

A quantitative analysis of the influence of a household's income, access to food and education level on the prevalence of diabetes in adults:

A secondary analysis of data from the South African General Household Survey of 2014.

by

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## DECLARATION

I, Mandy van Harmelen, hereby declare that this dissertation for the Master's Degree in Social Science, at the University of KwaZulu-Natal has not previously been submitted for a degree at this or any other university, and it is my work in design and execution, and that all the sources I have used or quoted have been indicated and duly acknowledged by means of complete references.



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## **DEDICATION**

This thesis is dedicated to my parents.  
I am so grateful to you both, for everything.

## ACRONYMS AND ABBREVIATIONS

|                  |   |
|------------------|---|
| AMA              | American Medical Association                            |
| ART              | Antiretroviral Therapy                                  |
| BMI              | Body mass index   |
| CI               | Confidence intervals                                    |
| DALYs            | Disability-adjusted life years                          |
| FAO              | Food and Agriculture Organization of the United Nations |
| FBDG             | South African food-based dietary guidelines             |
| GHS              | General Household Survey                                |
| HIV              | Human Immunodeficiency Virus                            |
| HFIAS            | Household Food Insecurity Access Scale                  |
| IDF              | International Diabetes Federation                       |
| NHI              | National Health Insurance                               |
| NCD              | Non-communicable disease                                |
| ROC              | Receiver Operating Characteristic                       |
| SADHS            | South Africa Demographic and Health survey              |
| SD               | Standard deviation                                      |
| SES              | Socio-economic status                                   |
| Stats SA         | Statistics South Africa                                 |
| SSB              | Sugar-sweetened beverages                               |
| TB               | Tuberculosis  |
| Type I diabetes  | Type I diabetes mellitus                                |
| Type II diabetes | Type II diabetes mellitus                               |
| UK               | United Kingdom  |
| USA              | United States of America                                |
| WHO              | World Health Organization                               |

## ABSTRACT

As *diabetes mellitus* is becoming a burgeoning epidemic in South Africa, preventative measures are required to stop its prevalence in adults. Hence, the aim of this study is to explore the South African General Household Survey data to try and understand the influence of a household's average per capita income, access to food and the head of the household's average educational level on the prevalence of diabetes in adults. It specifically looks at the data from a household level and not an individual level and uses literature to support and give meaning to the results. Furthermore, this study used bivariate analysis to determine if there is a difference between adult residents who have diabetes and adult residents who do not have diabetes. In addition to this, a multiple logistic regression was conducted to explain any significant effect of the three key variables under study. Results indicate that there is a difference in all three variables between households with adult residents with diabetes and households without adult residents with diabetes. Furthermore, only the head of the household's average education level had a significant effect on the prevalence of diabetes. These findings suggest that there is some influence on the prevalence of diabetes for individuals who have higher levels of education. This entry level study tried to make sense of these findings in terms of literature to inform future and more direct in-depth research which is urgently required to understand and combat the increasing prevalence of diabetes in South Africa. Significantly, the conclusion of this study suggests that the General Household Survey incorporates both *type I diabetes mellitus* and *type II diabetes mellitus* in their questionnaire, as these are unique diseases with their own risk factors and which require different preventative measures.

**Key terms:** General Household Survey, South Africa, diabetes, income, access to food, education level, access to services

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## CHAPTER ONE: LITERATURE REVIEW

### 1.1 Introduction

The International Diabetes Federation (IDF) estimated in 2014 that there were 22 million patients living with diabetes in Africa and that the majority of patients, around 62%, were undiagnosed (Pillay, Lutge, & Aldous, 2016). In South Africa, *diabetes mellitus* is responsible for 58 deaths daily and is the fifth highest cause of natural deaths (Pillay et al., 2016). Furthermore, the IDF estimates that the prevalence of diabetes in adults within South Africa is approximately 5.4% with 1,826.00 cases of diabetes across the country (IDF diabetes atlas, 2017). As *diabetes mellitus* is becoming a burgeoning epidemic in South Africa, preventative measures are needed to stop its prevalence in adults. This paper explores the influence of a household's income, access to food and the head of the household's educational level on the prevalence of diabetes in adults. It is divided into five chapters. Chapter One looks at related literature; Chapter Two describes the methodology used and how the data was analysed in this study; Chapter Three looks at the results of the data analysed; Chapter Four discusses what the results mean within a South African context; and Chapter Five concludes and gives some recommendations for further research.

### 1.2 Diabetes

*Diabetes mellitus* is a non-communicable disease (NCD) which is multifactorial in nature and can result in significant long-term complications (Pillay et al., 2016). It requires long-term care as it includes significant changes in both the physical and psychosocial components of each patient (Kosti & Kanakari, 2012). According to the American Diabetes Association (2008), *diabetes mellitus* is a metabolic disease which occurs due to hyperglycaemia (abnormally high blood sugar levels in the blood) resulting from challenges in the body's insulin secretion and insulin action processes, or in some cases, both. The hyperglycaemia is accompanied by enduring damage, dysfunction and failure of different organs, such as the eyes, kidneys, nerves, heart and blood vessels (American Diabetes Association, 2008). Developing countries, such as South Africa, need to prevent and control this disease in order to curb its impact on their health care systems that are already under strain (Pillay et al., 2016).

There are two types of diabetes, *type I diabetes mellitus* and *type II diabetes mellitus*. They are described as two separate conditions. In *type I diabetes mellitus*, the immune system attacks the insulin producing beta cells in the pancreas which results in the pancreas being unable to make

insulin (Marran & Segal, 2009). Symptoms of this form of the disease are caused by elevated blood sugar levels. These symptoms include extreme thirst, frequent urination, sluggishness, fatigue and drowsiness, vision impairment, the onset of quick weight loss and an increased appetite (Henderson, Allen, Deary, & Frier, 2003). They tend to go away once the blood sugar levels are stabilised through treatment. *Type I diabetes mellitus* may develop due to different genetic predispositions and unknown environmental factors (Knip et al., 2005). The incidence of this form of diabetes has increased significantly over the last two decades (Bluestone, Herold, & Eisenbarth, 2010). In this study, type I diabetes refers to *type I diabetes mellitus*.

*Type II diabetes mellitus* is an emerging clinical challenge which affects adults of all ethnicities, although individuals from disadvantaged groups tend to suffer disproportionately (Reinehr, 2013; World Health Organization (WHO), 2016; Hannon, Rao, & Arslanian, 2005). Research indicates that obesity is the main driver of this disease (Manyema et al., 2014). *Type II diabetes mellitus* is a chronic, metabolic disease which is identified by high levels of blood glucose. It usually occurs when one's body begins to resist the effect of insulin or does not make enough insulin (WHO, 2016). Over time, this disease may lead to serious damage to an individual's heart, blood vessels, eyes, kidneys and nerves. Individuals who develop the disease early, tend to have a higher risk of cardiovascular and kidney disease than those who develop the disease later in life (Marran & Segal, 2009). In addition, adults with *type II diabetes mellitus* tend to be more prone to hypertension and microalbuminuria, which is an early sign of vascular damage, than adults affected by *type I diabetes mellitus*. This health challenge will significantly compromise the future of patients with *type II diabetes mellitus* (Marran & Segal, 2009). In this study, type II diabetes refers to *type II diabetes mellitus*. In addition, this study mainly refers to type II diabetes as it represents about 90–95% of all diabetic cases (Joslin Diabetes Center, 2018).

Historically, mostly children were diagnosed with type I diabetes while type II diabetes was thought to occur mainly in adults (Somers, Rusford, Hassan & Erasmus, 2006). However, due to the rapid increase of overweight and obese children, this situation has changed (Somers et al., 2006; Hannon et al., 2005). Adults living with type II diabetes are increasingly prone to complications of the disease, suggesting that there are far-reaching health consequences for the individual (Reinehr, 2013; Seligman, Jacobs, López, Tschann & Fernandez, 2012). Such health consequences, which are common in adults with type II diabetes, include dyslipidaemia (higher levels of cholesterol) and sleep apnoea (Marran & Segal, 2009). Furthermore, not only does the disease affect the well-being of the individual, but the well-being of their family members too,

at an interpersonal level (WHO, 2016). Unfortunately, as there is currently no representative data for South Africa, it is likely that the majority of affected individuals are undiagnosed or possibly misdiagnosed with having type I diabetes (Marran & Segal, 2009). Type II diabetes is a particular concern as many of these diabetic patients only ask for help when they show symptoms of other metabolic diseases, such as hypertension, high blood pressure and high cholesterol; or when they develop complications of type II diabetes which alert them to a potential problem. This puts an added burden on the health care system as approximately 80% of type II diabetes cases could have been prevented by following a healthy eating plan and regular exercise (Ottermann, 2017). The main risks of developing type II diabetes are obesity and lack of exercise.

A further concern as to why preventing diabetes is so important, is that recent research indicates a close association between Tuberculosis (TB) and Human Immunodeficiency Virus (HIV). Based on evidence, TB may induce glucose intolerance and worsen glycaemic control in people with diabetes. Therefore, the likelihood that a person with TB will die or relapse is significantly higher if the person also has diabetes (WHO, 2011). Furthermore, Antiretroviral Therapy (ART), used for the treatment of HIV/AIDS, may also increase the risk of metabolic syndrome and therefore predisposes an individual to type II diabetes (Sekar & Mythreyee, 2012).

The escalation in diabetes rates is driven mostly by economic growth, as well as lifestyle changes. These have both been closely linked to the increase in obesity. In South Africa, the prevalence of diabetes in adults almost doubled from 5.5% to 9% between the years 2000 and 2009. Furthermore, in 2009, 73 000 disability-adjusted life years (DALYs) were due to type II diabetes and its comorbid health challenges; 2 000 were due to diabetes-related amputations; and 8 000 DALYs were due to cases of diabetes-related blindness (Manyema et al., 2014).

### **1.3 Obesity**

Obesity and physical inactivity are common risk factors for type II diabetes (Sullivan, Morrato, Ghushchyan, Wyatt & Hill, 2005; Hannon et al., 2005). Therefore, in order to fully appreciate the complex nature of diabetes and its development, one has to have a firm understanding of obesity. The following part of this literature review looks closely at the intricate relationship between obesity and diabetes.

Eighty-five percent of type II diabetes patients tend to be overweight or obese (Marran & Segal, 2009). Hence, with the global obesity epidemic, the American Medical Association (AMA) has declared obesity a disease (Katz, 2014). However, there is much debate regarding this decision

as some experts do not believe that obesity plays a major factor in the prevailing burden of chronic disease, such as diabetes (Katz, 2014). This is mainly due to the reality that chronic diseases can develop in the absence of obesity, once again reiterating the complex relationship between lifestyle, diet and the medicalisation of obesity in relation to diabetes. Regardless of the debate of whether or not obesity is in fact a disease, overweight and obesity are associated with serious psychological and social problems which seem to occur throughout an individual's lifetime and remain high risk factors for the development of diabetes type II (Hruby & Frank, 2015). Furthermore, if a child is overweight, they are likely to become overweight adults, leading to further associated comorbidities (Hannon et al., 2005).

Research also indicates that the rate of childhood obesity has increased greatly over the last three decades with the consequence of the type II diabetes epidemic (Han, Lawlor, & Kimm, 2010). Having a body mass index (BMI) higher than 25, puts a person in the overweight category (Kimokoti & Millen, 2011), while having a BMI of over 30, makes the co-morbidity risks of obesity much higher (Katz, 2014). As mentioned, co-morbidities of obesity include type II diabetes (Kimokoti & Millen, 2011). Interestingly, if a child is overweight at the age of four years, they will have a 20% likelihood of being overweight as an adult. Therefore, it is imperative to prevent obesity from a young age in order to reduce the prevalence of type II diabetes (DeMattia & Denney, 2008).

Research further indicates that it is not only genetics and ethnicity, but also an individual's lifestyle that may contribute to the development of this disease. Therefore, the social and environmental contexts at community levels have gained increased importance as being significant factors to consider when understanding how and why individuals develop diabetes (Whittemore, Melkus & Grey, 2004). This is relevant to this study as it offers a rationale behind why it is important to examine income, access to food and education when investigating the growth in the prevalence of type II diabetes in adults.

Reinehr (2013) also acknowledges in his research that obesity is currently the most frequently encountered health challenge facing individuals in developing countries. Significantly, the number of overweight or obese adults in Africa has doubled since 1990, causing great concern (De Onis, Blössner & Borghi 2010). South Africa, which is a developing country, is considered to be the nation at highest risk of developing obesity in sub-Saharan Africa (Boutayeb & Boutayeb, 2005). Furthermore, it is estimated that obesity-related disorders may be the cause of seven out of every ten deaths by 2020 (Boutayeb & Boutayeb, 2005). Therefore, preventing

individuals from becoming overweight and obese are the main vehicles for reducing diabetes, especially type II diabetes.

The Global Action Plan for the Prevention and Control of NCDs 2013-2020 offers policy preferences in order to reduce modifiable NCD factors, which should systematically reduce the occurrence of type II diabetes. These policies include taxes on foods and beverages, and limitations on the marketing of unhealthy foods (WHO, 2016). South Africa has followed suit with the Department of Health in 2015 committing to prevent and decrease the prevalence of obesity by 10% by 2020 (South African Department of Health, 2015). One of the governmental policies that has been put in place to accomplish this target, is the introduction of the 20% sugar-sweetened beverages (SSB) tax. This tax applies to all sugary drinks in South Africa. Manyema et al. (2014) predicted that this tax would decrease obesity by 3.8% in adult males and by 2.4% in adult females. Since children are the main consumers of SSBs, they will most likely also benefit from this policy (Manyema et al., 2014). It is therefore important to fully understand the prevalence levels of diabetes before this policy was implemented, in order to be able to compare if the policy is having any real effects on obesity, and thus the current and future prevalence of diabetes in adults. Therefore, looking at the General Household Survey (GHS) data of 2014 offers a good foundation to begin this study and further research can compare this study with more recent GHS data to look for a pattern of influence and to examine if intervention strategies put in place at governmental levels are functioning correctly and are decreasing the prevalence of NCDs.

Research further suggests that interventions may need to take place at multiple levels: there needs to be individual behaviour change, as well as interventions at interpersonal levels such as at schools, in homes and in workplaces (McLeroy, Bibeau, Steckler, & Glanz, 1988, as cited in Whittemore et al., 2004). There should also be sector changes within agriculture, food services, education, transportation and urban planning (WHO, 2009). The Diabetes Prevention Research Group (2002) supported the notion that the disease can be prevented and treated in high risk adults if an intensive, personalised intervention is introduced at the individual level. However, this intervention, which is necessary, is no longer adequate in fighting the disease (Whittemore et al., 2004). Changing an individual's lifestyle is becoming increasingly difficult to maintain due to current social trends. These trends include uptake of modern technology which promotes a sedentary lifestyle and the easy accessibility of fast food options which are a cost-effective option for poorer households, but encourage unhealthy overeating and

malnutrition. These have both contributed to the current epidemic of obesity (Whittemore et al., 2004).

Research has further indicated that programmes which appear to be successful in decreasing obesity, thus preventing the development of type II diabetes, include public health campaigns and technical assistance at the community level (DeMattia & Denney, 2008). Additional research has shown that successful programmes may also include screening of family members to determine their readiness for change, psycho-education concerning the complications linked to obesity, such as type II diabetes, and the importance of family involvement in the treatment (Hannon et al., 2005). Furthermore, long term goals include physical well-being by achieving and maintaining a healthy body weight and fitness level and not smoking (Hannon et al., 2005). Findings from Hainer, Toplak and Stich (2009) mentioned that there is a 'fatness versus fitness' debate which suggests that an individual can have a high BMI but still be fit and they are then less likely to develop diabetes. This illustrates the importance of physical exercise in preventing diabetes. In addition, ethnicity, a family's socio-economic status (SES), work demands, school lunch programmes, school physical education programmes, neighbourhood safety, accessibility to recreational facilities and access to convenience foods and restaurants, are possible drivers that may impact on an adult's weight and these should therefore be taken into consideration as factors contributing to the diabetes epidemic (DeMattia & Denney, 2008).

Some research has suggested that the most promising interventions seem to be targeted at children to prevent the onset of diabetes. This form of intervention involves both families and schools. However, Hannon et al. (2005) critiqued these programmes explaining that although they have proven effective in increasing the knowledge of what a healthy lifestyle is, they have not necessarily had an impact on the obesity epidemic. Other research has indicated that there are public health advocates who are wary of the lack of focus on the social and environmental factors in these prevention programmes which are supposedly aimed at changing behaviour and promoting health. This demonstrates that not all programmes are effectively planned and implemented and do not involve all the levels of influence (Whittemore et al., 2004). The current study tries to add to the body of research available in South Africa to overcome this limitation, keeping in mind the different levels of influence.

Interestingly, despite the lack of success in implementing good intervention plans, lifestyle modification is still the most commonly recommended treatment for adults who are at high risk of developing type II diabetes (Hannon et al., 2005). However, there appears to be a gap in the

epistemology surrounding obesity and its associated relationship with type II diabetes. Individuals seem to be aware of the damage that obesity can cause, yet they continue to lead unhealthy lifestyles. Therefore, obesity appears to be incredibly complex, and this may explain the current issues around both obesity and diabetes prevention and management.

