-90.0)	37.1 (0.0-120.0)	6.4 (0.0-51.4)
Percentage not engaging in vigorous physical activity	82.2% (80.3-84.2)	74.0% (70.9-77.1)	92.5% (90.8-94.2)

⁺ For definitions of low and high levels of physical activity, please see the GPAQ Analysis Guide, available at: <http://www.who.int/chp/steps/GPAQ/en/index.html>

Results for adults aged 25-64 years (incl. 95% CI)	Both Sexes	Males	Females
Step 2 Physical Measurements			
Mean body mass index - BMI (kg/m ²)	25.6 (25.4-25.7)	25.3 (25.1-25.5)	25.9 (25.6-26.2)
Percentage who are overweight (BMI ≥25 kg/m ²)	52.9% (50.6-55.3)	51.8% (48.4-55.2)	54.4% (51.2-57.5)
Percentage who are obese (BMI ≥30 kg/m ²)	12.2% (10.8-13.6)	9.5% (7.7-11.3)	15.7% (13.5-17.9)
Average waist circumference (cm)	---	83.6 (82.9-84.2)	81.9 (81.2-82.6)
Mean systolic blood pressure - SBP (mmHg), excluding those currently on medication for raised BP	123.5 (122.7-124.3)	126.1 (125.0-127.2)	120.2 (119.2-121.2)
Mean diastolic blood pressure - DBP (mmHg), excluding those currently on medication for raised BP	79.3 (78.8-79.9)	80.0 (79.2-80.8)	78.5 (77.8-79.2)
Percentage with raised BP (SBP ≥140 and/or DBP ≥90 mmHg or currently on medication for raised BP)	23.7% (21.8-25.6)	26.4% (23.6-29.2)	20.3% (18.0-22.6)
Percentage with raised BP (SBP ≥160 and/or DBP ≥100 mmHg or currently on medication for raised BP)	10.0% (8.7-11.3)	10.8% (8.9-12.7)	9.0% (7.4-10.6)

Step 3 Biochemical Measurement			
Mean fasting blood glucose (mmol/L), excluding those currently on medication for raised blood glucose	5.9 (5.8-6.0)	5.9 (5.8-6.0)	5.9 (5.8-6.0)
Percentage with impaired fasting glycaemia as defined below Fasting glucose: ≥ 6.1 mmol/L (110 mg/dl) and < 7.0 mmol/L (126 mg/dl) AND Post-glucose load: < 7.8 mmol/L (140 mg/dl)	21.7% (19.8-23.5)	20.9% (18.3-23.5)	22.7% (20.2-25.3)
Percentage with raised fasting blood glucose as defined below or currently on medication for raised blood glucose Fasting glucose: ≥ 7.0 mmol/L (126 mg/dl) OR Post-glucose load: ≥ 11.1 mmol/L (200 mg/dl)	7.5% (6.4-8.6)	7.8% (6.2-9.4)	7.2% (5.7-8.7)
Mean total blood cholesterol (mmol/L)	4.8 (4.8-4.9)	4.9 (4.8-4.9)	4.8 (4.7-4.8)
Percentage with raised total cholesterol (≥ 5.0 mmol/L or ≥ 190 mg/dl)	43.9% (41.6-46.2)	46.0% (42.6-49.3)	41.2% (38.2-44.3)
Percentage with raised total cholesterol (≥ 6.2 mmol/L or ≥ 240 mg/dl)	9.3% (7.9-10.6)	11.1% (9.0-13.2)	7.0% (5.5-8.5)
Summary of combined risk factors			
current daily smokers less than 5 servings of fruits and/or vegetables on average per day Low level of activity	overweight (BMI ≥ 25 kg/m ²) raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)		
Percentage with none of the risk factors included above, aged 25 to 64 years	6.3% (5.0-7.7)	7.2% (5.2-9.2)	5.2% (3.6-6.8)
Percentage with at least three of the risk factors included above, aged 25 to 44 years	28.1% (25.1-31.1)	25.5% (21.3-29.7)	31.5% (27.4-35.7)
Percentage with at least three of the risk factors included above, aged 45 to 64 years	44.3% (40.9-47.6)	41.6% (36.7-46.5)	47.5% (43.0-52.0)
Percentage with at least three of the risk factors included above, aged 25 to 64 years	33.3% (31.0-35.6)	30.5% (27.3-33.8)	36.8% (33.6-40.0)
Results for adults aged 25-74 years (incl. 95% CI)	Both Sexes	Males	Females
Percentage who currently smoke tobacco	6.8% (5.6-8.0)	8.4% (6.5-10.3)	4.7% (3.4-6.1)
Percentage who currently smoke tobacco daily	5.6% (4.5-6.7)	6.9% (5.2-8.6)	3.9% (2.6-5.1)

For those who smoke tobacco daily

Average age started smoking (years)	20.9 (19.5-22.2)	20.6 (18.9-22.3)	*
Percentage smoking manufactured cigarettes	61.2% (51.3-71.2)	67.6% (55.5-79.7)	*

Mean number of manufactured cigarettes smoked per day	4.6 (3.6-5.5)	*	*
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Step 1 Alcohol Consumption

Percentage of abstainers (who did not drink alcohol in the last year)	63.7% (61.5-65.8)	59.9% (56.8-63.0)	68.5% (65.7-71.3)
Percentage of current drinkers (who drank alcohol in the past 30 days)	30.8% (28.7-32.8)	34.9% (31.9-38.0)	25.5% (22.9-28.1)

Among current drinkers

Percentage who drank alcohol on 4 or more days in the last week	35.8% (31.0-40.7)	40.0% (33.5-46.4)	27.7% (21.1-34.3)
Percentage who binge drink (men who had 5 or more / women who had 4 or more drinks on any day in the last week)	--	11.9% (7.9-15.8)	12.1% (7.6-16.7)

Step 1 Fruit and Vegetable Consumption (in a typical week)

Mean number of days fruit consumed	3.7 (3.6-3.8)	3.7 (3.5-3.8)	3.8 (3.7-4.0)
Mean number of servings of fruit consumed on average per day	1.2 (1.1-1.3)	1.2 (1.1-1.3)	1.2 (1.1-1.3)
Mean number of days vegetables consumed	6.4 (6.3-6.4)	6.4 (6.3-6.4)	6.4 (6.3-6.5)
Mean number of servings of vegetables consumed on average per day	3.2 (3.2-3.3)	3.4 (3.3-3.6)	3.0 (2.9-3.1)
Percentage who ate less than 5 combined servings of fruit and/or vegetables on average per day	66.6% (64.5-68.8)	65.0% (61.9-68.2)	68.7% (65.8-71.5)

Step 1 Physical Activity

Percentage with low levels of activity (defined as < 600 MET-minutes per week) ⁺	58.6% (56.4-60.9)	49.8% (46.5-53.1)	69.6% (66.8-72.4)
Percentage with high levels of activity (defined as ≥ 3000 MET-minutes per week) ⁺	23.7% (21.7-25.7)	29.3% (26.2-32.3)	16.8% (14.5-19.0)
Median time spent in physical activity per day (minutes), with interquartile range	17.1 (0.0-85.7)	34.3 (0.0-120.0)	4.3 (0.0-51.4)
Percentage not engaging in vigorous physical activity	82.9% (81.1-84.7)	74.9% (71.9-77.8)	92.9% (91.3-94.4)

Results for adults aged 25-74 years (incl. 95% CI)	Both Sexes	Males	Females
Step 2 Physical Measurements			
Mean body mass index - BMI (kg/m ²)	25.5 (25.3-25.7)	25.3 (25.1-25.5)	25.8 (25.6-26.1)
Percentage with BMI ≥25 kg/m ²	52.4% (50.2-54.6)	51.6% (48.4-54.8)	53.5% (50.5-56.5)
Percentage with BMI ≥30 kg/m ²	12.1% (10.7-13.4)	9.5% (7.8-11.3)	15.3% (13.2-17.3)
Average waist circumference (cm)	--	83.7 (83.1-84.3)	82.1 (81.4-82.7)
Mean systolic blood pressure - SBP (mmHg), excluding those currently on medication for raised BP	124.7 (123.9-125.4)	127.0 (125.9-128.1)	121.7 (120.7-122.7)
Mean diastolic blood pressure - DBP (mmHg), excluding those currently on medication for raised BP	79.5 (79.0-80.0)	80.1 (79.3-80.9)	78.8 (78.1-79.4)
Percentage with raised BP (SBP ≥140 and/or DBP ≥90 mmHg or currently on medication for raised BP)	26.0% (24.2-27.8)	28.3% (25.6-31.0)	23.2% (20.9-25.4)
Percentage with raised BP (SBP ≥160 and/or DBP ≥100 mmHg or currently on medication for raised BP)	11.6% (10.4-12.9)	12.2% (10.3-14.0)	11.0% (9.4-12.6)
Step 3 Biochemical Measurement			
Mean fasting blood glucose (mmol/L), excluding those currently on medication for raised blood glucose	5.9 (5.8-6.0)	5.9 (5.8-6.0)	6.0 (5.9-6.1)
Percentage with impaired fasting glycaemia as defined below Fasting glucose: ≥6.1mmol/L (110mg/dl) and <7.0mmol/L (126mg/dl) AND Post-glucose load: <7.8mmol/L (140 mg/dl)	21.6% (19.8-23.3)	20.8% (18.3-23.3)	22.5% (20.1-24.9)
Percentage with raised fasting blood glucose as defined below or currently on medication for raised blood glucose Fasting glucose: ≥ 7.0 mmol/L (126 mg/dl) OR Post-glucose load: ≥ 11.1 mmol/L (200 mg/dl)	8.2% (7.1-9.3)	8.6% (7.1-10.2)	7.7% (6.2-9.1)
Mean total blood cholesterol (mmol/L)	4.8 (4.8-4.9)	4.9 (4.8-4.9)	4.8 (4.7-4.8)
Percentage with raised total cholesterol (≥5.0 mmol/L or ≥190 mg/dl)	44.3% (42.1-46.5)	45.7% (42.6-48.9)	42.5% (39.6-45.4)

Percentage with raised total cholesterol (≥ 6.2 mmol/L or ≥ 240 mg/dl)	9.2% (7.9-10.5)	10.5% (8.5-12.4)	7.6% (6.2-9.0)
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Summary of combined risk factors

current daily smokers less than 5 servings of fruits and/or vegetables on average per day Low level of activity	overweight ($\text{BMI} \geq 25 \text{ kg/m}^2$) raised BP ($\text{SBP} \geq 140$ and/or $\text{DBP} \geq 90$ mmHg or currently on medication for raised BP)
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Percentage with none of the risk factors included above, aged 25 to 74 years	6.1% (4.8-7.3)	6.9% (5.0-8.7)	5.1% (3.6-6.6)
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Percentage with at least three of the risk factors included above, aged 25 to 44 years	28.1% (25.2-31.1)	25.5% (21.3-29.7)	31.5% (27.4-35.7)
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Percentage with at least three of the risk factors included above, aged 45 to 74 years	46.2% (43.3-49.1)	43.3% (39.0-47.6)	49.7% (45.8-53.6)
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Percentage with at least three of the risk factors included above, aged 25 to 74 years	34.8% (32.6-37.0)	31.9% (28.8-35.0)	38.4% (35.4-41.4)
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* indicates less than 50 respondents

STEP SURVEY FOR RISK FACTORS AND PREVALENCE OF NON-COMMUNICABLE DISEASE IN THIMPHU (2007)

1. COUNTRY PROFILE

Bhutan is situated in the eastern Himalayas, bordered by Tibet (China's Xizang Autonomous Region) to north and the Indian state of Sikkim to the west, West Bengal to the southwest, Assam to the south and south east and Arunachal Pradesh to the east. The total land surface area of the country is 38,816 sq. km

By the end of 2007, the total population was projected at 658,888 from the population and housing census of 2005. 50% of the Bhutanese population was under the age of 23.3 years indicating a young population (Population and housing census of Bhutan 2005). Bhutanese are mostly an agrarian society with 66.6% of the labour force engaged in agriculture (Bhutan Living Standard Survey (BLSS) 2007).

Over 69.1% reside in rural areas while 30.9 % live in urban settlements. The highest urban settlers are found in Thimphu, the capital city of the country with 79,185 persons (80.3%) of the population living in urban Thimphu.

The first motor vehicles appeared in Bhutan in 1962 with the construction of the first road links from India. Today more than 4,946.70 kilometers of road have been constructed providing the key means of transport stretching through the rugged mountains of the country.

The average life span of Bhutan is 66.1 years. Under five mortality rate is 61.6/1000 live births and infant mortality rate is 40.10/1000 live births (United Nations Population Division, 2007). Approximately over 90% of the population has health coverage (Annual Health Bulletin, 2008).

Led by the youngest ruling monarch, His Majesty the King, Jigme Khesar Namgyel Wangchuck, Bhutan came into the limelight of nations as

the world's newest parliamentary democracy in 2008.

2. INTRODUCTION

Noncommunicable diseases are an emerging problem worldwide across countries of all income groups. Contrary to the belief that chronic noncommunicable diseases such as diabetes, hypertension, heart diseases and strokes are the diseases of the affluent society, 80% of all chronic disease deaths occur in low and middle income countries (WHO vital investment). WHO estimates that the total number of people dying from chronic disease which noncommunicable diseases is double the number dying from all infectious diseases (including HIV/AIDS, tuberculosis, malaria), maternal and perinatal conditions, and nutritional deficiencies combined.

No epidemiological studies were conducted so far in Bhutan to ascertain the prevalence of NCDs such as Diabetes, Hypertension, Cardiovascular Diseases, Cerebro-vascular Diseases, and Chronic Renal Failure and chronic respiratory diseases. Most of the data available are hospital based which does not give a true representation of the problem in the population. The hospital morbidity data in Bhutan indicates that NCDs account for more than 50% of inpatient mortality. This is an important cause of a large proportion of mid-life preventable death.

Noncommunicable diseases occur on exposure of the population to their risk factors over a span of time. It is equally dependent on intensity and multiplicity of exposure to these factors. While certain risk factors like age, sex, and ethnicity are non-modifiable but however, there are a set of common modifiable risk factors that underlie most noncommunicable diseases. These are harmful alcohol consumption, unhealthy diet, physical inactivity and obesity, tobacco use,

raised blood pressure, raised blood glucose and abnormal lipids.

This study was aimed to determine the prevalence of these risk factors in the urban population of Thimphu, the capital city of Bhutan. The WHO STEPS questionnaire was modified to meet the local needs and applied in the study.

General Objective:

To establish the prevalence of the major NCD risk factors in urban Thimphu which can be used in planning and evaluating the impact of an NCD prevention program in urban settings, particularly in Thimphu.

Specific objectives:

To determine the prevalence of the major, modifiable risk factors of NCDs in the urban population of Thimphu.

To assess the distribution of these risk factors by age and sex in the urban Thimphu population. To study cultural and social habits of urban Bhutanese population that adds up to the risk factors of NCD

3. SURVEY METHODOLOGY

Study Area

The study was conducted in the capital city of Thimphu. As resources were not available to conduct a national survey, Thimphu was selected as the survey site as it has the largest urban population, consisting of individuals originating from every part of the country, and was logistically the easiest area in which to conduct the survey.

Future surveys will be conducted in other urban settlements as well as to in peri-urban and rural areas. Conducting the current survey in the most populous urban area provided higher advocacy value as well as repeatability in the future to assess trends and evaluate the impact of NCD

prevention activities.

Study population

Any able-bodied Bhutanese individual, both male and female, residing in Thimphu city, at the time of study (July to September 2007), between 25 to 74 years of age.

Sample size

A sample size of 2800 people was targeted for the study. Sample size was determined according to the STEPS approach estimation of minimum sample size and was inflated to take into consideration an expected of 12% non-response rate.

Sample Design

The Research Unit of the Ministry of Health drew the sample for the study. A stratified two-stage sample was drawn using data from 2005 population and housing census as the sampling frame with the help of an expert from the national statistical bureau. In the first stage of sampling, 19 blocks out of a total of 46 were selected using probability proportionate to size (PPS) sampling among the Bhutanese population. In the second stage of sampling, individuals were selected from each block. Selection of individuals within each selected block proceeded as follows:

A map of each selected block was provided showing distinctive features like dzongs, streams, rivers, roads, hospitals, BHUs, footpaths and buildings.

A listing of households and persons aged 25 to 74 years was prepared for every sample block to serve as sampling frame.

The research unit provided the researchers with the list of persons selected for the study. This was done following enlisting individuals by age group and sex and selecting individuals from each age-sex group by interval sampling.

Training

A total of twenty nine research assistants and five laboratory technicians were trained for data collection for the study. The research assistants were trained initially in May 2006 and a subsequent refresher given prior to the study. They were trained on the following:

- Registration
- Application of the questionnaire
- Performing measurement of blood pressure, height, weight, waist and hip circumference
- Data entry to the survey form
- Checking for data and results
- Hands on training on questionnaire institution
- A small pilot survey was conducted before the initiation of the study.

Survey instrument

The WHO STEPs instrument was adapted to the local context for this study to include appropriate information. Information gathered included identification of the subject; demography; tobacco use; alcohol consumption; nutrition and physical activity. A questionnaire use field guideline was developed and glossary of important terms in the questionnaire was made and issued to the RAs for reference. The survey instruments as well as these field guides are available in Annexure II

Data collection

Data collection was started in early August 2007 and completed in mid September of the same year. A total of 29 Health Assistant and Basic Health Worker/Nurses, who worked as enumerators, five laboratory technicians and 8 supervisors conducted the study.

Physical Measurements

Height was measured using stadiometer (with sensitivity to ± 0.1 cm) shoes removed. Body weight was recorded in kilograms with electronic weighing machine (SECA 843, range 140kg) which were standardized and checked every

week. Participants were measured in light clothing.

Omron BP apparatus was used to measure blood pressure. The apparatuses had medium, large and pediatric cuff and these were used according to arm circumference. After taking rest for at least 10 minutes, blood pressure measurement was carried out with a digital BP apparatus. Three readings were made at a minimal interval of 3 minutes each and entered in the form.

Waist and hip circumference were measured, to the nearest centimeter, in a private area using measuring tape. Waist was measured at the level of the midpoint between inferior margin of last rib and the upper margin of the iliac crest at the mid-axillary plane with the subject standing. The measure was generally taken over light clothing. In subjects with pendulous abdomen the true circumference was estimated by inclining the tape downwards anteriorly to the umbilicus.

Blood sample collection

Venous blood samples were taken and the blood was stored at 2 to 8°C collected in a cold box in Sodium Fluorinated vacountainer tubes for blood glucose estimation before being transferred to the laboratory. Plasma glucose estimation was done using a Hitachi 912 bio-analyzer.

Venous blood samples for cholesterol and triglyceride were collected in plain vaccutainer tubes with gel separator and analyzed in a Hitachi 912 bio-analyzer.

Fasting blood glucose and Oral glucose tolerance test (OGTT)

Fasting blood glucose was measured in the morning after at least 3 days of unrestricted diet (more than 150 g of carbohydrate daily) and usual physical activity. The test was preceded by an overnight fast of 8-14 hours. Smoking was not permitted during the test. Ten minutes after collection of the fasting blood sample, the subject had to take 75 g of anhydrous glucose in 300 ml of water over a course of 5 minutes. Second

sample of blood was collected 120 minutes after the glucose load.

Determination of serum lipid profile

Total cholesterol, triglyceride and fasting glucose was determined from fasting blood sample. These were analyzed using Hitachi 912 bio-analyzer.

Report dissemination to the participants

All blood reports were distributed to the participants the next morning and necessary advice regarding high blood pressure, obesity, hyperglycemia, hyper-triglyceridemia and hypercholesterolemia were given, wherever required. Health education materials were distributed about risk factors of NCDs to any one who were detected of having these during questionnaire institution and physical measurements.

Ethical issues

Ethical clearance was sought from the ethical committee of the Ministry of Health.

The households participating in the study was informed of the study through “*Thrompon*”, the mayor of the city. Messages on the activity were transmitted through mass media. Subsequent to this, the concerned enumerators along with the supervisors visited the household and explained about the study and informed the individuals to be present on the planned date of study at the pre-determined camp for the study. Consent for the study was taken and the subject could volunteer out of the study if they feel so in due course of time. Those subjects whose blood pressure, blood sugar and cholesterol levels were detected to be abnormal were counseled and advised to attend the nearest health facility.

4. DEFINITIONS AND DIAGNOSTIC CRITERIA

Hypertension

A mean of the later two blood pressure readings of 140 mmHg systolic blood pressure (SBP) and/or 90 mm Hg diastolic blood pressure (DBP), or greater, was defined as hypertension. Subjects taking antihypertensive medicines irrespective of blood pressure were also considered to be hypertensive.

Hyperlipidaemia

Hypercholesterolemia is defined as a total cholesterol concentration of 250mg/dl (6.5 mmol/l) or greater. Values of 200- 249mg/dl (5.2- 6.4 mmol/l) is defined as “borderline hypercholesterolemia” and values below 200mg/dl (5.2mmol/l) are considered normal.

Borderline hypertriglyceridemia is defined as a triglyceride value of 200-399mg/dl (2.3-4.5 mmol/l) and high triglycerides as a value of 400mg/dl (4.5 mmol/l) or greater.

Glucose intolerance

Diabetes mellitus and impaired glucose tolerance (IGT) in adults are best defined on the basis of blood glucose concentration measured two hours after a 75 g oral glucose challenge, following an overnight fast of 8-14 hours and three days of unrestricted diet.

WHO criteria (1999) for diabetes, IGT and IFT

	Glucose concentration, mol/L (mg/dl)		
	Whole blood		Plasma
	Venous	Capillary	Venous
Diabetes Mellitus Fasting or 2-h post glucose load	≥ 6.1 (≥ 110) ≥ 10.0 (≥ 180)	≥ 6.1 (≥ 110) ≥ 11.1 (≥ 200)	≥ 7.0 (≥ 126) ≥ 11.1 (≥ 200)
Impaired Glucose Tolerance (IGT) Fasting (if measured) and 2-h post glucose load	< 6.1 (< 110) & ≥ 6.7 (≥ 120)	< 6.1 (< 110) & ≥ 7.8 (≥ 140)	< 7.0 (< 126) & ≥ 7.8 (≥ 140)
Impaired Fasting Glycaemia (IFG) Fasting and (if measured) 2-h post glucose load	≥ 5.6 (≥ 100) & < 6.1 (< 110) < 6.7 (< 120)	≥ 5.6 (≥ 100) & < 6.1 (< 110) < 7.8 (< 140)	≥ 6.1 (≥ 110) & < 7.0 (< 126) < 7.8 (< 140)
Values for venous plasma were taken for diagnosis of diabetes mellitus in the study.			

Anthropometry

Body mass index (BMI) is defined as weight (kg) divided by square of height (m) and waist-hip ratio (WHR), defined as waist circumference (cm) divided by hip circumference (cm).

Normal	BMI	(18.5–24.9) kg/m ²
Grade 1 overweight	BMI	(25.0–29.9) kg/m ²
Grade 2 overweight	BMI	(30.0–39.9) kg/m ²
Grade 3 overweight	BMI	> 40 kg/m ²

Waist Hip Ratio (WHR) is measured as an indicator of central obesity. WHR of greater than 0.95 for men and greater than 0.85 for women is abnormal.

Unit of alcohol

Following measures were regarded as one unit of alcohol for different types of alcoholic beverage each containing 10 grams of absolute alcohol. Beer-285 ml, other spirits-30 ml, Wine-120 ml, Ara-120 ml, Bangchang- 285ml, Singchang-120 ml.

Vegetable serving

Following measure of vegetable made one

serving.

Raw, green leafy vegetables	1cup (240ml).
Cooked vegetable	½ cup (120ml)

Fruit serving

Following quantity of fruit made one serving of fruit:

Medium sized apple, banana, orange:	1 piece
Chopped, cooked, canned fruit:	½ cup (120ml)
Fruit juice:	½ cup (120 ml)

The WHO recommends intake of at least 5 servings of fruits and vegetables a day.

METS

The symbol MET comes from metabolic equivalents of task. It is commonly used in medicine to express metabolic rates measured during a treadmill test. Two definitions of the MET are met with, essentially equivalent:

- 1 MET is equivalent to a metabolic rate consuming 3.5 milliliters of oxygen per kilogram of body weight per minute.
- 1 MET is equivalent to a metabolic rate

consuming 1 kilocalorie per kilogram of body weight per hour

- METs can be converted to kilocalories consumed per minute: $\text{kcal/min} = \text{METs} \times \text{body weight in kilograms} \div 60$.
- Oxygen consumption in liters per hour = $\text{METs} \times \text{body weight in kilograms} \div 0.21$

Physical Activity

The physical activity performed by individuals is converted into MET minutes.

Questions used for MET estimation are P1 to P15 a & b.

P1 - P6a & b: activity at work

P7 - P9 a & b: travel to and fro work

P10 – P15 a & b: recreational activities

Total Physical Activity MET-minute/week
(=the sum of the total MET minutes of activity computed for each setting)

Equation: Total Physical Activity = $[(P2 * P3 * 8) + (P5 * P6 * 4) + (P8 * P9 * 4) + (P11 * P12 * 8) + (P14 * P15 * 4)]$

Data management

Data collected through institution of questionnaire, anthropometry and biochemical parameters were simultaneously entered in computer by double entry method by using Epidata. It was completed by the time data collection was over. This was carried out by a team of three members of the Research unit. This raw data was cleaned in the next few months and the final analysis was done in May 2009.

Statistical analysis

Data was analyzed using Epi Info. Post stratification adjustment weights were calculated prior to the analysis to correct for differences between the age-sex structures of the sample versus the target population (2007 projections from the 2005 Thimphu census). Epi Info programs provided by the WHO, Head Quarters in Geneva were used to produce the descriptive analysis.

Level of total physical activity	Physical activity cutoff value
High	<p>If : $(P2+P11) \geq 3$ days AND Total Physical Activity MET minutes per week is ≥ 1500</p> <p>OR</p> <p>If $(P2+P5+P8+P11+P14) \geq 7$ days AND total physical activity MET minutes per week is ≥ 3000</p>
Moderate	<p>If: Level of physical activity does not reach criteria for high levels of physical activity</p> <p>AND</p> <p>If: $(P2+P11) \geq 3$ days AND $\{(P2 * P3) + (P11 * P12)\} \geq 60$ minutes</p> <p>OR</p> <p>If: $(P5+P8+P14) \geq 5$ days AND $\{9P5 * P6 + (P8 * P9) + (P14 * P15)\} \geq 150$ minutes</p> <p>OR</p> <p>If: $(P2+P5+P8+P11+P14) \geq 5$ days AND Total Physical Activity MET minutes per week ≥ 600</p>
Low	<p>If level of physical activity does not reach the criteria for either high or moderate levels of physical activity</p>

Data was analyzed for subpopulation groups (25 to 34 males, 35 to 44 males, 45 to 54 males, 55 to 64 males, 65 to 74 males and 25 to 34 females, 35 to 44 females, 45 to 54 females, 55 to 64 females, 65 to 74 females). Descriptive analysis was also done for 25-64 year old.

5. RESULTS

Socio-demographic profile

2484 respondents of aged 25-74 years participated in the survey. Of them 45.8% were males and 54.2 % were females. The distribution of the respondents across the age groups in both sexes was fairly uniform (See table 1). While there were slightly less respondents in 55-64 and 65-74 age groups, the numbers were representative of the sample of the source population of Thimphu city.

high school, 4.4% completed either university or post graduate education and 3.5% non-formal education or monastic education.

Of the respondents, 18.4 % were government employees, 7.0% non-government employee, 13.6% self employed, 5.4 % in agriculture, 7.0% in uniformed force and 48.5% comprised of non-paid, students, home makers, retired or unemployed people. Out of the non-paid group, 72.0% were home makers.

Out of the households, 7.9% earned annual household income of less than Nu.3000, 2.6% earned Nu3001-Nu.5000, 3.9% earned Nu. 5001-Nu.12,000, 7.1% earned Nu.12001-Nu.19000 and 78.5% earned greater than Nu.19000.

Table 1: Age group and sex of respondents 25-74 including 25-64

Age Group (years)	Men		Women		Both Sexes	
	n	%	n	%	N	%
25-34	259	46.9	293	53.1	552	22.2
35-44	260	47.4	288	52.6	548	22.1
45-54	259	46.0	304	54.0	563	22.7
55-64	206	45.2	250	54.8	456	18.4
65-74	154	42.2	211	57.8	365	14.7
25-74	1138	45.8	1346	54.2	2484	100.0
25-64	984	46.4	1135	53.6	2119	100.0

The respondents comprised of following ethnic groups: Ngalong(32.4%), Sharchop(38.0%), Bumtap/Kheng(8.3%), Lhotshampa(17.8%) and others(3.6%).

The mean number of years of full time study at school for all respondents was 3.1 years. Males attained mean of 4.6 years of education while females attained 1.8 years at school.

By highest level of education achievement among the respondents, 54.8% did not attend any formal schooling, 25.0% completed primary school or less, 12.3% completed secondary or

Tobacco use

Out of all the respondents, 19.6% currently used tobacco products either by smoking or by using smokeless products. 83.3 % of them were daily users.

Out of all respondents, 6.8 % currently smoked any tobacco products such as cigarettes, bidi, cigars or pipes. Significantly more men than women smoked (8.4 % vs 4.7 %).

While only 5.6% of the total respondents smoked any tobacco products daily, the vast majority of

the current smokers smoked daily (82.2%).

The prevalence of daily smoking was significantly greater among the youngest age group 25-34 years (9.8%) than in any of the other age groups. (See figure 1)

Among the daily smokers, the mean age of initiating daily smoking was 20.9 years. There was no statistically significant difference in age of smoking initiation among males and females.

Among the daily tobacco smokers, 61.2 % smoked manufactured cigarette. The mean number of manufactured cigarettes smoked per day was 4.6 while the mean daily consumption of rolled cigarettes was 3.5.

19.4% of respondents are current users of smokeless tobacco (snuff or chew tobacco or betel nuts). Of these, 83.0% use smokeless forms of tobacco daily. Among daily smokeless tobacco users, betel nut was used 7.5 times per

day on average and chewing tobacco was used 7.2 times per day on average (See figure 2). There was no statistically significant difference in daily mean consumption between males and females for betel nut and chewing tobacco.

Alcohol

Of the total respondents 30.8% drank alcohol in the last 30 days. The prevalence of alcohol consumption in this period was significantly higher for males as compared to females (34.9% vs 25.5%).

Of those who drank in the last 12 months, 21.2 % consumed at least one drink per day. However, there was significant difference in drinking frequency with 7.9% of males drinking 5-6 days per week as compared to 3.2 % of females drinking 5-6 days per week (see figure 3).

Among those who drank in the last 12 months, while the mean standard drink on a drinking day was 2.6, with the majority of respondents (45.2%) consuming 2-3 standard drinks per drinking day. Males were significantly heavy drinkers with 29.2% of males drinking more than 4 standard drinks as opposed to only 11.1% of the females on a drinking day (see figure 4). The number of standard drinks increased among the older age people although this trend is not statistically significant.

Of those who drank in the last 7 days, 11.9% of men and 12.1% of females had a binge-drink on any day. There is a general trend of greater prevalence of binge drinking with increasing age. However these trends on bingeing need to be used with caution due to the lesser number of the people.

Of men who drank in the last 30 days, 4.9 % of men who engaged in harmful drinking (≥ 60 grams of pure alcohol per day) in the last 7 days while 3.6% of the females engaged in harmful drinking (≥ 40 grams of pure alcohol per day). The difference was not statistically significant.

Figure 1: Percentage of Current smokers by age group and sex

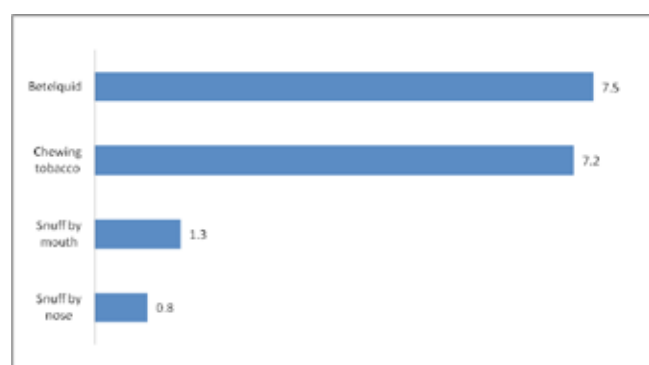
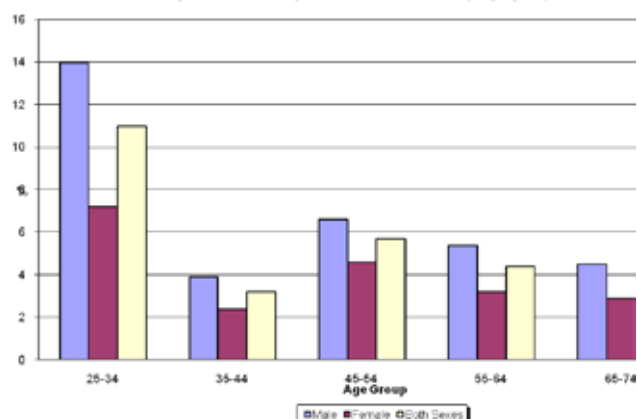
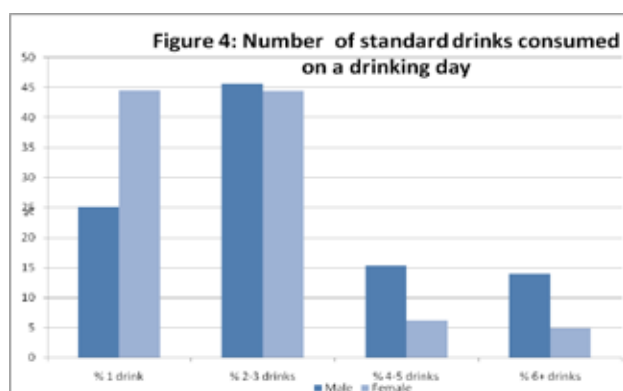
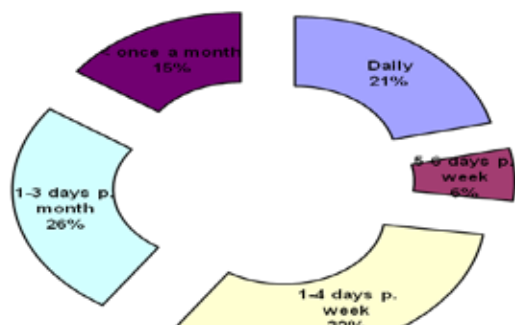


Figure 2: Meantime per day smokeless tobacco used by type

Using the criteria of hazardous drinking of 40-59.9 g of pure alcohol on the average per day for male and 20-39.9 g of pure alcohol per day, more females than males engaged in hazardous drinking (10.4%vs 3.9%), but difference in this pattern was not significant.

Figure 3: Frequency of alcohol consumption in last 12 months



Dietary habits, fruits and vegetable consumption

The mean days of fruit consumption in a week was 3.7 and was significantly lesser than mean number of days for vegetable consumption (6.4).

There was no significant difference in consumption pattern of fruits and vegetables between males and females (3.7 vs 3.8 mean days for fruit and 6.4 vs 6.4 mean days for vegetables).

Mean number of servings per day for fruits was significantly lower as compared to the vegetable servings (1.2 vs 3.2 servings).

Mean number of serving of vegetable consumed

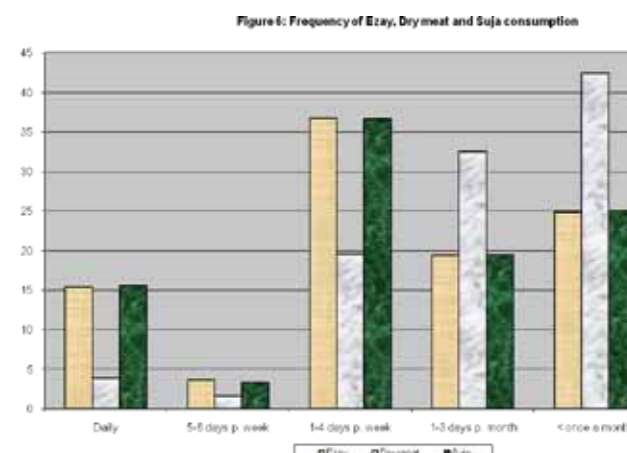
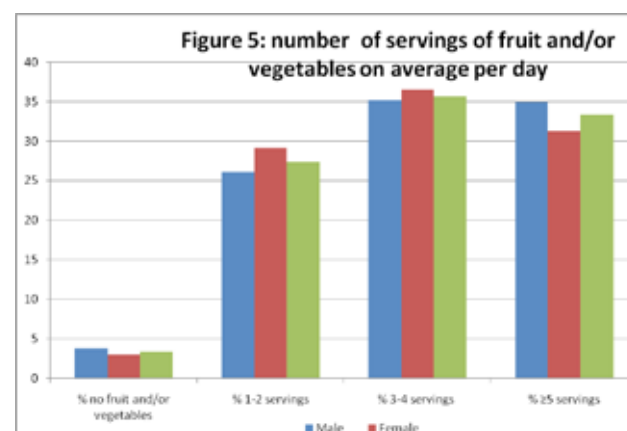
on average per day was significantly less in females as compared to males (3.4 vs 3.0 servings) while there was no difference in fruit consumption.

The mean number of servings combined for fruits and vegetables on average per day was 4.2.

66.6 % of the respondents ate less than 5 servings of fruits and/or vegetables on average per day. There was no significant difference between males and females in the percentage who ate less than 5 servings a day (see figure 5).

Of the 1133 households, vegetable oil was most widely used (96.8%) for meal preparation followed by ghee or butter (1.5%). The mean consumption of fat/oil in a month is 1.6 litres per adult per house hold.

15.4% of the respondents consumed *ezay* daily. 3.9% were daily consumers of dried meat. 19.6 % ate dried meat 1-4 days in a week. 42.4% ate dried meat less than once a month.



15.5% of the respondents drank *suja* daily while 25% of them drank less than once in a month (see figure 6).

Physical activity

Of the total respondents, 58.6% had low physical activity, 17.7% had medium physical activity and 23.7% had high physical activity.

Significantly more females than males were engaging in low level of physical activity (69.6% vs 49.8%). Additionally significantly more males than females engaged in moderate (21.0% vs 13.6 %) or high (29.3% vs 16.8%) levels of physical activity (see figure 7).

There was general decrease in percentage of respondents engaging in high physical activity as age increased in both sexes but the differences between the adjacent age groups were not significant.

Of all respondents, 50% engaged in physical activity for 17.1 minutes or less on average per day. This includes 25% of them who engaged in no physical activity on average per day. Overall 75% of the respondents engaged in physical activity for 85.7 minutes or less on average per day.

Among all female respondents, 50% of them who were physically active for 4.3 minutes or less on average per day while 50% of all male respondents were physically active for 34.3 minutes or less.

On average 75% of all the respondents engaged in physical activity for 21.4 minutes or less at work place per day, 19.3 minutes or less during the travel to and from places on per day and 0 minutes in recreational activity per day.

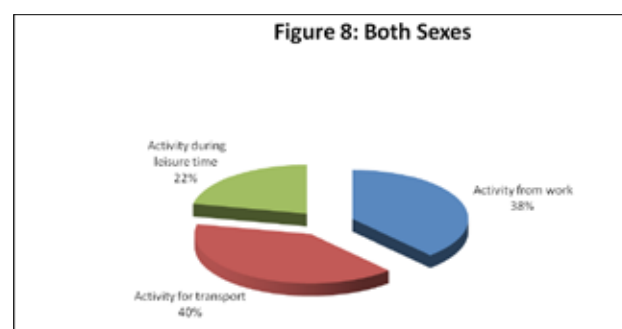
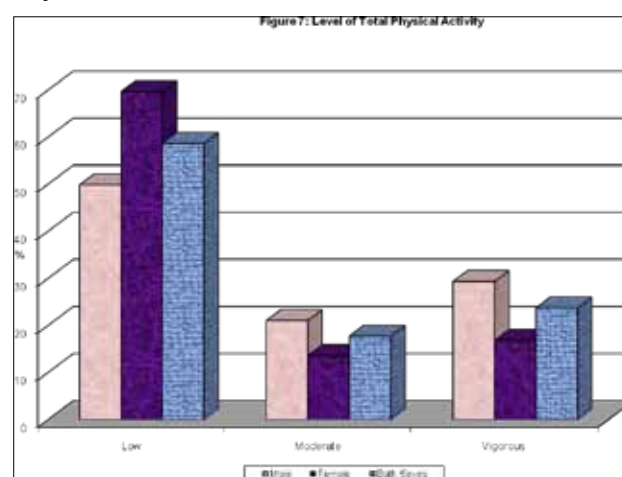
69.0% of the respondents engage in no-work related physical activity and 63.2 % of the respondents engaged in no-transport related activity.

Over all 78.7% of the respondents engaged in no-recreation related physical activity. Females were significantly less likely to engage in recreational physical activity than males (89.7 % vs 69.7%). Out of people who were engaging in any physical activity, an average of 38.3% of each individual's physical activity was from work, 40.0% from transport and 21.8% from leisure time (see figure 8).

82.9% of respondents did not engage in vigorous physical activity. While females were significantly more likely to not engage in vigorous physical activity (92.9% vs 74.9 %).

While there was general trend towards increasing prevalence of no vigorous physical activity with increasing age, the only consecutive age groups that were significantly different were 35-44 and 45-54 years (80.4% vs 88.3%).

50% of the respondents spent 2 hours or more in sedentary activities on average per day. This includes 25% of respondents who spent 4 hours or more in sedentary activities on average per day.



Blood pressure and diabetes history

17.1 % of the respondents have been diagnosed with raised blood pressure by a health workers or a doctor in the past 12 months. There was no significant difference in percentage in diagnosed in past 12 months between males and females.

Of the total respondents, 9.4% were currently taking drugs prescribed by doctor or health worker. For those who have been diagnosed and on treatment, there is a general trend towards increasing prevalence with increasing age but the difference between the consecutive age groups is only significant for 35-44 and 45-54 years.

As part of high blood pressure treatment, 12.3% of the respondents were being advised by doctor or health worker to have a special prescribed diet, 6.8% to lose weight, 3.4% to stop smoking and 6.3% to do exercise.

1.0% of the respondents had consulted a traditional healer for raised blood pressure in the past 12 months while 0.6% were currently taking herbal or traditional remedy for high blood pressure.

1.0% of the respondents were seen by an indigenous physician in the last 12 months while 0.7% were currently taking indigenous remedy for high blood pressure.

2.5% of the respondents had been diagnosed for diabetes by doctor or health worker in the last 12 months.

0.4% of the respondents were currently taking insulin prescribed for diabetes by doctor or health worker.

1.9 % of the total respondents were currently taking oral drugs prescribed by doctor or health worker.

As part of the diabetic treatment, 2.1% of the respondents were being advised by doctor or

health worker to have a special prescribed diet, 1.6% to lose weight, 0.8% to stop smoking and 1.7 % to do exercise.

0.2% of the respondents had consulted a traditional healer for raised blood pressure in the past 12 months while 0.2% were currently taking herbal or traditional remedy for high blood pressure.

0.2 % of the respondents were seen by an indigenous physician in the last 12 months while 0.2% were currently taking indigenous remedy for high blood pressure.

Physical measurement

12.1% of respondents were obese (BMI ≥ 30.0 kg/m²). Females were significantly more obese than males (15.3 % vs 9.5%). 2.0% were underweight (BMI < 18.5 kg/m²).

51.5% of men were overweight (BMI > 25 kg/m²) while 53.5% of females were overweight. There was no significant difference between males and females in being overweight.

Mean waist circumference for males was 83.7 cm and 82.1 cm for females.

Mean hip circumference for males was 92.9 cm and 94.6 cm for females. Mean waist and hip ratio was 0.9 cm for both males and females.

Over all mean systolic blood pressure was 124.7 mmHg and mean diastolic blood pressure was 79.5 mmHg.

22.1% of the respondents had raised blood pressure (SBP ≥ 140 mmHg and /or DBP ≥ 90 mmHg). Significantly males had higher prevalence of raised blood pressure as compared to females (24.8% vs 18.6%).

26.0% of the respondents had raised blood pressure or were on currently on medication for raised blood pressure.

5.1% are currently on medication for raised blood pressure.

6.9% of the respondents had raised blood pressure (SBP \geq 160mmHg and /or DBP \geq 100mmHg), excluding on those on raised blood pressure. 11.6% had raised blood pressure or are currently under medication for raised blood pressure.

Mean heart rate among the respondents was 75.8 beats per minute. 2.4% of the respondents had heart rate of over 100 beats per minute.

Biochemical measurement

The mean fasting glucose level for all the respondents excluding those currently on diabetes medication was 5.9mmol/L (106.7mg/dl). 8.2% of the respondents had either been previously diagnosed with diabetes or had been found to have raised fasting or post prandial glucose blood sugar. A greater percentage of males than females had raised fasting or post prandial blood sugar but the difference was not significant.

4.0% of respondents had impaired glucose tolerance and 21.6% were found to have impaired fasting glycemia. Greater percentage of females than males had higher impaired fasting glycemia but the difference is not significant.

Mean cholesterol among all respondents was 4.8 mmol/L or 186.5 mg/dl.

44.3% of the respondents had a cholesterol level \geq 5.0 mmol/L (\geq 190 mg/dl) while 9.2% of the respondents had cholesterol level \geq 6.2 mmol/L (\geq 240mg/dl).

Among all respondents, mean high density lipoprotein (HDL) was 1.3 mmol/L (51.1 mg/dl).

18.4 % of males had HDL $<$ 1.03mmol/L ($<$ 40 mg/dl). 47.0% of female respondents had HDL $<$ 1.29 mmol/L ($<$ 50 mg/dl).

Mean fasting triglyceride among all the respondents is 1.6 mmol/L (141.2 mg/dl). Mean triglyceride level for males was 1.8mmol/L (156.0 mg/dl) while mean for females was 1.4 mmol/L (121.6 mg/dl).

Among all respondents, 30.4% had triglycerides \geq 1.7 mmol/L (\geq 150 mg/dl).

Males (36.9 %) were significantly more likely than females (21.8%) to have triglycerides elevated at this level.

21.5% among all respondents had triglycerides \geq 2.0 mmol/L (\geq 180 mg/dl). Males (27.2%) were significantly more likely than females (14.0%) to have triglycerides elevated at this level.

Raised risk

The following risk factors were included in the combined analysis to assess the raised risk:

current daily smokers

Less than 5 servings of fruits and /or vegetables on average per day

Low level of activity

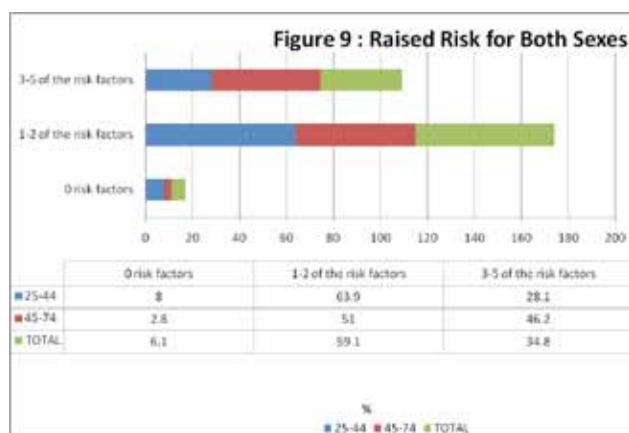
Over weight (BMI $>$ 25kg/m²)

Raised blood pressure (SBP $>$ 140 and/or DBP \geq 90mmHg or currently on medication for raised blood pressure)

Among all respondents, 6.1 % had no risk factors, 59.1% had 1-2 risk factors, 34.8% had 3-5 risk factors. Among females, 5.1% had no risk factors, 56.5% had 1-2 risk factors, 38.4% had 3-5 risk factors.

Among males, 6.9% had no risk factor, 61.2% had 1-2 risk factors, 31.9% had 3-5 risk factors. Women were significantly more likely to have 3-5 risk factors as compared to males.

Nearly half (46.2%) of the respondents aged 45-74 years have 3 or more risk factors and over a quarter (28.1%) of respondents aged 24-44 have 3 or more risk factors.



6. DISCUSSIONS

The objective of the survey was to establish baseline for selected risk factors for non-communicable diseases Thimphu for introducing effective interventions for the population. Five modifiable risk factors tobacco use, alcohol use, vegetable and/or fruit consumption, and physical activity have been studied. Further diabetes, raised blood pressure and raised cholesterol prevalence is also studied to establish a surrogate measure for non-communicable disease situation.

Tobacco use:

Although the overall prevalence of smokers was relatively low (6.8%), most people who smoked did so on a daily basis (82.2%). About one fifth (19.4%) used smokeless tobacco products, most of whom (83.0%) used daily (combined exposure to through daily consumption is very high (83.3%). Overall nearly 20 %(19.6%) of Thimphu population is exposed to health risk through tobacco use most of whom were using the smokeless form even though the Bhutanese law restricts sale of all tobacco products. Given the higher prevalence of smoking among the younger age group as compared to older age group, suggests a potential for an increase in overall smoking prevalence.

Alcohol use

While the prevalence of alcohol consumption is not very high (30.8%), over 10% of current

drinkers(those who drank in the last 30 days) have engaged in binge drinking within the previous week, indicating relatively high occurrence of unsafe drinking practice among those who drank.

Dietary habits, fruits and vegetable consumption

Overall two third of the population (66.6%) are not eating enough fruits and vegetables(less than five combined servings per day). The consumptions of fruit are particularly low (1.2 serving a day) and not very frequent (3.7 days per week).

Over half the population consumed *ezay* (56.7%) and *suja* (55.5%) at least once a week. *Suja* use may increase the consumption of butter and salt while *ezay* may be a good source of salt and other harmful preservatives.

Over quarter (25.1%) eat dried meat at least once a week. However, the study did not collect the practice of whether there was consumption of smoked or burnt dried meat, which in case is a known risk factor for cancers.

Physical activity

The majority of the population (58.6%) is not attaining the minimum requirement of health enhancing physical activity. In addition, 17.7% are just barely attaining this level of physical activity. Half the population is only getting 17.1 minutes or less physical activity on average per day.

Females are significantly more inactive than males. Almost two third (63.2%) are not getting any physical activity from transport (eg, they do not walk or cycle to transport themselves). Over three quarters (78.7%) do not get any physical activity during their recreation time or free time.

Blood pressure and diabetes history

Nearly one fifth (17.1%) of the respondents

had raised blood pressure while 2.5% of the respondents were diagnosed for diabetes in the last 12 months by health worker or doctor.

Besides seeking medical treatment and advice from the health workers, people consult traditional healers for raised blood pressure (1.0%) and diabetes (0.2%).

Physical measurement

While prevalence of obesity ($BMI \geq 30.0 \text{ kg/m}^2$) was relatively low (12.1%), over half the population was over weight ($BMI \geq 24.9 \text{ kg/m}^2$) in both the sexes, males (51.5%) and females (53.5%).

22.1% of the population had raised blood pressure ($SBP \geq 140 \text{ mmHg}$ and/or $DBP \geq 90 \text{ mmHg}$) on physical measurement. The problem was significantly higher in males than females (24.8% vs 18.6%).

6.9% had raised blood pressure ($SBP \geq 160 \text{ mmHg}$ and /or $DBP \geq 100 \text{ mmHg}$) on physical measurement (Excluding those on raised blood pressure).

Mean waist circumference for males was 83.7 cm and 82.1 cm for females.

Biochemical measurement (Discuss)

44.3% had a cholesterol level $\geq 5.0 \text{ mmol/L}$ ($\geq 190 \text{ mg/dl}$) while 9.2% of the respondents had cholesterol level of $\geq 6.2 \text{ mmol/L}$ ($\geq 240 \text{ mg/dl}$).

18.4% of males had $HDL < 1.03 \text{ mmol/L}$ ($< 40 \text{ mg/dl}$). 47.0% of females had $HDL < 1.29 \text{ mmol/L}$ ($< 50 \text{ mg/dl}$).

Among all respondents, 30.4% had triglycerides $\geq 1.7 \text{ mmol/L}$ ($\geq 150 \text{ mg/dl}$).

Males (36.9 %) were significantly more likely than females (21.8%) to have triglycerides elevated at this level.

21.5% among all respondents had triglycerides $\geq 2.0 \text{ mmol/L}$ ($\geq 180 \text{ mg/dl}$). Males (27.2%) were significantly more likely than females (14.0%) to have triglycerides elevated at this level.

Raised risks

Majority of the population was exposed to at least one of the risk factors (93.1%). Categorically, 56.5% were exposed to 1-2 risk factors and 38.4% had 3-5 risk factors.

Significantly women (38.4%) are more likely to be exposed than males (31.9%) to multiple risk factors. Exposure to risk is also higher among older age group of people as compared to younger group with nearly half (46.2%) aged between 45-74 years had 3 or more risk factors while over a quarter (28.1%) of 25-44 age group had 3 or more risk factors.

7. LIMITATIONS

It should be recognized that the study is based on a cross sectional data. Therefore, there is no causal inferences between the variables. The data represents the urban population in Thimphu city. Therefore, the study does not indicate how the situation might compare with other urban and rural settings in the country.

Due to the a long gap in data collection and data analysis, details in data collection and interview methods could not be ascertained as the data collection forms and interview sheets were not available due to poor data keeping.

Physical activity and dietary patterns are highly subject to recall problems in the participants. While tobacco and alcohol use information may pose social desirability bias. The process of data collection could not indicate how these problems were managed during the survey.

8. CHALLENGES FACED DURING THE SURVEY

The STEP SURVEY is expensive and laborious as it involves collection of biological specimen for biochemical assessments. The laboratory technicians and the enumerators worked for long hours to complete the survey. Information sheets have to be filled manually without any electronic gadgets.

Due to the lack of any prior experience in STEP survey, the Ministry of Health had to rely on the external support of the WHO for design and analysis.

9. RECOMMENDATIONS

The WHO STEP survey to compare NCD risk factors in rural and urban setting is highly desirable in future.

In addition, to monitor the change in NCD risk factors and evaluate the impacts in the population as a result of interventions, WHO STEP survey must be done on a routine basis (eg, three or five yearly) by the Ministry of Health.

The Thimphu survey though limited suggests that high proportion of Bhutanese may be exposed to multiple NCD risk factors. In order to reduce the health risks, intense health promotion to prevent from NCDs and to minimize exposure of population risks is imperative. In particular, good strategies must be designed and implemented to promote physical activity, healthy diet, safer use of alcohol, and tobacco cessation across communities in Bhutan.

Due to the multi-factorial causation of the NCDs, prevention is most effective when tackled through a true multi-sectoral approach. The current information of the NCD risk factors must be disseminated to wide ranging audiences of policy makers, relevant institutions, dzongkhag multi-sectoral task forces for HIV, health professionals, rural and urban communities to generate greater understanding for multi-sectoral collaboration in future.

Analytical epidemiological studies and qualitative studies must be conducted in future to understand more on behavioral and attitudes to tobacco, alcohol, physical activity and dietary practices and other NCD risk factors so that appropriate behavioral interventions can be designed among the population.

10. CONCLUSION

Given that vast majority of the population in Thimphu is exposed to at least one of the risk factors (93.1%) or 56.5% exposed to 1-2 risk factors and 38.4% exposed to 3-5 risk factors, it can be speculated that there is a huge potential of upsurge of NCDs.

The down-stream NCDs as a result of such risk exposures is already being manifested with prevalence of raised blood pressure of nearly one fifth (17.1%) and diabetes of 2.5% among the respondents. Nearly half (44.3%) of the respondents had high level of cholesterol (≥ 190 mg/dl). Although the prevalence is relatively low, the figures can rise.

Bhutan must pay attention to implement evidence based public health interventions urgently to prevent and control the epidemic of NCD looming over the population.