#### **1.4 Theoretical approach**

This research utilised a theoretical framework derived from the socio-ecological model. This model was used in an attempt to integrate person-focused interventions with environment-focused efforts in order to enhance an adult's physical and social surroundings (Stokols, 1996). Furthermore, this model offers a theoretical framework for understanding the active interplay between individuals, groups and their socio-physical environments (Stokols, 1996). Similar research concurs that there are many external factors which may contribute to the prevalence of type II diabetes (Caprio et al., 2008). This study is particularly interested in three external factors; namely a household's total income, access to food and the head of the household's education level, and how these may impact on the prevalence of diabetes in adults. As the socio-ecological model is concerned with the individual and the interaction between their physical, social and cultural environments, it has a good structure for understanding how these three factors relate to the prevalence of diabetes in adults and how intervention and management of the disease can translate into successful clinical practice (Caprio et al., 2008; Whittemore et al., 2004).

Furthermore, the socio-ecological theory explains how lasting behaviour change requires prevention programmes that target numerous levels of influence. These levels include intrapersonal factors, interpersonal factors, community factors and organizational and public policy (McLeroy et al., 1988, as cited in Whittemore et al., 2004). This study endeavoured to look at all levels of influences related to income, education and access to food.

That which follows is a review on income, education levels and access to food and their possible effects on the prevalence of diabetes in adults.

#### **1.5 Income**

Income is related to the SES of a household. Research conducted by Reinehr (2013) has suggested that individuals from low SES environments are more vulnerable to developing type II diabetes. He further explained that this may be due to an underdeveloped social network that does not provide psychosocial support. As a result of inadequate psychosocial support,



individuals are unable to obtain optimal self-management. This may lead to a negative cycle of poor self-management and an increase in psychosocial problems (Reinehr, 2013).

The majority of research papers have discussed the physical consequences of overweight and obesity, however, the non-physical consequences are also vital to consider (Cornette, 2008). They inform as to why it is so important to decrease the prevalence of obesity and thus the prevalence of type II diabetes in adults. These non-physical consequences include depression, social isolation, discrimination, low self-esteem and low self-image (Cornette, 2008; Hannon et al., 2005).

As type II diabetes accounts for 95% of diabetes cases worldwide, research has consistently indicated that the disease is over-represented amongst low SES groups (Eakin, Bull, Glasgow, & Mason, 2002; Reinehr, 2013; Whittemore et al., 2004; Reidpath, Burns, Garrard, Mahoney, & Townsend, 2002). As there is an increased burden of the disease on those with a lower SES, it is important that type II diabetes care and educational programmes are adapted for these groups (Eakin et al., 2002). However, some research suggests that the reach of prevention programmes is limited for ethnic minorities within a low SES (Whittemore et al., 2004). This is mainly due to the many internal and external barriers to self-management that are faced by those within a low SES environment. Barriers include economic challenges preventing care, cultural beliefs that may lessen an individual's accountability to a greater role in one's self-care, limited access to transportation, multiple care-giving roles, reduced access to childcare and the increase of mental health and abuse issues (Eakin et al., 2002). This information is imperative for the current research as it further explains the significance of developing intervention plans that are effective and which lessen the impact of the disease on a household and thus, the community.

Additionally, lower SES neighbourhoods tend to have higher intake levels of fat and simple carbohydrates in their diet; with less fruit, vegetables and complex carbohydrates being consumed (Volaco, Cavalcanti, Filho and Precoma (2018). This may be due to middle- and upper-class neighbourhoods tend to have more pharmacies, banks, supermarkets, health stores and exercise facilities, than low-income communities which tend to have more fast-food businesses, higher priced convenience shops, and more liquor stores (Whittemore et al., 2004). This encourages consumers in low-income neighbourhoods to buy highly processed foods that are relatively cheap and calorie dense, but which consequently increase their chances of an unhealthy lifestyle. In addition to this, low-income communities face increased crime and

violence levels which indirectly affects an individual's health by preventing opportunities for exercise and limiting the quality of social relationships (Whittemore et al., 2004; Volaco et al, 2018). Within a South African context, more research is required to get a better understanding as to which businesses are prevalent in low-income communities and how they may be contributing to the obesity epidemic, and thus the prevalence of diabetes in adults.

Pillay et al. (2016) have agreed with global research that poverty in South Africa may lead to lack of access to health services, which directly impacts diabetes control. In 2012, it was reported in KwaZulu-Natal that there was a high unemployment rate in their metropolitan municipality and its ten districts, which indicated that this area was vulnerable to unstable incomes (Stats SA, 2014, as cited in Pillay et al., 2016). As such, individuals living in this region or with a similar SES, may be at a higher risk of developing diabetes.

Evidence has also indicated an increase in energy intake from food due to the changes in the global food system (Gortmaker et al., 2011). Food is now prepared on a mass scale and there is a move from traditional plant-based foods to the utilisation of an energy-dense diet that is highly processed with added sugars, fats, salt, flavourants and preservatives for a longer shelf life (Kimokoti & Millen, 2011). This mass preparation of food has lowered the cost of food; which is especially important for low SES households. Furthermore, as the majority of adults in low SES households tend to work long hours and have to commute long distances, this mass preparation of food offers them the advantage of saving time. However, this has negatively contributed to the increase in obesity and thus type II diabetes (Reidpath et al, 2002; Abubakari et al., 2008).

Furthermore, research was conducted to ascertain if low SES areas had more exposure to fast food shops than high SES areas. It was confirmed that there were approximately 2.5 times more fast food shops in low SES communities (Reidpath et al., 2002). The research also established that those living in high SES areas had little to no exposure to fast food outlets. This research clearly brought together the link between the social and environmental determinants of obesity. More research is needed in this area as it is not clear if the fast food outlets were there due to consumer demand or that by the outlets being there, more individuals chose to purchase and eat the fast food (Reidpath et al., 2002).

### **1.5.1 Urbanization**

Developing countries going through socio-economic transition are experiencing a mixed epidemic of NCDs, such as diabetes (Ziraba, Fotso, & Ochako, 2009). Pillay et al. (2016) concurred that the increase of urbanization within developing countries, contributes to the concerning high rate of diabetes worldwide. Overweight and obesity were once only associated with high income countries, however this has changed and is now prevalent in low- and middle-income countries (Ziraba et al., 2009). As the prevalence of obesity has increased more in urban areas than rural areas, it is now estimated that 20–50% of urban populations in Africa are categorised as overweight or obese (Abubakari et al., 2008). This is due to increased access to energy-dense foods and less energy-intensive jobs. Urbanization has also led to an increase in television ownership and changes in traditional food preparation, leading to a sedentary lifestyle and the consumption of processed foods which are not always accessible in rural environments (Abubakari et al., 2008). Interestingly, as mentioned previously, most research indicates that areas with a low SES and poor neighbourhoods, are linked to an increased prevalence of obesity, and thus type II diabetes. However, some studies in Africa have shown that in contrast to this research, there may be a strong positive relationship between obesity and high SES groups (Mbanya, 2007, as cited in Ziraba et al., 2009). This possibly means that diabetes may be a risk to all adults, not just those living in low SES areas. Hence, investigating household income is an important variable to consider in order to improve the future health of adults in South Africa.

### **1.5.2 Economic burden**

There is a significant economic burden associated with diabetes (Eakin et al., 2002). Reports have shown that there are large costs involved with medical care in hospitals for those suffering with type II diabetes (Hannon et al., 2005). For example, research has shown that annually, one tenth of all global health expenditure is spent on treating adults with diabetes (Green, 2016). This is due to increased numbers of hospital admissions, longer hospital stays and a higher overall cost for persons with this disease (Eakin et al., 2002). In addition, outpatient medical care is also high for adults with type II diabetes. This includes urgent care, emergency doctor visits, routine care, and costs of prescription medicines. Indirect costs are also linked with type II diabetes, such as co-morbidity of diabetes with other chronic illnesses and excess mortality rates due to complications which may occur among those suffering with this form of the disease (Eakin et al., 2002). Furthermore, the main aim of diabetes management is to gain and maintain good metabolic control to halt the advance of diabetes-related difficulties. In order for an individual to do this, they would need to be able to access services and this requires a

strengthening of South Africa's current health care system in terms of resources, staffing, nursing, and psycho-educational support (Pillay et al., 2016).

As South Africa moves towards a National Health Insurance (NHI) plan, there is a concern that chronic NCDs will lead to major economic costs for both the patient and the health care system, which is already heavily burdened (Pillay et al., 2016; Reinehr, 2013). Furthermore, discrimination, stigmatization and insufficient economic and social resources may contribute to major health challenges (Flaskerud & Nyamathi, 2002, as cited in Whittemore et al., 2004). In addition, South Africa has one of the highest rates of income inequality in the world when compared with other middle-income countries, due to the legacy of apartheid (Altman, Hart & Jacobs, 2009). Although the post-apartheid government has promoted equality by recognising the need to implement specific measures to address the disadvantages that individuals experience, changes taking place within legislature have not impacted sufficiently to change conditions on the ground, further adding to the economic burden of accessing healthcare in this country (Watermeyer, Swartz, Lorenzo, Schneider, & Priestley, 2006).

### **1.5.3 Culture**

It is important to be aware of cultural perceptions regarding overweight and obesity (Abubakari et al., 2008). In certain areas of Africa, being overweight is not only associated with prestige, happiness, and healthy living, but is often seen as a sign of beauty for women and success for men (Siervo, Grey, Nyan, & Prentice, 2005, as cited in Abubakari et al., 2008). This could be why the findings of the research conducted by Abubakari et al. (2008) in West Africa showed that there was a higher prevalence of obesity in higher SES groups compared to lower SES groups. Furthermore, it is recognised that family members perform an important role in the management of diabetes, and alongside one's culture, this needs to be taken into consideration (Rintala, Paavilainen, & Astedt-Kurki, 2013).

### **1.6 Education**

The findings of household surveys are an important source of information about education systems in developing countries (Wils et al., 2009). One of the strengths of the GHS is that the survey methodology and many of the questionnaire items regarding education have remained mostly consistent since 2002, therefore allowing outcomes to be compared.

Whittemore et al. (2004) explains that in the United States of America (USA), as a household's income decreases, so do the potential levels of educational attainment for many individuals

within the household, thus significantly increasing an individual's risk of developing type II diabetes. Interestingly, the South African Department of Health (2015), in their strategy for the prevention and control of obesity in South Africa 2015–2020, mentioned that obesity rates are on the rise for people of all education levels. However, as with the USA, absolute rates are still high for those with low education levels. This does suggest, though, that the gap between socio-economic strata in South Africa, is possibly narrowing in the context of obesity (South African Department of Health, 2015).

Furthermore, studies conducted in developed countries have shown an inverse relationship between SES and obesity – and thus diabetes (Micklesfield et al., 2013). However, studies in South Africa indicate a steady, positive relationship between obesity and SES. In a research study by Micklesfield et al. (2013), obesity was closely linked with access to clean water and electricity, reduced housing density, increased expenditure on food, greater energy intake, travelling via mechanized transport and low levels of physical activity or high levels of sedentary behaviour. In contrast, findings from the South African Demographic and Health Survey (SADHS) indicated that the relationship between education and obesity is not direct, as women with almost no education and women with a tertiary education seemed to have a reduced body mass index (BMI) compared to those with little schooling (Micklesfield et al., 2013). This may be due to the wider distribution of both education and SES in South Africa, which has one of the highest GINI coefficients (measure of inequality in income) in the world, implying that there is significant inequality with regards to poverty and wealth (Micklesfield et al., 2013).

#### **1.6.1 Parental care / primary caregivers**

One body of research has suggested that primary caregivers may contribute to the behaviours that will affect the expression of obesity in children (DeMattia & Denney, 2008). This same research study indicated that parents who model healthy eating themselves possibly influence their children to do the same. However, parents who are obese, especially mothers, who enforce food strategies, such as restriction, have been shown to be implicated in their child's obesity (Harrison et al., 2011). It also appears that primary caregivers need to prioritise family activities and limit both screen time and consumption of fast food (Harrison et al., 2011). The above influence that an adult has on children and other members of the household is important to consider in this study, as healthy eating and healthy behavioural patterns may be determined by the educational attainment of the caregiver.

However, another body of research suggested that due to changes in lifestyle, the majority of children (75%) spend their day away from parental care and therefore are at a higher risk of developing obesity than children who spend time with their parents. This may be due to the barriers which children face in adopting health-promoting behaviours, such as a lack of accessibility to recreational opportunities, decreased access to healthy food options and limited time to partake in physical activities (International Health, Racquet and Sports Club Association, 2007, as cited in DeMattia & Denney, 2008).

Research has demonstrated that most intervention programmes have been focused on the home life and parental influence, with good reason. Parental characteristics, such as maternal education and maternal mental health (such as depression), may influence the risk of obesity in children and thus the prevalence of diabetes (Harrison et al, 2011). Furthermore, families that experience conflict and which endure negative mealtime behaviour also tend to be more overweight. Inversely, families that practice good interpersonal communication tend to eat more nutritious meals and are at lower risk of becoming overweight or obese (Harrison et al., 2011).

In addition, genetic factors provide a significant contribution to the development of diabetes. Type I and type II diabetes is more prevalent in individuals that have a family background of diabetes. This is also true for certain ethnic groups (Kim, Choi, Kim, Oh, & Shinn, 2002). Research has indicated that the risk of developing type 1 diabetes is 10 to 20 times higher for those individuals who have an immediate relative with this type of diabetes (Joslin Diabetes Center, 2018). Additionally, there is an increase of approximately 2–4 times more risk for offspring of parents with type II diabetes compared to the offspring of parents without the disease. The current study therefore sets the foundation for future research to explore the prevalence of diabetes in children who have parents with either type I or type II diabetes.

### **1.7 Access to food**

The Food and Agriculture Organization of the United Nations (FAO) in 2012 explained that food security occurs when all individuals, regardless of their SES, have at all times, physical and economic access to enough food that is safe and nutritious, in order to meet the daily nutritional requirements to live a healthy life (FAO, 2012).

A shift has occurred in the last few years relating to how food security is viewed. There is now a focus on access to food at both an individual and a household level (Stats SA, 2011).

According to FAO (2012) there are four interrelated components of food security. Firstly, there is the *availability of food*. This is the consistent access to food in both quantity and quality of the food. Secondly, there is *access to food*. This refers to the ability a household has to receive food on a sustainable level. Households require adequate resources for them to be able to receive sufficient food for a healthy diet. Thirdly, *utilisation of food* refers to food safety. This is dependent on safe water, sanitation, refrigeration and access to health services. *Stability of availability and access to food* is the fourth component. This refers to the continued access a household has to healthy food even in challenging situations, such as in the event of conflict, drought, death or unemployment at a household level (Stats SA, 2011).

Due to the link between food production activities and the emergence of disease, it is vital that factors leading to chronic food insecurity are unpacked (Alders, de Bruyn, Wingett, & Wong, 2017). The causes of these factors are often context-driven and may vary according to gender, culture, SES and ecological frameworks (Alders et al., 2017). Poor access to a balanced diet may lead to under- or overnutrition which results in long term effects on individuals' health. Interestingly, undernutrition remains a concern in many low- to middle-income countries, whilst overnutrition is developing into a major challenge globally (Alders et al., 2017). This is important information for this study, as overnutrition is linked to diabetes.

Maintaining a healthy lifestyle to decrease the risk of type II diabetes requires a supportive family structure and social networks. This includes an enabling environment for sustainable food systems. Capone, Bilali, Debs, Cardone and Driouech (2014) explained that a sustainable food system will support food security by creating the ideal use of natural and human resources. Furthermore, they suggested that this needs to be culturally acceptable as well as easily accessible. Reinehr (2013) agreed that dietary recommendations should be culturally appropriate and added that they should also be sensitive to family resources. Finally, a maintainable food system needs to take the environment into consideration, be economically fair and sustainable, and provide individuals and communities with nutritionally suitable, safe, healthy and affordable food for present and future generations (Capone et al., 2014).

Important to note is that the GHS does not offer information on micronutrients, quantity or quality of food eaten, nor does it show intra-household consumption patterns (Stats SA, 2011). However, it does indicate household hunger trends, as well as access to food. Hence, the GHS primarily focuses on access to and utilisation of food. Therefore, this study used the variable of

access to food to understand a household's food security. However, this is a complex variable and is greatly influenced by socio-economic and political factors (Chawarika, 2016).

### 1.7.1 Diet

Currently, weight control is one significant means of effectively preventing and treating diabetes (Hannon et al., 2005). Pillay et al. (2016) identified that westernised diets offer a significant contribution to the aetiology of the disease. Hawkes (2006) suggests that this is possibly due to the nutrition transition occurring throughout the developing world. Nutrition transition is the shift in dietary intake due to economic, demographic or epidemiological changes. In these countries, the intake of foods high in fats and sugars is on the rise and this is implicated in the increase of obesity and diet-related chronic illnesses such as diabetes. Hawkes (2006) further explained that globalisation effects agri-food systems, which leads to the altering of the quantity, type, cost and desirability of foods which are available. Understanding the nutrition transition and its link with globalisation, will help policy makers improve food policies to address the burden of these chronic diseases (Hawkes, 2006).