References:

Global Physical Activity Questionnaire (GPAQ) Analysis Guide
Preventing CHRONIC DISEASES a vital investment, World Health Organization
Statistical Yearbook of Bhutan 2008
Population and Housing Census of Bhutan 2005
Annual Health Bulletin 2008
Bhutan Living Standard Survey (BLSS) 2007

ANNEX I (Physical activity)

For calculation of a person's overall energy expenditure using GPAQ data, the following MET values are used:

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

For calculation of a categorical indicator, the total time spent in physical activity during a typical week, classifying populations are low. Moderate the numbers of day as well as the intensity of the physical activity are taken into account. The three levels of physical activity suggested for classifying populations are low, moderate and high. The criteria for these levels are shown below.

High

A person reaching any of this category:

- Vigorous –intensity activity on at least 3 days achieving a minimum of at least 1500 MET minutes/week OR

- 7 or more days of any combination of walking, moderate or vigorous intensity activities achieving a minimum of at least 3000MET minutes per week.

Moderate

A person not meeting the criteria for the “high” category, but meeting any of the following criteria:

- 3 or more days of vigorous –intensity activity of at least 20 minutes per day OR
- 5 or more days of moderate-intensity activity or walking of at least 30 minutes per day OR
- 5 or more days of any combination of walking, moderate-or vigorous intensity activities achieving a minimum of at least 600 MET –minutes per week

Low

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

ANNEX II

Participant Identification Number:

WHO STEPS INSTRUMENT
FOR CHRONIC DISEASE RISK FACTOR SURVEILLANCE
ROYAL GOVERNMENT OF BHUTAN
THIMPHU/BHUTAN

Location and Date		Response	Code
1	Town		I1
2	Block		I2
3	Household		I3
4	Person		I4
5	Date of completion of the instrument	dd mm year	I5

Participant Identification Number :			
Consent, Interview Language and Name		Response	Code
6	Consent has been read out to participant	Yes 1 No 2 If NO, read consent	I6
7	Consent has been obtained (verbal or written)	Yes 1 No 2 If NO, END	I7
8	Interview Language [Insert Language]	English 1 Dzongkha 2 Sharchhop 3 Lhotsham 4 Bumtap/ 5 Khengha 6 Others	I8
9	Time of interview (24 hour clock)	hrs mins	I9
10	Name of Respondent		I10
Additional Information that may be helpful			
11	Contact phone number where possible		I12
12	Specify whose phone	Work 1 Home 2 Neighbour 3 Other (specify) 4	I13

Participant Identification Number :

Step 1 Demographic Information
--

CORE: Demographic Information				
Questions		Response		Code
13	Sex (<i>Record Male / Female as observed</i>)	Male Female	1 2	C1
14	What is your date of birth? <i>Don't Know 77 777 7777</i>	<i>If known, go to C4</i> dd mm year		C2
15	How old are you?	Years		C3
16	In total, how many years have you spent at school or in full-time study (excluding pre-school)?	Years		C4

EXPANDED: Demographic Information		Response		Code
17	What ethnic/cultural group do you belong to?	Ngalong Sharchop Bumtap/Kheng Lhotshampa Others Refused	01 02 03 04 05 08	C5
18	What is the highest level of education you have completed?	No formal schooling Less than primary school Primary school completed Secondary school completed High school completed College/University completed Post graduate degree Non-Formal Education & Monastic Refused	01 02 03 04 05 06 07 08 88	C6

19	Which of the following best describes your <u>main</u> work status over the last 12 months?	Government employee	01	C7
		Non-government employee	02	
		Self-employed	03	
		Agriculture	04	
		Student	05	
		Homemaker/Housewife	06	
		Retired	07	
		Clergy/Lay Monks	08	
		Uniformed Force	09	
		Unemployed (able to work)	10	
		Unemployed (unable to work)	11	
		Refused	88	
20	How many people older than 18 years, including yourself, live in your household?	Number of people		C8
21	Can you give an estimate of the annual household income if I read some options to you if you don't know? Is it [INSERT QUINTILE VALUES] (READ OPTIONS)	Less than 3000	01	C10
		Nu. 3001 to Nu 5000	02	
		Nu 5001 to 12,000	03	
		Nu. 12001 to Nu.19000	04	
		Nu 19,000 above	05	
		Don't Know	07	

Participant Identification Number:

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.

Questions		Response		Code
23	Do you currently smoke any tobacco products , such as cigarettes, bidi, cigars or pipes?	Yes	1	T1
		No	2 <i>If No, go to T6</i>	
24	Do you currently smoke tobacco products daily	Yes	1	T2
		No	2 <i>If No, go to T6</i>	
25	How old were you when you first started smoking daily?	Age (years)	<i>If Known, go to T5a</i>	T3
		Don't remember	777	

26	Do you remember how long ago it was? (RECORD ONLY 1, NOT ALL 3) Don't remember 777	In Years <i>If Known, go to T5a</i>	T4a
		OR in Months <i>If Known, go to T5a</i>	T4b
		OR in Weeks	T4c
27	On average, how many of the following do you smoke each day? (RECORD FOR EACH TYPE) Don't remember 777	Manufactured cigarettes	T5a
		Hand-rolled cigarettes or bidi	T5b
		Pipes full of tobacco	T5c
		Cigars, cheroots,	T5d
		Other	T5e

EXPANDED: Tobacco Use			
Questions		Response	Code
28	In the past, did you ever smoke daily	Yes 1	T6
		No 2 <i>If No, go to T9</i>	
29	How old were you when you stopped smoking daily ?	Age (years)	T7
		Don't remember 777 <i>If Known, go to T9</i>	
30	How long ago did you stop smoking daily? (RECORD ONLY 1, NOT ALL 3) Don't remember 777	Years ago <i>If Known, go to T9</i>	T8a
		OR Months ago <i>If Known, go to T9</i>	T8b
		OR Weeks ago	T8c
31	Do you currently use any smokeless tobacco such as [<i>snuff, khaini (chewing tobacco), doma (betel)</i>]? (Yes 1	T9
		No 2 <i>If No, go to T12</i>	
32	Do you currently use smokeless tobacco products such as [<i>snuff, khaini (chewing tobacco), doma (betel)</i>] daily ?	Yes 1	T10
		No 2 <i>If No, go to T12</i>	

Participant Identification Number :

EXPANDED: Tobacco Use, contd.			
Questions		Response	Code
33	On average, how many times a day do you use	Snuff, by mouth	T11a

	(RECORD FOR EACH TYPE) Don't Know 77	Snuff, by nose		T11b
		Khaini (Chewing tobacco)		T11c
		Doma (Betel, quid)		T11d
		Other <i>If Other, go to T11 other</i>		T11e
		Don't Know		
34	In the past, did you ever use smokeless tobacco such as [<i>snuff, khaini (chewing tobacco), doma (betel)</i>] daily ?	Yes	1	T12
		No	2	

CORE: Alcohol Consumption

The next questions ask about the consumption of alcohol.

Questions		Response		Code
35	Have you consumed alcohol (such as beer, wine, spirits, fermented cider (<i>ara, bangchang, singchang</i>) within the past 12 months ?	Yes	1	A1
		No	2 <i>If No, go to D1</i>	
36	In the past 12 months, how frequently have you had at least one drink? (<i>READ RESPONSES USE SHOWCARD</i>)	Daily	1	A2
		5-6 days per week	2	
		1-4 days per week	3	
		1-3 days per month	4	
		Less than once a month	5	
37	When you drink alcohol, on average , how many drinks do you have during one day.	Number		A3
		Don't know 77		
38	Have you consumed alcohol (such as beer, wine, spirits, fermented cider, ara, bangchang, singchang/ within the past 30 days ? (<i>USE SHOWCARD OR SHOW EXAMPLES</i>)	Yes	1	A4
		No	2 <i>If No, go to A 6</i>	
39	During each of the past 7 days , how many standard drinks of any alcoholic drink did you have each day? (<i>RECORD FOR EACH DAY USE SHOWCARD</i>)	Monday		A5a
		Tuesday		A5b
		Wednesday		A5c
		Thursday		A5d
		Friday		A5e
		Saturday		A5f
		Sunday		A5g
		Don't Know 77		

Participant Identification Number :

CORE: Diet			
<p>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.</p>			
Questions		Response	Code
40	In a typical week, on how many days do you eat fruit ?	Number of days Don't Know 77	D1
41	How many servings of fruit do you eat on one of those days? (USE SHOWCARD)	Number of servings Don't Know 77	D2
42	In a typical week, on how many days do you eat vegetables ? (USE SHOWCARD)	Number of days Don't Know 77	D3
43	How many servings of vegetables do you eat on one of those days? (USE SHOWCARD)	Number of servings Don't Know 77	D4

EXPANDED: Diet			
44	What type of oil or fat is most often used for meal preparation in your household? (USE SHOWCARD SELECT ONLY ONE)	Vegetable oil 01 Animal Fat 02 Butter or ghee 03 Margarine 04 Other 05 <i>If Other, go to D5 other</i> None in particular 06 None used 07 Don't know 77	D5
		Other	D5other
45	Total amount of fat/oil used in a month (all forms together)	Number in litres	X1
46	How many members of the family eat from the same pot?	Number of people	X2
47	How frequently do you eat "Ezay"?	Daily 01 5-6 days per week 02 1-4 days per week 03 1-3 days per month 04 Less than once a month 05	X3

48	How frequently do you eat dry meat?	Daily	1	X4
		5-6 days per week	2	
		1-4 days per week	3	
		1-3 days per month	4	
		Less than once a month	5	
49	How frequently do you drink suja?	Daily	1	X5
		5-6 days per week	2	
		1-4 days per week	3	
		1-3 days per month	4	
		Less than once a month	5	

Participant Identification Number

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. 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. <i>[Insert other examples if needed]</i>. 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>			
Questions	Response		Code
Activity at work			
50	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> for at least 10 minutes continuously?	Yes 1 No 2 <i>If No, go to P 4</i>	P1
51	In a typical week, on how many days do you do vigorous-intensity activities as part of your work?	Number of days	P2
52	How much time do you spend doing vigorous-intensity activities at work on a typical day?	Hours : minutes Hours Mins	P3 (a-b)

53	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> for at least 10 minutes continuously	Yes 1 No 2 <i>If No, go to P 7</i>	P4
54	In a typical week, on how many days do you do moderate-intensity activities as part of your work?	Number of days	P5
55	How much time do you spend doing moderate-intensity activities at work on a typical day?	Hours : minutes hrs mins	P6 (a-b)
Travel to and from places			
<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. [insert other examples if needed]</p>			
56	Do you walk or use a bicycle (<i>pedal cycle</i>) for at least 10 minute continuously to get to and from places?	Yes 1 No 2 <i>If No, go to P 10</i>	P7
57	In a typical week, on how many days do you walk or bicycle for at least 10 minutes continuously to get to and from places?	Number of days	P8
58	How much time do you spend walking or bicycling for travel on a typical day?	Hours : minutes hours mins	P9 (a-b)
Recreational activities			
<p>The next questions exclude the work and transport activities that you have already mentioned.</p> <p>Now I would like to ask you about sports, fitness and recreational activities (leisure), [insert relevant terms].</p>			
59	Do you do any vigorous-intensity sports, fitness or recreational (<i>leisure</i>) activities that cause large increases in breathing or heart rate like <i>[running or football, aerobics,]</i> for at least 10 minutes continuously?	Yes 1 No 2 <i>If No, go to P 13</i>	P10

60	In a typical week, on how many days do you do vigorous-intensity sports, fitness or recreational (<i>leisure</i>) activities?	Number of days	P11
61	How much time do you spend doing vigorous-intensity sports, fitness or recreational activities on a typical day?	Hours : minutes mins hrs	P12 (a-b)

CORE: Physical Activity (recreational activities) contd.

Questions		Response	Code
62	Do you do any moderate-intensity sports, fitness or recreational (<i>leisure</i>) activities that causes a small increase in breathing or heart rate such as brisk walking, (<i>cycling, swimming, archery, dego, khuru, volleyball</i>) for at least 10 minutes continuously	Yes 1 No 2 <i>If No, go to P16</i>	P13
63	In a typical week, on how many days do you do moderate-intensity sports, fitness or recreational (<i>leisure</i>) activities?	Number of days	P14
64	How much time do you spend doing moderate-intensity sports, fitness or recreational (<i>leisure</i>) activities on a typical day?	Hours : minutes mins hrs	P15 (a-b)

Sedentary behaviour

The following question is about sitting or reclining at work, at home, getting to and from places, or with friends including time spent [sitting at a desk, sitting with friends, travelling in car, bus, train, reading, playing cards or watching television], but do not include time spent sleeping.

65	How much time do you usually spend sitting or reclining on a typical day? (<i>both at home and at work place</i>)	Hours : minutes hours mins	P16 (a-b)
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EXPANDED: History of Raised Blood Pressure

Questions		Response	Code
66	When was your blood pressure last measured by a health professional?	Within past 12 months 1 1-5 years ago 2 Not within past 5 years 3	H1

67	During the past 12 months have you been told by a doctor or other health worker that you have raised blood pressure or hypertension?	Yes	1	H2	
		No	2		
68	Are you currently receiving any of the following treatments for raised blood pressure prescribed by a doctor or other health worker as well as any advice?				
	Drugs (medication) that you have taken in the last 2 weeks	Yes	1	H3a	
		No	2		
	Special prescribed diet	Yes	1	H3b	
		No	2		
	Advice or treatment to lose weight	Yes	1	H3c	
		No	2		
	Advice or treatment to stop smoking	Yes	1	H3d	
		No	2		
	Advice to start or do more exercise	Yes	1	H3e	
		No	2		
	69	During the past 12 months have you seen a traditional healer for raised blood pressure or hypertension	Yes	1	H4
			No	2	
70	Are you currently taking any herbal or traditional remedy for your raised blood pressure?	Yes	1	H5	
		No	2		
71	During the past 12 months have you seen an Indigenous Physician (Drungtso/Menpa) for raised blood pressure or hypertension	Yes	1	X6	
		No	2		
72	Are you currently taking any Indigenous remedy for your raised blood pressure?	Yes	1	X7	
		No	2		

Participant Identification Number

EXPANDED: History of Diabetes				
Questions		Response		Code
73	Have you had your blood sugar measured in the last 12 months?	Yes	1	H6
		No	2	
74	During the past 12 months, have you ever been told by a doctor or other health worker that you have diabetes?	Yes	1	H7
		No	2	
75	Are you currently receiving any of the following treatments for diabetes prescribed by a doctor or other health worker as well as any advice?			

	Insulin	Yes	1	H8a
		No	2	
	Oral drug (Oral hypoglycemic medication) that you have taken in the last 2 weeks	Yes	1	H8b
		No	2	
	Special prescribed diet	Yes	1	H8c
		No	2	
	Advice or treatment to lose weight	Yes	1	H8d
		No	2	
	Advice or treatment to stop smoking	Yes	1	H8e
		No	2	
	Advice to start or do more exercise	Yes	1	H8f
		No	2	
76	During the past 12 months have you seen a Traditional Healer for diabetes?	Yes	1	H9
		No	2	
77	Are you currently taking any herbal or traditional remedy for your diabetes?	Yes	1	H10
		No	2	
78	During the past 12 months have you seen an Indigenous Physician (Drungtso/Menpa) for diabetes?	Yes	1	X8
		No	2	
79	Are you currently taking any Indigenous remedy for your diabetes?	Yes	1	X9
		No	2	

Participant Identification Number :

Step 2 Physical Measurements

CORE: Height and Weight		Response	Code
80	Interviewer ID		M1
81	Device IDs for height and weight	Height	M2a
		Weight	M2b
82	Height	in Centimetres (cm)	M3
83	Weight <i>If too large for scale, code 666.6</i>	in Kilograms (kg)	M4
84	(For women) Are you pregnant?	Yes	M5
		No	
CORE: Waist			
85	Device ID for waist		M6
86	Waist circumference <i>(Measure at the level of umbilicus)</i>	in Centimetres (cm)	M7
CORE: Blood Pressure			
87	Interviewer ID		M8
88	Device ID for blood pressure		M9

89	Cuff size used	Small Medium 2 Large 3	M10
90	Reading 1	Systolic (mmHg)	M11a
		Diastolic (mmHg)	M11b
91	Reading 2	Systolic (mmHg)	M12a
		Diastolic (mmHg)	M12b
2	Reading 3	Systolic (mmHg)	M13a
		Diastolic (mmHg)	M13b
93	During the past two weeks, have you been treated for raised blood pressure with drugs (anti hypertensive medication) prescribed by a doctor or other health worker?	Yes 1 No 2	M14

EXPANDED: Hip Circumference and Heart Rate				
94	Hip Circumference	In Centimeters (cm)	.	M15
95	Heart Rate (Record if automatic blood pressure device is used)			
	Reading 1	Beats per minute		M16a
	Reading 2	Beats per minute		M16b
	Reading 3	Beats per minute		M16c

Participant Identification Number :

Biochemical Measurements

Step 3

CORE: Blood Glucose		Response	Code
96	During the last 8 hours have you had anything to eat or drink, other than water?	Yes 1 No 2	B1
97	Technician ID		B2
98	Time of day fasting blood specimen taken (24 hour clock)	Hours : minutes Hours mins	B4
99	Fasting blood glucose	Mg/dl	B5
100	Time of starting glucose intake (24 hour clock)	Hours : minutes Hours mins	X10

101	Time of post glucose challenge blood specimen taken	Hours : minutes Hours mins	X11
102	Blood Glucose (2 hours after glucose load)	Mg/dl	X12
103	Total cholesterol	Mg/dl	B7
104	Total Triglyceride	Mg/dl	B8
105	High Density Lipoprotein	Mg/dl	B9

Signature of the interviewer: _____

Signature of laboratory technician: _____

Form cross-checked by: _____

Annex III

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

Age group
by sex

Instrument question:

Sex

What is your date of birth?

Age group and sex of respondents								
Age Group (years)	Men			Women			Both Sexes	
	n	%		n	%		n	%
25-34	259	46.9		293	53.1		552	22.2
35-44	260	47.4		288	52.6		548	22.1
45-54	259	46.0		304	54.0		563	22.7
55-64	206	45.2		250	54.8		456	18.4
65-74	154	42.2		211	57.8		365	14.7
25-74	1138	45.8		1346	54.2		2484	100.0
25-64	984	46.4		1135	53.6		2119	100.0

Ethnicity Description: Summary results for the ethnicity of the respondents.

Instrument Question:

What ethnic/cultural group do you belong to?

Ethnic group of respondents						
Age Group (years)	Both Sexes					
	n	% Ngalong	% Sharchop	% Bumtap/ Kheng	% Lhotshampa	% Other groups
25-34	552	26.1	41.7	9.1	19.7	3.4
35-44	547	26.9	41.5	8.2	20.7	2.7
45-54	561	31.4	37.1	8.4	19.8	3.4
55-64	456	34.4	36.8	7.0	16.4	5.3
65-74	365	49.3	29.9	8.5	9.0	3.3
25-74	2481	32.4	38.0	8.3	17.8	3.6
25-64	2116	29.5	39.4	8.2	19.3	3.6

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

Instrument question:

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

Mean number of years of education								
Age Group (years)	Men			Women			Both Sexes	
	n	Mean		n	Mean		<i>n</i>	<i>Mean</i>
25-34	247	6.8		269	4.4		516	5.5
35-44	248	5.7		273	2.6		521	4.1
45-54	252	4.4		293	1.0		545	2.6
55-64	194	3.6		238	0.6		432	1.9
65-74	149	0.5		208	0.2		357	0.3

25-74	1090	4.6	1281	1.8	2371	3.1
25-64	941	5.2	1073	2.2	2014	3.6

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

Instrument question:

What is the highest level of education you have completed?

Highest level of education									
Men									
Age Group (years)	n	% No formal schooling	% Less than primary school	% Primary school completed	% Secondary school completed	% High school completed	% College/ University completed	% Post graduate degree completed	% Non-Formal Education and Monastic
25-34	256	18.4	22.3	21.1	16.0	10.2	8.2	2.0	2.0
35-44	257	28.4	21.4	16.0	11.3	8.6	3.1	8.6	2.7
45-54	250	38.4	19.2	11.2	8.4	7.2	5.2	4.4	6.0
55-64	203	46.8	13.3	9.4	13.3	4.9	3.4	1.5	7.4
65-74	151	84.8	5.3	2.6	1.3	2.0	0.0	0.0	4.0
25-74	1117	39.3	17.5	13.1	10.7	7.1	4.4	3.7	4.3
25-64	966	32.2	19.4	14.7	12.2	7.9	5.1	4.2	4.3

Highest level of education									
Women									
Age Group (years)	n	% No formal schooling	% Less than primary school	% Primary school completed	% Secondary school completed	% High school completed	% College/ University completed	% Post graduate degree completed	% Non-Formal Education and Monastic
25-34	289	41.9	15.6	15.2	14.5	4.8	4.2	0.3	3.5
35-44	278	58.6	15.8	12.2	6.1	2.2	0.7	0.0	4.3
45-54	295	76.3	11.2	5.4	2.7	0.7	0.3	0.3	3.1
55-64	245	84.9	9.8	1.2	1.2	1.6	0.0	0.0	1.2
65-74	199	86.9	9.5	1.0	0.5	0.5	0.0	0.0	1.5
25-74	1306	68.1	12.6	7.6	5.4	2.1	1.1	0.2	2.8
25-64	1107	64.8	13.2	8.8	6.3	2.3	1.4	0.2	3.1

Highest level of education									
Both Sexes									
Age Group (years)	n	% No formal schooling	% Less than primary school	% Primary school completed	% Secondary school completed	% High school completed	% College/ University completed	% Post graduate degree completed	% Non-Formal Education and Monastic
25-34	545	30.8	18.7	18.0	15.2	7.3	6.1	1.1	2.8
35-44	535	44.1	18.5	14.0	8.6	5.2	1.9	4.1	3.6
45-54	545	58.9	14.9	8.1	5.3	3.7	2.6	2.2	4.4
55-64	448	67.6	11.4	4.9	6.7	3.1	1.6	0.7	4.0
65-74	350	86.0	7.7	1.7	0.9	1.1	0.0	0.0	2.6
25-74	2423	54.8	14.9	10.1	7.9	4.4	2.6	1.8	3.5
25-64	2073	49.6	16.1	11.8	9.1	4.9	3.1	2.1	3.7

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

Instrument question:

Which of the following best describes your main work status over the last 12 months?

Employment status							
Men							
Age Group (years)	n	% Government employee	% Non-government employee	% Self-employed	% Agriculture	% Uniformed Force	% Unpaid
25-34	258	35.7	21.7	11.2	1.6	20.5	9.3
35-44	260	44.6	12.7	16.5	1.2	21.5	3.5
45-54	258	34.5	8.9	18.2	6.6	19.0	12.8
55-64	206	23.8	9.2	27.2	8.7	3.9	27.2
65-74	147	4.1	3.4	13.6	17.7	0.7	60.5
25-74	1129	31.2	12.0	17.3	6.0	14.8	18.7
25-64	982	35.2	13.3	17.8	4.3	16.9	12.4

Employment status							
Women							
Age Group (years)	n	% Government employee	% Non-government employee	% Self-employed	% Agriculture	% Uniformed Force	% Unpaid
25-34	292	15.1	4.1	14.0	2.1	1.0	63.7
35-44	288	9.4	3.8	13.5	2.4	0.7	70.1
45-54	301	6.3	2.3	12.3	5.3	0.0	73.8
55-64	246	2.8	2.0	6.9	7.7	0.4	80.1
65-74	204	2.0	1.0	2.9	7.8	0.0	86.3
25-74	1331	7.6	2.8	10.5	4.8	0.5	73.9
25-64	1127	8.6	3.1	11.9	4.3	0.5	71.6

Employment status							
Both Sexes							
Age Group (years)	n	% Government employee	% Non-government employee	% Self-employed	% Agriculture	% Uniformed Force	% Unpaid
25-34	550	24.7	12.4	12.7	1.8	10.2	38.2
35-44	548	26.1	8.0	15.0	1.8	10.6	38.5
45-54	559	19.3	5.4	15.0	5.9	8.8	45.6
55-64	452	12.4	5.3	16.2	8.2	2.0	56.0
65-74	351	2.8	2.0	7.4	12.0	0.3	75.5
25-74	2460	18.4	7.0	13.6	5.4	7.0	48.5
25-64	2109	21.0	7.9	14.7	4.3	8.2	44.0

Unpaid work and unemployed Description: Proportion of respondents in unpaid work.

Instrument question:

Which of the following best describes your main work status over the last 12 months?

Unpaid work and unemployed							
Age Group (years)	Men					Unemployed	
	n	% Student	% Home-Maker	% Retired	% Clergy/Lay Monks	% Able to work	% Not able to work
25-34	24	4.2	29.2	0.0	25.0	41.7	0.0
35-44	9	0.0	44.4	22.2	22.2	11.1	0.0
45-54	33	0.0	15.2	42.4	27.3	6.1	9.1
55-64	56	0.0	16.1	35.7	10.7	26.8	10.7
65-74	89	0.0	12.4	27.0	10.1	34.8	15.7
25-74	211	0.5	17.1	28.4	15.2	28.0	10.9
25-64	122	0.8	20.5	29.5	18.9	23.0	7.4

Unpaid work and unemployed							
Age Group (years)	Women					Unemployed	
	n	% Student	% Home-Maker	% Retired	% Clergy/Lay Monks	% Able to work	% Not able to work
25-34	186	1.6	95.2	0.0	0.0	2.7	0.5
35-44	202	0.0	96.0	1.5	0.5	2.0	0.0
45-54	222	0.5	91.9	0.9	0.9	5.4	0.5
55-64	197	0.0	77.2	0.5	1.5	15.7	5.1
65-74	176	0.0	55.1	0.6	2.3	12.5	29.5
25-74	983	0.4	83.8	0.7	1.0	7.5	6.5
25-64	807	0.5	90.1	0.7	0.7	6.4	1.5

Unpaid work and unemployed							
Age Group (years)	Both Sexes					Unemployed	
	n	% Student	% Home-Maker	% Retired	% Clergy/Lay Monks	% Able to work	% Not able to work
25-34	210	1.9	87.6	0.0	2.9	7.1	0.5
35-44	211	0.0	93.8	2.4	1.4	2.4	0.0
45-54	255	0.4	82.0	6.3	4.3	5.5	1.6
55-64	253	0.0	63.6	8.3	3.6	18.2	6.3
65-74	265	0.0	40.8	9.4	4.9	20.0	24.9
25-74	1194	0.4	72.0	5.6	3.5	11.1	7.3
25-64	929	0.5	80.9	4.5	3.1	8.6	2.3

Estimated household earnings

Description: summary of participant household earnings by quintile.

Instrument question:

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

Estimated household earnings					
n	% <3000 Nu	% 3001 Nu. - 5000 Nu	% 5001 Nu. - 12,000 Nu.	% 12,001 Nu. - 19,000 Nu.	% >19,000 Nu.
1440	7.9	2.6	3.9	7.1	78.5
1306	7.4	2.8	3.4	7.1	79.4

Tobacco Use

Current smoking Description: Current smokers among all respondents.

Instrument questions:

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

Percentage of current smokers									
Age Group (years)	Men				Women			Both Sexes	
	n	% Current smoker	95% CI		n	% Current smoker	95% CI	n	% Current smoker
25-34	258	14.0	9.7-18.2		291	7.2	4.2-10.2	549	11.0
35-44	259	3.9	1.5-6.2		287	2.4	0.7-4.2	546	3.2
45-54	259	6.6	3.5-9.6		303	4.6	2.3-7.0	562	5.7
55-64	205	5.4	2.3-8.5		249	3.2	1.0-5.4	454	4.4
65-74	154	4.5	1.3-7.8		209	2.9	0.6-5.1	363	3.8
25-74	1135	8.4	6.5-10.3		1339	4.7	3.4-6.1	2474	6.8
25-64	981	8.7	6.7-10.7		1130	4.9	3.5-6.3	2111	7.0

Smoking Status Description: Smoking status of all respondents.

Instrument questions:

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

Do you currently smoke tobacco products daily?

Smoking status							
Age Group (years)	Men						
	n	Current smoker				% Does not smoke	95% CI
		% Daily	95% CI	% Non-daily	95% CI		
25-34	258	12.4	8.4-16.4	1.6	0.0-3.1	86.0	81.8-90.3
35-44	259	1.5	0.0-3.0	2.3	0.5-4.1	96.1	93.8-98.5
45-54	259	5.8	2.9-8.6	0.8	0.0-1.8	93.4	90.4-96.5
55-64	205	5.4	2.3-8.5	0.0	0.0-0.0	94.6	91.5-97.7
65-74	154	2.6	0.1-5.1	1.9	0.0-4.1	95.5	92.2-98.7
25-74	1135	6.9	5.2-8.6	1.5	0.7-2.3	91.6	89.7-93.5
25-64	981	7.2	5.4-9.0	1.4	0.6-2.3	91.3	89.3-93.3

Smoking status							
Age Group (years)	Women						
	n	Current smoker				% Does not smoke	95% CI
		% Daily	95% CI	% Non-daily	95% CI		
25-34	291	6.5	3.7-9.4	0.7	0.0-1.6	92.8	89.8-95.8
35-44	287	1.7	0.2-3.3	0.7	0.0-1.7	97.6	95.8-99.3
45-54	303	3.3	1.3-5.3	1.3	0.0-2.6	95.4	93.0-97.7
55-64	249	2.4	0.5-4.3	0.8	0.0-1.9	96.8	94.6-99.0
65-74	209	1.4	0.0-3.0	1.4	0.0-3.0	97.1	94.9-99.4
25-74	1339	3.9	2.6-5.1	0.9	0.3-1.4	95.3	93.9-96.6
25-64	1130	4.1	2.7-5.4	0.8	0.3-1.4	95.1	93.7-96.5

Smoking status							
Age Group (years)	Both Sexes						
	n	Current smoker				% Does not smoke	95% CI
		% Daily	95% CI	% Non-daily	95% CI		
25-34	549	9.8	7.2-12.4	1.2	0.2-2.1	89.0	86.3-91.7
35-44	546	1.6	0.6-2.7	1.6	0.5-2.7	96.8	95.2-98.3
45-54	562	4.7	2.9-6.5	1.0	0.2-1.8	94.3	92.3-96.3
55-64	454	4.0	2.1-5.9	0.4	0.0-0.9	95.6	93.6-97.6
65-74	363	2.1	0.5-3.6	1.7	0.3-3.1	96.2	94.2-98.3
25-74	2474	5.6	4.5-6.7	1.2	0.7-1.7	93.2	92.0-94.4
25-64	2111	5.8	4.6-7.0	1.2	0.6-1.7	93.0	91.7-94.3

Frequency of smoking Description: Percentage of current daily smokers among smokers.

Instrument question:

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

Do you currently smoke tobacco products daily?

Current daily smokers among smokers												
Age Group (years)	Men				Women			Both Sexes				
	n	% Daily smokers	95% CI		n	% Daily smokers	95% CI	<i>n</i>	<i>% Daily smokers</i>	<i>95% CI</i>		
	25-74	81	82.5	73.6-91.4		56	81.6	71.1-92.2		137	82.2	75.4-89.1
	25-64	74	83.5	74.4-92.5		50	83.1	72.3-93.9		124	83.4	76.3-90.4

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

Instrument question:

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

Manufactured cigarette smokers among daily smokers											
Age Group (years)	Men				Women			Both Sexes			
	n	% Manu- factured cigarette smoker	95% CI		n	% Manu- factured cigarette smoker	95% CI	n	% <i>Manu- factured cigarette smoker</i>	95% <i>CI</i>	
25-74	66	67.6	55.5-79.7		43	46.9	30.1-63.7		109	61.2	51.3-71.2
25-64	62	68.1	55.7-80.4		40	48.2	34.5-69.1		102	62.0	51.8-72.1

Amount of tobacco used among smokers by type

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

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

Mean amount of tobacco used by daily smokers by type												
Age Group (years)	Men											
	n	Mean # of manu- factured cig.	95% CI	n	Mean #of hand- rolled cig.	95% CI	n	Mean # of pipes of tobacco	95% CI	n	Mean # of other type of tobacco	95% CI
25-74	45	4.6	3.4-5.7	16	5.2	2.2-8.3	15	2.0	0.0-4.4	16	4.9	0.7-9.2
25-64	42	4.5	3.3-5.7	14	5.1	1.8-8.3	13	2.2	-0.5-4.8	14	5.2	0.7-9.8

Mean amount of tobacco used by daily smokers by type													
Age Group (years)	Women												
	n	Mean # of manu- factured cig.	95% CI	n	Mean #of hand- rolled cig.	95% CI	n	Mean # of pipes of tobacco	95% CI	n	Mean # of other type of tobacco	95% CI	
	25-74	22	4.6	2.9-6.3	22	1.9	1.0-2.8	9	0.0	0.0-0.0	12	1.5	0.0-3.4
	25-64	22	4.6	2.9-6.3	19	1.6	0.8-2.4	9	0.0	0.0-0.0	12	1.5	-0.4-3.4

Mean amount of tobacco used by daily smokers by type													
Age Group (years)	Both Sexes												
	n	Mean # of manu- factured cig.	95% CI	n	Mean #of hand- rolled cig.	95% CI	n	Mean # of pipes of tobacco	95% CI	n	Mean # of other type of tobacco	95% CI	
	25-74	67	4.6	3.6-5.5	38	3.5	1.9-5.1	24	1.2	0.0-2.7	28	3.5	0.8-6.2
	25-64	64	4.5	3.6-5.5	33	3.3	1.6-5.0	22	1.3	-0.3-2.9	26	3.7	0.9-6.5

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

Instrument questions:

How old were you when you first started smoking daily?

How long ago did you stop smoking daily?

Mean age started smoking									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean age	95% CI	n	Mean age	95% CI	<i>n</i>	<i>Mean age</i>	<i>95% CI</i>
25-74	61	20.6	18.9-22.3	37	21.5	19.2-23.7	98	20.9	19.5-22.2
25-64	58	20.7	19.1-22.5	34	20.7	18.8-22.7	92	20.8	19.4-22.1

Mean duration of smoking											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean duration	95% CI		n	Mean duration	95% CI		<i>n</i>	<i>Mean duration</i>	<i>95% CI</i>
25-74	61	15.8	12.8-18.7		37	14.0	10.4-17.7		98	15.2	12.9-17.6
25-64	58	14.9	12.1-17.6		34	13.6	10.0-17.2		92	14.5	12.3-16.7

Percentage of ex daily smokers in the population Description: Percentage of ex-daily smokers among all respondents and the mean duration, in years, since ex-daily smokers quit smoking daily.

Instrument question:

In the past did you ever smoke daily?

How old were you when you stopped smoking daily?

Ex-daily smokers among all respondents											
Age Group (years)	Men				Women				Both Sexes		
	n	% ex daily smokers	95% CI		n	% ex daily smokers	95% CI		<i>n</i>	<i>% ex daily smokers</i>	<i>95% CI</i>
25-34	226	16.4	11.5-21.2		272	4.0	1.7-6.4		498	10.8	7.9-13.7
35-44	256	17.2	12.6-21.8		283	9.2	5.8-12.6		539	13.7	10.7-16.7
45-54	243	23.0	17.7-28.3		294	11.9	8.2-15.6		537	18.0	14.6-21.4
55-64	195	31.8	25.3-38.3		242	14.9	10.4-19.4		437	24.0	19.9-28.2
65-74	150	31.3	23.9-38.8		208	17.8	12.6-23.0		358	25.0	20.3-29.7
25-74	1070	20.6	18.1-23.2		1299	9.1	7.6-10.7		2369	15.4	13.9-17.0
25-64	920	19.8	17.1-22.5		1091	8.4	6.8-10.1		2011	14.7	13.0-16.4

Mean years since cessation											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean years	95% CI		n	Mean years	95% CI		<i>n</i>	<i>Mean years</i>	<i>95% CI</i>
25-74	164	22.8	21.1-24.5		91	22.5	20.4-24.6		255	22.7	21.4-24.1
25-64	127	21.1	19.4-22.7		66	21.4	19.2-23.6		193	21.2	19.8-22.5

Current Users of smokeless tobacco Description: Percentage of current users of smokeless tobacco among all respondents.
Instrument question:
Do you currently use any smokeless tobacco such as [snuff, chewing tobacco, betel]?

Current users of smokeless tobacco											
Age Group (years)	Men				Women				Both Sexes		
	n	% Current users	95% CI		n	% Current users	95% CI		<i>n</i>	<i>% Current users</i>	<i>95% CI</i>
25-34	248	24.2	18.9-29.5		285	18.6	14.1-23.1		533	21.7	18.1-25.3
35-44	250	22.4	17.2-27.6		281	18.9	14.3-23.4		531	20.8	17.3-24.4
45-54	253	17.4	12.7-22.1		295	16.3	12.1-20.5		548	16.9	13.7-20.1

55-64	203	17.2	12.0-22.4	246	13.8	9.5-18.1	449	15.7	12.2-19.1
65-74	148	15.5	9.7-21.4	201	13.4	8.7-18.1	349	14.6	10.7-18.4
25-74	1102	21.1	18.5-23.8	1308	17.3	15.0-19.6	2410	19.4	17.6-21.2
25-64	954	21.5	18.7-24.3	1107	17.6	15.2-20.0	2061	19.8	17.9-21.7

Daily Users of smokeless tobacco

Description: Percentage of current users of smokeless tobacco who use daily.

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

Current users of smokeless tobacco									
Age Group (years)	Men			Women			Both Sexes		
	n	% Daily users	95% CI	n	% Daily users	95% CI	n	% Daily users	95% CI
25-34	60	85.0	75.9-94.1	53	71.7	59.5-83.9	113	80.0	72.6-87.3
35-44	56	89.3	81.1-97.5	53	84.9	75.2-94.6	109	87.5	81.3-93.8
45-54	44	84.1	73.2-95.0	48	85.4	75.4-95.5	92	84.7	77.1-92.2
55-64	35	82.9	70.3-95.4	34	91.2	81.6-100.0	69	86.2	77.7-94.7
65-74	23	73.9	55.8-92.0	27	70.4	53.0-87.7	50	72.4	59.7-85.1
25-74	218	85.3	80.3-90.4	215	79.5	73.4-85.6	433	83.0	79.1-86.9
25-64	195	85.9	80.7-91.1	188	80.0	73.6-86.4	383	83.6	79.5-87.6

Smokeless tobacco use

Description: Status of using smokeless tobacco among all respondents.

Instrument questions:
Do you currently use any smokeless tobacco such as [snuff, chewing tobacco, betel]?
Do you currently use smokeless tobacco products daily?

Smokeless tobacco use							
Age Group (years)	Men						
	n	Current user				% Does not use smokeless tobacco	95% CI
		% Daily	95% CI	% Non- daily	95% CI		
25-34	248	20.6	15.5-25.6	3.6	1.3-6.0	75.8	70.5-81.1

35-44	250	20.0	15.0-25.0	2.4	0.5-4.3	77.6	72.4-82.8
45-54	253	14.6	10.3-19.0	2.8	0.7-4.8	82.6	77.9-87.3
55-64	203	14.3	9.5-19.1	3.0	0.6-5.3	82.8	77.6-88.0
65-74	148	11.5	6.3-16.6	4.1	0.9-7.2	84.5	78.6-90.3
25-74	1102	18.0	15.5-20.6	3.1	2.0-4.2	78.9	76.2-81.5
25-64	954	18.5	15.8-21.2	3.0	1.9-4.2	78.5	75.6-81.3

Smokeless tobacco use							
Women							
Age Group (years)	n	Current user				% Does not use smokeless tobacco	95% CI
		% Daily	95% CI	% Non-daily	95% CI		
25-34	285	13.3	9.4-17.3	5.3	2.7-7.9	81.4	76.9-85.9
35-44	281	16.0	11.7-20.3	2.8	0.9-4.8	81.1	76.6-85.7
45-54	295	13.9	9.9-17.8	2.4	0.6-4.1	83.7	79.5-87.9
55-64	246	12.6	8.5-16.8	1.2	0.0-2.6	86.2	81.9-90.5
65-74	201	9.5	5.4-13.5	4.0	1.3-6.7	86.6	81.9-91.3
25-74	1308	13.8	11.7-15.8	3.6	2.4-4.7	82.7	80.4-85.0
25-64	1107	14.1	11.9-16.3	3.5	2.3-4.8	82.4	80.0-84.8

Smokeless tobacco use							
Both Sexes							
Age Group (years)	n	Current user				% Does not use smokeless tobacco	95% CI
		% Daily	95% CI	% Non-daily	95% CI		
25-34	533	17.4	14.0-20.7	4.4	2.6-6.1	78.3	74.7-81.9
35-44	531	18.3	14.9-21.6	2.6	1.2-4.0	79.2	75.6-82.7
45-54	548	14.3	11.3-17.3	2.6	1.2-4.0	83.1	79.9-86.3
55-64	449	13.5	10.3-16.8	2.2	0.7-3.6	84.3	80.9-87.8
65-74	349	10.5	7.2-13.9	4.0	1.9-6.1	85.4	81.6-89.3
25-74	2410	16.1	14.5-17.8	3.3	2.5-4.1	80.6	78.8-82.4
25-64	2061	16.5	14.8-18.3	3.3	2.4-4.1	80.2	78.3-82.1

Percentage of ex daily users of smokeless tobacco in the population

Description: Percentage of ex-daily users of smokeless tobacco among all respondents.

Instrument question:

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

Ex-daily smokeless tobacco users									
Age Group (years)	Men				Women			Both Sexes	
	n	% Ex daily users	95% CI		n	% Ex daily users	95% CI	n	% Ex daily users
25-34	161	11.2	6.3-16.1		175	13.1	8.1-18.2	336	12.0
35-44	149	21.5	14.9-28.1		167	19.8	13.7-25.8	316	20.7
45-54	174	20.1	14.1-26.1		187	18.7	13.1-24.3	361	19.5

55-64	124	16.1	9.6-22.6	160	20.0	13.8-26.2	284	17.9	13.4-22.5
65-74	104	17.3	10.0-24.6	154	16.2	10.4-22.1	258	16.8	12.1-21.5
25-74	712	16.4	13.5-19.3	843	16.9	14.1-19.6	1555	16.6	14.6-18.6
25-64	608	16.3	13.3-19.4	689	16.9	14.0-19.9	1297	16.6	14.4-18.7

Frequency of smokeless tobacco use among users by type

Description: Mean times per day smokeless tobacco used by smokeless tobacco users per day, by type.

Instrument question:
On average, how many times a day do you use...?

Mean times per day smokeless tobacco used by daily smokeless tobacco users by type

Age Group (years)	Men											
	n	Snuff by mouth	95% CI	n	Snuff by nose	95% CI	n	Chewing tobacco	95% CI	n	Betel quid	95% CI
25-74	46	0.7	0.0-1.5	46	0.3	0.0-0.7	119	7.4	6.4-8.3	109	7.0	5.4-8.7
25-64	41	0.8	0.0-1.6	40	0.1	0.0-0.2	110	7.5	6.5-8.5	98	7.2	5.4-8.9

Mean times per day smokeless tobacco used by daily smokeless tobacco users by type

Age Group (years)	Women											
	n	Snuff by mouth	95% CI	n	Snuff by nose	95% CI	n	Chewing tobacco	95% CI	n	Betel quid	95% CI
25-74	47	2.1	0.8-3.3	47	1.5	0.4-2.5	89	6.8	5.5-8.1	118	8.0	5.9-10.2
25-64	46	2.1	0.8-3.4	45	1.4	0.4-2.5	81	6.8	5.5-8.2	107	8.1	5.9-10.3

Mean times per day smokeless tobacco used by daily smokeless tobacco users by type

Age Group (years)	Both Sexes											
	n	Snuff by mouth	95% CI	n	Snuff by nose	95% CI	n	Chewing tobacco	95% CI	n	Betel-quid	95% CI
25-74	93	1.3	0.6-2.0	93	0.8	0.2-1.3	208	7.2	6.4-8.0	227	7.5	6.1-8.8
25-64	87	1.3	0.6-2.1	85	0.7	0.2-1.1	191	7.3	6.5-8.1	205	7.6	6.2-8.9

Current tobacco users

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

Instrument questions:

Do you currently smoke tobacco products daily?

Do you currently use smokeless tobacco products daily?

Daily tobacco users

Age Group (years)	Men				Women				Both Sexes		
	n	% Daily users	95% CI		n	% Daily users	95% CI		n	% Daily users	95% CI
25-34	247	28.7	23.1-34.4		283	16.3	12.0-20.6		530	23.2	19.5-26.9

35-44	249	20.9	15.8-25.9	281	17.4	13.0-21.9	530	19.4	15.9-22.8
45-54	253	18.6	13.8-23.4	295	15.3	11.2-19.4	548	17.1	13.9-20.3
55-64	202	17.8	12.5-23.1	246	15.0	10.6-19.5	448	16.6	13.0-20.1
65-74	148	12.8	7.4-18.2	200	11.0	6.7-15.3	348	12.0	8.5-15.5
25-74	1099	22.5	19.8-25.3	1305	15.9	13.7-18.1	2404	19.6	17.7-21.4
25-64	951	23.2	20.3-26.2	1105	16.2	13.9-18.6	2056	20.1	18.2-22.1

Current tobacco users											
Age Group (years)	Men				Women				Both Sexes		
	n	% Current users	95% CI		n	% Current users	95% CI		<i>n</i>	% <i>Current users</i>	<i>95% CI</i>
25-34	247	33.2	27.3-39.1		283	21.9	17.1-26.7		530	28.2	24.3-32.1
35-44	249	24.5	19.2-29.8		281	20.3	15.6-25.0		530	22.6	19.0-26.3
45-54	253	22.1	17.0-27.3		295	18.6	14.2-23.1		548	20.6	17.1-24.0
55-64	202	20.8	15.2-26.4		246	16.7	12.0-21.3		448	18.9	15.2-22.6
65-74	148	16.9	10.9-22.9		200	16.0	10.9-21.1		348	16.5	12.5-20.5
25-74	1099	26.4	23.5-29.3		1305	19.9	17.5-22.3		2404	23.5	21.6-25.4
25-64	951	27.1	24.0-30.2		1105	20.2	17.6-22.7		2056	24.0	22.0-26.1

Current tobacco users who use daily											
Age Group (years)	Men				Women				Both Sexes		
	n	% daily users	95% CI		n	% daily users	95% CI		<i>n</i>	% daily users	<i>95% CI</i>
25-34	82	86.6	79.2-94.0		62	74.2	63.2-85.2		144	82.3	76.1-88.5
35-44	61	85.2	76.3-94.2		57	86.0	76.9-95.0		118	85.5	79.1-92.0
45-54	56	83.9	74.2-93.6		55	81.8	71.6-92.1		111	83.1	76.0-90.2
55-64	42	85.7	75.1-96.4		41	90.2	81.1-99.4		83	87.5	80.2-94.9
65-74	25	76.0	59.2-92.9		32	68.8	52.6-84.9		57	72.8	61.0-84.6
25-74	266	85.3	80.8-89.9		247	79.9	74.3-85.5		513	83.3	79.7-86.8
25-64	241	85.8	81.1-90.4		215	80.6	74.7-86.4		456	83.8	80.2-87.5

Alcohol Consumption

Alcohol consumption status

Description: Alcohol consumption status of all respondents. Abstainers have not consumed alcohol in the last 12 months.*

Instrument questions:

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

Have you consumed alcohol (such as beer, wine, spirits, fermented cider, or (add other local examples) within the past 30 days?

Alcohol consumption status							
Men							
Age Group (years)	n	% Current drinker (last 30 days)	95% CI	% Drank in last 12 months, not current	95% CI	% Abstainer	95% CI
25-34	259	37.5	31.6-43.3	5.0	2.4-7.7	57.5	51.5-63.6
35-44	259	39.8	33.8-45.7	5.8	2.9-8.6	54.4	48.4-60.5
45-54	256	27.3	21.9-32.8	5.5	2.7-8.3	67.2	61.4-72.9
55-64	201	28.9	22.6-35.1	4.0	1.3-6.7	67.2	60.7-73.7
65-74	150	30.7	23.3-38.0	5.3	1.7-8.9	64.0	56.3-71.7
25-74	1125	34.9	31.9-38.0	5.2	3.8-6.6	59.9	56.8-63.0
25-64	975	35.2	32.0-38.4	5.2	3.7-6.7	59.6	56.3-62.9

Alcohol consumption status							
Women							
Age Group (years)	n	% Current drinker (last 30 days)	95% CI	% Drank in last 12 months, not current	95% CI	% Abstainer	95% CI
25-34	288	26.4	21.3-31.5	7.6	4.6-10.7	66.0	60.5-71.4
35-44	284	27.1	21.9-32.3	4.9	2.4-7.4	68.0	62.5-73.4
45-54	301	26.2	21.3-31.2	5.0	2.5-7.4	68.8	63.5-74.0
55-64	246	21.5	16.4-26.7	4.5	1.9-7.1	74.0	68.5-79.5
65-74	209	20.1	14.7-25.5	6.2	2.9-9.5	73.7	67.7-79.7
25-74	1328	25.5	22.9-28.1	6.0	4.5-7.4	68.5	65.7-71.3
25-64	1119	25.9	23.2-28.7	6.0	4.4-7.5	68.1	65.1-71.0

Alcohol consumption status							
Both Sexes							
Age Group (years)	n	% Current drinker (last 30 days)	95% CI	% Drank in last 12 months, not current	95% CI	% Abstainer	95% CI
25-34	547	32.6	28.6-36.7	6.2	4.1-8.2	61.2	57.0-65.4
35-44	543	34.3	30.2-38.4	5.4	3.5-7.4	60.3	56.1-64.5
45-54	557	26.9	23.1-30.6	5.3	3.4-7.1	67.9	63.9-71.8
55-64	447	25.5	21.4-29.7	4.2	2.3-6.1	70.3	65.9-74.6
65-74	359	25.7	21.0-30.4	5.7	3.3-8.2	68.5	63.5-73.5
25-74	2453	30.8	28.7-32.8	5.6	4.5-6.6	63.7	61.5-65.8
25-64	2094	31.1	28.9-33.3	5.5	4.5-6.6	63.3	61.1-65.6

Frequency of alcohol consumption

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

Instrument question:

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

Frequency of alcohol consumption in the last 12 months											
Men											
Age Group (years)	n	% Daily	95% CI	% 5-6 days p. week	95% CI	% 1-4 days p. week	95% CI	% 1-3 days p. month	95% CI	% < once a month	95% CI
25-34	110	14.5	7.9-21.2	7.3	2.4-12.1	35.5	26.5-44.4	25.5	17.3-33.6	17.3	10.2-24.4
35-44	119	23.5	15.9-31.2	7.6	2.8-12.3	37.0	28.3-45.7	21.8	14.4-29.3	10.1	4.7-15.5
45-54	84	32.1	22.1-42.2	6.0	0.9-11.0	33.3	23.2-43.5	20.2	11.6-28.9	8.3	2.4-14.3
55-64	67	32.8	21.5-44.1	14.9	6.4-23.5	23.9	13.6-34.1	19.4	9.9-28.9	9.0	2.1-15.8
65-74	55	40.0	27.0-53.0	7.3	0.4-14.2	23.6	12.4-34.9	16.4	6.5-26.2	12.7	3.9-21.6
25-74	435	23.0	18.9-27.1	7.9	5.2-10.6	33.8	29.0-38.7	22.5	18.2-26.8	12.8	9.3-16.3
25-64	380	21.9	17.6-26.2	7.9	5.1-10.8	34.5	29.4-39.6	22.9	18.4-27.5	12.8	9.1-16.5

Frequency of alcohol consumption in the last 12 months											
Women											
Age Group (years)	n	% Daily	95% CI	% 5-6 days p. week	95% CI	% 1-4 days p. week	95% CI	% 1-3 days p. month	95% CI	% < once a month	95% CI
25-34	99	12.1	5.7-18.6	1.0	0.0-3.0	28.3	19.4-37.2	33.3	24.0-42.7	25.3	16.7-33.8
35-44	93	17.2	9.5-24.9	3.2	0.0-6.8	29.0	19.8-38.3	32.3	22.7-41.8	18.3	10.4-26.2
45-54	95	25.3	16.5-34.0	5.3	0.8-9.8	32.6	23.2-42.1	30.5	21.2-39.8	6.3	1.4-11.2
55-64	65	26.2	15.4-36.9	7.7	1.2-14.2	30.8	19.5-42.0	20.0	10.2-29.8	15.4	6.6-24.2
65-74	53	32.1	19.5-44.7	3.8	0.0-8.9	24.5	12.9-36.2	17.0	6.8-27.1	22.6	11.3-34.0
25-74	405	18.3	14.4-22.2	3.2	1.5-4.8	29.3	24.4-34.1	30.3	25.3-35.2	19.0	14.6-23.3
25-64	352	17.5	13.4-21.5	3.1	1.4-4.8	29.6	24.5-34.7	31.1	25.9-36.3	18.7	14.2-23.3

Frequency of alcohol consumption in the last 12 months											
Both Sexes											
Age Group (years)	n	% Daily	95% CI	% 5-6 days p. week	95% CI	% 1-4 days p. week	95% CI	% 1-3 days p. month	95% CI	% < once a month	95% CI
25-34	209	13.6	8.9-18.4	4.9	1.8-8.0	32.7	26.2-39.2	28.5	22.3-34.7	20.3	14.8-25.8
35-44	212	21.3	15.6-27.0	6.0	2.7-9.4	34.2	27.7-40.7	25.5	19.6-31.4	13.0	8.5-17.5
45-54	179	29.1	22.3-36.0	5.7	2.2-9.1	33.0	26.0-40.1	24.7	18.4-31.1	7.5	3.5-11.4
55-64	132	30.2	22.1-38.2	12.0	6.3-17.8	26.6	19.0-34.3	19.6	12.7-26.5	11.5	6.1-16.9
65-74	108	37.0	27.6-46.4	6.0	1.2-10.7	24.0	15.7-32.2	16.6	9.4-23.8	16.5	9.5-23.5
25-74	840	21.2	18.2-24.1	6.1	4.3-7.9	32.1	28.6-35.6	25.5	22.2-28.8	15.2	12.4-17.9
25-64	732	20.2	17.1-23.2	6.1	4.2-7.9	32.5	28.9-36.3	26.1	22.6-29.5	15.1	12.2-18.0

Standard drinks per drinking day

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

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

Number of standard drinks consumed on a drinking day											
Age Group (years)	Men										
	n	% 1 drink	95% CI	% 2-3 drinks	95% CI	% 4-5 drinks	95% CI	% 6+ drinks	95% CI	Mean # of standard drinks	95% CI
25-34	96	26.0	17.2-34.9	43.8	33.8-53.7	19.8	11.8-27.8	10.4	4.3-16.6	2.9	2.4-3.4
35-44	106	27.4	18.8-35.9	49.1	39.5-58.6	11.3	5.3-17.4	12.3	6.0-18.5	2.7	2.3-3.2
45-54	82	23.2	14.0-32.3	52.4	41.6-63.3	9.8	3.3-16.2	14.6	7.0-22.3	2.9	2.4-3.4
55-64	54	16.7	6.7-26.7	38.9	25.8-52.0	24.1	12.6-35.5	20.4	9.6-31.2	3.4	2.8-4.0
65-74	45	24.4	11.8-37.1	33.3	19.5-47.2	6.7	0.0-14.0	35.6	21.5-49.6	4.2	3.2-5.1
25-74	383	25.1	20.4-29.9	45.7	40.3-51.1	15.3	11.3-19.3	13.9	10.3-17.5	3.0	2.7-3.2
25-64	338	25.2	20.2-30.1	46.5	40.8-52.1	15.8	11.6-20.0	12.6	8.9-16.3	2.9	2.6-3.2

Number of standard drinks consumed on a drinking day											
Age Group (years)	Women										
	n	% 1 drink	95% CI	% 2-3 drinks	95% CI	% 4-5 drinks	95% CI	% 6+ drinks	95% CI	Mean # of standard drinks	95% CI
25-34	84	54.8	44.1-65.5	41.7	31.1-52.3	1.2	0.0-3.5	2.4	0.0-5.7	1.6	1.4-1.8
35-44	79	36.7	26.0-47.4	53.2	42.1-64.2	7.6	1.7-13.5	2.5	0.0-6.0	2.0	1.7-2.3
45-54	81	25.9	16.3-35.5	48.1	37.2-59.1	17.3	9.0-25.6	8.6	2.5-14.8	2.7	2.2-3.2
55-64	51	47.1	33.3-60.8	33.3	20.3-46.3	3.9	0.0-9.3	15.7	5.7-25.7	2.4	1.8-3.1
65-74	46	60.9	46.7-75.0	30.4	17.1-43.8	4.3	0.0-10.3	4.3	0.0-10.3	1.7	1.4-2.1
25-74	341	44.5	38.7-50.3	44.4	38.7-50.2	6.2	3.7-8.7	4.9	2.6-7.1	2.0	1.8-2.2
25-64	295	43.5	37.4-49.6	45.3	39.2-51.4	6.3	3.7-8.9	4.9	2.6-7.2	2.0	1.8-2.2