Some research has indicated that there is a link which exists between an individual's vegetable and fruit consumption, and a decreased risk of developing disease (Hawkes, 2006; Naude, 2013). Therefore, according to Lindström et al. (2006) research published in the *Lancet*, the majority of dietary advice for individuals with type II diabetes has stipulated that an individual's carbohydrate intake should be high and their fat intake low. Additionally, Lindström et al. (2006) research published in the *Diabetologia*, suggest that protein should make up around 15% of an individual's diet, sugars should be limited and the consumption of fresh fruit and vegetables should be encouraged. Based upon this finding, the South African food-based dietary guidelines (FBDG) promote vegetable and fruit intake. However, this dietary advice is controversial, with other research having indicated that high levels of protein and fat in an individual's diet may reduce the risk of type II diabetes (Gannon & Nuttall, 2004). Interestingly, Naude (2013) conducted a systematic review of cohort studies and found that there was no relationship between vegetable and fruit intake and the risk of type II diabetes. In addition, this same research also found an inverse association between the intake of green leafy vegetables and type II diabetes. Unfortunately, the limitation of this finding is that there is little evidence available to substantiate it but it does suggest that there are different opinions regarding what dietary recommendations are effective in helping to decrease the prevalence of diabetes in adults. Further research into this area is critical.



Importantly, a sustainable and supportive environment for health continues to be a challenge (WHO, 2009). South Africa's high rate of inequality has led to high levels of poverty and subsequently, low levels of household food security (Altman et al., 2009). Furthermore, poor diet quality is a key public health concern that is linked with a dual burden of malnutrition and disease (Hawkes, 2006).

### **1.8 Rationale for the study**

Diabetes is becoming a burgeoning epidemic in South Africa and drastic preventative measures are needed to stop its prevalence in adults. There is a knock-on effect in the household of an adult living with diabetes. It affects their interpersonal relationships, which in turn affects the well-being of other members living in the household. Furthermore, organisational structures, one's community and political policies, all play an integral part in this person's life and must be considered when planning interventions. The feasibility of population-level interventions which are aimed at prevention are widely reported. However, in South Africa, most of this research is hindered by the shortage of epidemiological data. The GHS is one of the first of the continuous official surveys to be created as a multipurpose survey. This data is readily available and this study provides a platform to analyse it to find out what the results mean in terms of a household's income, access to food and education level and the prevalence of diabetes in adults. Furthermore, this close examination of the data helps researchers to better understand both the strengths and limitations of using GHS data.

### **1.9 Summary**

In South Africa, an epidemiological transition is occurring. There is now a change in disease burden from infectious diseases, such as HIV and TB, to chronic NCDs, such as diabetes (Appunni, Blignaut, & Lougue, 2014). Hence, the need for research aimed at exploring those factors which may influence the prevalence of diabetes is called for. Furthermore, there seem to be many contradictions in the findings of research conducted around obesity, which leads to the development of type II diabetes in adults. On one hand, a low SES suggests a higher prevalence of type II diabetes. However, on the other hand, the prevalence of obesity seems to be on the increase in middle to high SES groups. This contradiction continues with the paradoxes that emerge regarding education levels and diabetes. These include the positive link between food insecurity and obesity and the non-linear association between education and obesity (Micklesfield et al., 2013). Adults with type II diabetes have been advised to eat a diet high in carbohydrates and low in fat, but other research indicates that high protein consumption coupled with low carbohydrate intake is also successful. Of concern is that the research

indicates that individuals are currently more informed and aware of the connection between obesity and type II diabetes, along with other risk factors, than in the past, yet the prevalence of type II diabetes is still on the increase. This suggests to researchers that there may be issues regarding understandings of what type II diabetes is, or that there are challenges with the past and current interventions. Possibly, there is some part of the socio-ecological system that researchers have not yet identified that has a significant influence on the prevalence of diabetes. Therefore, in order to highlight the possible socio-ecological factors which may contribute to the prevalence of diabetes in adults, there is a need for more research and subsequent data analysis. Examining the GHS data is an important step in identifying factors which may influence the prevalence of type II diabetes in adults. The advantage of using the secondary household data, as a rich information resource, is that this data is not limited to one population or socio-economic group, but has already been collected from the broader South African population. There is an ethical obligation by researchers to use this data and to make meaning from it, as participants have given their time to share their information. Furthermore, it is a very resource-intensive process in terms of money and time and therefore it should be used productively. Unfortunately, the use of the GHS is currently under-researched and it therefore offers a new area of research. Not only will this study contribute to literature in South Africa, but the results may be generalised to a wider population to inform policy and to identify those areas that require medical or health care intervention, thus utilising all levels of influence within the socio-ecological model. This study will assist in defining the at-risk groups within communities and will determine if factors such as income, access to food and education levels need to be taken into consideration when implementing affordable and successful prevention programmes.

## **CHAPTER TWO: METHODOLOGY**

### **2.1 Introduction**

In this chapter the researcher examines the different processes involved in accomplishing the aims of this study. The discussion focuses on the research methodology, population and sampling procedures, data collection methods, data analysis and interpretation, validity and reliability, ethical considerations and limitations of the study.

This research carried out a secondary analysis of the GHS 2014 which was implemented by Statistics South Africa (Stats SA, 2014). Stats SA is a national governmental department responsible for the production and co-ordination of all statistical services for South Africa, according to the Statistics Act no. 6 of 1999. The GHS is a survey which is conducted by Stats SA among approximately 22 000 households which are representative of non-institutionalised and non-military individuals or households (Stats SA, 2014). It is purposefully created to measure different aspects of the daily living conditions of residents in South African households. It has been conducted annually since 2002 and assists in measuring the quality of service delivery in key service sectors (Stats SA, 2017). The survey incorporates six areas, namely education, health and social development, housing, household access to services and facilities, food security, and agriculture (Stats SA, 2014).

This primary data utilised was generated through a survey of households in the nine provinces of South Africa, gathered from January–December 2014. The GHS consisted of two datasets. The GHS household dataset included variables such as dwelling type, home ownership, access to water and sanitation, access to services, transport, household assets, land ownership and agricultural production (Stats SA, 2014). The GHS individual dataset included variables such as employment status, level of education, health status, access to services and facilities, as well as demographic variables such as demographic characteristics, relationship to household head, marital status, home language, income, fertility, mortality, disability, and access to social services (Stats SA, 2014). The data was collected from a wide population in both urban and rural settings, which included a variety of socio-economic areas, in order to ensure appropriate generalisability of the findings.

Secondary data analysis comprises the use of existing data which is gathered by researchers who were not involved in the primary collection of the data. This data is normally used for analysis to reproduce or expand on previously observed findings, or as in the case of this study, to address new research questions that were not in the primary published analyses of the data

(Greenhoot & Dowsett, 2012). The analyses of this secondary data allowed the researcher to resourcefully find solutions to important research questions and to expand on the crucial findings in this particular field of study (Greenhoot & Dowsett, 2012).

The benefits of using secondary data, such as the GHS dataset, are that it saves time and is easily accessible, which allows researchers to address questions which otherwise would have been expensive and time consuming to do (Greenhoot & Dowsett, 2012). Working with this public-use dataset allows for large samples and has many variables which can be measured. As the GHS is a continuous survey, it is particularly beneficial in that it also allows researchers to track the evolution of different variables and look for trends, which is vitally important when analysing data instead of thinking of these variables in isolation. Furthermore, a longitudinal study is useful when comparing data results of different countries, thereby leading to rich information from the primary data collection which often misses the rigour that diverse social context comparisons need. Importantly, using secondary data can generate new insights which are different from previous analyses and which may lead to unanticipated valuable discoveries (Greenhoot & Dowsett, 2012).

This study focused specifically on the secondary analysis of three independent variables, namely household income, household access to food and head of household's education level. The head of the household, living with diabetes, was the study's dependent variable (Stats SA, 2014). This variable was particularly chosen for this study as the head of the household is typically the person who makes the overall household decisions and their status may have the most impact on the rest of the household. As this data is from South Africa, its secondary analysis will add to the necessary body of research needed within the South African context.

Currently, the majority of research which looks at data populations, accepts that there has been a significant increase in diabetes prevalence. However, this data is somewhat outdated and is also limited to the South African context (Somers et al., 2006). Furthermore, most of the research available has not focused on the particular factors of income, education and access to food, and how these may influence the prevalence of diabetes in adults. Therefore, studies like the current one are required to assess the scale of the prevalence of diabetes in order to locate the various risk groups within communities, and to implement prevention programmes that are likely to be successful and sustainable at the right level of influence (Caprio et al., 2008).

## **2.2 Research aim**

There is limited research using the GHS to understand the effects of a household's average income, access to food and the average education level of the head of the household on the prevalence of diabetes in adults in South Africa. In this study, differences in the prevalence of diabetes are explored within these three variables, in light of the literature available. By doing so, the results will add information to this limited area of study. Therefore, the below research question is considered:

Using the GHS of 2014; does a household's access to food, average income and the head of the household's education level, influence the prevalence of diabetes in adults?

### Hypothesis: Per capita income

Ho: There is no difference in the average income between households with adult residents with diabetes and households without adult residents with diabetes.

Ha: There is a difference in the average income between households with adult residents with diabetes and households without adult residents with diabetes.

### Hypothesis: Access to food

Ho: There is no difference in access to food between households with adult residents with diabetes and households without adult residents with diabetes.

Ha: There is a difference in access to food between households with adult residents with diabetes and households without adult residents with diabetes.

### Hypothesis: Education level

Ho: There is no difference in the average head of the household's education level between households with adult residents with diabetes and households without adult residents with diabetes.

Ha: There is a difference in the average head of the household's education level between households with adult residents with diabetes and households without adult residents with diabetes.

## **2.3 Research paradigm**

This study was grounded in an epistemological position, taken from a post-positivist paradigm, which challenges the notion of absolute truth (Wahyuni, 2012). Post-positivism aims for an explanation that leads to the prediction and control of certain phenomena. The paradigm also

emphasises cause and effect links which can then be studied, identified and generalised from an objective and detached researcher role (Ponterotto, 2005). Post-positivism came about due to the discontent with some of the qualities of the positivist position (Ponterotto, 2005). Positivists accept an objective, apprehendable reality, whilst post-positivists recognise an objective reality that is imperfectly apprehendable (Lincoln & Guba, 2000). Therefore, this scientific process involves systematic observation and description of phenomena investigated within the socio-ecological model, the presentation of the hypotheses, the implementation of a controlled experimental study, the use of inferential statistics to test the hypotheses, and then the interpretation of the statistical results, in light of the initial theory (Cacioppo et al., 2004, as cited in Ponterotto, 2005).

Thus, this study attempted to understand the philosophical assumptions, such as beliefs about reality, knowledge, and value in research, by investigating the possible link between a household's income, the education level of the head of the household and access to food and the prevalence of diabetes in adults (Bisel & Adame, 2017). This type of philosophical framework was appropriate as the data may indicate one outlook, however, research on trends and factors influencing the prevalence of diabetes, may not correspond. This would then indicate that the absolute truth may not be enforced and that it will be important to consider other variables when introducing intervention planning in the case of preventing diabetes in adults. In addition, this study used statistical generalisation to link the findings to a larger population. The results for this specific study are objective and occurred independently of any human interference. However, the collection of the primary data for the survey did indirectly rely on human interference in the form of people who administrated the data collection for the GHS, over which the current study has no control.

## **2.4 Research design and methodology**

The study followed a literature review and an experimental study, and performed an advanced statistical method on the GHS data. A quantitative research method was therefore employed using secondary data collected from the GHS of 2014 to obtain the information required. The GHS is an annual household survey which measures the living conditions of South African households. The GHS collects data on education, health, and social development, housing, access to services and facilities, food security, and agriculture. A quantitative approach was used as this study aimed to explore the meaning of this data in a reliable and objective manner (Coolican, 2014). As this study tried to explore if the independent variables influence the dependent variable, the researcher needed to determine if those independent variables had a significant effect on the dependant variable. A quantitative multiple logistic regression analysis

was conducted to determine this outcome using the three variables under study. Furthermore, controls were put in place to add context to this study in terms of the head of the household's: population type, age, gender, population group, geographical environment and province (Appendix E).

#### **2.4.1 Literature review**

A literature review on household income, education levels, access to food, diabetes and access to services was conducted from sources such as academic journals, articles, books, government publications, the Internet, previous research studies and other sources that were relevant to the study.

#### **2.4.2 Experimental study**

The experimental portion of this study comprises the methodology dimensions detailed in the sub-sections that follow.

##### **2.4.2.1 Target population**

The target population consisted of households throughout the nine provinces of South Africa, that had an adult resident living with diabetes. The data was gathered during the period between January and December 2014.

##### **2.4.2.2 Sampling**

###### **Primary sampling**

The primary sample design for the GHS (2014) was founded on a master sample that was created for the Quarterly Labour Force Survey.

A two-stage, stratified design with probability-proportional-to-size sampling of primary sampling units (PSU) from within strata was used, and systematic sampling of dwelling units from the sampled PSUs was carried out. Thereafter, a self-weighting design at provincial level was used and the master sample stratification was divided into two levels. Primary stratification was defined by metropolitan and non-metropolitan geographic area type. During secondary stratification, the Census 2001 data was summarised at the primary sampling unit level. The following variables were used for the secondary stratification process: household size, head of the household's education level, household access to food, occupancy status, gender, industry (refers to particular job sector) and income (Stats SA, 2014).

Census enumeration areas formed the basis of the primary sampling units. The following additional rules were applied:

- Primary sampling unit sizes were kept between 100 and 500 dwelling units;
- Enumeration areas with fewer than 25 dwelling units were excluded;
- Enumeration areas with between 26 and 99 dwelling units were pooled to form larger primary sampling units and the criterion used was same settlement type;
- Virtual splits were applied to large primary sampling units: 500 to 999 split into two; 1 000 to 1 499 split into three; and 1 500 plus split into four primary sampling units; and
- Informal primary sampling units were segmented.

A randomised probability-proportional-to-size systematic sample of primary sampling units was drawn in each stratum, with the measure of size being the number of households in the primary sampling unit. This added value to this study as it increased the generalisability of the secondary data analysis due to the wide variety of populations measured in the primary data collection. Altogether, approximately 3 080 primary sampling units were selected. In each selected primary sampling unit, a systematic sample of dwelling units was drawn. The number of dwelling units selected per primary sampling unit varied from one primary sampling unit to the next, and depended on the Inverse Sampling Ratios of each unit (Stats SA, 2014).

### Secondary sampling

The secondary sampling of this data specifically looked at the variables of income, access to food and education levels to examine their influence on the prevalence of diabetes in adults. The data was recoded and sorted in terms of these three variables, as well as other demographic variables, such as age of the head of the household, gender of the head of the household, geographical type, province, population group and household size. Even though this secondary data was collected for a different reason, it was suitable for this research as it utilised a large sample of the population which is diverse in that it offers a depth of complementary types of information that helps put the variables into context. Furthermore, the GHS is produced yearly and uses a partial rotating panel design (Stats SA, 2011).



**Table 1: Variables of interest for households with adult residents with diabetes**

| <u>Description</u>                        | <u>Dataset</u>      | <u>How it is measured: question</u>                 |
|---|---------------------|---|
| Household Income:<br>Total Monthly Income | GHS Household data  | GHS variable: totmhinc_max                          |
| Head of household Education Level         | GHS Individual data | GHS variable recoded:<br>EDUCCAT_RECODE_max         |
| Access to Food                            | GHS Household data  | GHS variables recoded:<br>Food_Security_tertiles    |
| Diabetes                                  | GHS Individual data | GHS variable recoded:<br>diabetesinhousehold_binary |
| Head of household Age                     | GHS Household data  | GHS variable: head_age                              |
| Head of household Gender                  | GHS Household data  | GHS variable: head_sex                              |
| Head of household Population group        | GHS Household data  | GHS variable: head_popgrp                           |
| Living Environment                        | Both datasets       | GHS variable: GeoType                               |
| Size of the household                     | GHS Household data  | GHS variable: hholds_max                            |
| Province                                  | GHS Household data  | GHS variable: prov_max                              |
| Weight                                    | GHS Household data  | GHS variable: house_wgt_max                         |

## **2.5 Data collection**

The GHS consisted of two datasets, one with household characteristics and the other with individual characteristics. The variables required on each dataset were merged so that all required data was found on one dataset. Below is an explanation of how the variables were recorded or recoded.

### **2.5.1 Access to food**

Access to food is an important variable to use as it directly links to the aim of the study which intends to explore the influence of access to food on the prevalence of diabetes in adults.

Information required for this variable was taken from the GHS Household dataset. Since 2002, the GHS has used self-reported questionnaires to indicate if an adult or a child has experienced difficulty in accessing food. The challenge with using self-report surveys is that there may be response bias as the participant may under or over report due to complex external factors.

In 2009, questions were adapted from the Household Food Insecurity Access Scale (HFIAS) in order to assess if households experienced challenges with accessing food during the previous 30 days, which would have an effect on their access to food. This measurement was scaled down from its usual nine questions to four questions in the GHS. This was conducted to try and measure any changes in households in terms of their diet or consumption of food due to insufficient resources to acquire the food. Refer to Q7.9 (Q79MF / Q79MF5), Q7.10 (Q710Meal / Q710Meal5) on page 41 of the GHS and Q7.11 (Q711Less / Q711Less5) and Q7.12 (Q712Lfd / Q712Lfd5) on page 42 of the GHS (Appendix A) for the following questions which were used to calculate a household's access to food:

*“Did your household run out of money to buy food during the past year?”*

*“Has it happened 5 or more days in the past 30 days?”*

*“Did you cut the size of meals during the past year because there was not enough food in the house?”*

*“Has it happened 5 or more days in the past 30 days?”*

*“Did you skip any meals during the past year because there was not enough food in the house?”*

*“Has it happened 5 or more days in the past 30 days?”*

*“Did you eat a smaller variety of foods during the past year than you would have liked to, because there was not enough food in the house?”*

*“Has it happened 5 or more days in the past 30 days?”*

In the survey, households had to reply ‘yes’ or ‘no’ to each of the above questions. For every answer that was ‘yes’ the index score increased by one point. If a household received a score of one or less out of eight, then they were categorised as having adequate access to food. If the household scored from two to six, then they were categorised as having inadequate access to food. Lastly, if the household scored seven or eight, then they were categorised as having severely inadequate access to food (Stats SA, 2011). Therefore, variables taken from the household dataset were recoded into a new variable called Food\_security\_tertiles to reflect a household's overall access to food.

### **2.5.2 Average household income per capita**

This study used the variable called *totmhinc* found on the GHS Household dataset. It was calculated by dividing the household size by the total monthly income. This variable is appropriate as it offers a household's overall total monthly income, taking into account who lives in the house, what they earn and if they receive social grants. Furthermore, this variable has to be used as it links with the aim of this study which is to explore the influence of a household's income on the prevalence of diabetes in adults.

### **2.5.3 Head of the household's education level**

The variable required was taken from the GHS Individual dataset. This variable was recoded to reflect education levels in terms of years. The study used Q1.5 on page 5. Reflecting the education levels in terms of years allowed the researcher to understand an individual's highest educational level by being able to measure it equally against other data. Therefore, instead of looking at grades separately and trying to understand what level adult education training or a national technical certificate is at; one can quantify education levels with relative ease. In addition, this format helps international researchers to understand and compare trends in education levels in other countries with those in South Africa and vice versa (Barro & Lee, 1996). This is an important variable to use as it directly links with the aims of this study which is to explore the influence of the head of a household's education level on the prevalence of diabetes in adults.

### **2.5.4 Diabetes prevalence**

The variable required was taken from the GHS individual dataset and used Q2.6a on page 20. The participant had either replied 'yes' that they had diabetes, or 'no' that they did not. This is appropriate as it sorted the data into those households with adult residents with diabetes and households without adult residents with diabetes. Therefore, this dependent variable had to be used as it is in line with the aim of this study which intends to explore the relationship of three independent variables and their influence on the prevalence of diabetes in adults. With regards to children in the households where residents had diabetes, the percentage of children within the dataset that had diabetes was 0.2% of the population and was reflected in only 46 households. According to Cohen (1992), using multiple regression and considering the three variables, the dataset would have needed approximately 547 children with diabetes in order to have a small effect ( $r=0.1$ ) on the sample size. Therefore, children were excluded since they did not meet the sample size cut off.

### **2.5.5 Province**

The variable of province was taken from both datasets (*Prov*). This variable comprised of the Western Cape, Eastern Cape, Northern Cape, Free State, Gauteng, KwaZulu-Natal, North West, Mpumalanga and Limpopo Province. The inclusion of this variable is important as it offers descriptive statistics linked to the aim of this study, exploring how residing in a specific province can have an impact on the outcome of the findings.

### **2.5.6 Household type**

Classification of this variable was conducted according to settlement characteristics. This study used the variable called *geotype* to determine if the household was in an Urban formal, Urban informal, Tribal or Rural formal area. This variable is appropriate as it indicated specific household types that may have influenced the prevalence of diabetes.

### **2.5.7 Age of the head of the household**

The variable of age was taken from the GHS household data. This study used the variable *head\_age* to determine the average age of the head of the household. Again, this variable is appropriate as it indicated if the head of the household's age may have influenced the prevalence of diabetes.

### **2.5.8 The size of the household**

This variable refers to the number of members who were sharing resources in the same household. This study used the variable *hholds* to determine the average size of the household. This variable is important as it contributed to the descriptive statistics and indicated if household size may have an influence on the prevalence of diabetes and household size.

### **2.5.9 Population type**

This study used the variable *head\_popgrp* to determine the head of the household's population group. The different groups included Black/African, Coloured, Indian/Asian and White. It was important to use this variable for descriptive statistics and to find out if a population group had an impact on the prevalence of diabetes in adults.

### **2.5.10 Household weight**

In this study a variable was used which was called *house\_wgt*. The role of survey weights is to inflate the sample to represent the entire population (Stats SA, 2014). This variable had to be

included as it is a critical step when working with survey data in order to obtain estimates of population parameters. Using this variable enables the aim of this study to be statistically accurate, and therefore the results to be generalisable to the wider population.

## **2.6 Data analysis**

Large amounts of measurable data were collected from the GHS. After being organised, the data was subjected to statistical analysis using SPSS (version 25) software (Bless, Higson-Smith, Sithole, 2013). Descriptive analysis was first used on the new analysis database to describe the different variables in the dataset and to thoroughly understand the characteristics of the sample the researcher was working with. Descriptive analysis is a good method to obtain an overview of the distribution of the data. The descriptive analysis was followed by bivariate analysis to show the relationship between two variables. This form of analysis was conducted on the variable of diabetes (those households which had a resident diabetic adult) against the variable of income, followed by access to food and lastly against education level of the head of the household. Thereafter, a multiple logistic regression analysis was conducted.

This type of regression has outcome variables that are categorical and predictor variables that are continuous (Field, 2009). Thereafter, the multiple logistic regression was reported on. This form of analysis assumes that the independent variables are not highly correlated with one another. This assumption is tested using the Variance Inflation Factor (VIF) values (Field, 2009).

## **2.7 Ethics**

The ethical risks presented by the research were considered low level, as per the ethics committee guidelines, as the research utilised secondary data that did not directly sample human subjects, and thus presented little potential harm.

However, when engaging in social science research it is important to consider the eight principles which guide the researcher's ethics (Emanuel, Wendler, & Grady, 2008). Firstly, there should be a collaborative partnership with everyone involved in the research. As such, with regards to the secondary data, an email was sent to Statistics South Africa, requesting permission to use their GHS 2014 data. The email stated that the researcher would acknowledge Statistics South Africa as the primary source of the data. Case number CAS-07884-S6K4C7 was opened (Appendix B) and on 1 March 2018, Isabel Schmidt from Stats SA advised that permission was granted (Appendix C). Interestingly, using secondary data is also considered an

important strategy for advancing a collective, and most often, collaborative science (Greenhoot & Dowsett, 2012).

Firstly, the collection of the primary data was conducted within a collaborative partnership between communities and the government. Communities were represented by using a multi-stage design which was based on a stratified design with probability-proportional-to-size selection at the first stage, and then sampling of dwelling units with systematic sampling at the second stage (Stats SA, 2014). Two hundred and thirty-three enumerators and 62 provincial and district co-ordinators took part in the survey across all of the provinces. A further 27 quality assurers monitored and assured the quality of the questionnaire. Furthermore, national training took place over a period of four days. They then trained provincial trainers for five days and the provincial trainers in turn trained survey officers for six days. These survey officers visited all of the sampled dwelling units in each province. At this stage they collaborated with the community by informing the residents about the survey as part of a publicity campaign before the actual interviews took place face-to-face, four weeks later (Stats SA, 2014). These survey officers played a crucial role as collaborative partners as they need to form strong relationships with survey participants when they explained why the data which was being collected was so important and how it could contribute to better services in the future (Wassenaar & Mamotte, 2012). If the survey officers did not correctly accomplish this, then participants may have either refused to respond or they may have incorrectly self-reported. Due to the nature of this study, the researcher did not have any control over this aspect.

Secondly, the research needed to have social value as to why it is necessary. Many participants spent time contributing to this survey and therefore, ethically, as much information as possible should be taken from this survey to contribute to better service delivery for all (Wassenaar & Mamotte, 2012). If it is not used adequately, then there is little point in conducting the survey due to the high costs involved to administer the survey, as well as participants' time and emotional investment. Furthermore, participants could become frustrated if they continue to participate in the survey but then do not witness a change in governmental service delivery. This study intended to use this underutilised household data, that is readily available every year, to explore the meaning of certain variables in the dataset and to gain an enhanced understanding of the prevalence of diabetes in adults within households. This is just one example of how this data can be further used to benefit the population. In addition, the results of this analysis of the GHS dataset will add to research in this limited area within the South African context.

Thirdly, this study used scientific methods to ensure that the results were reliable and valid in terms of the objectives of this study. Therefore, in order to achieve this, the methodology had to be rigorous, appropriate and systematic in order to be able to generalise the findings to the wider population (Wassenaar & Mamotte, 2012). The research design and methodology of this study were appropriate for the analysis required to understand the meaning of the data. As the sample size was comprehensive it covered many demographic characteristics, allowing for a reliable and valid study which was coherent. Additionally, the design was also appropriate for predicting variables within the data, and due to the large sample size, the results can subsequently be generalised to the broader population. Furthermore, in terms of the primary data, it was vital that the survey officers were chosen and trained correctly to conduct the face-to-face interviews so as to ensure high quality and scientifically valid primary data collection.

Fourthly, there should be fair participant selection of the sample population. This was achieved by the primary data collectors use of a partial rotating panel design which encourages fair participant selection (Stats SA, 2014).

The fifth ethics principle to keep in mind is the favourable risk-benefit ratio (Wassenaar & Mamotte, 2012). There are two general concerns when conducting social science research and they include the probability of harming individuals, as well as the anticipated depth of the harm. Fortunately, as this study used secondary data, there was low risk that participants would be negatively affected in anyway. From a benefit ratio, this study could benefit those individuals with diabetes, as well as their family members, as the study explores the differences in diabetes within the three variables of income, access to food and education levels, further adding literature to this limited area within a South African context. Furthermore, by exploring other ways of examining the GHS, more information is gained from the survey which may have a positive effect on participants. In addition, the impact of the survey itself can be considered to ensure that the research questions and the outcomes which can be extracted from the data, are in fact useful to analyse. This is especially important as it is one of the most comprehensive surveys used in South Africa and therefore it needs to ask valid and correct questions to obtain all necessary information.

This research was granted full approval by both the Research and Higher Degrees Committee and the Humanities and Social Sciences Research Ethics Committee (HSSREC) at the University of KwaZulu-Natal, ensuring that the sixth ethics principle was adhered to, which is the need for independent ethical review. The Protocol reference number for this study is

HSS/1494/018M (Appendix D). Approval means that the Ethics Board, which is guided by law and other documented ethics guidance rules, is satisfied that this study meets all ethical criteria.

The seventh ethical principle looks at informed consent. From a secondary data perspective, this study did not require informed consent as no human participants were included in this second analysis of the data. However, consent was required from the necessary gatekeepers of the data (Tsoka-Gwegweni & Wassenaar, 2014). As described above, Stats SA confirmed that this study could use their data for secondary analysis as long as they were acknowledged as the primary source of the data. Informed consent was applicable to the participants who responded in the gathering of the primary data. Furthermore, the survey officers were trained in providing the necessary information to the participants in order to obtain their voluntary responses. Information they would have received about the survey was clear and detailed. This information would have included the methods that were used, along with the risks and benefits for the individual, and the understanding that the participant could either refuse to take part in the survey or could stop responding to the survey without incurring any penalties.

Lastly, the eighth ethical principle offered by Emanuel et al. (2008) is the ongoing respect for participants. This means that all the participants are to be treated with respect throughout their whole experience with the survey research (Wassenaar & Mamotte, 2012). As this study incorporates secondary analysis, the raw and anonymous data, as well as the results of the analysis, will be kept on a password protected computer for the next five years. After five years, the documents will be deleted.

## **2.8 Reliability and validity**

Coherence was achieved by using a method that is appropriate for the aims and theoretical framework of the research. Reliability and validity are essential in order to ensure that the results of this study have high replicability and generalisability (Wahyuni, 2012). The researcher achieved these, as well as the objectives of this social research, by being strategic and ensuring coherence in terms of the fit between purpose, process, data collection, data analysis and reporting. This was made easier by safeguarding the consistency throughout the study by remaining within the post-positivist paradigm and employing the socio-ecological model as a framework to answering the research objectives.

Furthermore, the primary data that was used in this study had already been proven reliable and valid in that it employed a large population sample to ensure the generalisation of its findings.



In addition, the primary study was coherent with their sampling method, data collection and analysis. As reliability is concerned with the consistency of measures, it is important that every time a statistical test is produced on the unchanging values, the results remain the same, producing high reliability (Bless et al., 2013). Therefore, this research ensured consistency by using bivariate and multiple logistic regression statistical analysis that will have the same outcome each time it is conducted on this data.

Validity refers to the extent to which this study will reflect the social phenomena (income, education and access to food) which were observed (Wahyuni, 2012). This research maintained a high external validity as it used a large body of primary data as its foundation. The data was extracted from a variety of households across many population groups throughout the nine provinces in South Africa, from both urban and rural environments. This ensured that the findings of this study are generalisable to the wider population.

## **2.9 Limitations**

Considering that this study used secondary data, the researcher was not able to identify any traces of sampling bias that may have occurred as a result of unequal power relations. Therefore, great care had to be taken when interpreting the data (Bless et al., 2013). Additionally, the researcher had to be mindful of any research bias which may have affected the participants' responses during the primary data collection process. Response bias tends to be seen in research related to behaviour or healthcare where self-reported data is used (Rosenman, Tennekoon, & Hill, 2011). The reasons for this bias are broad and range from participants not understanding what a correct measurement is, to social-desirability bias where the participant prefers to 'look good' in the survey even though the data collection is anonymous (Rosenman et al., 2011).

Using a quantitative method has its limitations in that the results obtained may give narrow and unrealistic information employing measures which use only a small portion of the concept originally under study (Coolican, 2014). A further limitation due to the quantitative nature of this data is that the study was unable to generate any qualitative feedback from the participants to add context to their responses. However, this limitation could be overcome as the data included many variables, such as demographics and SES, of all the participants. Furthermore, quantitative analysis minimised research time.

Despite its comprehensiveness, the study does not take into account all the relevant factors which may have a direct or indirect influence on income, education or access to food. The

advantage of this study is that it intends to highlight the potential for a significant link between the impact of income, education, access to food and the prevalence of diabetes in adults. Furthermore, the study also sets the groundwork for future research in this area using the GHS data which is readily available.

## **CHAPTER THREE: RESULTS**

The previous chapter outlined that the main purpose of this study was to explore if a household's income, access to food and the education level of the household head influence the prevalence of diabetes in adults. The researcher hypothesised that there is a difference in the prevalence of diabetes among adults who come from households that have low levels of income, inadequate access to food and where the adult residents have low educational attainment. The results of a bivariate and multiple regression analysis are discussed in this chapter.

### **3.1 Introduction**

Descriptive statistics were computed. These included frequencies and percentages for categorical data, and means and standard deviations or medians for continuous data. Differences between adults with diabetes and those without diabetes were assessed by p-values (t-tests), chi-squared tests for categorical variables with 95% confidence intervals (CI) for median, mean or percentage differences. All analyses were performed at the University of KwaZulu-Natal, using SPSS, version 25.

### **3.2 Descriptive analysis**

In Table 2 the socio-demographic characteristics of the households are described. The characteristics of these households include the average per capita income, average education level of the household head, household access to food, average age of household head, geographical type, prevalence of diabetes in the household, household size, population group of household head, geographical area and the province in which the household is situated. Only the head of the household's information for age, gender, race and education level, were used for this study, as the head of the household is typically the person who makes the overall household decisions and their status may have the most impact on the rest of the household. Furthermore, even though there may have been more than one person in the household with diabetes, the researcher focused on the situation within households where diabetes was present, and not what each individual's situation was within that household. Additionally, when diabetes in a household is being discussed, it refers to the adults in the household.

The results of the analysis of the secondary data collected from the GHS (Stats SA, 2014) are reported according to the objectives of this study in the rest of this chapter.

In this study the size of the household consisted of an average of 3.43 members with a standard deviation (SD) of 2.3 and a median of 3 household members. A total 58.7% of the respondents were male, while 41.3% were female. The mean age of the head of the household was 46 years old with a SD of 15 and a median of 44 years.

Of the respondents, 58.9% came from an Urban formal setting, followed by 26.9% from a Tribal area, 9.9% from an Urban informal area and 4.4% from a Rural informal area. In terms of racial classification, 79.6% of the population were African/Black, 10.6% were White, 7.4% were Coloured and 2.4% were Indian/Asian.

The majority of the sample, 28.8%, came from Gauteng, this was followed by KwaZulu-Natal with 17.1%, Western Cape with 11%, Eastern Cape with 10.9%, Limpopo with 9.5%, Mpumalanga and North West province with 7.5% each, Free State with 5.7% and Northern Cape with 2%.

### **3.2.1 Education level**

The head of the household had an average education level of 11 years with a SD of 3 and a median of 12 years.

### **3.2.2 Per capita income**

The per capita income was an average of R3 077 with a SD of 4 242 and a median of R1 346.

### **3.2.3 Access to food**

In order to understand if a household was food insecure, the study examined a few variables to determine food security. The results indicated that 22.4% of households ran out of money for food, compared to 77.6% of households which reported having adequate money to buy food. Of those households that ran out of money, 32.8% said that this had occurred on five or more days in the 30 days prior to the data collection.

Some 19.9% reported that they had cut down the size of their meals, while the remaining 80.1% did not have to do this. A total 35.5% of those who reportedly reduced meal sizes, had done so on five or more days in the 30 days prior to the interview, while the remaining 64.5% had not.

A total 16.2% of the population reported having skipped meals, while 83.8% declared that they had not had to skip meals. Of those who skipped meals, 33.3% said that this occurred on five or more days in the previous 30 days, compared to 66.7% who did not experience this. A smaller variety of food was reportedly eaten by 20.4% of the sample, whilst 79.6% did not report this. Out of those households that ate a smaller variety of food, 40.7% explained that this had occurred on five or more days in the past 30 days, while 59.3% said that this had not occurred.