Number of standard drinks consumed on a drinking day											
Age Group (years)	Both Sexes										
	n	% 1 drink	95% CI	% 2-3 drinks	95% CI	% 4-5 drinks	95% CI	% 6+ drinks	95% CI	Mean # of standard drinks	95% CI
25-34	180	36.9	29.8-44.0	43.0	35.6-50.3	12.8	7.6-18.0	7.4	3.3-11.4	2.4	2.1-2.8
35-44	185	30.6	23.8-37.3	50.5	43.1-57.8	10.0	5.6-14.5	8.9	4.6-13.3	2.5	2.2-2.8
45-54	163	24.3	17.6-31.0	50.7	42.9-58.5	12.8	7.7-17.9	12.2	7.0-17.4	2.8	2.5-3.2
55-64	105	28.6	20.0-37.1	36.7	27.3-46.1	16.2	8.7-23.7	18.5	10.9-26.2	3.0	2.6-3.5
65-74	91	38.7	28.6-48.8	32.2	22.3-42.1	5.8	0.7-10.8	23.3	14.0-32.7	3.2	2.6-3.8
25-74	724	32.4	28.6-36.1	45.2	41.2-49.2	11.9	9.2-14.6	10.5	8.1-12.9	2.6	2.4-2.8
25-64	633	32.0	28.1-35.9	46.0	41.8-50.2	12.2	9.4-15.1	9.7	7.3-12.2	2.6	2.4-2.8

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

Instrument question:

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

Frequency and quantity of drinks consumed in the last 7 days							
Age Group (years)	Men						
	n	% Drank on 4+ days	95% CI	% 5+ drinks on any day	95% CI	% 20+ drinks in 7 days	95% CI
25-34	65	32.3	20.9-43.8	4.6	0.0-9.8	3.1	0.0-7.3
35-44	73	37.0	25.8-48.1	15.1	6.8-23.3	11.0	3.7-18.2
45-54	44	56.8	42.1-71.6	13.6	3.4-23.8	15.9	5.0-26.8
55-64	40	52.5	36.9-68.1	25.0	11.5-38.5	25.0	11.5-38.5
65-74	30	53.3	35.4-71.3	20.0	5.6-34.4	26.7	10.7-42.6
25-74	252	40.0	33.5-46.4	11.9	7.9-15.8	10.6	6.9-14.2
25-64	222	39.2	32.4-46.0	11.4	7.2-15.5	9.6	5.9-13.4

Frequency and quantity of drinks consumed in the last 7 days							
Age Group (years)	Women						
	n	% Drank on 4+ days	95% CI	% 4+ drinks on any day	95% CI	% 15+ drinks in 7 days	95% CI
25-34	45	17.8	6.5-29.0	4.4	0.0-10.5	4.4	0.0-10.5
35-44	51	25.5	13.4-37.6	7.8	0.4-15.3	3.9	0.0-9.3
45-54	46	39.1	24.9-53.4	34.8	20.9-48.7	15.2	4.7-25.7
55-64	26	38.5	19.6-57.3	15.4	1.4-29.4	11.5	0.0-23.9
65-74	26	53.8	34.5-73.2	11.5	0.0-23.9	15.4	1.4-29.4
25-74	194	27.7	21.1-34.3	12.1	7.6-16.7	7.4	3.7-11.1
25-64	168	26.1	19.2-32.9	12.1	7.4-16.9	6.9	3.1-10.7

Frequency and quantity of drinks consumed in the last 7 days			
Age Group (years)	Both Sexes		
	n	% Drank on 4+ days	95% CI
25-34	110	27.6	19.0-36.2
35-44	124	33.2	24.7-41.7
45-54	90	49.4	38.9-60.0
55-64	66	48.2	35.9-60.5
65-74	56	53.5	40.1-67.0
25-74	446	35.8	31.0-40.7
25-64	390	34.7	29.7-39.8

Hazardous and harmful drinking Description: Percentage of current (last 30 days) drinker engaging in hazardous and harmful drinking in the last 7 days.
 Harmful drinking is defined as ≥ 60 g of pure alcohol on average per day for men and ≥ 40 g for women.
 Hazardous drinking is defined as 40-59.9g of pure alcohol on average per day for men and 20-39.9g for women.
 A standard drink contains approximately 10g of pure alcohol.

Instrument question:

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

Hazardous and harmful drinking in the last 7 days							
Age Group (years)	Men						
	n	% harmful drinking (≥ 6 drink per day)	95% CI	% hazardous drinking (4-5 drinks per day)	95% CI	% < 40 g pure alcohol per day	95% CI
25-34	65	1.5	0.0-4.6	1.5	0.0-4.6	96.9	92.7-100.0
35-44	73	4.1	0.0-8.7	5.5	0.2-10.7	90.4	83.6-97.2
45-54	44	9.1	0.5-17.6	2.3	0.0-6.7	88.6	79.2-98.1
55-64	40	10.0	0.6-19.4	7.5	0.0-15.7	82.5	70.6-94.4
65-74	30	16.7	3.2-30.1	10.0	0.0-20.8	73.3	57.4-89.3
25-74	252	4.9	2.4-7.5	3.9	1.5-6.3	91.1	87.7-94.5
25-64	222	4.3	1.7-6.8	3.6	1.1-6.0	92.2	88.7-95.6

Hazardous and harmful drinking in the last 7 days							
Age Group (years)	Women						
	n	% harmful drinking (≥ 4 drink per day)	95% CI	% hazardous drinking (2-35 drinks per day)	95% CI	% < 20 g pure alcohol per day	95% CI
25-34	45	0.0	0.0-0.0	6.7	0.0-14.0	93.3	86.0-100.0
35-44	51	2.0	0.0-5.8	9.8	1.6-18.0	88.2	79.3-97.2
45-54	46	10.9	1.8-19.9	13.0	3.2-22.9	76.1	63.7-88.5
55-64	26	7.7	0.0-18.0	15.4	1.4-29.4	76.9	60.6-93.3
65-74	26	7.7	0.0-18.0	23.1	6.7-39.4	69.2	51.3-87.1
25-74	194	3.6	1.3-5.9	10.4	6.0-14.9	86.0	81.1-90.9
25-64	168	3.3	1.0-5.7	9.6	5.1-14.2	87.0	82.0-92.1

Fruit and Vegetable Consumption

Mean number of days of fruit and vegetable consumption

Description: mean number of days fruit and vegetables consumed.

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

Mean number of days fruit consumed in a typical week										
Age Group (years)	Men				Women			Both Sexes		
	n	Mean number of days	95% CI		n	Mean number of days	95% CI	<i>n</i>	<i>Mean number of days</i>	<i>95% CI</i>
25-34	224	3.6	3.3-3.8		244	3.8	3.6-4.1	468	3.7	3.5-3.9
35-44	227	3.8	3.5-4.1		243	3.9	3.6-4.1	470	3.8	3.6-4.0
45-54	222	3.8	3.5-4.1		260	3.6	3.3-3.8	482	3.7	3.5-3.9
55-64	170	3.8	3.5-4.2		204	3.9	3.6-4.3	374	3.9	3.6-4.1
65-74	120	3.5	3.1-3.9		175	4.0	3.6-4.3	295	3.7	3.5-4.0
25-74	963	3.7	3.5-3.8		1126	3.8	3.7-4.0	2089	3.7	3.6-3.8
25-64	843	3.7	3.5-3.9		951	3.8	3.7-4.0	1794	3.7	3.6-3.9

Mean number of days vegetables consumed in a typical week										
Age Group (years)	Men				Women			Both Sexes		
	n	Mean number of days	95% CI		n	Mean number of days	95% CI	<i>n</i>	<i>Mean number of days</i>	<i>95% CI</i>
25-34	231	6.2	6.1-6.4		263	6.4	6.2-6.6	494	6.3	6.2-6.4
35-44	230	6.5	6.3-6.6		256	6.4	6.2-6.5	486	6.4	6.3-6.5
45-54	238	6.3	6.2-6.5		278	6.4	6.3-6.6	516	6.4	6.3-6.5
55-64	181	6.6	6.4-6.7		224	6.4	6.3-6.6	405	6.5	6.4-6.6
65-74	140	6.3	6.1-6.5		191	6.5	6.3-6.7	331	6.4	6.2-6.5
25-74	1020	6.4	6.3-6.4		1212	6.4	6.3-6.5	2232	6.4	6.3-6.4
25-64	880	6.4	6.3-6.5		1021	6.4	6.3-6.5	1901	6.4	6.3-6.5

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

Mean number of servings of fruit on average per day											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean number of servings	95% CI		n	Mean number of servings	95% CI		<i>n</i>	<i>Mean number of servings</i>	<i>95% CI</i>
25-34	224	1.1	1.0-1.3		244	1.2	1.1-1.3		468	1.2	1.1-1.3
35-44	227	1.3	1.1-1.5		243	1.4	1.2-1.6		470	1.3	1.2-1.5
45-54	222	1.1	1.0-1.3		260	1.1	0.9-1.3		482	1.1	1.0-1.2
55-64	170	1.2	1.0-1.4		204	1.2	1.0-1.3		374	1.2	1.1-1.3
65-74	120	1.1	0.8-1.4		175	1.2	1.0-1.5		295	1.2	1.0-1.4
25-74	963	1.2	1.1-1.3		1126	1.2	1.1-1.3		2089	1.2	1.1-1.3
25-64	843	1.2	1.1-1.3		951	1.2	1.1-1.3		1794	1.2	1.1-1.3

Mean number of servings of vegetables on average per day											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean number of servings	95% CI		n	Mean number of servings	95% CI		<i>n</i>	<i>Mean number of servings</i>	<i>95% CI</i>
25-34	231	3.6	3.3-3.9		263	3.0	2.8-3.2		494	3.3	3.2-3.5
35-44	230	3.5	3.2-3.7		256	3.2	2.9-3.4		486	3.3	3.2-3.5
45-54	238	3.4	3.1-3.7		278	3.1	2.9-3.3		516	3.2	3.1-3.4
55-64	181	3.0	2.8-3.3		224	3.0	2.7-3.2		405	3.0	2.8-3.2
65-74	140	3.1	2.7-3.4		191	2.5	2.3-2.7		331	2.8	2.6-3.0
25-74	1020	3.4	3.3-3.6		1212	3.0	2.9-3.1		2232	3.2	3.2-3.3
25-64	880	3.5	3.3-3.6		1021	3.1	2.9-3.2		1901	3.3	3.2-3.4

Mean number of servings of fruit and/or vegetables on average per day											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean number of servings	95% CI		n	Mean number of servings	95% CI		<i>n</i>	<i>Mean number of servings</i>	<i>95% CI</i>
25-34	241	4.5	4.2-4.8		272	4.0	3.7-4.2		513	4.3	4.1-4.5
35-44	243	4.5	4.1-4.8		268	4.3	4.0-4.6		511	4.4	4.2-4.6
45-54	245	4.3	4.0-4.6		285	4.0	3.7-4.3		530	4.2	4.0-4.4
55-64	190	4.0	3.7-4.3		230	3.9	3.7-4.2		420	4.0	3.8-4.2
65-74	141	4.0	3.6-4.5		193	3.6	3.3-4.0		334	3.8	3.6-4.1
25-74	1060	4.4	4.2-4.5		1248	4.0	3.9-4.2		2308	4.2	4.1-4.3
25-64	919	4.4	4.2-4.6		1055	4.1	3.9-4.2		1974	4.3	4.1-4.4

Fruit and vegetable consumption per day

Description: Frequency of fruit and/or vegetable consumption.

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

Number of servings of fruit and/or vegetables on average per day									
Age Group (years)	Men								
	n	% no fruit and/or vegetables	95% CI	% 1-2 servings	95% CI	% 3-4 servings	95% CI	% ≥ 5 servings	95% CI
25-34	241	2.9	0.8-5.0	27.8	22.1-33.5	32.0	26.1-37.8	37.3	31.2-43.5
35-44	243	6.2	3.1-9.2	20.6	15.5-25.7	36.6	30.6-42.7	36.6	30.6-42.7
45-54	245	1.6	0.0-3.2	27.3	21.8-32.9	38.4	32.3-44.5	32.7	26.8-38.5
55-64	190	4.2	1.4-7.1	30.5	24.0-37.1	33.7	27.0-40.4	31.6	25.0-38.2
65-74	141	4.3	0.9-7.6	27.0	19.6-34.3	41.8	33.7-50.0	27.0	19.6-34.3
25-74	1060	3.8	2.5-5.0	26.1	23.2-28.9	35.2	32.1-38.3	35.0	31.9-38.1
25-64	919	3.8	2.4-5.1	26.0	23.0-29.0	34.7	31.4-38.0	35.6	32.2-38.9

Number of servings of fruit and/or vegetables on average per day									
Age Group (years)	Women								
	n	% no fruit and/or vegetables	95% CI	% 1-2 servings	95% CI	% 3-4 servings	95% CI	% ≥ 5 servings	95% CI
25-34	272	4.4	2.0-6.9	27.9	22.6-33.3	33.8	28.2-39.4	33.8	28.2-39.4
35-44	268	3.0	0.9-5.0	29.5	24.0-34.9	32.5	26.9-38.1	35.1	29.4-40.8
45-54	285	1.1	0.0-2.2	30.2	24.8-35.5	41.8	36.0-47.5	27.0	21.9-32.2
55-64	230	2.6	0.5-4.7	27.8	22.0-33.6	41.7	35.4-48.1	27.8	22.0-33.6
65-74	193	1.0	0.0-2.5	34.7	28.0-41.4	43.0	36.0-50.0	21.2	15.5-27.0
25-74	1248	3.0	1.9-4.1	29.2	26.5-32.0	36.5	33.6-39.4	31.3	28.5-34.2
25-64	1055	3.1	2.0-4.3	28.8	25.9-31.7	36.0	32.9-39.1	32.1	29.1-35.1

Number of servings of fruit and/or vegetables on average per day									
Age Group (years)	Both Sexes								
	n	% no fruit and/or vegetables	95% CI	% 1-2 servings	95% CI	% 3-4 servings	95% CI	% ≥ 5 servings	95% CI
25-34	513	3.6	2.0-5.2	27.9	23.9-31.8	32.8	28.6-36.9	35.8	31.6-40.0
35-44	511	4.8	2.9-6.7	24.4	20.7-28.2	34.8	30.6-39.0	36.0	31.7-40.2
45-54	530	1.4	0.3-2.4	28.6	24.7-32.5	39.9	35.6-44.1	30.2	26.2-34.1
55-64	420	3.5	1.7-5.3	29.3	24.9-33.7	37.3	32.6-42.0	29.9	25.4-34.4
65-74	334	2.8	0.8-4.7	30.5	25.5-35.6	42.4	36.9-47.8	24.3	19.5-29.1
25-74	2308	3.4	2.6-4.3	27.4	25.4-29.5	35.7	33.6-37.9	33.4	31.2-35.5
25-64	1974	3.5	2.6-4.4	27.2	25.1-29.4	35.3	33.0-37.5	34.0	31.8-36.3

Fruit and vegetable consumption per day

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

Instrument questions:

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

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

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

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

Less than five servings of fruit and/or vegetables on average per day											
Age Group (years)	Men				Women				Both Sexes		
	n	% < five servings per day	95% CI		n	% < five servings per day	95% CI		<i>n</i>	% < <i>five servings per day</i>	95% <i>CI</i>
25-34	241	62.7	56.5-68.8		272	66.2	60.6-71.8		513	64.2	60.0-68.4
35-44	243	63.4	57.3-69.4		268	64.9	59.2-70.6		511	64.0	59.8-68.3
45-54	245	67.3	61.5-73.2		285	73.0	67.8-78.1		530	69.8	65.9-73.8
55-64	190	68.4	61.8-75.0		230	72.2	66.4-78.0		420	70.1	65.6-74.6
65-74	141	73.1	65.7-80.4		193	78.8	73.0-84.5		334	75.7	70.9-80.5
25-74	1060	65.0	61.9-68.2		1248	68.7	65.8-71.5		2308	66.6	64.5-68.8
25-64	919	64.4	61.1-67.8		1055	67.9	64.9-70.9		1974	65.9	63.7-68.3

Type of oil used most frequently

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

Instrument question:

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

Type of oil or fat most often used for meal preparation in household						
n (households)	% Vegetable oil	95% CI	% Animal Fat	95% CI	% Butter or Ghee	95% CI
2468	96.8	96.0-97.6	0.5	0.3-0.8	1.5	0.9-2.1

Type of oil or fat most often used for meal preparation in household								
n (households)	% Margarine	95% CI	% None in Particular	95% CI	% None	95% CI	% Other	95% CI
2468	0.4	0.1-0.7	0.4	0.1-0.7	0.0	--	0.4	0.1-0.7

Amount of fat/oil used

Description: Amount of fat/oil used in a month.

Instrument questions:

Total amount of fat/oil used in a month (all forms together)

Mean number of litres of fat/oil used in a month per adult			
Age Group (years)	Both Sexes		
	n	Mean number of litres	95% CI
25-74	2451	1.6	1.5-1.6
25-64	2096	1.6	1.6-1.7

Family members eating from same pot
 Description: Mean number of family members eating from the same pot.
 Instrument questions:
 How many members of the family eat from the same pot?

Mean number of family members eating from the same pot			
Age Group (years)	Both Sexes		
	n	Mean number of family members	95% CI
25-74	2416	5.4	5.3-5.5
25-64	2061	5.3	5.2-5.4

Ezay consumption
 Description: Frequency of Ezay consumption.
 Instrument questions:
 How frequently do you eat "Ezay"?

Frequency of Ezay consumption											
Age Group (years)	Men										
	n	% Daily	95% CI	% 5-6 days p. week	95% CI	% 1-4 days p. week	95% CI	% 1-3 days p. month	95% CI	% < once a month	95% CI
25-34	257	17.1	12.5-21.7	1.9	0.3-3.6	36.2	30.3-42.1	17.5	12.9-22.2	27.2	21.8-32.7
35-44	258	14.0	9.7-18.2	3.5	1.2-5.7	43.8	37.7-49.9	18.6	13.9-23.4	20.2	15.3-25.1
45-54	256	15.6	11.2-20.1	5.5	2.7-8.3	33.6	27.8-39.4	20.7	15.7-25.7	24.6	19.3-29.9
55-64	204	10.8	6.5-15.0	2.9	0.6-5.3	39.2	32.5-45.9	22.5	16.8-28.3	24.5	18.6-30.4
65-74	151	17.9	11.8-24.0	0.0	0.0-0.0	34.4	26.9-42.0	15.9	10.1-21.7	31.8	24.4-39.2
25-74	1126	15.3	13.0-17.7	2.9	1.9-4.0	38.0	34.9-41.1	18.8	16.4-21.3	24.9	22.1-27.6
25-64	975	15.2	12.7-17.6	3.1	2.1-4.3	38.2	35.0-41.5	19.0	16.4-21.6	24.4	22.5-27.3

Frequency of Ezay consumption											
Age Group (years)	Women										
	n	% Daily	95% CI	% 5-6 days p. week	95% CI	% 1-4 days p. week	95% CI	% 1-3 days p. month	95% CI	% < once a month	95% CI
25-34	292	14.4	10.4-18.4	5.8	3.1-8.5	37.0	31.4-42.5	18.5	14.0-22.9	24.3	19.4-29.2
35-44	284	18.7	14.1-23.2	3.2	1.1-5.2	32.7	27.3-38.2	20.8	16.1-25.5	24.6	19.6-29.7
45-54	302	13.2	9.4-17.1	3.3	1.3-5.3	37.7	32.3-43.2	23.2	18.4-27.9	22.5	17.8-27.2
55-64	248	15.7	11.2-20.3	4.4	1.9-7.0	31.5	25.7-37.2	21.0	15.9-26.0	27.4	21.9-33.0
65-74	208	15.4	10.5-20.3	3.4	0.9-5.8	32.7	26.3-39.1	18.3	13.0-23.5	30.3	24.0-36.5
25-74	1334	15.5	13.4-17.6	4.4	3.1-5.6	35.1	32.3-37.9	20.2	17.8-22.5	24.9	22.4-27.4
25-64	1126	15.5	13.3-17.8	4.4	3.1-5.8	35.3	32.3-38.3	20.3	17.8-22.8	24.5	21.8-27.2

Frequency of Ezay consumption											
Both Sexes											
Age Group (years)	n	% Daily	95% CI	% 5-6 days p. week	95% CI	% 1-4 days p. week	95% CI	% 1-3 days p. month	95% CI	% < once a month	95% CI
25-34	549	15.9	12.8-19.0	3.7	2.1-5.2	36.5	32.4-40.6	17.9	14.7-21.2	26.0	22.2-29.7
35-44	542	16.0	12.9-19.1	3.4	1.8-4.9	39.0	34.8-43.2	19.5	16.2-22.9	22.1	18.6-25.6
45-54	558	14.6	11.6-17.6	4.5	2.7-6.3	35.5	31.4-39.5	21.8	18.3-25.3	23.7	20.1-27.3
55-64	452	13.0	9.9-16.1	3.6	1.9-5.3	35.7	31.2-40.2	21.8	17.9-25.7	25.8	21.7-29.9
65-74	359	16.7	12.7-20.7	1.6	0.4-2.7	33.6	28.6-38.7	17.0	13.0-21.0	31.1	26.2-36.0
25-74	2460	15.4	13.8-17.0	3.6	2.8-4.4	36.7	34.6-38.8	19.4	17.7-21.1	24.9	23.0-26.8
25-64	2101	15.3	13.6-17.0	3.7	2.9-4.6	36.9	34.7-39.2	19.6	17.8-21.4	24.4	22.4-26.4

Dry meat consumption

Description: Frequency of dry meat consumption.

Instrument questions:

How frequently do you eat dry meat?

Frequency of dry meat consumption											
Men											
Age Group (years)	n	% Daily	95% CI	% 5-6 days p. week	95% CI	% 1-4 days p. week	95% CI	% 1-3 days p. month	95% CI	% < once a month	95% CI
25-34	259	1.5	0.0-3.0	1.5	0.0-3.0	20.8	15.9-25.8	31.3	25.6-36.9	44.8	38.7-50.8
35-44	259	3.5	1.2-5.7	1.9	0.3-3.6	20.5	15.5-25.4	33.2	27.5-38.9	40.9	34.9-46.9
45-54	256	4.7	2.1-7.3	2.0	0.3-3.6	20.3	15.4-25.2	32.4	26.7-38.2	40.6	34.6-46.6
55-64	204	4.4	1.6-7.2	1.0	0.0-2.3	17.6	12.4-22.9	32.8	26.4-39.3	44.1	37.3-50.9
65-74	154	6.5	2.6-10.4	0.6	0.0-1.9	16.9	11.0-22.8	33.8	26.3-41.2	42.2	34.4-50.0
25-74	1132	3.3	2.2-4.3	1.6	0.8-2.4	20.0	17.5-22.6	32.3	29.4-35.3	42.8	39.7-45.9
25-64	978	3.0	2.0-4.1	1.7	0.8-2.5	20.3	17.6-23.0	32.2	29.1-35.4	42.8	39.5-46.2

Frequency of dry meat consumption											
Women											
Age Group (years)	n	% Daily	95% CI	% 5-6 days p. week	95% CI	% 1-4 days p. week	95% CI	% 1-3 days p. month	95% CI	% < once a month	95% CI
25-34	292	3.4	1.3-5.5	1.0	0.0-2.2	18.5	14.0-22.9	32.2	26.8-37.6	44.9	39.2-50.6
35-44	284	5.6	3.0-8.3	1.8	0.2-3.3	20.8	16.1-25.5	32.4	27.0-37.8	39.4	33.8-45.1
45-54	301	5.0	2.5-7.4	2.3	0.6-4.0	18.6	14.2-23.0	34.9	29.5-40.3	39.2	33.7-44.7
55-64	245	5.3	2.5-8.1	1.2	0.0-2.6	19.6	14.6-24.6	32.7	26.8-38.5	41.2	35.1-47.4
65-74	211	7.1	3.6-10.6	1.9	0.1-3.7	16.6	11.6-21.6	32.2	25.9-38.5	42.2	35.5-48.8
25-74	1333	4.8	3.6-6.0	1.5	0.8-2.2	19.1	16.8-21.4	32.8	30.0-35.5	41.9	38.9-44.8
25-64	1122	4.6	3.3-5.8	1.5	0.8-2.2	19.3	16.8-21.8	32.8	29.9-35.8	41.8	38.7-44.9

Frequency of dry meat consumption											
Both Sexes											
Age Group (years)	n	% Daily	95% CI	% 5-6 days p. week	95% CI	% 1-4 days p. week	95% CI	% 1-3 days p. month	95% CI	% < once a month	95% CI
25-34	551	2.4	1.1-3.6	1.3	0.3-2.3	19.8	16.4-23.2	31.7	27.7-35.6	44.8	40.6-49.0
35-44	543	4.4	2.7-6.1	1.9	0.7-3.0	20.6	17.1-24.1	32.9	28.8-36.9	40.3	36.1-44.5
45-54	557	4.8	3.0-6.6	2.1	0.9-3.3	19.6	16.2-22.9	33.5	29.5-37.5	40.0	35.8-44.1
55-64	449	4.8	2.8-6.8	1.1	0.1-2.1	18.5	14.9-22.2	32.8	28.3-37.2	42.8	38.2-47.5
65-74	365	6.8	4.1-9.4	1.2	0.1-2.3	16.7	12.8-20.7	33.1	28.1-38.0	42.2	37.0-47.4
25-74	2465	3.9	3.1-4.7	1.6	1.0-2.1	19.6	17.9-21.4	32.5	30.5-34.6	42.4	40.2-44.6
25-64	2100	3.7	2.9-4.5	1.6	1.0-2.2	19.8	18.0-21.7	32.5	30.3-34.7	42.4	40.1-44.7

Suja consumption Description: Frequency of suja consumption.

Instrument questions:

How frequently do you drink suja?