A majority 82.1% of the population sample said that the adult/s in the household never had insufficient food, meaning that this group always had enough food. In comparison, 6% said that they seldom had too little food, 7.5% said that they sometimes had too little food and 2.2% explained that they often had insufficient food. Out of this sample, 0.8% said that they always had insufficient food. With regards to the children (individuals under 18 years of age) in the household, 44.9% said that they never had insufficient food for a child, 4.0% said they seldom did not have enough food, 4.2% said they sometimes had insufficient food, 1.5% said that they often had insufficient food and 0.4% said they always had insufficient food for their child. As previously mentioned, information on households with children with diabetes was not analysed further because of the low numbers that were reported, making it statistically insignificant.

With regard to the prevalence of diabetes, 8.8% of the adult population reported living with the disease, while 91.2% reported not having diabetes. In the case of children in the population, 99.8% were reported as non-diabetic. Only 0.2% of children were reported as being diabetic.

Important to note is that the proportion of households that had an adult living without diabetes was 91% as opposed to those households that had an adult living with diabetes. This is a significant sample size at 8.8% of the population.

**Table 2: Characteristics of sample population**

|                                    |               |
|------------------------------------|---------------|
| Per capita income                  | n=24 994      |
| Mean (SD)                          | 3 077 (4 242) |
| Median                             | 1 346         |
| Education of Household Head        | n=25 285      |
| Mean (SD)                          | 11(3)         |
| Median                             | 12            |
| Food Security                      | n=25 364      |
| Adequate access to food            | 77.5%         |
| Inadequate access to food          | 16.6%         |
| Severely inadequate access to food | 5.9%          |

|   |            |
|---|------------|
| Ran out of money to buy food                    | n=25 363   |
| Yes   | 22.4%      |
| No  | 77.6%      |
| Has happened 5 or more days in the past 30 days | n=5 987    |
| Yes   | 32.8%      |
| No  | 67.2%      |
| Cut the size of meal or skip any meals          | n=25 363   |
| Yes   | 19.9%      |
| No  | 80.1%      |
| Has happened 5 or more days in the past 30 days | n=5 196    |
| Yes   | 35.5%      |
| No  | 64.5%      |
| Skipped meals                                   | n=25 361   |
| Yes   | 16.2%      |
| No  | 83.8%      |
| Has happened 5 or more days in the past 30 days | n=4 099    |
| Yes   | 33.3%      |
| No  | 66.7%      |
| Smaller variety of food                         | n=25 363   |
| Yes   | 20.4%      |
| No  | 79.6%      |
| Has happened 5 or more days in the past 30 days | n=5 206    |
| Yes   | 40.7%      |
| No  | 59.3%      |
| Insufficient food for an adult                  | n=25 363   |
| Never   | 82.1%      |
| Seldom  | 6.0%       |
| Sometimes                                       | 7.5%       |
| Often   | 2.2%       |
| Always  | 0.8%       |
| Insufficient food for a child                   | n=25 363   |
| Never   | 44.9%      |
| Seldom  | 4.0%       |
| Sometimes                                       | 4.2%       |
| Often   | 1.5%       |
| Always  | 0.4%       |
| Age of the household head                       | n=25 363   |
| Mean (SD)                                       | 46 (15)    |
| Median  | 44         |
| Geographical type                               | n=25 363   |
| Urban formal                                    | 58.9%      |
| Urban informal                                  | 9.9%       |
| Tribal areas                                    | 26.9%      |
| Rural formal                                    | 4.4%       |
| Children with diabetes                          | n=25 364   |
| No  | 99.8%      |
| Yes   | 0.2%       |
| Adults with diabetes in the household           | n=25 364   |
| No  | 91.2%      |
| Yes   | 8.8%       |
| Household size                                  | n=25 363   |
| Mean (SD)                                       | 3.43 (2.3) |
| Median  | 3          |

|                            |          |
|----------------------------|----------|
| Gender of household head   | n=25 363 |
| Male                       | 58.7%    |
| Female                     | 41.3%    |
| Household population group | n=25 364 |
| African/Black              | 79.6%    |
| Coloured                   | 7.4%     |
| Indian/Asian               | 2.4%     |
| White                      | 10.6%    |
| Province                   | n=25 364 |
| Western Cape               | 11%      |
| Eastern Cape               | 10.9%    |
| Northern Cape              | 2.0%     |
| Free State                 | 5.7%     |
| KwaZulu-Natal              | 17.1%    |
| North West                 | 7.5%     |
| Gauteng                    | 28.8 %   |
| Mpumalanga                 | 7.5 %    |
| Limpopo                    | 9.5%     |

### 3.3 Bivariate Analysis

**Table 3: Per capita income: result of bivariate analysis**

|                   |                  |                     |         |
|-------------------|------------------|---------------------|---------|
| Per capita income | HH with diabetes | HH without diabetes | p-value |
| Average           | R2 858           | R3 098              | 0.00    |
|                   | SD (3 769)       | SD (4 284)          |         |

#### *Hypothesis*

Ho: There is no difference in the average income between households with adult residents with diabetes and households without adult residents with diabetes.

Ha: There is a difference in the average income between households with adult residents with diabetes and households without adult residents with diabetes.

In Table 3 the average per capita income was R2 858 (SD 3 769) per household for those which had adults with diabetes. For households with adults without diabetes, the average per capita income was R3 098 (SD 4 284). Therefore, the mean difference between a household's average per capita income with an adult with diabetes and without an adult with diabetes was only R240. This study used an independent t-test as an inferential statistical test to determine whether there was a statistically significant difference between the means of households with an adult resident with diabetes and households without an adult resident with diabetes in terms of per capita income. Interestingly, this result was significant;  $t=62.32$ ,  $p=0.00$ . Since  $p<0.05$ , the null hypothesis is therefore rejected and one can conclude that there is a difference in the average income between households with diabetic adult residents and households without diabetic adult residents.

**Table 4: Education level: result of bivariate analysis**

| Education in years | HH with diabetes | HH without diabetes | p-value |
|--------------------|------------------|---------------------|---------|
| Average            | 11.28 years      | 11.03 years         | 0.00    |
|                    | SD (3)           | SD (3)              |         |

*Hypothesis*

Ho: There is no difference in the average education level of household heads between households with adult residents with diabetes and households without adult residents with diabetes.

Ha: There is a difference in the average education level of household heads between households with adult residents with diabetes and households without adult residents with diabetes.

In Table 4 the average education level of the head of the household without diabetic adults was 11.03 years (SD 3). For households with adults with diabetes, the average education level of the head of the household was 11.28 years (SD 3). The mean difference between the educational level of the head of the household with diabetes and without diabetes was -0.24. This study used an independent t-test as an inferential statistical test to determine whether there was a statistically significant difference between the means of households with an adult resident with diabetes and households without an adult resident with diabetes in terms of the head of the household's average educational level. Importantly, the result of the t-test was significant;  $t = -90.51$ ,  $p = 0.00$ . Since  $p < 0.05$ , the null hypothesis was therefore rejected, concluding that there is a difference in the average education level of the head of the household with diabetes compared to the head of the household without diabetes.

**Table 5: Access to food: result of bivariate analysis**

| Food security                      | HH with diabetes | HH without diabetes | p-value |
|------------------------------------|------------------|---------------------|---------|
| Adequate access to food            | 77.5 %           | 77.8%               | 0.00    |
| Inadequate access to food          | 16.5 %           | 17.4%               | 0.00    |
| Severely inadequate access to food | 6.0%             | 4.8%                | 0.00    |

*Hypothesis*

Ho: There is no difference in access to food between households with adult residents with diabetes and households without adult residents with diabetes.

Ha: There is a difference in access to food between households with adult residents with diabetes and households without adult residents with diabetes.



In Table 5, in households that had a diabetic adult, 77.5% had adequate access to food, 16.5% had inadequate access to food and 6.0% had severely inadequate access to food. In households with a non-diabetic adult, 77.8% had adequate access to food, 17.4% had inadequate access to food, and 4.8% had severely inadequate access to food. In order to understand how likely it was that the observed distribution was due to chance, a Pearson chi-square independent test was performed. The result of this chi-square test was significant;  $\chi^2(2, n=25\ 364) = 3575.63, p=0.00$ . Since  $p<0.05$ , the null hypothesis was therefore rejected, concluding that there is a difference in access to food between households with diabetes and households without diabetes, in terms of .

### **3.4 Multiple Logistic Regression**

Multiple Logistic Regression was used to explore the applicable factors that may have an effect on the independent variables in this study, namely, household income, access to food and the head of the household's education level.

The data was weighted using household weights provided by Stats SA to adjust for differences between the sample households and the national population. When the weights are applied the results are rescaled to represent the full population of households in South Africa. The SPSS complex samples package (version 25) was used to account for the similarity or clustering of households in a selected enumerator area when analysing the data. This procedure adjusts the standard errors in the multiple logistic regression analysis. Multivariate adjusted odds ratio (OR) were obtained from the multiple logistic regression model to add context and adjust for the head of the household's age, their gender, their educational level, the household's income per capita, the head of the household's race group, the household's provincial location, the household size and its food security status. Furthermore, it is important to note that this dataset used the last categorical variable as the default reference group.

**Table 6: Multiple logistic regression**

| Diabetes_binary  |                                    | B                  | 95% Confidence Interval |            | Hypothesis Test |          |       | Exp(B) | 95% Confidence Interval for Exp(B) |       |
|------------------|------------------------------------|--------------------|-------------------------|------------|-----------------|----------|-------|--------|------------------------------------|-------|
|                  |                                    |                    | Lower                   | Upper      | t               | Df       | Sig.  |        | Lower                              | Upper |
| HH with diabetes | (Intercept)                        | -7,686             | -8,273                  | -7,099     | -25,672         | 3023,000 | 0,000 | 0,000  | 0,000                              | 0,001 |
|                  | Adequate access to food            | 0,141              | -0,080                  | 0,363      | 1,254           | 3023,000 | 0,210 | 1,152  | 0,923                              | 1,437 |
|                  | Inadequate access to food          | 0,137              | -0,099                  | 0,373      | 1,135           | 3023,000 | 0,256 | 1,146  | 0,905                              | 1,452 |
|                  | Severely inadequate access to food | 0.000 <sup>a</sup> |                         |            |                 |          |       | 1,000  |                                    |       |
|                  | Male                               | 0,182              | 0,075                   | 0,289      | 3,327           | 3023,000 | 0,001 | 1,200  | 1,078                              | 1,335 |
|                  | Female                             | 0.000 <sup>a</sup> |                         |            |                 |          |       | 1,000  |                                    |       |
|                  | Urban formal                       | 0,455              | 0,146                   | 0,764      | 2,887           | 3023,000 | 0,004 | 1,576  | 1,157                              | 2,146 |
|                  | Urban informal                     | 0,165              | -0,226                  | 0,555      | 0,828           | 3023,000 | 0,408 | 1,179  | 0,798                              | 1,742 |
|                  | Tribal area                        | 0,104              | -0,218                  | 0,426      | 0,635           | 3023,000 | 0,525 | 1,110  | 0,804                              | 1,531 |
|                  | Rural formal                       | 0.000 <sup>a</sup> |                         |            |                 |          |       | 1,000  |                                    |       |
|                  | Western Cape                       | 0,754              | 0,467                   | 1,040      | 5,158           | 3023,000 | 0,000 | 2,125  | 1,596                              | 2,830 |
|                  | Eastern Cape                       | 0,872              | 0,632                   | 1,112      | 7,127           | 3023,000 | 0,000 | 2,392  | 1,882                              | 3,041 |
|                  | Northern Cape                      | 0,453              | 0,137                   | 0,769      | 2,813           | 3023,000 | 0,005 | 1,574  | 1,147                              | 2,159 |
|                  | Free State                         | 0,751              | 0,470                   | 1,032      | 5,242           | 3023,000 | 0,000 | 2,120  | 1,601                              | 2,808 |
|                  | KwaZulu-Natal                      | 0,871              | 0,633                   | 1,110      | 7,159           | 3023,000 | 0,000 | 2,390  | 1,882                              | 3,033 |
|                  | North West                         | 0,503              | 0,227                   | 0,779      | 3,571           | 3023,000 | 0,000 | 1,654  | 1,255                              | 2,180 |
|                  | Gauteng                            | 0,466              | 0,196                   | 0,736      | 3,379           | 3023,000 | 0,001 | 1,594  | 1,216                              | 2,088 |
|                  | Mpumalanga                         | 0,608              | 0,347                   | 0,868      | 4,579           | 3023,000 | 0,000 | 1,836  | 1,415                              | 2,382 |
|                  | Limpopo                            | 0.000 <sup>a</sup> |                         |            |                 |          |       | 1,000  |                                    |       |
|                  | African/Black                      | 0,026              | -0,206                  | 0,259      | 0,223           | 3023,000 | 0,823 | 1,027  | 0,814                              | 1,296 |
|                  | Coloured                           | 0,586              | 0,336                   | 0,836      | 4,600           | 3023,000 | 0,000 | 1,797  | 1,400                              | 2,306 |
|                  | Indian/Asian                       | 0,962              | 0,632                   | 1,291      | 5,724           | 3023,000 | 0,000 | 2,617  | 1,882                              | 3,638 |
|                  | White                              | 0.000 <sup>a</sup> |                         |            |                 |          |       | 1,000  |                                    |       |
|                  | percapitaincome                    | -                  | -3,042E-05              | 6,880 E-06 | -1,237          | 3023,000 | 0,216 | 1,000  | 1,000                              | 1,000 |
|                  | EDUCCAT_RECODE_max                 | 0,048              | 0,027                   | 0,070      | 4,463           | 3023,000 | 0,000 | 1,049  | 1,027                              | 1,072 |
|                  | head_age                           | 0,062              | 0,058                   | 0,065      | 34,493          | 3023,000 | 0,000 | 1,064  | 1,060                              | 1,068 |
|                  | hholdsize_max                      | 0,081              | 0,059                   | 0,103      | 7,268           | 3023,000 | 0,000 | 1,084  | 1,061                              | 1,108 |

Dependent Variable: Diabetes\_binary (reference category = HH without diabetes)

Model: (Intercept), Food\_security\_tertiles, head\_sex, Geotype, prov\_max, race\_max, percapitaincome, EDUCCAT\_RECODE\_max, head\_age, hholdsz\_max

a. Set to zero because this parameter is redundant.

Overall, results from the logistic regression demonstrated that the logistic regression model was statistically significant for the head of the household's education level,  $\chi^2=38.5$ ,  $p<.05$  ( $p=0.00$ ). Therefore, there is a 95% chance that this variable has an influence on the caseness of diabetes in adults. The model was insignificant for both per capita income,  $\chi^2=0.13$ ,  $p>.05$  ( $p=0.72$ ); and access to food,  $\chi^2=0.64$ ,  $p>.05$  ( $p=0.73$ ). Furthermore, the model explained 0.163 (Nagelkerke  $R^2$ ) of the variance in diabetes prevalence and correctly classified 85.3% of cases. Sensitivity was 91.3%, specificity was 24.7%, positive predictive value was 99.7% and negative predictive value was 1.1%. Furthermore, the false negative value was 8.7% and the false positive value

was 75.3%. Thus, the model did not have much discriminatory power. The area under the ROC (receiver operating characteristic) Curve was 0.598%, which is a poor level of discrimination.

It is often thought that with logistic regression there are no assumptions as it is assumed that the relationship between the independent variable and the logit are linear. Therefore, a Box-Tidwell test was run to test the assumption of homogeneity of covariance matrices. The results indicated that the interaction was insignificant between; adequate access to food and diabetes ( $p=0.950$ ); inadequate access to food ( $p=0.595$ ); and the average education level ( $p=0.08$ ). However, with regards to per capita income variable, it was significant ( $p=0.001$ ) and therefore the linearity assumption was violated. This is most likely due to the large sample size being investigated (Field, 2009).

After controlling for sociodemographic characteristics in Table 4, the analysis of the data surprisingly indicated that a household's per capita income is not strongly linked with the prevalence of diabetes among adults in a household,  $b=-1.177$ ,  $p>0.05$  ( $p=0.216$ ).

A household's adequate access to food also did not strongly suggest an effect on the prevalence of diabetes among adults in a household,  $b=0.14$ ,  $p>0.05$  ( $p=0.210$ ) nor did a household that had inadequate access to food significantly show a strong link to the prevalence of diabetes among adults in a household,  $b=0.137$ ,  $p>0.05$  ( $p=0.256$ ). Severely inadequate access to food was used as the default reference category that the other variables were compared to.

The analysis indicated that the higher the level of the head of the household's education, the higher the likelihood of that household having an adult with diabetes in it,  $b=0.048$ ,  $p<0.05$  ( $p=0.00$ ).

The results indicated that there is a difference between men and women in terms of the prevalence of diabetes in adults in a household, with the male head of the household indicating a stronger influence,  $b=0.18$ ,  $p<0.05$  ( $p=0.00$ ), and if they came from an Urban formal environment,  $b=0.46$ ,  $p<0.05$  ( $p=0.004$ ). Living in an Urban informal,  $b=0.17$ ,  $p>0.05$  ( $p=0.408$ ) or Tribal area,  $b=0.10$ ,  $p>0.05$  ( $p=0.525$ ), did not translate to a strong chance of there being diabetic adults in the household.