Frequency of suja consumption											
Men											
Age Group (years)	n	% Daily	95% CI	% 5-6 days p. week	95% CI	% 1-4 days p. week	95% CI	% 1-3 days p. month	95% CI	% < once a month	95% CI
25-34	255	17.3	12.6-21.9	2.0	0.3-3.7	35.7	29.8-41.6	17.6	13.0-22.3	27.5	22.0-32.9
35-44	255	14.1	9.8-18.4	3.5	1.3-5.8	43.9	37.8-50.0	18.8	14.0-23.6	19.6	14.7-24.5
45-54	247	15.4	10.9-19.9	4.9	2.2-7.5	34.0	28.1-39.9	20.6	15.6-25.7	25.1	19.7-30.5
55-64	202	10.9	6.6-15.2	3.0	0.6-5.3	38.6	31.9-45.3	22.8	17.0-28.6	24.8	18.8-30.7
65-74	150	18.0	11.8-24.2	0.0	0.0-0.0	34.0	26.4-41.6	16.0	10.1-21.9	32.0	24.5-39.5
25-74	1109	15.4	13.1-17.8	2.9	1.8-3.9	37.8	34.7-40.9	18.9	16.5-21.4	25.0	22.2-27.7
25-64	959	15.2	12.8-17.7	3.1	1.9-4.2	38.1	34.8-41.4	19.2	16.5-21.8	24.5	21.5-27.4

Frequency of suja consumption											
Women											
Age Group (years)	n	% Daily	95% CI	% 5-6 days p. week	95% CI	% 1-4 days p. week	95% CI	% 1-3 days p. month	95% CI	% < once a month	95% CI
25-34	288	14.6	10.5-18.7	5.6	2.9-8.2	36.8	31.2-42.4	18.4	13.9-22.9	24.7	19.7-29.6
35-44	279	18.3	13.7-22.8	2.9	0.9-4.8	33.3	27.8-38.9	20.4	15.7-25.2	25.1	20.0-30.2
45-54	300	13.3	9.5-17.2	3.3	1.3-5.4	38.0	32.5-43.5	23.3	18.5-28.1	22.0	17.3-26.7
55-64	245	15.9	11.3-20.5	4.5	1.9-7.1	31.4	25.6-37.2	20.8	15.7-25.9	27.3	21.8-32.9
65-74	203	15.8	10.7-20.8	3.4	0.9-6.0	32.5	26.1-39.0	18.7	13.4-24.1	29.6	23.3-35.8
25-74	1315	15.5	13.4-17.7	4.2	3.0-5.4	35.2	32.3-38.0	20.1	17.8-22.5	25.0	22.4-27.5
25-64	1112	15.5	13.3-17.8	4.3	2.9-5.6	35.4	32.4-38.4	20.2	17.7-22.7	24.6	21.9-27.3

Frequency of suja consumption											
Age Group (years)	Both Sexes										
	n	% Daily	95% CI	% 5-6 days p. week	95% CI	% 1-4 days p. week	95% CI	% 1-3 days p. month	95% CI	% < once a month	95% CI
25-34	543	16.1	12.9-19.2	3.5	2.0-5.1	36.2	32.1-40.3	18.0	14.7-21.3	26.2	22.4-30.0
35-44	534	15.9	12.8-19.0	3.2	1.7-4.8	39.3	35.1-43.6	19.5	16.1-22.9	22.0	18.4-25.5
45-54	547	14.5	11.4-17.5	4.2	2.4-5.9	35.8	31.7-39.9	21.9	18.4-25.4	23.7	20.1-27.3
55-64	447	13.2	10.0-16.3	3.7	1.9-5.4	35.4	30.8-39.9	21.9	18.0-25.8	25.9	21.8-30.1
65-74	353	17.0	12.9-21.0	1.6	0.4-2.8	33.3	28.3-38.4	17.3	13.2-21.3	30.9	25.9-35.8
25-74	2424	15.5	13.9-17.1	3.4	2.7-4.2	36.6	34.5-38.8	19.5	17.7-21.2	25.0	23.1-26.9
25-64	2071	15.4	13.7-17.1	3.6	2.7-4.4	36.9	34.6-39.2	19.6	17.8-21.5	24.5	22.5-26.6

Physical Activity

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

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

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

Activity at work:

Does your work involve vigorous-intensity activity that causes large increases in breathing or heart rate like [examples] for at least 10 minutes continuously?

In a typical week, on how many days do you do vigorous-intensity activities as part of your work?

How much time do you spend doing vigorous-intensity activities at work on a typical day?

Does your work involve moderate-intensity activity, that causes small increases in breathing or heart rate such as brisk walking for at least 10 minutes continuously?

In a typical week, on how many days do you do moderate-intensity activities as part of your work?

How much time do you spend doing moderate-intensity activities at work on a typical day?

Travel to and from places:

Do you walk or use a bicycle for at least 10 minutes continuously to get to and from places?

In a typical week, on how many days do you walk or bicycle for at least 10 minutes continuously to get to and from places?

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

Recreational activities:

Do you do any involve vigorous-intensity sports, fitness or recreational activities that cause large increases in breathing or heart rate like [examples] for at least 10 minutes continuously?

In a typical week, on how many days do you do vigorous-intensity sports, fitness or recreational activities?

How much time do you spend doing vigorous-intensity sports, fitness or recreational activities on a typical day?

Do you do any involve moderate-intensity sports, fitness or recreational activities that cause large increases in breathing or heart rate like [examples] for at least 10 minutes continuously?

In a typical week, on how many days do you do moderate--intensity sports, fitness or recreational activities?

How much time do you spend doing moderate--intensity sports, fitness or recreational activities on a typical day?

Sedentary behaviour :

How much time do you usually spend sitting or reclining on a typical day?

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

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

Level of total physical activity							
Age Group (years)	Men						
	n	% Low	95% CI	% Moderate	95% CI	% High	95% CI
25-34	238	50.0	43.6-56.4	18.5	13.6-23.4	31.5	25.6-37.4
35-44	237	44.7	38.4-51.1	22.4	17.1-27.7	32.9	26.9-38.9
45-54	242	47.9	41.6-54.2	24.8	19.4-30.2	27.3	21.7-32.9
55-64	192	54.2	47.1-61.2	22.9	17.0-28.9	22.9	17.0-28.9
65-74	148	64.9	57.2-72.6	16.2	10.3-22.2	18.9	12.6-25.2
25-74	1057	49.8	46.5-53.1	21.0	18.3-23.6	29.3	26.2-32.3
25-64	909	48.7	45.2-52.1	21.3	18.5-24.1	30.0	26.8-33.3

Level of total physical activity							
Age Group (years)	Women						
	n	% Low	95% CI	% Moderate	95% CI	% High	95% CI
25-34	275	71.6	66.3-77.0	12.7	8.8-16.7	15.6	11.3-19.9
35-44	263	66.5	60.8-72.2	13.3	9.2-17.4	20.2	15.3-25.0
45-54	294	66.7	61.3-72.1	15.0	10.9-19.0	18.4	13.9-22.8

55-64	238	69.3	63.5-75.2	16.4	11.7-21.1	14.3	9.8-18.7
65-74	203	77.3	71.6-83.1	11.3	7.0-15.7	11.3	7.0-15.7
25-74	1273	69.6	66.8-72.4	13.6	11.6-15.7	16.8	14.5-19.0
25-64	1070	69.0	66.0-72.0	13.8	11.6-16.0	17.2	14.8-19.6

Level of total physical activity							
Age Group (years)	Both Sexes						
	n	% Low	95% CI	% Moderate	95% CI	% High	95% CI
25-34	513	59.6	55.3-64.0	15.9	12.7-19.2	24.5	20.6-28.3
35-44	500	54.2	49.8-58.7	18.4	14.9-21.9	27.3	23.3-31.4
45-54	536	56.5	52.2-60.7	20.3	16.8-23.8	23.2	19.5-26.9
55-64	430	61.1	56.4-65.8	19.9	16.0-23.8	19.0	15.1-22.8
65-74	351	70.6	65.7-75.6	14.0	10.2-17.7	15.4	11.4-19.4
25-74	2330	58.6	56.4-60.9	17.7	15.9-19.4	23.7	21.7-25.7
25-64	1979	57.7	55.3-60.1	18.0	16.1-19.8	24.3	22.2-26.4

Total physical activity-mean
 Description: Mean minutes of total physical activity on average per day.
 Instrument questions
 activity at work
 travel to and from places
 recreational activities

Mean minutes of total physical activity on average per day											
Age Group (years)	Men				Women			Both Sexes			
	n	Mean minutes	95% CI		n	Mean minutes	95% CI	<i>n</i>	<i>Mean minutes</i>	<i>95% CI</i>	
25-34	238	94.6	75.4-113.7		275	49.1	36.6-61.6		513	74.3	62.2-86.5
35-44	237	109.4	88.3-130.6		263	71.6	55.6-87.7		500	92.9	79.0-106.9
45-54	242	90.9	70.6-111.2		294	63.3	48.5-78.1		536	78.3	65.3-91.3
55-64	192	93.6	69.6-117.6		238	57.6	41.6-73.6		430	77.1	62.1-92.1
65-74	148	69.1	45.4-92.7		203	34.0	23.9-44.1		351	52.8	39.2-66.4
25-74	1057	95.9	85.6-106.2		1273	57.2	50.1-64.2		2330	78.6	72.0-85.2
25-64	909	97.9	87.0-108.9		1070	59.1	51.5-66.6		1979	80.6	73.6-87.6

Total physical activity-median
 Description: Median minutes of total physical activity on average per day.
 Instrument questions
 activity at work
 travel to and from places
 recreational activities

Median minutes of total physical activity on average per day										
Age Group (years)	Men				Women			Both Sexes		
	n	Median minutes	Inter-quartile range (P25-P75)		n	Median minutes	Inter-quartile range (P25-P75)	<i>n</i>	<i>Median minutes</i>	<i>Inter-quartile range (P25-P75)</i>
25-34	238	40.0	0.0-110.0		275	0.0	0.0-42.9	513	17.1	0.0-77.1
35-44	237	45.0	0.0-137.1		263	8.6	0.0-60.0	500	25.7	0.0-120.0
45-54	242	37.1	0.0-120.0		294	8.6	0.0-60.0	536	25.7	0.0-90.0
55-64	192	25.7	0.0-90.0		238	4.3	0.0-55.7	430	15.0	0.0-68.6
65-74	148	0.0	0.0-60.0		203	0.0	0.0-25.7	351	0.0	0.0-42.9
25-74	1057	34.3	0.0-120.0		1273	4.3	0.0-51.4	2330	17.1	0.0-85.7
25-64	909	37.9	0.0-120.0		1070	6.4	0.0-51.4	1979	20.0	0.0-90.0

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

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

Mean minutes of work-related physical activity on average per day										
Age Group (years)	Men				Women			Both Sexes		
	n	Mean minutes	95% CI		n	Mean minutes	95% CI	<i>n</i>	<i>Mean minutes</i>	<i>95% CI</i>
25-34	238	53.8	36.4-71.3		275	27.3	17.9-36.7	513	42.0	31.4-52.7
35-44	237	63.0	44.9-81.0		263	49.4	35.1-63.7	500	57.1	45.1-69.0
45-54	242	47.3	32.7-61.8		294	41.0	28.9-53.2	536	44.4	34.7-54.1
55-64	192	66.4	44.3-88.5		238	32.4	18.6-46.1	430	50.8	37.2-64.4
65-74	148	45.4	23.5-67.4		203	12.4	6.3-18.5	351	30.1	17.9-42.4
25-74	1057	55.9	46.9-64.9		1273	34.8	29.0-40.6	2330	46.5	40.8-52.1
25-64	909	56.7	46.1-66.3		1070	36.6	30.4-42.8	1979	47.8	41.7-53.7

Mean minutes of transport-related physical activity on average per day										
Age Group (years)	Men				Women			Both Sexes		
	n	Mean minutes	95% CI		n	Mean minutes	95% CI	<i>n</i>	<i>Mean minutes</i>	<i>95% CI</i>
25-34	238	17.4	12.7-22.1		275	10.7	7.0-14.3	513	14.4	11.3-17.5
35-44	237	26.2	18.3-34.1		263	11.3	8.1-14.5	500	19.7	15.0-24.4
45-54	242	27.9	21.3-34.5		294	13.8	9.2-18.5	536	21.5	17.3-25.7
55-64	192	18.0	12.1-23.8		238	14.1	9.4-18.8	430	16.2	12.4-20.0
65-74	148	17.7	11.8-23.7		203	17.1	10.5-23.7	351	17.4	13.0-21.9
25-74	1057	21.6	18.6-24.7		1273	12.3	10.3-14.2	2330	17.5	15.5-19.4
25-64	909	21.9	18.7-25.2		1070	11.9	9.9-13.9	1979	17.5	15.4-19.5

Mean minutes of recreation-related physical activity on average per day											
Age Group (years)	Men				Women			Both Sexes			
	n	Mean minutes	95% CI		n	Mean minutes	95% CI	<i>n</i>	<i>Mean minutes</i>	<i>95% CI</i>	
25-34	238	23.3	18.0-28.6		275	11.1	6.0-16.2		513	17.9	14.1-21.6
35-44	237	20.3	14.5-26.0		263	10.9	5.3-16.6		500	16.2	12.1-20.3
45-54	242	15.7	9.6-21.8		294	8.4	3.6-13.3		536	12.4	8.4-16.4
55-64	192	9.2	4.0-14.4		238	11.1	4.9-17.3		430	10.1	6.1-14.1
65-74	148	5.9	0.0-11.7		203	4.5	1.1-7.9		351	5.2	1.7-8.8
25-74	1057	18.3	15.5-21.1		1273	10.1	7.4-12.7		2330	14.6	12.7-16.6
25-74	909	19.3	16.3-22.3		1070	10.5	7.7-13.4		1979	15.4	13.3-17.5

Domain-specific physical activity - median

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

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

Median minutes of work-related physical activity on average per day											
Age Group (years)	Men				Women				Both Sexes		
	n	Median minutes	Inter-quartile range (P25-P75)		n	Median minutes	Inter-quartile range (P25-P75)		<i>n</i>	<i>Median minutes</i>	<i>Inter-quartile range (P25-P75)</i>
25-34	238	0.0	0.0-30.0		275	0.0	0.0-0.0		513	0.0	0.0-17.1
35-44	237	0.0	0.0-45.0		263	0.0	0.0-17.1		500	0.0	0.0-34.3
45-54	242	0.0	0.0-30.0		294	0.0	0.0-12.9		536	0.0	0.0-25.7
55-64	192	0.0	0.0-51.4		238	0.0	0.0-0.0		430	0.0	0.0-20.0
65-74	148	0.0	0.0-2.1		203	0.0	0.0-0.0		351	0.0	0.0-0.0
25-74	1057	0.0	0.0-30.0		1273	0.0	0.0-6.4		2330	0.0	0.0-21.4
25-64	909	0.0	0.0-34.3		1070	0.0	0.0-8.5		1979	0.0	0.0-25.7

Median minutes of transport-related physical activity on average per day											
Age Group (years)	Men				Women				Both Sexes		
	n	Median minutes	Inter-quartile range (P25-P75)		n	Median minutes	Inter-quartile range (P25-P75)		<i>n</i>	<i>Median minutes</i>	<i>Inter-quartile range (P25-P75)</i>
25-34	238	0.0	0.0-21.4		275	0.0	0.0-7.1		513	0.0	0.0-17.1
35-44	237	0.0	0.0-30.0		263	0.0	0.0-11.4		500	0.0	0.0-25.7
45-54	242	0.0	0.0-34.3		294	0.0	0.0-15.0		536	0.0	0.0-25.7
55-64	192	0.0	0.0-25.7		238	0.0	0.0-8.6		430	0.0	0.0-17.1
65-74	148	0.0	0.0-17.1		203	0.0	0.0-8.6		351	0.0	0.0-12.9
25-74	1057	0.0	0.0-25.7		1273	0.0	0.0-8.6		2330	0.0	0.0-19.3
25-64	909	0.0	0.0-30.0		1070	0.0	0.0-10.0		1979	0.0	0.0-20.0

Median minutes of recreation-related physical activity on average per day									
Age Group (years)	Men				Women			Both Sexes	
	n	Median minutes	Inter-quartile range (P25-P75)		n	Median minutes	Inter-quartile range (P25-P75)	<i>n</i>	<i>Median minutes</i> <i>Inter-quartile range (P25-P75)</i>
25-34	238	0.0	0.0-34.3		275	0.0	0.0-0.0	513	0.0 0.0-12.9
35-44	237	0.0	0.0-25.7		263	0.0	0.0-0.0	500	0.0 0.0-0.0
45-54	242	0.0	0.0-0.0		294	0.0	0.0-0.0	536	0.0 0.0-0.0
55-64	192	0.0	0.0-0.0		238	0.0	0.0-0.0	430	0.0 0.0-0.0
65-74	148	0.0	0.0-0.0		203	0.0	0.0-0.0	351	0.0 0.0-0.0
25-74	1057	0.0	0.0-17.1		1273	0.0	0.0-0.0	2330	0.0 0.0-0.0
25-64	909	0.0	0.0-19.3		1070	0.0	0.0-0.0	1979	0.0 0.0-0.0

No physical activity by domain

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

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

No work-related physical activity									
Age Group (years)	Men				Women			Both Sexes	
	n	% no activity at work	95% CI		n	% no activity at work	95% CI	<i>n</i>	<i>% no activity at work</i> <i>95% CI</i>
25-34	238	66.0	59.9-72.0		275	76.4	71.3-81.4	513	70.6 66.5-74.6
35-44	237	60.3	54.1-66.6		263	68.4	62.8-74.1	500	63.9 59.6-68.2
45-54	242	65.3	59.3-71.3		294	72.1	67.0-77.2	536	68.4 64.4-72.4
55-64	192	63.5	56.7-70.4		238	76.5	71.1-81.9	430	69.5 65.0-73.9
65-74	148	74.3	67.3-81.4		203	85.2	80.3-90.1	351	79.4 74.9-83.8
25-74	1057	64.7	61.5-67.8		1273	74.3	71.7-76.9	2330	69.0 66.9-71.1
25-64	909	64.0	60.6-67.3		1070	73.4	70.6-76.2	1979	68.2 65.9-70.4

No transport-related physical activity									
Age Group (years)	Men				Women			Both Sexes	
	n	% no activity for transport	95% CI		n	% no activity for transport	95% CI	n	% no activity for transport
25-34	238	59.2	53.0-65.5		275	72.7	67.5-78.0	513	65.2
35-44	237	54.4	48.1-60.8		263	68.4	62.8-74.1	500	60.5
45-54	242	52.9	46.6-59.2		294	65.6	60.2-71.1	536	58.7
55-64	192	62.5	55.6-69.4		238	71.0	65.2-76.8	430	66.4
65-74	148	65.5	57.9-73.2		203	71.4	65.2-77.6	351	68.3
25-74	1057	57.7	54.4-60.9		1273	70.1	67.3-72.8	2330	63.2
25-64	909	57.1	53.7-60.5		1070	70.0	67.0-72.9	1979	62.8

No recreation-related physical activity									
Age Group (years)	Men				Women			Both Sexes	
	n	% no activity at recreation	95% CI		n	% no activity at recreation	95% CI	n	% no activity at recreation
25-34	238	59.2	53.0-65.5		275	87.3	83.3-91.2	513	71.7
35-44	237	66.2	60.2-72.3		263	91.3	87.8-94.7	500	77.1
45-54	242	78.1	72.9-83.3		294	90.1	86.7-93.5	536	83.6
55-64	192	84.9	79.8-90.0		238	90.8	87.1-94.4	430	87.6
65-74	148	93.2	89.2-97.3		203	94.1	90.8-97.3	351	93.6
25-74	1057	69.7	66.6-72.8		1273	89.7	87.8-91.6	2330	78.7
25-64	909	68.0	64.6-71.3		1070	89.4	87.3-91.4	1979	77.5

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

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

Composition of total physical activity							
Age Group (years)	Men						
	n	% Activity from work	95% CI	% Activity for transport	95% CI	% Activity during leisure time	95% CI
25-34	157	33.6	27.5-39.7	33.2	27.1-39.3	33.2	27.4-39.1
35-44	169	37.6	31.4-43.7	35.2	29.2-41.1	27.3	21.5-33.0
45-54	165	33.9	27.9-39.9	46.0	39.5-52.5	20.1	14.7-25.5
55-64	119	48.0	40.0-56.0	37.0	29.4-44.5	15.0	9.5-20.6
65-74	72	39.9	30.0-49.8	50.7	40.7-60.8	9.3	3.1-15.5
25-74	682	36.6	33.4-39.9	37.4	34.1-40.6	26.0	22.9-29.0
25-64	610	36.6	33.1-39.9	36.7	33.3-40.0	26.9	23.7-30.1

Composition of total physical activity							
Women							
Age Group (years)	n	% Activity from work	95% CI	% Activity for transport	95% CI	% Activity during leisure time	95% CI
25-34	131	38.2	30.8-45.7	42.9	35.0-50.8	18.9	12.8-25.0
35-44	147	47.9	40.4-55.3	41.0	33.5-48.4	11.2	6.5-15.9
45-54	158	42.4	35.4-49.4	44.0	36.9-51.1	13.6	8.6-18.6
55-64	123	36.5	28.7-44.3	48.2	39.9-56.5	15.3	9.2-21.5
65-74	80	27.7	18.9-36.4	59.0	49.1-68.9	13.3	6.0-20.6
25-74	639	40.9	37.1-44.6	44.2	40.3-48.1	15.0	12.2-17.8
25-64	559	41.7	37.7-45.6	43.2	39.2-47.3	15.1	12.1-18.1

Composition of total physical activity							
Both Sexes							
Age Group (years)	n	% Activity from work	95% CI	% Activity for transport	95% CI	% Activity during leisure time	95% CI
25-34	288	35.3	30.5-40.0	36.7	31.9-41.6	28.0	23.6-32.4
35-44	316	41.5	36.7-46.2	37.3	32.7-42.0	21.2	17.1-25.3
45-54	323	37.3	32.7-41.9	45.2	40.4-50.0	17.5	13.7-21.3
55-64	242	43.2	37.5-48.9	41.6	36.0-47.3	15.2	11.0-19.3
65-74	152	34.9	28.0-41.8	54.1	46.9-61.3	11.0	6.3-15.7
25-74	1321	38.3	35.8-40.7	40.0	37.5-42.5	21.8	19.6-24.0
25-64	1169	38.5	35.9-41.0	39.2	36.6-41.8	22.4	20.1-24.7

No vigorous physical activity

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

Instrument questions: activity at work recreational activities

No vigorous physical activity									
Age Group (years)	Men			Women			Both Sexes		
	n	% no vigorous activity	95% CI	n	% no vigorous activity	95% CI	n	% no vigorous activity	95% CI
25-34	238	67.6	61.7-73.6	275	92.7	89.7-95.8	513	78.8	75.1-82.5
35-44	237	70.9	65.1-76.7	263	92.8	89.6-95.9	500	80.4	76.8-84.1
45-54	242	85.1	80.6-89.6	294	92.2	89.1-95.2	536	88.3	85.5-91.2
55-64	192	84.9	79.8-90.0	238	91.6	88.1-95.1	430	88.0	84.8-91.2
65-74	148	86.5	81.0-92.0	203	97.5	95.4-99.7	351	91.6	88.4-94.8
25-74	1057	74.9	71.9-77.8	1273	92.9	91.3-94.4	2330	82.9	81.1-84.7
25-64	909	74.0	70.9-77.1	1070	92.5	90.8-94.2	1979	82.2	80.3-84.2

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

Instrument question:
sedentary behaviour

Minutes spent in sedentary activities on average per day					
Men					
Age Group (years)	n	Mean minutes	95% CI	Median minutes	Interquartile range (P25-P75)
25-34	257	168.1	152.8-183.5	120.0	80.0-240.0
35-44	258	155.3	140.3-170.3	120.0	60.0-180.0
45-54	258	165.2	150.2-180.1	120.0	60.0-240.0
55-64	206	158.7	138.8-178.7	120.0	60.0-180.0
65-74	154	209.0	184.5-233.6	180.0	120.0-300.0
25-74	1133	165.9	157.9-173.9	120.0	60.0-240.0
25-64	979	162.8	154.3-171.2	120.0	60.0-210.0

Minutes spent in sedentary activities on average per day					
Women					
Age Group (years)	n	Mean minutes	95% CI	Median minutes	Interquartile range (P25-P75)
25-34	293	170.4	155.6-185.3	120.0	60.0-240.0
35-44	286	182.8	167.1-198.5	120.0	60.0-240.0
45-54	304	178.1	162.6-193.7	120.0	60.0-240.0
55-64	249	204.0	186.5-221.5	180.0	120.0-255.0
65-74	211	248.7	226.6-270.7	240.0	120.0-360.0
25-74	1343	184.7	176.7-192.6	150.0	75.0-240.0
25-64	1132	179.6	171.3-187.9	150.0	75.0-240.0

Minutes spent in sedentary activities on average per day					
Both Sexes					
Age Group (years)	n	Mean minutes	95% CI	Median minutes	Interquartile range (P25-P75)
25-34	550	169.1	158.3-179.9	120.0	60.0-240.0
35-44	544	167.3	156.3-178.2	120.0	60.0-240.0
45-54	562	171.0	160.2-181.8	120.0	60.0-240.0
55-64	455	179.2	165.6-192.9	120.0	60.0-240.0
65-74	365	227.4	210.6-244.2	180.0	120.0-360.0
25-74	2476	174.2	168.5-179.9	120.0	60.0-240.0
25-64	2111	170.2	164.2-176.2	129.9	60.0-240.0

Blood Pressure and Diabetes History

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

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

Raised blood pressure diagnosed by doctor or health worker in last 12 months											
Age Group (years)	Men				Women				Both Sexes		
	n	% diagnosed	95% CI		n	% diagnosed	95% CI		<i>n</i>	% <i>diagnosed</i>	95% <i>CI</i>
25-34	257	10.5	6.8-14.3		289	11.8	8.0-15.5		546	11.1	8.4-13.7
35-44	254	13.4	9.2-17.6		280	17.1	12.7-21.6		534	15.0	12.0-18.1
45-54	247	26.3	20.8-31.8		295	22.7	17.9-27.5		542	24.7	21.0-28.4
55-64	198	22.2	16.4-28.0		248	26.6	21.1-32.1		446	24.2	20.2-28.3
65-74	149	26.8	19.7-34.0		206	28.6	22.5-34.8		355	27.7	22.9-32.5
25-74	1105	16.4	14.1-18.6		1318	18.1	15.9-20.2		2423	17.1	15.5-18.7
25-64	956	15.6	13.3-18.0		1112	17.2	15.0-19.5		2068	16.3	14.7-18.0

Currently taking blood pressure drugs prescribed by doctor or health worker										
Age Group (years)	Men				Women			Both Sexes		
	n	% taking meds	95% CI		n	% taking meds	95% CI	<i>n</i>	<i>% taking meds</i>	<i>95% CI</i>
25-34	258	2.7	0.7-4.7		291	2.7	0.9-4.6	549	2.7	1.3-4.1
35-44	258	7.4	4.2-10.6		288	9.0	5.7-12.3	546	8.1	5.8-10.4
45-54	259	16.6	12.1-21.1		303	13.5	9.7-17.4	562	15.2	12.2-18.3
55-64	204	16.7	11.6-21.8		250	20.0	15.0-25.0	454	18.2	14.6-21.8
65-74	154	18.2	12.1-24.3		211	23.2	17.5-28.9	365	20.5	16.3-24.7
25-74	1133	9.0	7.4-10.6		1343	9.8	8.3-11.4	2476	9.4	8.2-10.5
25-64	979	8.3	6.7-10.0		1132	8.8	7.2-10.3	2111	8.5	7.4-9.7

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

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

Advised by doctor or health worker to have special prescribed diet									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	<i>n</i>	%	<i>95% CI</i>
25-34	258	5.4	2.7-8.2	291	7.9	4.8-11.0	549	6.5	4.4-8.6
35-44	259	8.9	5.4-12.3	288	12.2	8.4-15.9	547	10.3	7.8-12.9
45-54	258	21.7	16.7-26.7	303	17.8	13.5-22.1	561	20.0	16.6-23.4
55-64	203	20.2	14.7-25.7	250	20.4	15.4-25.4	453	20.3	16.5-24.1
65-74	154	14.9	9.3-20.6	211	23.7	18.0-29.4	365	19.0	14.9-23.0
25-74	1132	11.5	9.6-13.3	1343	13.4	11.5-15.3	2475	12.3	11.0-13.7
25-64	978	11.2	9.3-13.2	1132	12.6	10.6-14.5	2110	11.8	10.5-13.2

Advised by doctor or health worker to lose weight									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	<i>n</i>	%	<i>95% CI</i>
25-34	258	2.7	0.7-4.7	291	3.1	1.1-5.1	549	2.9	1.5-4.3
35-44	258	5.0	2.4-7.7	288	6.6	3.7-9.5	546	5.7	3.8-7.7
45-54	258	12.0	8.0-16.0	303	9.9	6.5-13.3	561	11.1	8.4-13.7
55-64	203	14.8	9.9-19.7	250	12.8	8.7-16.9	453	13.9	10.6-17.1
65-74	154	8.4	4.0-12.8	211	10.4	6.3-14.6	365	9.4	6.3-12.4
25-74	1131	6.7	5.3-8.1	1343	6.9	5.5-8.2	2474	6.8	5.8-7.8
25-64	977	6.6	5.1-8.1	1132	6.6	5.2-8.0	2109	6.6	5.6-7.6

Advised by doctor or health worker to stop smoking									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	<i>n</i>	%	<i>95% CI</i>
25-34	258	1.6	0.0-3.1	290	1.0	0.0-2.2	548	1.3	0.3-2.3
35-44	258	3.9	1.5-6.2	288	4.2	1.9-6.5	546	4.0	2.3-5.7
45-54	257	6.2	3.3-9.2	303	2.3	0.6-4.0	560	4.5	2.7-6.3
55-64	202	6.9	3.4-10.4	248	7.7	4.4-11.0	450	7.3	4.8-9.7
65-74	154	1.9	0.0-4.1	208	4.8	1.9-7.7	362	3.3	1.5-5.1
25-74	1129	3.6	2.5-4.7	1337	3.1	2.2-4.1	2466	3.4	2.7-4.1
25-64	975	3.7	2.6-4.9	1129	3.0	2.0-4.0	2104	3.4	2.6-4.2

Advised by doctor or health worker to start or do more exercise									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	<i>n</i>	%	<i>95% CI</i>
25-34	256	3.1	1.0-5.3	291	3.4	1.3-5.5	547	3.3	1.8-4.8
35-44	259	5.4	2.7-8.2	288	5.9	3.2-8.6	547	5.6	3.7-7.6
45-54	258	12.4	8.4-16.4	303	7.9	4.9-11.0	561	10.4	7.8-13.0
55-64	203	11.8	7.4-16.3	249	7.6	4.3-10.9	452	9.9	7.1-12.8
65-74	154	6.5	2.6-10.4	211	10.4	6.3-14.6	365	8.3	5.5-11.2
25-74	1130	6.6	5.1-8.0	1342	5.9	4.6-7.2	2472	6.3	5.3-7.2
25-64	976	6.6	5.1-8.1	1131	5.5	4.2-6.9	2107	6.1	5.1-7.1

Blood pressure advice by a traditional healer	Description: Percentage of respondents who have sought advice or received treatment from traditional healers for raised blood pressure.
	Instrument questions:
	During the past 12 months have you seen a traditional healer for raised blood pressure?
	Are you currently taking any herbal or traditional remedy for your high blood pressure?
	During the past 12 months have you seen an Indigenous Physician (Drungtso/Menpa) for raised blood pressure or hypertension?
	Are you currently taking any Indigenous remedy for your raised blood pressure?