As the data used categorical variables, Limpopo was set as the default reference group which the other groups were compared to. However, it did not matter which province the head of the

household lived in, in South Africa, as the incidence of diabetes of an adult living in the household was strongly linked across all nine of the provinces when compared with Limpopo. The values for each province were: Western Cape,  $b=0.74$ ,  $p<0.05$  ( $p=0.000$ ); Eastern Cape,  $b=0.87$ ,  $p<0.05$  ( $p=0.000$ ); Northern Cape,  $b=0.45$ ,  $p<0.05$  ( $p=0.005$ ); Free State,  $b=0.75$ ,  $p<0.05$  ( $p=0.000$ ); KwaZulu-Natal,  $b=0.87$ ,  $p<0.05$  ( $p=0.000$ ); North West,  $b=0.50$ ,  $p<0.05$  ( $p=0.000$ ); Gauteng,  $b=0.47$ ,  $p<0.05$  ( $p=0.001$ ); and Mpumalanga,  $b=0.61$ ,  $p<0.05$  ( $p=0.000$ ).

With regards to the population group, a household head that was Black/African did not show any significant influence on the prevalence of diabetes in adults,  $b=0.03$ ,  $p>0.05$  ( $p=0.823$ ). However, a household head that was Coloured,  $b=0.59$ ,  $p<0.05$  ( $p=0.00$ ), or Indian/Asian,  $b=0.96$ ,  $p<0.05$  ( $p=0.00$ ) was seen to have a significant influence on the prevalence of a diabetic adult residing there. Furthermore, both the age of the head of the household,  $b=0.06$ ,  $p<0.05$  ( $p=0.000$ ), and the size of the household,  $b=0.08$ ,  $p<0.05$  ( $p=0.00$ ) showed a strong link with the prevalence of diabetes in an adult living in the household.

In summary, of the three predictor variables only one was statistically significant in influencing the prevalence of diabetes and that was the head of the household's education level ( $p=0.00$ ). This may be due to the highly correlated independent variables which are explaining the same part of the variation as the dependent variable. Therefore, collectively, the variable was decreased in power which in turn made it insignificant. Furthermore, with regards to gender: both males and females were shown to have high diabetes prevalence rates ( $p=0.001$ ). Furthermore, all regions indicated high prevalence rates: Western Cape, Eastern Cape, Free State, KwaZulu-Natal and Mpumalanga ( $p=0.00$ ), Gauteng ( $p=0.001$ ) and Northern Cape ( $p=0.005$ ). In particular, adults living in an Urban formal environment had more of a chance of being diabetic ( $p=0.004$ ).

## **CHAPTER FOUR: DISCUSSION**

### **4.1 Introduction**

The results indicated that there is a difference between households with a resident adult with diabetes and households where none of the resident adults have diabetes, in terms of all three independent variables under study. However, through multiple logistic regression, the result of the study only indicated some significant effects between the level of the head of the household's education and the influence on the prevalence of diabetes in adults. Little significance was determined between average per capita income and access to food. There are limitations to this study most likely due to the nature of household surveys and their collection and statistical compilation. Therefore, even though this study aimed to explore and not infer outcomes, when interpreting the results of this study one needs to be mindful of this limitation and do so with care.

The aim of this research was to explore the difference between households with a resident adult with diabetes and those households where none of the resident adults had diabetes, in terms of the influence of income, access to food and education level, on a household level. In order to do this, statistical analyses was conducted using descriptive and bivariate statistics. This was followed by multiple logistic regression using the selected variables to further understand the prevalence of diabetes in adults. Chapter Three indicated that the null hypothesis for all three independent variables was found to be untrue and therefore they were rejected. As a result, the alternative hypotheses were accepted. This concluded that there is a difference in the average per capita income, average education level of the household head and access to food and in households where there is an adult with diabetes and households where there is no adult with diabetes. Therefore, all three variables do have some effect on the prevalence of diabetes in households.

After putting controls in place for age, gender, race, geographical location and province, the results of the regression analysis indicated that there was not a strong relationship between diabetes and the average per capita household income, as well as access to food and the prevalence of diabetes in households. The results, however, indicated a stronger relationship between diabetes prevalence and the household head's average education level. This conclusion shows that an increase in an individual's education attainment, may have some effect on the likelihood of that adult developing diabetes. This finding is in line with the available literature within a South African context.

The current chapter of this study discusses the results of the descriptive, bivariate and multiple logistic regression analyses from a socio-ecological perspective, considering the post-positivist position that offers possible explanations as to what may have led to the influence of these three variables on the prevalence of diabetes in adults.

Firstly, the discussion of this study explores what it means for a household to have a family member with diabetes in it so that one understands the impact of diabetes on a household and why it is an important topic to explore. Secondly, the discussion of this study looks at the difference in diabetes prevalence within the three variables under consideration, namely, income, access to food and education level.

The findings of this study are in line with the research questions, as well as the literature available. Therefore, this study uses literature available to further discuss and understand the meaning of the results.

## **4.2 Diabetes**

The results of this analysis report that a significant 8.8% of households in the population sample in South Africa had diabetes.

In 2017, approximately 1 865 021 adult South Africans were diagnosed with diabetes (IDF, 2017). However, in 2014, the findings indicated that 1 232 577 adult South Africans were diagnosed with diabetes (7.9% of the population). As mentioned previously, obesity is one of the main known risk factors in the development of diabetes, as well as other NCDs in this country. The South African Department of Health, in 2015, committed to prevent and reduce the prevalence of obesity by 10% by 2020. It is thus important that by 2017, the prevalence rate of diabetes would have started to decrease. However, if the findings in this study from 2014, indicate that the prevalence of diabetes had in actual fact increased, then this is a major concern for all levels of influence, especially at policy level, as this finding seems to indicate that intervention and prevention strategies may not be working as effectively and efficiently as hoped. In the past, research indicated that diabetes could be prevented in individuals by rigorous intervention strategies. However, the prevalence of diabetes is on the increase and therefore another framework is required. Thus, research is now looking towards the socio-ecological model as a framework for prevention. Studies indicate that even though approaches aimed at the treatment or prevention in individuals is important, these are no longer sufficient (Whittemore et al., 2004). Individuals are finding it difficult to maintain the necessary lifestyle

change required to prevent diabetes due to current societal trends linked with modern technology and fast food options. Hence, the development of intervention and prevention programmes from the individual level to the community level, is now being strongly advocated (Whittemore et al., 2004).

As the GHS is one of the few surveys which uses such a broad sample size, it is therefore a useful tool to measure trends, making this finding incredibly concerning. Unfortunately, the variable of obesity is not found in the GHS dataset, even though it is one of the leading risk factors for most of the metabolic diseases that are captured in the survey. Thus, it is difficult to understand why this trend may be present. Perhaps the GHS needs to include obesity as a variable moving forward. However, understandably, measuring obesity is complex due to the many social and cultural aspects that affect the understanding of this concept. This finding does, however, suggest that more in-depth studies are required around this topic to understand what other factors may be affecting it, especially as the influence of obesity is linked to the prevalence of diabetes. The repercussion of having an adult in a household with diabetes, has an effect on the well-being of all family members, as outlined below.

Living in a household where there is diabetes present becomes a family event as diabetes in one family member tends to have an impact on other members of the family (Rintala et al., 2013; Reinhr, 2013). Research further indicates that a family tends to influence the self-management of diabetes. This can either have a positive or negative impact on the family system. There are three influencing factors which tend to make diabetes a family illness. Firstly, genetics plays an important role – even though there is no single gene that may give an individual diabetes – it definitely predisposes a person to diabetes (WHO, 2016). Therefore, a diabetes diagnosis for one family member, may mean that other family members are at high risk. This finding is a further concern for the health care system and an individual's well-being, affecting many levels of influence (intrapersonal, interpersonal, community and organisational). Secondly, food has a direct impact on a person's health (Hawkes, 2006; Harrison et al., 2011). Family members living in the same household tend to eat similar food. Therefore, when one family member has diabetes, they need to adjust their diet and this is a lot more difficult for that person to achieve if the family does not change too. Thirdly, a lack of physical exercise is the other major risk factor for developing diabetes (Sullivan et al., 2005). Individuals who have family members that are not active, tend to have less motivation to exercise themselves.

Furthermore, adults with diabetes tend to have family members who perceive that their illness is a lot more severe than those who actually suffer from it. This leaves those family members experiencing fears and concerns directly connected to diabetes. Some family members constantly worry about the health of the diabetic family member, making them feel uncertain about their future. Research shows that this worry that family members experience, lowers their positive well-being more than it does the person with diabetes (Rintala et al., 2013). These examples clearly signify the interpersonal influences an individual with diabetes has on their family structure. Therefore, this secondary impact on the different levels within the socio-ecological model, warrants diabetes-related outcomes to be even more worrisome than they already are.

#### **4.2.1 Head of the household**

It is important to note that this study specifically looked at the head of the household to understand the situation within the household, on a household level, and not on an individual level. The decision to use the head of household's data was made as they usually bring in most of the income and are responsible for the overall decision-making in the family, which in turn affects the overall well-being of those in the household, and are therefore of particular interest in understanding the meaning of the results of this study (Booyesen, Guvuriro, Campher, & Mudzingiri, 2013).

In South Africa, according to the findings of this study, the majority of heads of households were male (58.7%). The largest population group in this study was African/Black with 79.6% of the population. This is in line with available literature as research conducted by Booyesen, Guvuriro, Campher, and Mudzingiri (2013) has indicated that in many African cultures, the head of the household is usually the oldest male and therefore a contributing factor as to why the analysis indicated that the majority of households in South Africa have male household heads. Furthermore, the majority of research mirrors the findings that the head of the household is given certain importance within the social standing of the family and is most often associated with decision-making status (Booyesen et al., 2013). If they are then diagnosed with diabetes, this will have a significant impact on the rest of the family and their well-being. Overall, the diagnosis of diabetes means that all family members need to adopt a healthier lifestyle. Interventions that target the family on an interpersonal level, tend to be more effective than those that solely target individual levels.



#### **4.2.2 Gender**

The results of the study indicated that being either male or female made no difference in the prevalence of diabetes. This result is supported by literature, but interestingly, most research has indicated that the prevalence of diabetes in either males or females seems to differ by country. In the United Kingdom (UK), literature indicated that men aged between 35 and 54 are twice as likely to have diabetes compared to females in the same age group (Diabetes UK, 2009). This research explained that the prevalence of diabetes has risen almost four times faster in males aged between 35 and 44 over the last several years, compared to women. The main reason given for this is that men in the UK are consistently more overweight than women. Being overweight or obese is one of two major risk factors for developing diabetes and South Africa has one of the highest obesity rates in sub-Saharan Africa (Diabetes UK, 2009; Sullivan et al., 2005). In contrast to the data above, in South Africa, research has shown that women are more likely to be overweight or obese than men. In 2000, it was estimated that 87% of diabetes cases in South Africa were due to excess body weight (Pheiffer et al., 2018). This same research explained that in 2013, 38% of men and 69% of women in South Africa were thought to be overweight or obese. This finding is most likely due to a complex matrix of social, economic and cultural variables.

#### **4.2.3 Age**

The results of the current study also concluded that the age of the head of the household had an effect on the likelihood of developing diabetes. The average age of the head of the household in this study was found to be 46 years. Further research in this area conducted by Peer et al. (2012) determined that in developing countries, there was a steep growth in individuals over the age of 45 years screening positive for diabetes. These individuals make up 20–25% of the individuals between the economically-active age of 45 to 64 years. Therefore, the results from this study are in line with literature.

The above discussion gave further understanding as to why researching diabetes is so important. The below discussion now looks at the aims, which is to explore the influence of the three variables researched in this study. The results in Chapter Three show that differences in average per capita income, average head of the household education level and a household's access to food have an impact on the prevalence of diabetes in adults in households in South Africa. The discussion that follows attempts to understand the meaning of these results, which are intricately linked.

### 4.3 Income

Low SES is associated with a higher prevalence of diabetes and consequently worse health outcomes than those individuals from a higher SES (Flatz et al., 2015).

This study hypothesised that there is no difference in the average per capita income between adult residents in a house living with diabetes and adult residents living without diabetes. The results of this study, however, indicated that there is a difference in the average per capita income between adult residents in a household living with diabetes and adult residents living without diabetes. The results were in line with recent research which indicated that people living in low SES environments are vulnerable to developing diabetes (Reinehr, 2013; Abubakari et al., 2008).

Furthermore, as type II diabetes accounts for 95% of diabetes cases worldwide, research has consistently indicated that the disease is over-represented amongst low SES groups (Eakin et al., 2002; Reinehr, 2013; Whittemore et al., 2004; Reidpath et al., 2002). Reinehr (2013) also explained that inadequate social support often leads to low levels of self-management and this may be due to an underdeveloped social network that does not provide psychosocial support. This further explains why the socio-ecological model is important to consider when introducing intervention and prevention treatment plans as the model does not simply look at the individual as a single entity but considers their social environment as a whole, and the impact these different levels may have on the prevalence of diabetes in adults.

What is concerning about this finding, is that the average household per capita income was R3 077. This had a SD of 4 242. The SD is incredibly high due to the highly unequal distribution of wages in South Africa. The labour market is split into two extreme job categories. Therefore, a small number of individuals can access high paying jobs whilst the majority of individuals have less well-paying jobs (Stats SA, 2018). Furthermore, the median per capita household income was R1 346. Such low income levels have huge implications on households. Low income means low levels of education, a decrease in access to food, and a decrease in access to healthcare services. Low levels of income also indicate a need for special diabetes care and for educational programmes which are modified for this group (Eakin et al., 2002). Unfortunately, research has shown that the reach of prevention programmes is usually limited when it comes to households from low SES environments. There are a number of internal and external factors that may cause this (Whittemore et al., 2004). Such factors include economic barriers to care,

cultural beliefs, limited access to transportation, multiple care-giving roles, reduced access to childcare and the increase of mental health and abuse issues (Eakin et al., 2002).

#### **4.3.1. Urbanization**

Results indicated that coming from an Urban formal environment increases the likelihood of developing diabetes as an adult. This is in line with literature which explains that an increase in urbanization is occurring within developing countries and is a contributing factor towards the prevalence of diabetes in South Africa (Pillay et al., 2016). Interestingly, the only population group in which urbanization did not have a strong effect on developing diabetes as an adult is the Black/African population. This population, however, is the largest population group compared to the other three. Challenges that may have influenced the data include the huge discrepancy between per capita income that is prevalent in South Africa due to inequality, the self-reporting nature of the primary data collection, and in terms of access to food, the complex measurements required to determine adequate access to food per household.

Additionally, developing countries are undergoing socio-economic transition and are therefore experiencing a mixed epidemic of NCDs, such as diabetes (Ziraba et al., 2009). In line with the current study's results and available literature, there is a strong likelihood that living in an Urban formal environment increases the prevalence of diabetes in adults, as opposed to living in Urban informal, Tribal areas and Rural formal areas, that do not show a strong link to the prevalence of diabetes in adults. To add to the discussion around this significant result, it is now estimated that 20–50% of urban populations in Africa are categorized as overweight or obese (Abubakari et al., 2008). An explanation of this is perhaps due to increased access to energy-dense foods and less energy-consuming jobs. Urbanization has also led to an increase in television ownership and changes in traditional food preparation, leading to a sedentary lifestyle and the consumption of processed foods which are not always accessible in rural environments (Abubakari et al., 2008).

#### **4.3.2 Socio-economic status**

Research has indicated that areas with a low SES and 'poor neighbourhoods', are associated with an increased prevalence of obesity, and thus diabetes, due to their vulnerability, especially in countries like the USA, UK, Canada, Japan, Austria and Germany (Reinehr, 2013). However, the results of this study were not in line with this literature, but rather in line with research conducted in Africa. Some studies in Africa have shown that in contrast to the above research that mentions the link between low SES and diabetes, this research explains that there is

potentially a strong positive relationship between obesity and high SES groups (Mbanya, 2007, as cited in Ziraba et al., 2009). As the results of this study indicated that living in an Urban formal environment was likely to influence the prevalence of diabetes in adults, compared to other lower SES environments, the findings were consistent with research conducted in other African countries.

#### **4.3.3 Culture**

Usually, results from analyses focus on those variables which have a strong likelihood of influencing the dependent variable. However, in this study, the fact that the results indicated that the only population group which did not have a significant effect on the prevalence of diabetes in adults, was the Black/African population group, is of importance. This finding is not in line with available research as current research reports that Black/African residents have a significantly higher prevalence of diabetes as opposed to other population groups (Peer et al., 2012). This population group includes 76.9% of the total South African population. The reason this is significant is that from a cultural perspective, in certain African cultures, being overweight is associated with prestige, happiness and healthy living (Abubakari et al., 2008). Being overweight may also be perceived as beautiful in women and successful in men (Siervo, Grey, Nyan, & Prentice, 2005, as cited in Abubakari et al., 2008). Furthermore, an increased body mass is often regarded as an indicator of well-being and marital harmony (Mvo, Dick, & Steyn, 1999). However, this does not bode well for the prevalence of diabetes in adults as overweight or obesity is a major risk factor for developing diabetes. Understanding this cultural influence amongst the largest population group in South Africa, one would think that the results of this study would indicate a significant effect of this population developing diabetes. This, especially since research conducted by Somers et al. (2006) indicated that the highest prevalence rates of diabetes may have been found in the adult population of Indian origin, but that it was closely followed by the Black/African population group. However, against findings in current literature, the results of this study indicated that being Black/African and living in a household with other Black/Africans only had a limited influence on a person developing diabetes.

Using literature to explain this finding, a possible reason may be the debate around ‘fitness versus fatness’. Discussions in Sullivan et al. (2005) mentioned that obesity may not be as serious a health problem as perceived, if levels of physical activity were considered. Findings from Hainer et al. (2009) reported that fitness tends to be more important than fatness, however, they also mentioned that it is difficult to account for the interaction between both of the

determinants which are present. This is due to the impact this has on the individual, which is difficult to predict, as it does not address the complexities and interdependencies between socio-economic, cultural, political, environmental, organisational, psychological, and biological determinants, all of which affect health (Stokols, 1996, as cited in Whittemore et al., 2004). Therefore, this leaves room for further research in this area.

Another research paper, which was presented by Diabetes UK in 2012, found that individuals who belong to the Black/African population, are expected to develop diabetes earlier in life at an increased rate than individuals from the White population group. Using the socio-ecological model to understand this finding, McLeroy, Bibeau, Steckler, and Glanz (1988, as cited in Whittemore et al., 2004) explain that levels of influence on the prevalence of diabetes may include intrapersonal factors, interpersonal processes, institutional factors, community factors, and public policy. Therefore, it is important to consider how the legacy of apartheid may have an influence on many of these levels as a result of the inequality in South Africa. Although the post-apartheid government has promoted equality, recognising the need to implement specific measures to address the disadvantages that individuals experience, changes in this legislature have not yet impacted sufficiently to change conditions on the ground (Watermeyer et al., 2006). Therefore, poor households are vulnerable to national policy choices and politics (Acheampong Dei, 2014).

Furthermore, an emerging clinical challenge shows that diabetes affects all ethnicities, although individuals from racial minority groups tend to suffer disproportionately (Reinehr, 2013). In this study the results indicated that individuals in the Indian/Asian population group, followed by individuals in the Coloured population group, had a stronger likelihood of developing diabetes as an adult. This is in line with literature that reports that the majority of the Indian/Asian population group are predisposed to diabetes through a genetic link (Ottermann, 2017).

However, the results of the current study, after putting controls in place for age, gender, race, geographical location and province, indicated that there is little significant effect between low income households and the prevalence of diabetes in adults. To understand how this may have occurred it is important to understand the usefulness and challenges of using household surveys for data collection (Kelsh, 2016). The data gathered may be comprehensive in terms of sample reach and information gathered, as well as reasonably cost effective to produce. However, according to Meyer, Wallace and Sullivan (2015), even though the household survey is a

valuable innovation in social science research, it is threatened by decreasing accuracy due to the lack of co-operation of some respondents. Furthermore, they explain that the quality levels of household surveys have deteriorated over the years mainly due to a rise in non-response rates rather than due to any significant factor/s. A huge problem is in assessing biases due to the challenges of non-response, imputation and measurement error, as there is a lack of a benchmark or measure of truth (Meyer et al., 2015). In addition to an increase in the non-response rate, individuals also tend to leave out certain survey questions, especially questions around income, and the reason for this may be linked to national grant applications. Another factor affecting the response rate includes a lack of interest in and understanding of the outcome of the household survey and how it may positively affect the respondent. Even poor health and language difficulties may impact on a participant's response. Furthermore, a rise in gated communities has made door-to-door data collection increasingly difficult (Kelsh, 2016).

The next section looks at the difference in access to food between households with an adult resident diabetic and households without an adult resident with diabetes.

#### **4.4 Access to food**

This study hypothesised that there is no difference in access to food between adults living with diabetes and adults who do not have diabetes. The results of this study, however, indicated that there is a difference in access to food between households who have an adult resident living with diabetes and adult resident living without diabetes. This finding is in line with most of the recent research on this topic.

Research explains that there are four components to understanding household food security and these include availability of food, access to food, utilisation of food and the stability of availability and access to food. However, measuring food security is complex as there are multiple dimensions of food insecurity. Different survey instruments have been used to study food insecurity in South Africa over the years, however, these instruments focus on malnutrition, energy availability, food poverty and experiences of hunger. The findings of these unfortunately do not meaningfully add to a comprehensive understanding of food security (Stats SA, 2011). Furthermore, the outcomes of these surveys do not allow researchers to properly determine the prevalence of diverse types of food security, while at the same time accurately identifying households that are at risk (Stats SA, 2011).

Therefore, the GHS is limited in offering a definitive answer to understanding whether a household endures food insecurity or is food secure. This study does, however, allow an understanding of those households that have adequate or inadequate access to food.

It is concerning that the results of this study indicate that 16.6% of households in South Africa reported having inadequate access to food. The common reason that some households respond to having inadequacies in obtaining food include anxiety over food insufficiency, food budget adjustments due to increased costs of living, changes in the type of food they are able to obtain, and reduced intake of food (Seligman, Bindman, Vittinghoff, Kanaya, & Kushel, 2007). Even more concerning is that a further 5.9% of households reported that they had severely inadequate access to food. Individuals in these households tended to miss meals and reported hunger due to the unaffordability of food (Seligman et al., 2007).

A further challenge is that 2.2% of adults in the population sample reported that they often had insufficient access to food and 0.8% always had insufficient access to food. With regards to children, it was reported that 1.5% of this population sample often had insufficient access to food and 0.4% always had insufficient access to food. On a policy level, food is a basic human right which is noted in the Constitution of the Republic of South African, No 8 of 1996 (RSA, 2017). Therefore, good nutrition is vital as it can delay or prevent the onset of disease, thereby helping with recovery and lowering the cost of health care (Dwyer, 2006).

Furthermore, inadequate access to food is understood to mean that households are unable to get food on a sustainable basis (Stats SA, 2011). These households therefore lack access to adequate resources and do not have the ability to grow, buy or receive food. In addition, households should be able to access enough food, which is part of a nutritious diet. However, a household with inadequate access to food, is unable to do this (Stats SA, 2011). The result of this current study is replicated in some research which suggested that inadequate access to food is intricately linked to low levels of income (Seligman et al., 2007). Households that function in a state of poverty are consequently vulnerable to hunger and food insecurity (Stats SA, 2011). Low levels of income are further linked to the increased burden of diseases such as diabetes (Eakin et al., 2002). Findings by Seligman et al. (2007) showed evidence for an association between food insecurity and diabetes in a nationally representative sample. Individuals living in food insecure households, are inclined to buy inexpensive alternatives which are not necessarily nutritionally healthy. This leads to higher levels of caloric intake and results in individuals exceeding their dietary quotient for the day. Other studies have indicated that food insecure household's tend

to reduce the amount of fruits and vegetables they eat, which increases the amount of fat in their diets, especially saturated fats and refined carbohydrates. This kind of dietary intake is associated with diabetes. Furthermore, diets that are cyclical in nature, due to monthly incomes and grants, tend to have individuals in these households either overconsuming food at certain times or under consuming food at other times. This pattern of eating is linked to the likelihood of developing diabetes (Seligman et al., 2007).

Importantly, the results of the current study, after putting controls in place for age, gender, race, geographical location and province, indicated that there was not a strong effect between access to food and the prevalence of diabetes in adults. A further possible reason for this result is that literature explains that the measurement of access to food in the GHS is limited in that the results tend to allow only for an understanding of a household's situation within the context of a larger group, and not on an individual basis, which may skew the results. Furthermore, the questions asked in the survey did not necessarily focus on the intra-household distribution of food, and therefore the reasons as to why a household is not food secure cannot be easily identified (Stats SA, 2011). This does, however, leave room for further in-depth research.

The next variable to look at is education level. Out of the three variables this study is interested in, only the head of the household's average education level showed a strong link with the likelihood of an adult developing diabetes.

#### **4.5 Education level**

This study hypothesised that there is no difference in the head of the household's average education level between adults living with diabetes and adults living without diabetes. The results of this study, however, indicated that there is in fact a difference in the average education level between adults living with diabetes and adults living without diabetes. Most research conducted internationally indicated that an individual's educational attainment was inversely associated with the prevalence of diabetes (Borrell, Dallo, & White, 2006; Micklesfield et al., 2013). The reason for this is that education and income are intricately linked and low income often means a higher prevalence of developing diabetes, as well as lower levels of educational attainment. For example, research indicated that as a household's income decreases, then the possibility of improving education levels decreases too, thus lowering the education attainment of individuals within that household. This cyclical nature has a significant effect on the prevalence of diabetes in adults, especially the risk of developing type II diabetes (Whittemore et al., 2004).



Importantly, after putting controls in place for age, gender, race, geographical location and province, the results of this study indeed indicated that educational attainment had a strong effect on the prevalence of diabetes in adults. However, the results of the analysis were not in line with international literature. The results of this study showed that the higher the level of education, the higher the prevalence of diabetes is for adults living in South Africa.

The South African Department of Health (2015) indicated that in South Africa, there tends to be a consistent positive association between obesity and SES and the prevalence of diabetes. Interestingly, in their strategy for the prevention and control of obesity in South Africa 2015–2020, this government department also mentioned that obesity rates are on the rise for people of all education levels. As we know that one of the major risks of diabetes is obesity, this finding has significant value. In trying to understand this, upon further investigation of literature, it was found that absolute rates of diabetes are still high for those individuals with low education levels. This finding does suggest that the gap between socio-economic strata in South Africa is possibly narrowing, which is affecting diabetes prevalence (South African Department of Health, 2015).

Furthermore, in this study, it was the head of the household's educational level that was examined. The findings from the analysis indicated that the majority of individuals that were the heads of their household were male and those with diabetes had an average number of 11.28 years of educational attainment. It is important to note that 12 years of education is equivalent to a Senior Certificate pass and most jobs require this level, at least. The average number of years of education of the heads of the households that did not have diabetes was 11.03 years, also less than the requirement level to receive a Senior Certificate and fewer years of education than those living with diabetes. Lack of education is intricately linked with low levels of income and poverty which both have an effect on the prevalence of diabetes.

#### **4.5.1 Access to services**

One of the reasons to explain the result as to why higher educational attainment has a stronger influence on diabetes, is the likelihood that these individuals with a higher level of education, have access to services, and can thus be screened and receive a diagnosis of diabetes. Literature has shown that a possible 62% of individuals living with diabetes were undiagnosed and this may have to do with the poverty levels in South Africa (Pillay et al., 2016; Green, 2016). Furthermore, it is the Black/African population that are the most vulnerable to poverty. This may explain why the results of this study showed that this particular population group did not

have a significant effect on the influence of diabetes in adults. It is possible that it was not the case that this group did not have high levels of diabetes, but rather that the disease was underdiagnosed within this group.

Furthermore, research conducted by Obuaku-Igwe (2015) showed that the health of the general population is contingent in most part, on access to healthcare. This is a vital determinant which includes not only the availability of health services, but also the quality and effectiveness of the care offered by professionals, as well as the financial resources to access both general and specialised care by patients. In South Africa, inequality in health care differs throughout geographical context and dimensions of social and economic class. Furthermore, health inequalities are significantly associated with variations in access to education, living conditions in childhood, age, geographical location, ethnicity, race, socio-economic conditions and gender (Obuaku-Igwe, 2015). This inequality leads to poor access to services and the underdiagnosis of diabetes which leads to health complications and increasingly poor quality of life for those living with diabetes.

In addition, South Africa is moving towards an NHI plan and hopefully this will close the gap between those who are diagnosed with the disease and those who are not. Unfortunately, many diabetic patients only ask for help when they show symptoms of other metabolic diseases or when they have complications. This puts an unnecessary burden on the health care system as around 80% of cases of type II diabetes could be prevented by following a healthy eating plan and through exercise. Furthermore, there is a concern that chronic NCDs, such as diabetes, will lead to major economic costs for both the patient and the health care system, which is already heavily burdened (Pillay et al., 2016; Reinehr, 2013). In 2016, the cost of treating one diabetic patient per year in South Africa was approximately R26 500.00 (Green, 2016). However, often it is not treating the diabetes that is expensive, but rather treating the complications of the disease that causes high costs. Therefore, preventative measures which offer early identification of the disease need to be implemented by offering basic health care which is affordable (Ottermann, 2017). This is where the challenge comes in as access to health services are hindered for some individuals, due to high levels of inequality in South Africa.

*Batho Pele*, which means ‘people first’, is a government initiative that started in 1997 (Thenjiwe & Miza, 2015). This approach is linked with social mobilisation in terms of a socio-ecological perspective. The initiative distinctly mentions that services should be available for and accessible to all individuals who seek health care, bringing together organisations and social

institutions (Thenjiwe & Miza, 2015). This is also linked to policy and is an area in need of advocacy, according to the socio-ecological model. However, the results of the current study indicated that 26.9% of the population live in Tribal areas, 4.4% live in Rural formal areas, and 9.9% live in Urban informal areas. This equates to a large number of residents in households that are very far away from health services, have difficulties with transport or access to appointment information, or they do not have enough income to access health care. Furthermore, on an individual level, the benefits of accessing health care are often not recognised (Frost, Jenkins, & Emmink, 2017). This level of the socio-ecological model needs to be addressed and individuals should be given access to knowledge, which will influence their attitudes and behaviours towards diabetes and how they can prevent or manage it. Behaviour change will also affect interpersonal communication, leading to further self-efficacy, motivation to change and higher levels of wellness.

#### **4.6 Interventions**

Most interventions have focused on the individual level and interpersonal level (parental influence), with good reason as importantly, parental characteristics, such as maternal education and maternal mental health, may influence the risk of obesity and thus the prevalence of diabetes (Harrison et al., 2011). Therefore, it is vital that adults with diabetes have access to services, are diagnosed, and understand how to manage their disease and its symptoms; so that the children in the household are not affected. With 8.8% of South African households reportedly having a diabetic adult, there is a high chance that children living in those households are negatively affected.

One of the most efficient ways of addressing the burden of diabetes is for governments, at policy level, to focus on prevention by raising awareness (Ottermann, 2017). However, for these interventions to be successful, social mobilisation must be put in place at different socio-ecological levels. Social mobilisation is a continuous process that involves various inter-sectoral partners at both national and local levels to either raise awareness or request certain developmental objectives. These partners may include policy and decision makers, community leaders, religious groups, non-governmental organisations, private sector entities, communities and individuals (Hausler & Wills, 2007).

#### **4.7 Limitations**

One of the main limitations of this study was that the researcher did not have control over the data; in terms of how it was collected; the challenges with the self-reported nature of household

surveys; and the possible under-reporting by participants due to various factors. Therefore, the multiple logistic regression indicated a false positive value of 75.3%, which means that the model does not have much discriminatory power. As there is little control, there are therefore errors in this data. However, this study is not meant to infer but rather to be used in an exploratory manner and hence the results were interrogated using available literature.

A further limitation of this study, which may have affected the results, was the large variance in the SD results for per capita household income. The standard error is an estimate of the SD of the coefficient and is essentially the amount that varies across cases. The results indicated that the amount that income varied across each case was 3 769. Therefore, this limitation must be acknowledged. Even though the results show that they are significant, in particular, between adults who have diabetes and those that do not, the results need to be interpreted with caution because of the high SD. Another limitation of the multiple logistic regression analysis was that the results were compared to a default reference category, which was chosen due to it belonging to the last category within the group. Lastly, a further limitation was that the ROC Curve results were 0.598, which indicated that the multiple logistic regression model lacked sensitivity and specificity.

#### **4.8 Summary**

This chapter indicated that there are differences between an adult resident living with diabetes and an adult resident living without diabetes when it comes to a household's average per capita income, their access to food and the head of the household's education level. Interestingly, the results showed that compared with a household's average per capita income and access to food, only the head of the household's average educational level had a significant influence on the prevalence of diabetes in adults. Due to the limitations of this study, the results were interpreted with caution, and this study used available literature to understand their meaning.

## **CHAPTER FIVE: CONCLUSION**

This is an entry level study using secondary data where there is no control over how the primary data was collected. The study aimed to analyse and make sense of the data in terms of the available literature, in order to inform more direct studies on this topic in the future.

### **5.1 Introduction**

This study investigated the influence of a household's average per capita income, access to food and the head of the household's average education level on the prevalence of diabetes in adults. The study used data from the GHS of 2014, referring to both the individual dataset and the household dataset. Statistical analysis was used to understand the population sample. The results were introduced via descriptive and bivariate statistics. A multiple logistic regression analysis was performed using different variables as controls. The results of this analysis, after putting controls in place for age, gender, race, geographical location and province, indicated that only the head of the household's average educational level had a strong effect on the prevalence of diabetes in adults. Furthermore, the results also point to a concern of using the GHS to investigate the three variables and their influence on diabetes. The survey may be comprehensive, but it does not necessarily capture the required information due to many complex factors that are hard to identify and measure.

Diabetes is reaching epidemic proportions globally and South African seems to be following this trend. The study's results indicated that 8.8% of households had an adult that was diagnosed with diabetes. Furthermore, the results showed that the three variables under study are all intricately entwined and affect not only the individual with diabetes, but also their interpersonal relationships.

The results of the study concluded that there was a difference in the average per capita income level of a household with an adult resident with diabetes compared to a household that did not have an adult resident with diabetes. However, as opposed to literature, the results of this study further indicated that the average per capita income only had a small effect on the prevalence of diabetes in adults. This is a surprising finding, as most of the literature shows that income has an effect on diabetes at all levels of income brackets. Reasons for this are unclear but may have to do with the limitations of this study in terms of the large variance in the SD for the income variable. It does, however, allow for further in-depth research.

What is concerning is that the results of this study indicated that the majority of the households were surviving on an average income of only R1 346 per month. Furthermore, households which are facing poverty tend to lack access to services, access to educational attainment and are vulnerable to food insecurity, which have huge repercussions on an individual and the prevalence of diabetes.