Seen a traditional healer in the last 12 months											
Age Group (years)	Men				Women				Both Sexes		
	n	%	95% CI		n	%	95% CI		<i>n</i>	%	<i>95% CI</i>
25-34	258	0.8	0.0-1.8		291	0.0	0.0-0.0		549	0.4	0.0-1.0
35-44	259	1.5	0.0-3.0		287	1.0	0.0-2.2		546	1.3	0.3-2.3
45-54	258	1.2	0.0-2.5		303	0.7	0.0-1.6		561	0.9	0.1-1.8
55-64	203	0.5	0.0-1.5		249	2.0	0.3-3.8		452	1.2	0.2-2.1
65-74	154	1.3	0.0-3.1		211	4.7	1.9-7.6		365	2.9	1.2-4.5
25-74	1132	1.1	0.4-1.7		1341	1.0	0.5-1.4		2473	1.0	0.6-1.4
25-64	978	1.0	0.4-1.7		1130	0.7	0.2-1.1		2108	0.9	0.5-1.3

Currently taking herbal or traditional remedy for high blood pressure										
Age Group (years)	Men				Women			Both Sexes		
	n	%	95% CI		n	%	95% CI	<i>n</i>	%	<i>95% CI</i>
25-34	258	0.0	0.0-0.0		291	0.0	0.0-0.0	549	0.0	0.0-0.0
35-44	259	1.5	0.0-3.0		288	0.7	0.0-1.7	547	1.2	0.2-2.1
45-54	258	0.8	0.0-1.8		303	0.0	0.0-0.0	561	0.4	0.0-1.0
55-64	203	0.5	0.0-1.5		250	2.0	0.3-3.7	453	1.2	0.2-2.1
65-74	154	1.3	0.0-3.1		211	0.9	0.0-2.3	365	1.1	0.0-2.3
25-74	1132	0.7	0.2-1.2		1343	0.5	0.1-0.8	2475	0.6	0.3-0.9
25-64	978	0.6	0.2-1.1		1132	0.5	0.1-0.8	2110	0.6	0.3-0.9

Seen an indigenous physician in the last 12 months											
Age Group (years)	Men				Women				Both Sexes		
	n	%	95% CI		n	%	95% CI		<i>n</i>	%	<i>95% CI</i>
25-34	258	0.4	0.0-1.1		291	0.0	0.0-0.0		549	0.2	0.0-0.6
35-44	259	1.5	0.0-3.0		288	0.7	0.0-1.7		547	1.2	0.2-2.1
45-54	258	0.8	0.0-1.8		303	1.0	0.0-2.1		561	0.9	0.1-1.6
55-64	203	1.5	0.0-3.1		250	2.0	0.3-3.7		453	1.7	0.5-2.9
65-74	154	1.9	0.0-4.1		211	4.7	1.9-7.6		365	3.2	1.5-5.0
25-74	1132	1.0	0.4-1.6		1343	0.9	0.5-1.4		2475	1.0	0.6-1.3
25-64	978	0.9	0.3-1.5		1132	0.6	0.2-1.5		2110	0.8	0.4-1.2

Currently taking indigenous remedy for high blood pressure											
Age Group (years)	Men				Women				Both Sexes		
	n	%	95% CI		n	%	95% CI		<i>n</i>	%	<i>95% CI</i>
25-34	258	0.4	0.0-1.1		291	0.0	0.0-0.0		549	0.2	0.0-0.6
35-44	259	1.2	0.0-2.5		288	0.3	0.0-1.0		547	0.8	0.0-1.6
45-54	258	0.4	0.0-1.1		303	0.3	0.0-1.0		561	0.4	0.0-0.9
55-64	203	1.5	0.0-3.1		250	2.4	0.5-4.3		453	1.9	0.6-3.2
65-74	154	1.9	0.0-4.1		211	2.8	0.6-5.1		365	2.4	0.8-3.9
25-74	1132	0.8	0.3-1.3		1343	0.6	0.3-1.0		2475	0.7	0.4-1.1
25-64	978	0.7	0.2-1.3		1132	0.5	0.1-0.8		2110	0.6	0.3-1.0

Diabetes
diagnosis
and
treatment

Description: Diabetes diagnosis and treatment results among all respondents.

Instrument questions:

During the past 12 months, have you ever been told by a doctor or other health worker that you have diabetes?

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

Diabetes diagnosed by doctor or health worker in last 12 months										
Age Group (years)	Men				Women			Both Sexes		
	n	% diagnosed	95% CI		n	% diagnosed	95% CI	<i>n</i>	% <i>diagnosed</i>	<i>95% CI</i>
25-34	259	0.4	0.0-1.1		292	0.7	0.0-1.6	551	0.5	0.0-1.1
35-44	257	1.6	0.0-3.1		288	1.4	0.0-2.7	545	1.5	0.4-2.5
45-54	259	5.0	2.4-7.7		303	3.3	1.3-5.3	562	4.3	2.5-6.0
55-64	203	5.9	2.7-9.2		248	4.4	1.9-7.0	451	5.2	3.1-7.4
65-74	154	9.7	5.1-14.4		211	5.2	2.2-8.2	365	7.6	4.8-10.5
25-74	1132	2.8	1.9-3.6		1342	2.1	1.4-2.8	2474	2.5	1.9-3.0
25-64	978	2.3	1.4-3.1		1131	1.9	1.1-2.6	2109	2.1	1.5-2.7

Currently taking insulin prescribed for diabetes by doctor or health worker										
Age Group (years)	Men				Women			Both Sexes		
	n	% taking insulin	95% CI		n	% taking insulin	95% CI	<i>n</i>	<i>% taking insulin</i>	<i>95% CI</i>
25-34	258	0.0	0.0-0.0		292	0.3	0.0-1.0	550	0.2	0.0-0.4
35-44	258	0.0	0.0-0.0		288	0.0	0.0-0.0	546	0.0	0.0-0.0
45-54	258	0.8	0.0-1.8		303	1.0	0.0-2.1	561	0.9	0.1-1.6
55-64	204	1.0	0.0-2.3		249	2.0	0.3-3.8	453	1.4	0.4-2.5
65-74	154	1.3	0.0-3.1		210	0.5	0.0-1.4	364	0.9	0.0-2.0
25-74	1132	0.3	0.1-0.6		1342	0.6	0.2-1.0	2474	0.4	0.2-0.7
25-64	978	0.3	0.0-1.5		1132	0.6	0.2-1.0	2110	0.4	0.2-0.6

Currently taking oral drugs prescribed for diabetes by doctor or health worker										
Age Group (years)	Men				Women			Both Sexes		
	n	% taking meds	95% CI		n	% taking meds	95% CI	<i>n</i>	% <i>taking meds</i>	<i>95% CI</i>
25-34	258	0.8	0.0-1.8		292	0.3	0.0-1.0	550	0.6	0.0-1.3
35-44	258	0.8	0.0-1.8		288	1.0	0.0-2.2	546	0.9	0.1-1.7
45-54	258	5.0	2.4-7.7		303	1.7	0.2-3.1	561	3.5	1.9-5.1
55-64	204	4.4	1.6-7.2		249	4.0	1.6-6.5	453	4.2	2.3-6.1
65-74	154	6.5	2.6-10.4		210	3.8	1.2-6.4	364	5.3	2.8-7.7
25-74	1132	2.3	1.5-3.1		1342	1.4	0.9-2.0	2474	1.9	1.4-2.4
25-64	978	2.0	1.2-2.8		1132	1.3	0.7-1.9	2110	1.7	1.2-2.2

Diabetes lifestyle advice

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

Instrument question:

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

Advised by doctor or health worker to have special prescribed diet										
Age Group (years)	Men				Women			Both Sexes		
	n	%	95% CI		n	%	95% CI	<i>n</i>	%	<i>95% CI</i>
25-34	258	0.8	0.0-1.8		293	0.7	0.0-1.6	551	0.7	0.0-1.5
35-44	258	0.8	0.0-1.8		288	1.0	0.0-2.2	546	0.9	0.1-1.7
45-54	258	4.7	2.1-7.2		303	2.3	0.6-4.0	561	3.6	2.0-5.2
55-64	203	4.9	1.9-7.9		249	4.0	1.6-6.5	452	4.5	2.5-6.5
65-74	154	7.8	3.6-12.0		210	3.3	0.9-5.8	364	5.7	3.2-8.3
25-74	1131	2.4	1.6-3.2		1343	1.7	1.0-2.3	2474	2.1	1.5-2.6
25-64	977	2.0	1.2-2.8		1133	1.5	0.8-2.2	2110	1.8	1.3-2.3

Advised by doctor or health worker to lose weight										
Age Group (years)	Men				Women			Both Sexes		
	n	%	95% CI		n	%	95% CI	<i>n</i>	%	<i>95% CI</i>
25-34	258	0.8	0.0-1.8		293	1.0	0.0-2.2	551	0.9	0.1-1.7
35-44	258	0.8	0.0-1.8		288	0.7	0.0-1.7	546	0.7	0.0-1.5
45-54	258	3.5	1.2-5.7		303	1.7	0.2-3.1	561	2.7	1.3-4.1
55-64	203	3.9	1.3-6.6		249	2.4	0.5-4.3	452	3.2	1.5-4.9
65-74	154	4.5	1.3-7.8		210	2.9	0.6-5.1	364	3.8	1.7-5.8
25-74	1131	1.9	1.1-2.6		1343	1.3	0.7-2.0	2474	1.6	1.1-2.1
25-64	977	1.7	0.9-2.4		1133	1.2	0.6-1.9	2110	1.5	1.0-2.0

Advised by doctor or health worker to stop smoking									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	258	0.8	0.0-1.8	292	0.3	0.0-1.0	550	0.6	0.0-1.3
35-44	258	0.8	0.0-1.8	287	0.3	0.0-1.0	545	0.6	0.0-1.3
45-54	258	2.3	0.5-4.2	303	0.3	0.0-1.0	561	1.4	0.4-2.5
55-64	203	0.5	0.0-1.5	249	1.2	0.0-2.6	452	0.8	0.0-1.6
65-74	153	0.7	0.0-1.9	208	1.0	0.0-2.3	361	0.8	0.0-1.7
25-74	1130	1.0	0.4-1.6	1339	0.5	0.1-0.9	2469	0.8	0.4-1.2
25-64	977	1.0	0.4-1.7	1131	0.5	0.1-0.9	2108	0.8	0.4-1.2

Advised doctor or health worker to start or do more exercise									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	259	0.8	0.0-1.8	293	1.0	0.0-2.2	552	0.9	0.1-1.7
35-44	258	1.2	0.0-2.5	288	1.0	0.0-2.2	546	1.1	0.2-2.0
45-54	258	3.9	1.5-6.2	303	1.7	0.2-3.1	561	2.9	1.4-4.3
55-64	203	3.0	0.6-5.3	249	2.4	0.5-4.3	452	2.7	1.2-4.2
65-74	154	4.5	1.3-7.8	210	2.9	0.6-5.1	364	3.8	1.7-5.8
25-74	1132	1.9	1.2-2.7	1343	1.4	0.8-2.1	2475	1.7	1.2-2.2
25-64	978	1.7	1.0-2.5	1133	1.3	0.7-2.0	2111	1.6	1.0-2.1

Diabetes advice by traditional healer

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

Instrument questions:

During the past 12 months have you seen a traditional healer for diabetes?

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

During the past 12 months have you seen an Indigenous Physician (Drungtsho/sMenpa) for diabetes?

Are you currently taking any Indigenous remedy for your diabetes?

Seen a traditional healer for diabetes in the last 12 months									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	259	0.0	0.0-0.0	293	0.0	0.0-0.0	552	0.0	0.0-0.0
35-44	258	0.0	0.0-0.0	288	0.0	0.0-0.0	546	0.0	0.0-0.0
45-54	258	0.8	0.0-1.8	303	0.0	0.0-0.0	561	0.4	0.0-1.0
55-64	203	0.5	0.0-1.5	249	1.2	0.0-2.6	452	0.8	0.0-1.6
65-74	154	0.0	0.0-0.0	210	0.5	0.0-1.4	364	0.2	0.0-0.7
25-74	1132	0.2	0.0-0.4	1343	0.2	0.0-0.4	2475	0.2	0.0-0.3
25-64	978	0.2	0.0-0.4	1133	0.2	0.0-0.3	2111	0.2	0.0-0.3

Currently taking herbal or traditional treatment for diabetes											
Age Group (years)	Men				Women				Both Sexes		
	n	%	95% CI		n	%	95% CI		<i>n</i>	%	<i>95% CI</i>
25-34	259	0.0	0.0-0.0		293	0.0	0.0-0.0		552	0.0	0.0-0.0
35-44	258	0.0	0.0-0.0		288	0.0	0.0-0.0		546	0.0	0.0-0.0
45-54	258	0.8	0.0-1.8		303	0.0	0.0-0.0		561	0.4	0.0-1.0
55-64	203	0.0	0.0-0.0		249	0.8	0.0-1.9		452	0.4	0.0-0.9
65-74	154	0.6	0.0-1.9		210	0.5	0.0-1.4		364	0.6	0.0-1.4
25-74	1132	0.2	0.0-0.4		1343	0.1	0.0-0.3		2475	0.2	0.0-0.3
25-64	978	0.1	0.0-0.3		1133	0.1	0.0-0.3		2111	0.1	0.0-0.3

Seen an indigenous physician for diabetes in the last 12 months											
Age Group (years)	Men				Women				Both Sexes		
	n	%	95% CI		n	%	95% CI		<i>n</i>	%	<i>95% CI</i>
25-34	259	0.0	0.0-0.0		293	0.0	0.0-0.0		552	0.0	0.0-0.0
35-44	258	0.0	0.0-0.0		288	0.0	0.0-0.0		546	0.0	0.0-0.0
45-54	258	1.2	0.0-2.5		303	0.0	0.0-0.0		561	0.6	0.0-1.4
55-64	203	0.0	0.0-0.0		249	1.2	0.0-2.6		452	0.5	0.0-1.2
65-74	154	1.3	0.0-3.1		210	0.5	0.0-1.4		364	0.9	0.0-2.0
25-74	1132	0.3	0.0-0.5		1343	0.2	0.0-0.4		2475	0.2	0.1-0.4
25-64	978	0.2	0.0-0.5		1133	0.2	0.0-0.3		2111	0.2	0.0-0.3

Currently taking indigenous remedy for diabetes											
Age Group (years)	Men				Women			Both Sexes			
	n	%	95% CI		n	%	95% CI	<i>n</i>	%	<i>95% CI</i>	
25-34	259	0.0	0.0-0.0		293	0.0	0.0-0.0		552	0.0	0.0-0.0
35-44	258	0.0	0.0-0.0		288	0.0	0.0-0.0		546	0.0	0.0-0.0
45-54	258	0.8	0.0-1.8		303	0.0	0.0-0.0		561	0.4	0.0-1.0
55-64	203	0.0	0.0-0.0		249	1.2	0.0-2.6		452	0.5	0.0-1.2
65-74	154	1.3	0.0-3.1		210	0.5	0.0-1.4		364	0.9	0.0-2.0
25-74	1132	0.2	0.0-0.4		1343	0.2	0.0-0.4		2475	0.2	0.1-0.3
25-64	978	0.1	0.0-0.4		1133	0.2	0.0-0.3		2111	0.2	0.0-0.3

Physical Measurements

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

Instrument questions:

Height

Weight

Mean height (cm)						
Age Group (years)	Men				Women	
	n	Mean	95% CI		n	Mean 95% CI
25-34	255	163.8	163.0-164.6		291	154.6 153.8-155.5
35-44	260	164.2	163.4-165.0		287	154.5 153.7-155.2
45-54	255	162.9	162.1-163.7		302	153.2 152.5-153.9
55-64	206	162.3	161.3-163.3		247	152.5 151.7-153.3
65-74	153	162.5	161.3-163.7		211	150.8 149.9-151.8
25-74	1129	163.5	163.1-163.9		1338	153.8 153.4-154.2
25-64	976	163.6	163.1-164.0		1127	154.0 153.6-154.5

Mean weight (kg)						
Age Group (years)	Men				Women	
	n	Mean	95% CI		n	Mean 95% CI
25-34	256	65.4	64.2-66.5		281	59.8 58.5-61.0
35-44	259	70.4	68.2-72.5		285	63.3 61.9-64.8
45-54	255	70.7	69.4-72.0		301	63.2 61.9-64.4
55-64	205	67.9	66.1-69.7		243	60.6 59.0-62.1
65-74	153	65.6	63.6-67.6		210	55.8 54.4-57.2
25-74	1128	67.9	67.1-68.7		1320	61.1 60.4-61.8
25-64	975	68.1	67.2-68.9		1110	61.5 60.8-62.2

Mean BMI (kg/m ²)									
Age Group (years)	Men				Women			Both Sexes	
	n	Mean	95% CI		n	Mean	95% CI	n	Mean 95% CI
25-34	254	24.3	23.9-24.7		280	25.0	24.5-25.5	534	24.6 24.3-24.9
35-44	256	25.6	25.2-26.1		282	26.4	26.0-26.9	538	26.0 25.7-26.3
45-54	255	26.6	26.2-27.0		299	26.9	26.4-27.4	554	26.7 26.4-27.1
55-64	203	25.8	25.2-26.4		242	26.0	25.4-26.6	445	25.9 25.5-26.3
65-74	152	24.9	24.2-25.5		208	24.6	24.1-25.1	360	24.7 24.3-25.1
25-74	1120	25.3	25.1-25.5		1311	25.8	25.6-26.1	2431	25.5 25.3-25.7
25-64	968	25.3	25.1-25.6		1103	25.9	25.6-26.2	2071	25.6 25.4-25.8

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

Instrument questions:

Height

Weight

BMI classifications									
Age Group (years)	Men								
	n	% BMI <18.5	95% CI	% BMI 18.5-24.9	95% CI	% BMI 25.0-29.9	95% CI	% BMI ≥30.0	95% CI
25-34	254	1.6	0.0-3.1	58.3	52.2-64.3	36.2	30.3-42.1	3.9	1.5-6.3
35-44	256	0.8	0.0-1.9	44.5	38.4-50.6	44.1	38.1-50.2	10.5	6.8-14.3
45-54	255	0.4	0.0-1.2	31.4	25.7-37.1	52.2	46.0-58.3	16.1	11.6-20.6
55-64	203	4.4	1.6-7.3	36.9	30.3-43.6	43.4	36.5-50.2	15.3	10.3-20.2
65-74	152	5.3	1.7-8.8	46.1	38.1-54.0	38.2	30.4-45.9	10.5	5.6-15.4
25-74	1120	1.7	1.0-2.5	46.7	43.5-49.9	42.0	38.9-45.2	9.5	7.8-11.3
25-64	968	1.5	0.7-2.3	46.7	43.3-50.1	42.3	39.0-45.6	9.5	7.8-11.3

BMI classifications									
Age Group (years)	Women								
	n	% BMI <18.5	95% CI	% BMI 18.5-24.9	95% CI	% BMI 25.0-29.9	95% CI	% BMI ≥30.0	95% CI
25-34	280	3.6	1.4-5.7	48.9	43.1-54.8	38.2	32.5-43.9	9.3	5.9-12.7
35-44	282	0.4	0.0-1.0	41.5	35.7-47.2	39.7	34.0-45.4	18.4	13.9-23.0
45-54	299	0.7	0.0-1.6	37.5	32.0-42.9	37.8	32.3-43.3	24.1	19.2-28.9
55-64	242	5.0	2.2-7.7	38.8	32.7-45.0	38.8	32.7-45.0	17.4	12.6-22.1
65-74	208	2.9	0.6-5.2	54.3	47.6-61.1	33.2	26.8-39.6	9.6	5.6-13.6
25-74	1311	2.3	1.4-3.3	44.2	41.2-47.1	38.2	35.3-41.1	15.3	13.2-17.3
25-64	1103	2.3	1.3-3.3	43.3	40.2-46.5	38.6	35.6-41.7	15.7	13.5-17.9

BMI classifications									
Age Group (years)	Both Sexes								
	n	% BMI <18.5	95% CI	% BMI 18.5-24.9	95% CI	% BMI 25.0-29.9	95% CI	% BMI ≥30.0	95% CI
25-34	534	2.4	1.2-3.7	54.2	49.9-58.5	37.1	32.9-41.2	6.3	4.2-8.3
35-44	538	0.6	0.0-1.3	43.2	39.0-47.5	42.2	38.0-46.5	14.0	11.1-16.9
45-54	554	0.5	0.0-1.1	34.1	30.1-38.1	45.8	41.5-50.0	19.6	16.3-23.0
55-64	445	4.7	2.7-6.7	37.8	33.2-42.4	41.3	36.7-46.0	16.2	12.7-19.7
65-74	360	4.2	2.0-6.3	49.9	44.6-55.2	35.9	30.7-41.0	10.1	6.9-13.3
25-74	2431	2.0	1.4-2.6	45.6	43.4-47.8	40.4	38.2-42.5	12.1	10.7-13.4
25-64	2071	1.8	1.2-2.5	45.2	42.9-47.6	40.7	38.4-43.0	12.2	10.8-13.6

Waist circumference

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

Instrument question:

Waist circumference measurement

Waist circumference (cm)							
Age Group (years)	Men				Women		
	n	Mean	95% CI		n	Mean	95% CI
25-34	256	80.4	79.3-81.4		280	79.0	77.8-80.3
35-44	258	84.3	83.2-85.4		283	82.3	81.1-83.6
45-54	255	87.4	86.3-88.6		302	85.3	84.0-86.5
55-64	206	86.7	85.2-88.2		244	84.8	83.3-86.3
65-74	149	85.2	83.4-87.0		206	84.5	83.0-85.9
25-74	1124	83.7	83.1-84.3		1315	82.1	81.4-82.7
25-64	975	83.6	82.9-84.2		1109	81.9	81.2-82.6

Hip circumference

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

Instrument question:

Hip circumference measurement

Hip circumference (cm)							
Age Group (years)	Men				Women		
	n	Mean	95% CI		n	Mean	95% CI
25-34	255	91.3	90.3-92.2		280	92.4	91.3-93.4
35-44	260	94.0	93.0-95.0		285	95.7	94.5-96.9
45-54	255	94.8	93.7-95.8		303	97.5	96.3-98.6
55-64	206	93.6	92.5-94.8		245	95.2	93.5-96.8
65-74	154	92.5	90.9-94.0		210	93.6	92.1-95.2
25-74	1130	92.9	92.4-93.4		1323	94.6	94.0-95.2
25-64	976	93.0	92.4-93.5		1113	94.7	94.0-95.3

Waist / hip ratio

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

Instrument question:

Waist and hip circumference measurement

Mean waist / hip ratio							
Age Group (years)	Men				Women		
	n	Mean	95% CI		n	Mean	95% CI
25-34	254	0.9	0.9-0.9		279	0.9	0.8-0.9
35-44	258	0.9	0.9-0.9		283	0.9	0.9-0.9
45-54	255	0.9	0.9-0.9		302	0.9	0.9-0.9
55-64	206	0.9	0.9-0.9		244	0.9	0.9-0.9
65-74	149	0.9	0.9-0.9		206	0.9	0.9-0.9
25-74	1122	0.9	0.9-0.9		1314	0.9	0.9-0.9
25-64	973	0.9	0.9-0.9		1108	0.9	0.9-0.9

Blood pressure Description: Mean blood pressure among all respondents, excluding those currently on medication for raised blood pressure.

Instrument question:

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

Mean systolic blood pressure (mmHg)											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean	95% CI		n	Mean	95% CI		<i>n</i>	<i>Mean</i>	<i>95% CI</i>
25-34	252	122.0	120.3-123.6		289	116.0	114.6-117.5		541	119.3	118.2-120.5
35-44	249	124.3	122.4-126.1		272	118.6	116.7-120.4		521	121.8	120.5-123.1
45-54	234	133.1	130.5-135.7		277	126.1	123.9-128.4		511	130.0	128.2-131.8
55-64	193	134.4	131.3-137.4		217	129.9	127.2-132.5		410	132.4	130.3-134.5
65-74	139	140.0	135.6-144.5		181	143.0	138.9-147.0		320	141.4	138.3-144.4
25-74	1067	127.0	125.9-128.1		1236	121.7	120.7-122.7		2303	124.7	123.9-125.4
25-64	928	126.1	125.6-127.2		1055	120.2	119.2-121.2		1983	123.5	122.8-124.3

Mean diastolic blood pressure (mmHg)											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean	95% CI		n	Mean	95% CI		<i>n</i>	<i>Mean</i>	<i>95% CI</i>
25-34	252	76.9	75.5-78.3		289	76.7	75.5-77.8		541	76.8	75.9-77.7
35-44	249	79.8	78.5-81.1		272	78.5	77.2-79.8		521	79.2	78.3-80.1
45-54	234	85.5	83.8-87.1		277	81.2	80.0-82.4		511	83.6	82.5-84.7
55-64	193	83.1	81.2-84.9		217	80.8	79.3-82.3		410	82.1	80.9-83.3
65-74	139	82.0	79.9-84.2		181	82.7	80.7-84.6		320	82.3	80.9-83.8
25-74	1067	80.1	79.3-80.9		1236	78.8	78.1-79.4		2303	79.5	79.0-80.0
25-64	928	80.0	79.2-80.8		1055	78.5	77.8-79.2		1983	79.3	78.8-79.9

Raised blood pressure Description: Percentage of respondents with raised blood pressure and percentage on medication for raised blood pressure.