The results of this study may have found that there is a difference between household's access to food for those who have an adult resident with diabetes compared to those households that do not have an adult resident with diabetes. In addition, this finding was supported by literature. However, the results further indicated that there may be a difference between the two, but there is not a strong influence of access to food on the prevalence of diabetes in adults. Similar to the per capita household income finding, this was again unusual in that literature supports inadequate levels of access to food having a significant impact on the prevalence of diabetes in adults. Furthermore, this research indicated that 22.5% of the sample population that had diabetes either had inadequate or severely inadequate access to food, which is rather concerning for a number of reasons. On a policy level, food is a human right, however, this is not following through to other levels within the socio-ecological model and this outcome has potential huge implications for health and well-being at the individual and interpersonal levels within the socio-ecological model. Additionally, as the GHS is limited in measuring food security, this study specifically looked at access to food and found that 3% of the adult population either always or often had insufficient food. For children this was at 1.9%. This is concerning as good nutrition combats the prevalence of diabetes, especially type II diabetes which is considered a lifestyle disease.

Lastly, the results of this study showed that the head of the household's average level of education has an effect on the prevalence of diabetes in adults. However, contrary to international literature, the results indicated that the higher the education level, the higher the chances were of developing diabetes. This seems to be particularly evident within research around education, diabetes and specifically the South African population. One of the reasons for this may have to do with the large number of individuals who are undiagnosed with diabetes (Pillay et al., 2016). Individuals who have high levels of educational attainment, tend to have higher levels of income and are thus able to access services compared to those individuals who live on the poverty line.

## **5.2 Research strengths and limitations**

The strength of this study is that it used continuous data which covered diverse population groups ensuring the results are generalisable to the wider population. As the aim of this study was to explore if a household's average per capita income, access to food and the average head of the household's educational level had an influence on the prevalence of diabetes, the results were able to determine that these three variables did indeed have an effect on the prevalence of diabetes in adults. The study was also able to determine the amount of that effect, concluding that only the average education level of the head of the household had a significant effect on the prevalence of diabetes. Therefore, using the bivariate and multiple logistic regression, the aims of this study were achieved. Furthermore, in order to understand the results, literature was successfully introduced to give meaning to the findings. Another strength of this study is the use of the GHS secondary data. This data is readily available and can be analysed quickly and without excessive cost. This offers potential research in many areas desperate for more analysis within a South African context. Most importantly, the advantage of analysing household data is that it can inform policy makers about the characteristics of households that have an adult resident with diabetes, thereby indicating at which levels of the socio-economic model preventions and interventions should take place.

However, there are some limitations to using the GHS secondary data which were identified. Firstly, the results are limited by the sensitivity of a self-reported survey which is beyond the researcher's control. Secondly, the challenges that household surveys worldwide face is that of under-reporting by respondents. This under-reporting may be due to under-statements by responders or there may be under-coding due to errors by the interviewers which cannot be taken into account when using secondary data. Thirdly, whilst interrogating the GHS dataset, it was found that the SD for per capita income was incredibly wide, which limits the interpretation of this study. Hence, moving forward, more in-depth research may need to be conducted to ensure better statistical methods are conducted in terms of data collection and analysis, in order to capture the data, making it simpler to analyse the various components within the dataset. Either way, the possible inaccuracies in the information could have implications for analysis and understanding of a true reflection of the South African population. This in turn effects what government policies can provide, not only on an individual level, but also on an interpersonal and community level.

### **5.3 Recommendations**

Following the results of this study, it appears that access to services is where time should be spent so that intervention planning is effective. Without access to services, there seems little incentive to spend money and time on interventions and prevention planning when the knowledge is not being passed on to those who need it the most, as well as for those in whom diabetes is undiagnosed. Therefore, once policy is in place, it is not only at the individual level, but also at the community and organisational level, that intervention and prevention planning should take place. This is especially significant in terms of communication and social support, as success in these two domains offers a positive impact on a person with diabetes at the individual and interpersonal level. This will allow for social change to happen, which will have a ripple effect, encouraging behavioural change.

Furthermore, the outcome of this study indicated a continued need to understand the current socio-economic climate in South Africa, as well as a need to further develop the measuring of variables in the GHS. If one of the main purposes of the GHS is to measure the quality of service delivery in key service sectors to implement policy decisions, then diabetes type I and II need to appear on the GHS as two separate variables, as they are two distinct diseases and prevention strategies are different for each one. As it is, this discrepancy in understanding the difference between the two diseases has major implications for individuals with diabetes.

Lastly, as obesity is a driver for diabetes, as well as for other metabolic diseases, it should perhaps be reflected as a variable in the GHS. As with the other variables that the GHS uses, there are complex factors contributing to obesity on all levels of influence. Therefore, more in-depth research needs to be conducted to understand the complex nature of household surveys, especially in terms of the statistical methods used to capture the data. This will allow researchers to extract significant information from this available dataset, thereby supporting a positive outcome for all individuals at risk of developing diabetes.



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## **APPENDICES**

### **Appendix A: General Household Survey 2014**

## **Appendix B:** Gatekeeper's request

## **Appendix C:** Gatekeeper's permission

**Appendix D:** HSSREC: full approval letter

## **Appendix E:** Methodology: sequence of events

# General Household Survey 2014

## A: Particulars of the dwelling

A1: PSU Number Segment

A2: Dwelling Unit Number

A3: Physical ID of the Dwelling Unit/Household

A4: Telephone number of enumerated household

A5: Total number of persons in household

A6: Questionnaire number of this household

## B: Households at the selected dwelling unit

B1: Household number for this household

B2: Total number of households at selected dwelling

## C: Field staff

Survey Officer name

Assignment Number

DSC name

Assignment Number

PQM name

Assignment Number

Unique No.

## D: Survey period

## E: Response details

| Visit No. | Date actual     | Result Code | Next Visit (Planned) |
|-----------|-----------------|-------------|----------------------|
|           | d d m m y y y y |             | d d m m y y y y      |
| 1         |                 |             |                      |
| 2         |                 |             |                      |
| 3         |                 |             |                      |
| 4         |                 |             |                      |

E2: FINAL RESULT CODE

E3: Comments and full details for result codes 2-11

d d m m y y y y

d d m m y y y y

d d m m y y y y

| RESULT CODES |                       |    |                    |
|--------------|-----------------------|----|--------------------|
| 01           | Completed             | 07 | Listing error      |
| 02           | Non-contact           | 08 | Demolished         |
| 03           | Refused               | 09 | Change of status   |
| 04           | Partly completed      | 10 | Other non-response |
| 05           | No usable information | 11 | End at Question B  |
| 06           | Vacant/unoccupied DU  |    |                    |

### **Aim and use of the survey**

The aim of the General Household Survey (GHS) is to measure the level of development and performance of various government programmes and projects.

It is essential for any country to measure the characteristics of its population and monitor changes in those characteristics over time. Various Government Departments are stakeholders in the GHS and the information collected is provided to them for further analysis. The GHS's results will help in the compilation of indicators of living standards and service delivery such as average household size, literacy, patterns of home ownership, access to water and sanitation facilities, access to social welfare services, use and access to transport as well as access and service delivery related to healthcare facilities and education institutions.

### **The survey design**

A representative national sample of 31 771 Dwelling Units (DUs) has been drawn from the 3 058 Primary Sampling Units (PSUs) that form the current master sample. The master sample is based on the 2001 Population Census Enumeration Areas (EAs). Between 1 and 30 dwelling units have been randomly sampled from each PSU and all the households residing within these sampled dwelling units will be enumerated.

### **Write figures very carefully**

Close the zeros (0) so that they will not be mistaken for the sixes (6).

When there is more than one zero (0), as for instance in the value 1 000, do not connect the zeros on top, which is very common. Don't write the figures sideways or diagonally. Never use decimal points (or decimal commas).

Your figures should be made like this:

|          |          |          |          |          |
|----------|----------|----------|----------|----------|
| <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |
| <b>6</b> | <b>7</b> | <b>8</b> | <b>9</b> | <b>0</b> |

Your crosses should not touch the sides:





# **FLAP This section covers particulars of each person in the household**

The following information must be obtained for every person who is considered to be a member of the household.

Only add persons who had stayed here for at least four nights on average per week for the last four weeks. **Do not forget babies.**

If there are more than 10 persons in the household, use a second questionnaire.

INTERVIEW START TIME h h m m

|          |   | 01                         | 02                         | 03                         | 04                         | 05                         | 06                         | 07                         | 08                         | 09                         | 10                         |
|----------|---|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| <b>A</b> | <b>First name and surname</b>   |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|          | <i>First name:</i><br>Write down first name and surname of each member of the household, starting with the head or acting head. If more than one head or acting head take the oldest. |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|          | <i>Surname:</i>   |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|          |   |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <b>B</b> | Has ..... stayed here (in this household) for at least four nights on average per week during the last four weeks?  |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|          | 1 = Yes   | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 |
|          | 2 = No → If "No", End of interview  | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 |
| <b>C</b> | Is ..... a male or a female?  |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|          | 1 = Male  | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 |
|          | 2 = Female  | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 |
| <b>D</b> | What is .....’s date of birth and age in completed years?   |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|          | <b>Day of Birth:</b><br>Example of day 05   | d d                        | d d                        | d d                        | d d                        | d d                        | d d                        | d d                        | d d                        | d d                        | d d                        |
|          | <b>Month of birth:</b><br>Example of month 11   | m m                        | m m                        | m m                        | m m                        | m m                        | m m                        | m m                        | m m                        | m m                        | m m                        |
|          | <b>Year of birth:</b><br>Example of year 2007   | y y y y                    | y y y y                    | y y y y                    | y y y y                    | y y y y                    | y y y y                    | y y y y                    | y y y y                    | y y y y                    | y y y y                    |
|          | <b>Age in years</b><br>Less than one year = 0   |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|          |   |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |

|          |   | 01                           | 02                         | 03                         | 04                         | 05                         | 06                         | 07                         | 08                         | 09                         | 10                         |
|----------|---|------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| <b>E</b> | <b>What population group does ..... belong to?</b>  |                              |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|          | 1 = Black African   | <input type="checkbox"/> 1   | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 |
|          | 2 = Coloured  | <input type="checkbox"/> 2   | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 |
|          | 3 = Indian/Asian  | <input type="checkbox"/> 3   | <input type="checkbox"/> 3 | <input type="checkbox"/> 3 | <input type="checkbox"/> 3 | <input type="checkbox"/> 3 | <input type="checkbox"/> 3 | <input type="checkbox"/> 3 | <input type="checkbox"/> 3 | <input type="checkbox"/> 3 | <input type="checkbox"/> 3 |
|          | 4 = White   | <input type="checkbox"/> 4   | <input type="checkbox"/> 4 | <input type="checkbox"/> 4 | <input type="checkbox"/> 4 | <input type="checkbox"/> 4 | <input type="checkbox"/> 4 | <input type="checkbox"/> 4 | <input type="checkbox"/> 4 | <input type="checkbox"/> 4 | <input type="checkbox"/> 4 |
|          | 5 = Other (specify in box below)  | <input type="checkbox"/> 5   | <input type="checkbox"/> 5 | <input type="checkbox"/> 5 | <input type="checkbox"/> 5 | <input type="checkbox"/> 5 | <input type="checkbox"/> 5 | <input type="checkbox"/> 5 | <input type="checkbox"/> 5 | <input type="checkbox"/> 5 | <input type="checkbox"/> 5 |
|          |   |                              |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <b>F</b> | <b>Is there any other person residing in this household, other than those already mentioned, who is not presently here?</b> | <input type="checkbox"/> Yes | → If "Yes", Go back to A   |                            |                            |                            |                            |                            |                            |                            |                            |
|          |   | <input type="checkbox"/> No  |                            |                            |                            |                            |                            |                            |                            |                            |                            |

## SECTION 1 : HOUSEHOLD SPECIFIC CHARACTERISTICS

*This section covers particulars of each person in the household*

|   | 01   | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 10   |
|---|--|--|--|--|--|--|--|--|--|--|
| <b>1.1 What is .....’s relationship to the head of the household? (i.e. to the person in column 1)</b><br>1 = Head/acting head<br>2 = Husband/wife/partner of person 01<br>3 = Son/daughter/stepchild/adopted child of person 01<br>4 = Brother/sister/stepbrother/stepsister of person 01<br>5 = Father/mother/stepfather/stepmother of person 01<br>6 = Grandparent/great grandparent of person 01<br>7 = Grandchild/great grandchild of person 01<br>8 = Other relative (e.g. in-laws or aunt/uncle) of person 01<br>9 = Non-related persons |  |  |  |  |  |  |  |  |  |  |
| <b>1.2a What is .....’s present marital status?</b><br>1 = Legally married<br>2 = Living together like husband and wife<br>3 = Divorced<br>4 = Separated, but still legally married<br>5 = Widowed<br>6 = Single, but have been living together with someone as husband/wife before<br>7 = Single and have never been married/never lived together as husband/wife before<br>Go to Q 1.3a   |  |  |  |  |  |  |  |  |  |  |
| <b>1.2b Does ....’s spouse/partner live in this household?</b><br>1 = Yes<br>2 = No<br>→ Go to Q1.3a  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 |
| <b>1.2c Ask if yes in Q1.2b</b><br><b>Which person is the spouse/partner of .....?</b><br>Give person number → Go to Q1.3a  | <input type="text"/> <input type="text"/>                | <input type="text"/> <input type="text"/>                | <input type="text"/> <input type="text"/>                | <input type="text"/> <input type="text"/>                | <input type="text"/> <input type="text"/>                | <input type="text"/> <input type="text"/>                | <input type="text"/> <input type="text"/>                | <input type="text"/> <input type="text"/>                | <input type="text"/> <input type="text"/>                | <input type="text"/> <input type="text"/>                |

|             |  | 01   | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 10   |
|-------------|--|--|--|--|--|--|--|--|--|--|--|
| <b>1.3a</b> | <b>Is .....’s biological father still alive?</b><br>1 = Yes → <b>Go to Q1.3c</b><br>2 = No<br>3 = Do not know → <b>Go to Q1.4a</b> | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 |
| <b>1.3b</b> | <b>Was the biological father alive five years ago?</b><br>1 = Yes<br>2 = No<br>3 = Do not know → <b>Go to Q1.4a</b>                | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 |
| <b>1.3c</b> | <b>Is ...’s biological father part of this household?</b><br>1 = Yes<br>2 = No → <b>Go to Q1.4a</b>                                | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               |
| <b>1.3d</b> | <b>Which person is .....’s biological father?</b><br><i>Give person number</i>   | <input type="text"/> <input type="text"/>  | <input type="text"/> <input type="text"/>  | <input type="text"/> <input type="text"/>  | <input type="text"/> <input type="text"/>  | <input type="text"/> <input type="text"/>  | <input type="text"/> <input type="text"/>  | <input type="text"/> <input type="text"/>  | <input type="text"/> <input type="text"/>  | <input type="text"/> <input type="text"/>  | <input type="text"/> <input type="text"/>  |
| <b>1.4a</b> | <b>Is .....’s biological mother still alive?</b><br>1 = Yes → <b>Go to Q1.4c</b><br>2 = No<br>3 = Do not know → <b>Go to Q1.5</b>  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 |
| <b>1.4b</b> | <b>Was the biological mother alive five years ago?</b><br>1 = Yes<br>2 = No<br>3 = Do not know → <b>Go to Q1.5</b>                 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 |
| <b>1.4c</b> | <b>Is .....’s biological mother part of this household?</b><br>1 = Yes<br>2 = No → <b>Go to Q1.5</b>                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               |
| <b>1.4d</b> | <b>Which person is .....’s biological mother?</b><br><i>Give person number</i>   | <input type="text"/> <input type="text"/>  | <input type="text"/> <input type="text"/>  | <input type="text"/> <input type="text"/>  | <input type="text"/> <input type="text"/>  | <input type="text"/> <input type="text"/>  | <input type="text"/> <input type="text"/>  | <input type="text"/> <input type="text"/>  | <input type="text"/> <input type="text"/>  | <input type="text"/> <input type="text"/>  | <input type="text"/> <input type="text"/>  |

**Ask for all household members. Read out: Now I am going to ask you questions related to education for each member of the household**

5

Ask for all household members aged 0-4 years. Otherwise go to Q1.9

|  | 01   | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 10   |
|--|--|--|--|--|--|--|--|--|--|--|
| <b>1.6 Which of the following does the child currently attend?</b><br>1 = Grade R<br>2 = Pre-school / nursery school/ Grade 00/Grade 000<br>3 = Creche / educare centre<br>4 = Day-mother / gogo<br>5 = Other (specify in the block)<br>6 = None<br>7 = Do not know <div style="position: absolute; left: 260px; top: 240px; border-left: 1px solid black; padding-left: 5px;">             Go to Q 1.8           </div> | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   |
|  |  |  |  |  |  |  |  |  |  |  |
| <b>1.7 Where is he/she during the day for most of the time?</b><br>1 = At home with parent, foster parent or guardian<br>2 = At home with another adult<br>3 = At home with someone younger than 18 years<br>4 = At someone else's dwelling<br>5 = Other   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5 |
| <b>1.8 Is...exposed to an Early Childhood development programme in any way?</b><br><i>ECD refers to the emotional, cognitive, sensory, spiritual, moral, physical, social and communication development of a child.</i><br>1 = Yes<br>2 = No<br>3 = Do not know  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3   |

→ Go to Section 2

**