Instrument question:

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

SBP ≥140 and/or DBP ≥ 90 mmHg											
Age Group (years)	Men				Women				Both Sexes		
	n	%	95% CI		n	%	95% CI		<i>n</i>	%	<i>95% CI</i>
25-34	252	14.7	10.3-19.1		289	8.0	4.8-11.1		541	11.7	8.9-14.5
35-44	249	18.1	13.3-22.9		272	14.0	9.8-18.1		521	16.3	13.0-19.6
45-54	234	40.6	34.3-46.9		277	27.4	22.2-32.7		511	34.7	30.5-38.9
55-64	193	38.9	32.0-45.7		217	32.7	26.5-39.0		410	36.2	31.4-40.9

65-74	139	49.6	41.3-58.0	181	53.0	45.8-60.3	320	51.2	45.5-56.8
25-74	1067	24.8	22.2-27.5	1236	18.6	16.4-20.7	2303	22.1	20.3-23.8
25-64	928	23.2	20.4-25.9	1055	16.1	13.9-18.3	1983	20.1	18.2-21.9

SBP \geq 140 and/or DBP \geq 90 mmHg or currently on medication for raised blood pressure									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	257	16.3	11.8-20.9	291	8.6	5.4-11.8	548	12.9	10.0-15.9
35-44	259	21.2	16.3-26.2	287	18.5	14.0-23.0	546	20.0	16.6-23.5
45-54	255	45.5	39.4-51.6	304	33.9	28.6-39.2	559	40.3	36.1-44.4
55-64	206	42.7	36.0-49.5	248	41.1	35.0-47.3	454	42.0	37.4-46.6
65-74	154	54.5	46.7-62.4	210	59.5	52.9-66.2	364	56.8	51.6-62.1
25-74	1131	28.3	25.6-31.0	1340	23.2	20.9-25.4	2471	26.0	24.2-27.8
25-64	977	26.4	23.6-29.2	1130	20.3	18.0-22.7	2107	23.7	21.8-25.6

Currently on medication for raised blood pressure									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	257	1.9	0.3-3.6	291	0.7	0.0-1.6	548	1.4	0.4-2.4
35-44	259	3.9	1.5-6.2	287	5.2	2.7-7.8	546	4.5	2.7-6.2
45-54	255	8.2	4.9-11.6	304	8.9	5.7-12.1	559	8.5	6.2-10.9
55-64	206	6.3	3.0-9.6	248	12.5	8.4-16.6	454	9.1	6.5-11.7
65-74	154	9.7	5.1-14.4	210	13.8	9.1-18.5	364	11.6	8.3-14.9
25-74	1131	4.6	3.4-5.8	1340	5.7	4.5-6.8	2471	5.1	4.2-5.9
25-64	977	4.2	3.0-5.4	1130	9.0	7.8-10.2	2107	6.6	5.7-7.5

Raised blood pressure

Description: Percentage of respondents with raised blood pressure and percentage on medication for raised blood pressure.

Instrument question:

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

SBP \geq 160 and/or DBP \geq 100 mmHg									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	252	4.4	1.8-6.9	289	1.7	0.2-3.2	541	3.2	1.6-4.8
35-44	249	2.8	0.8-4.9	272	4.0	1.7-6.4	521	3.3	1.8-4.9
45-54	234	14.1	9.6-18.6	277	6.9	3.9-9.8	511	10.9	8.0-13.7
55-64	193	15.0	10.0-20.1	217	9.2	5.4-13.1	410	12.5	9.2-15.8
65-74	139	23.0	16.0-30.0	181	26.0	19.6-32.4	320	24.3	19.5-29.2
25-74	1067	8.0	6.4-9.5	1236	5.6	4.5-6.8	2303	6.9	5.9-8.0
25-64	928	6.9	5.3-8.5	1055	4.2	3.0-5.4	1983	5.7	4.7-6.8

SBP ≥ 160 and/or DBP ≥ 100 mmHg or currently on medication for raised blood pressure									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	257	6.2	3.3-9.2	291	2.4	0.6-4.2	548	4.5	2.7-6.4
35-44	259	6.6	3.5-9.6	287	9.1	5.7-12.4	546	7.7	5.4-9.9
45-54	255	21.2	16.2-26.2	304	15.1	11.1-19.2	559	18.5	15.1-21.8
55-64	206	20.4	14.9-25.9	248	20.6	15.5-25.6	454	20.5	16.7-24.2
65-74	154	30.5	23.2-37.8	210	36.2	29.7-42.7	364	33.1	28.2-38.1
25-74	1131	12.2	10.3-14.0	1340	11.0	9.4-12.6	2471	11.6	10.4-12.9
25-64	977	10.8	8.9-12.8	1130	9.0	7.4-10.6	2107	10.8	8.8-11.3

Heart rate Description: Mean heart rate among all respondents and percentage with a raised heart rate.

Instrument question:
Heart Rate measurement

Mean beats per minute									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	257	72.6	71.2-73.9	291	80.8	79.7-82.0	548	76.2	75.2-77.2
35-44	259	73.5	72.3-74.7	287	78.4	77.3-79.5	546	75.6	74.8-76.5
45-54	255	73.7	72.5-74.9	304	76.4	75.3-77.6	559	74.9	74.1-75.8
55-64	206	75.7	74.0-77.3	248	76.3	74.8-77.8	454	75.9	74.8-77.1
65-74	154	74.9	72.9-76.9	211	77.7	76.0-79.4	365	76.2	74.9-77.5
25-74	1131	73.5	72.8-74.2	1341	78.7	78.1-79.3	2472	75.8	75.3-76.3
25-64	977	73.4	72.7-74.2	1130	78.7	78.1-79.4	2107	75.8	75.3-76.3

Percentage with beats per minute over 100									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	257	2.3	0.5-4.2	291	2.7	0.9-4.6	548	2.5	1.2-3.8
35-44	259	1.2	0.0-2.5	287	2.4	0.7-4.2	546	1.7	0.6-2.8
45-54	255	0.4	0.0-1.2	304	2.3	0.6-4.0	559	1.3	0.4-2.1
55-64	206	4.4	1.6-7.2	248	4.4	1.9-7.0	454	4.4	2.5-6.3
65-74	154	3.2	0.4-6.0	211	5.7	2.6-8.8	365	4.4	2.3-6.5
25-74	1131	2.0	1.1-2.9	1341	3.0	2.0-4.0	2472	2.4	1.8-3.1
25-64	977	1.9	1.0-2.8	1130	2.8	1.8-3.8	2107	2.3	1.6-3.0

Biochemical Measurements

Mean fasting blood glucose

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

Instrument questions:

Are you currently receiving any of the following treatments for diabetes prescribed by a doctor or other health worker?

Insulin?

Oral drugs (medication) that you have taken in the last 2 weeks?

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

Blood glucose measurement

Mean fasting blood glucose (mmol/L)											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean	95% CI		n	Mean	95% CI		<i>n</i>	<i>Mean</i>	<i>95% CI</i>
25-34	178	5.7	5.5-5.9		188	5.8	5.6-6.0		366	5.7	5.6-5.9
35-44	189	5.9	5.7-6.2		184	5.9	5.8-5.9		373	5.9	5.7-6.1
45-54	170	6.1	5.9-6.3		205	6.2	5.9-6.5		375	6.1	6.0-6.3
55-64	139	6.1	5.9-6.3		181	6.1	5.9-6.2		320	6.1	5.9-6.2
65-74	106	6.1	5.9-6.4		139	6.3	5.9-6.7		245	6.2	6.0-6.4
25-74	782	5.9	5.8-6.0		897	6.0	5.9-6.1		1679	5.9	5.8-6.0
25-64	676	5.9	5.8-6.0		758	5.9	5.8-6.0		1434	5.9	5.8-6.0

Mean fasting blood glucose (mg/dl)											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean	95% CI		n	Mean	95% CI		<i>n</i>	<i>Mean</i>	<i>95% CI</i>
25-34	178	102.8	99.4-106.2		188	104.2	100.7-107.8		366	103.4	100.9-105.9
35-44	189	106.8	101.8-111.8		184	105.5	104.0-107.0		373	106.3	103.2-109.3
45-54	170	109.4	106.1-112.7		205	111.7	106.4-116.9		375	110.4	107.5-113.4
55-64	139	109.7	105.7-113.8		181	109.1	106.6-111.5		320	109.4	107.0-111.8
65-74	106	110.5	106.7-114.4		139	113.3	106.3-120.3		245	111.8	108.0-115.6
25-74	782	106.3	104.3-108.4		897	107.2	105.4-109.0		1679	106.7	105.3-108.1
25-64	676	106.0	103.8-108.2		758	106.7	104.9-108.5		1434	106.3	104.8-107.8

Mean post-glucose load glucose (mmol/L)											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean	95% CI		n	Mean	95% CI		<i>n</i>	<i>Mean</i>	<i>95% CI</i>
25-34	249	4.8	4.6-5.0		286	5.4	5.1-5.8		535	5.1	4.9-5.3
35-44	256	5.3	4.9-5.7		283	5.6	5.4-5.8		539	5.4	5.2-5.7
45-54	242	5.6	5.2-6.0		295	5.9	5.6-6.2		537	5.8	5.5-6.0
55-64	196	5.8	5.4-6.2		238	5.9	5.6-6.3		434	5.8	5.6-6.1
65-74	144	6.1	5.7-6.5		202	6.4	5.9-6.9		346	6.2	5.9-6.5
25-74	1087	5.3	5.1-5.4		1304	5.7	5.5-5.8		2391	5.5	5.3-5.6
25-64	943	5.2	5.0-5.4		1102	5.6	5.5-5.8		2045	5.4	5.3-5.5

Mean post-glucose load glucose (mg/dl)											
Age Group (years)	Men				Women			Both Sexes			
	n	Mean	95% CI		n	Mean	95% CI	<i>n</i>	<i>Mean</i>	<i>95% CI</i>	
25-34	249	86.4	82.1-90.7		286	98.1	92.5-103.7		535	91.6	88.1-95.1
35-44	256	96.0	88.6-103.4		283	100.8	97.2-104.4		539	98.1	93.6-102.6
45-54	242	101.1	94.3-107.9		295	106.7	101.6-111.8		537	103.7	99.3-108.0
55-64	196	103.8	96.5-111.0		238	106.7	100.0-113.5		434	105.1	100.1-110.1
65-74	144	109.4	101.9-116.8		202	115.1	106.7-123.4		346	112.0	106.4-117.6
25-74	1087	95.0	91.9-98.0		1304	102.5	99.9-105.2		2391	98.3	96.3-100.4
25-64	943	94.0	90.8-97.2		1102	101.6	98.8-104.4		2045	97.3	95.2-99.5

Raised blood glucose

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

Instrument questions:

Are you currently receiving any of the following treatments for diabetes prescribed by a doctor or other health worker?

Insulin?

Oral drugs (medication) that you have taken in the last 2 weeks?

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

Blood glucose measurement (fasting and post-glucose load)

Raised blood glucose or currently on medication for diabetes and/or diagnosed with diabetes*											
Age Group (years)	Men				Women				Both Sexes		
	n	%	95% CI		n	%	95% CI		<i>n</i>	%	<i>95% CI</i>
25-34	252	2.8	0.7-4.8		289	4.5	2.1-6.9		541	3.5	2.0-5.1
35-44	259	8.1	4.8-11.4		287	4.5	2.1-6.9		546	6.5	4.4-8.7
45-54	255	13.3	9.2-17.5		304	12.5	8.8-16.2		559	13.0	10.1-15.8
55-64	206	15.0	10.2-19.9		248	13.3	9.1-17.5		454	14.3	11.0-17.6
65-74	154	20.1	13.8-26.5		210	13.8	9.1-18.5		364	17.2	13.2-21.3
25-74	1126	8.6	7.1-10.2		1338	7.7	6.2-9.1		2464	8.2	7.1-9.3
25-64	972	7.8	6.2-9.4		1128	7.2	5.7-8.7		2100	7.5	6.4-8.6

Impaired Glucose Tolerance**											
Age Group (years)	Men				Women				Both Sexes		
	n	%	95% CI		n	%	95% CI		<i>n</i>	%	<i>95% CI</i>
25-34	252	2.4	0.5-4.3		289	2.4	0.6-4.2		541	2.4	1.1-3.7
35-44	259	1.9	0.3-3.6		287	7.0	4.0-9.9		546	4.1	2.5-5.7
45-54	255	3.9	1.5-6.3		304	4.3	2.0-6.6		559	4.1	2.4-5.7
55-64	206	5.3	2.3-8.4		248	6.5	3.4-9.5		454	5.8	3.7-8.0
65-74	154	9.1	4.5-13.6		210	8.6	4.8-12.4		364	8.9	5.8-11.9
25-74	1126	3.3	2.3-4.4		1338	4.9	3.7-6.0		2464	4.0	3.2-4.8
25-64	972	2.9	1.8-4.0		1128	4.6	3.3-5.8		2100	3.6	2.8-4.5

Impaired Fasting Glycaemia***											
Age Group (years)	Men				Women				Both Sexes		
	n	%	95% CI		n	%	95% CI		<i>n</i>	%	<i>95% CI</i>
25-34	252	13.9	9.6-18.2		289	19.0	14.5-23.6		541	16.2	13.0-19.3
35-44	259	19.3	14.5-24.1		287	24.4	19.4-29.4		546	21.5	18.0-25.0
45-54	255	30.6	24.9-36.2		304	28.0	22.9-33.0		559	29.4	25.6-33.3
55-64	206	32.5	26.1-38.9		248	23.0	17.7-28.2		454	28.2	24.0-32.5
65-74	154	20.1	13.8-26.5		210	19.5	14.2-24.9		364	19.9	15.6-24.1
25-74	1126	20.8	18.3-23.3		1338	22.5	20.1-24.9		2464	21.6	19.8-23.3
25-64	972	20.9	18.3-23.5		1128	22.7	20.2-25.3		2100	21.7	19.8-23.5

Currently on medication for diabetes											
Age Group (years)	Men				Women				Both Sexes		
	n	%	95% CI		n	%	95% CI		<i>n</i>	%	<i>95% CI</i>
25-34	252	0.8	0.0-1.9		289	0.7	0.0-1.6		541	0.7	0.0-1.5
35-44	259	0.8	0.0-1.8		287	1.0	0.0-2.2		546	0.9	0.1-1.7
45-54	255	5.1	2.4-7.8		304	2.3	0.6-4.0		559	3.8	2.2-5.5
55-64	206	4.9	1.9-7.8		248	4.0	1.6-6.5		454	4.5	2.5-6.4
65-74	154	6.5	2.6-10.4		210	3.8	1.2-6.4		364	5.3	2.8-7.7
25-74	1126	2.4	1.6-3.2		1338	1.7	1.0-2.4		2464	2.1	1.5-2.6
25-64	972	2.1	1.3-2.9		1128	1.5	0.8-2.2		2100	1.8	1.3-2.4

Total cholesterol Description: Mean total cholesterol among all respondents.

Instrument question:

Total cholesterol measurement

Mean total cholesterol (mmol/L)									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	<i>n</i>	<i>Mean</i>	<i>95% CI</i>
25-34	254	4.8	4.6-4.9	289	4.5	4.4-4.6	543	4.6	4.6-4.7
35-44	259	4.9	4.8-5.1	286	4.7	4.6-4.8	545	4.8	4.8-4.9
45-54	253	4.9	4.8-5.1	302	5.0	4.9-5.2	555	5.0	4.9-5.1
55-64	206	5.0	4.8-5.1	248	5.1	5.0-5.3	454	5.0	5.0-5.1
65-74	154	4.7	4.5-4.8	210	5.1	5.0-5.3	364	4.9	4.8-5.0
25-74	1126	4.9	4.8-4.9	1335	4.8	4.7-4.8	2461	4.8	4.8-4.9
25-64	972	4.9	4.8-4.9	1125	4.8	4.7-4.8	2097	4.8	4.8-4.9

Mean total cholesterol (mg/dl)										
Age Group (years)	Men				Women			Both Sexes		
	n	Mean	95% CI		n	Mean	95% CI	<i>n</i>	<i>Mean</i>	<i>95% CI</i>
25-34	254	184.1	179.0-189.3		289	174.2	169.6-178.9	543	179.8	176.2-183.3
35-44	259	191.3	186.3-196.3		286	182.3	178.6-186.0	545	187.4	184.1-190.7
45-54	253	191.1	186.3-195.8		302	195.0	190.4-199.5	555	192.8	189.5-196.1
55-64	206	191.9	186.7-197.2		248	199.0	194.2-203.9	454	195.1	191.5-198.8
65-74	154	180.8	175.5-186.0		210	198.0	192.4-203.5	364	188.7	184.8-192.6
25-74	1126	187.9	185.3-190.5		1335	184.7	182.3-187.0	2461	186.5	184.7-188.3
25-64	972	188.4	185.7-191.2		1125	183.6	181.2-186.1	2097	186.3	184.4-188.2

Raised total cholesterol Description: Percentage of respondents with raised total cholesterol.

Instrument question:
Total cholesterol measurement

Total cholesterol ≥ 5.0 mmol/L or ≥ 190 mg/dl										
Age Group (years)	Men				Women			Both Sexes		
	n	%	95% CI		n	%	95% CI	<i>n</i>	%	<i>95% CI</i>
25-34	254	42.1	36.1-48.2		289	30.8	25.5-36.1	543	37.1	33.0-41.3
35-44	259	46.3	40.3-52.4		286	38.8	33.2-44.5	545	43.1	38.8-47.3
45-54	253	52.2	46.0-58.3		302	55.6	50.0-61.2	555	53.7	49.5-58.0
55-64	206	48.5	41.7-55.4		248	57.7	51.5-63.8	454	52.7	48.0-57.3
65-74	154	42.2	34.4-50.0		210	58.6	51.9-65.2	364	49.8	44.5-55.0
25-74	1126	45.7	42.6-48.9		1335	42.5	39.6-45.4	2461	44.3	42.1-46.5
25-64	972	46.0	42.6-49.3		1125	41.2	38.2-44.3	2097	43.9	41.6-46.2

Total cholesterol ≥ 6.2 mmol/L or ≥ 240 mg/dl											
Age Group (years)	Men				Women			Both Sexes			
	n	%	95% CI		n	%	95% CI	<i>n</i>	%	<i>95% CI</i>	
25-34	254	11.0	7.2-14.9		289	5.2	2.6-7.7		543	8.5	6.0-10.9
35-44	259	11.6	7.7-15.5		286	3.8	1.6-6.1		545	8.2	5.8-10.6
45-54	253	9.1	5.5-12.6		302	11.3	7.7-14.8		555	10.1	7.5-12.6
55-64	206	13.1	8.5-17.7		248	13.3	9.1-17.5		454	13.2	10.0-16.4
65-74	154	1.9	0.0-4.1		210	14.8	10.0-19.6		364	7.9	5.3-10.5
25-74	1126	10.5	8.5-12.4		1335	7.6	6.2-9.0		2461	9.2	7.9-10.5
25-64	972	11.1	9.0-13.2		1125	7.0	5.5-8.5		2097	9.3	7.9-10.6

High density lipoprotein (HDL) Description: Mean HDL among all respondents and percentage of respondents with low HDL.
Instrument question:
HDL cholesterol measurement

HDL (mmol/L)									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	<i>n</i>	<i>Mean</i>	<i>95% CI</i>
25-34	235	1.3	1.3-1.4	258	1.3	1.3-1.4	493	1.3	1.3-1.3
35-44	233	1.3	1.3-1.4	259	1.3	1.3-1.4	492	1.3	1.3-1.4
45-54	237	1.3	1.2-1.3	289	1.3	1.3-1.4	526	1.3	1.3-1.3
55-64	197	1.4	1.3-1.4	235	1.4	1.3-1.4	432	1.4	1.3-1.4
65-74	147	1.3	1.3-1.4	199	1.4	1.4-1.5	346	1.4	1.3-1.4
25-74	1049	1.3	1.3-1.3	1240	1.3	1.3-1.4	2289	1.3	1.3-1.3
25-64	902	1.3	1.3-1.3	1041	1.3	1.3-1.3	1943	1.3	1.3-1.3

HDL (mg/dl)									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	<i>n</i>	<i>Mean</i>	<i>95% CI</i>
25-34	235	50.6	48.6-52.7	258	50.9	49.5-52.3	493	50.7	49.4-52.1
35-44	233	51.1	48.8-53.3	259	50.8	49.3-52.2	492	50.9	49.5-52.4
45-54	237	49.4	47.9-51.0	289	51.7	50.4-53.1	526	50.5	49.4-51.5
55-64	197	52.2	49.6-54.8	235	52.8	51.0-54.6	432	52.5	50.8-54.1
65-74	147	51.7	49.7-53.8	199	54.7	52.8-56.7	346	53.1	51.7-54.6
25-74	1049	50.8	49.7-51.9	1240	51.5	50.8-52.3	2289	51.1	50.4-51.8
25-64	902	50.7	49.6-51.9	1041	51.3	50.5-52.0	1943	51.0	50.2-51.7

Percentage of those with HDL <1.03mmol/L or <40 mg/dl			
Age Group (years)	Men		
	n	%	95% CI
25-34	235	15.3	10.7-19.9
35-44	233	23.6	18.2-29.1
45-54	237	18.1	13.2-23.1
55-64	197	17.8	12.4-23.1
65-74	147	17.0	10.9-23.1
25-74	1049	18.4	15.8-20.9
25-64	902	18.5	15.8-21.2

Percentage of those with HDL <1.29mmol/L or <50 mg/dl			
Age Group (years)	Women		
	n	%	95% CI
25-34	258	49.2	43.1-55.3
35-44	259	53.3	47.2-59.4
45-54	289	44.6	38.9-50.4
55-64	235	40.9	34.6-47.1

65-74	199	31.2	24.7-37.6
25-74	1240	47.0	44.0-50.1
25-64	1041	48.3	45.1-51.6

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

Instrument question:
Triglyceride measurement

Triglycerides (mmol/L)											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean	95% CI		n	Mean	95% CI		<i>n</i>	<i>Mean</i>	<i>95% CI</i>
25-34	181	1.8	1.6-2.1		191	1.3	1.1-1.4		372	1.6	1.4-1.8
35-44	191	1.8	1.7-2.0		184	1.4	1.3-1.5		375	1.7	1.5-1.8
45-54	178	1.8	1.6-2.0		210	1.5	1.4-1.6		388	1.7	1.6-1.8
55-64	146	1.6	1.4-1.8		189	1.5	1.3-1.6		335	1.5	1.4-1.7
65-74	112	1.2	1.1-1.3		146	1.4	1.2-1.6		258	1.3	1.2-1.4
25-74	808	1.8	1.7-1.9		920	1.4	1.3-1.5		1728	1.6	1.5-1.7
25-64	696	1.8	1.7-1.9		774	1.4	1.3-1.5		1470	1.6	1.5-1.7

Triglycerides (mg/dl)											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean	95% CI		n	Mean	95% CI		<i>n</i>	<i>Mean</i>	<i>95% CI</i>
25-34	181	162.0	140.2-183.7		191	111.8	96.2-127.5		372	140.8	126.4-155.2
35-44	191	163.1	148.9-177.4		184	121.4	111.0-131.8		375	146.4	136.7-156.1
45-54	178	162.2	145.7-178.7		210	132.7	121.0-144.4		388	149.0	138.4-159.6
55-64	146	141.5	123.0-160.0		189	129.6	119.5-139.7		335	135.9	125.0-146.8
65-74	112	103.7	93.7-113.7		146	128.0	110.2-145.8		258	114.6	104.8-124.5
25-74	808	156.0	146.2-165.7		920	121.6	114.7-128.4		1728	141.2	134.8-147.6
25-64	696	159.8	149.4-170.2		774	121.0	113.7-128.3		1470	143.3	136.4-150.1

Percentage of those with Triglycerides ≥ 1.7 mmol/L or ≥ 150 mg/dl												
Age Group (years)	Men				Women				Both Sexes			
	n	%	95% CI		n	%	95% CI		<i>n</i>	%	<i>95% CI</i>	
	25-34	181	34.3	27.3-41.2		191	14.1	9.2-19.1		372	25.8	21.1-30.4
	35-44	191	44.0	36.9-51.0		184	23.9	17.7-30.1		375	35.9	30.9-40.9
	45-54	178	43.8	36.5-51.1		210	27.1	21.1-33.2		388	36.4	31.4-41.3
	55-64	146	31.5	24.0-39.1		189	32.8	26.1-39.5		335	32.1	27.0-37.2
	65-74	112	15.2	8.5-21.8		146	19.9	13.4-26.3		258	17.3	12.6-22.0
	25-74	808	36.9	33.3-40.5		920	21.8	19.0-24.7		1728	30.4	28.0-32.9
	25-64	696	38.5	34.7-42.4		774	22.0	19.0-25.0		1470	31.5	28.9-34.0

Percentage of those with Triglycerides ≥ 2.0 mmol/L or ≥ 180 mg/dl											
Age Group (years)	Men				Women				Both Sexes		
	n	%	95% CI		n	%	95% CI		<i>n</i>	%	<i>95% CI</i>
25-34	181	25.4	19.1-31.8		191	9.4	5.3-13.6		372	18.7	14.5-22.8
35-44	191	33.5	26.8-40.2		184	15.8	10.5-21.0		375	26.4	21.8-31.0
45-54	178	31.5	24.6-38.3		210	18.6	13.3-23.8		388	25.7	21.2-30.2
55-64	146	21.9	15.2-28.6		189	16.9	11.6-22.3		335	19.6	15.2-23.9
65-74	112	10.7	5.0-16.5		146	13.7	8.1-19.3		258	12.1	8.0-16.1
25-74	808	27.2	23.9-30.6		920	14.0	11.6-16.3		1728	21.5	19.3-23.7
25-64	696	28.5	24.9-32.0		774	14.0	11.5-16.5		1470	22.3	19.9-24.6

Raised Risk

Raised risk Description: Percentage of respondents with 0, 1-2, or 3-5 of the following risk factors:
 current daily smoker
 less than 5 servings of fruits & vegetables per day
 low level of activity (<600 MET -minutes)
 overweight or obese (BMI ≥ 25 kg/m²)
 raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP).

Instrument question: combined from Step 1 and Step 2

Raised Risk							
Age Group (years)	Men						
	n	% with 0 risk factors	95% CI	% with 1-2 risk factors	95% CI	% with 3-5 risk factors	95% CI
25-44	435	9.2	6.4-12.1	65.3	60.7-69.8	25.5	21.3-29.7
45-74	533	2.7	1.3-4.0	54.1	49.8-58.4	43.3	39.0-47.6
25-74	968	6.9	5.0-8.7	61.2	57.9-64.5	31.9	28.8-35.0

Raised Risk							
Age Group (years)	Women						
	n	% with 0 risk factors	95% CI	% with 1-2 risk factors	95% CI	% with 3-5 risk factors	95% CI
25-44	484	6.4	4.2-8.7	62.0	57.7-66.4	31.5	27.4-35.7
45-74	660	2.9	1.6-4.2	47.4	43.5-51.3	49.7	45.8-53.6
25-74	1144	5.1	3.6-6.6	56.5	53.4-59.6	38.4	35.4-41.4

Raised Risk							
Age Group (years)	Both Sexes						
	n	% with 0 risk factors	95% CI	% with 1-2 risk factors	95% CI	% with 3-5 risk factors	95% CI
25-44	919	8.0	6.1-9.9	63.9	60.7-67.1	28.1	25.2-31.1
45-74	1193	2.8	1.8-3.7	51.0	48.1-54.0	46.2	43.3-49.1
25-74	2112	6.1	4.8-7.3	59.1	56.8-61.4	34.8	32.6-37.0

Raised Risk							
Age Group (years)	Men						
	n	% with 0 risk factors	95% CI	% with 1-2 risk factors	95% CI	% with 3-5 risk factors	95% CI
25-44	435	9.2	6.4-12.1	65.3	60.7-69.8	25.5	21.3-29.7
45-64	398	2.8	1.1-4.4	55.7	50.7-60.6	41.6	36.7-46.5
25-64	833	7.2	5.2-9.2	62.3	58.8-65.8	30.5	27.3-33.8

Raised Risk							
Age Group (years)	Women						
	n	% with 0 risk factors	95% CI	% with 1-2 risk factors	95% CI	% with 3-5 risk factors	95% CI
25-44	484	6.4	4.2-8.7	62.0	57.7-66.4	31.5	27.4-35.7
45-64	480	2.8	1.3-4.3	49.7	45.2-54.2	47.5	43.0-52.0
25-64	964	5.2	3.6-6.8	58.0	54.7-61.3	36.8	33.6-40.0

Raised Risk							
Age Group (years)	Both Sexes						
	n	% with 0 risk factors	95% CI	% with 1-2 risk factors	95% CI	% with 3-5 risk factors	95% CI
25-44	919	8.0	6.1-9.9	63.9	60.7-67.1	28.1	25.1-31.1
45-64	878	2.8	1.7-3.9	53.0	49.6-56.3	44.3	40.9-47.6
25-64	1797	6.3	5.0-7.7	60.4	57.9-62.8	33.3	31.0-35.6

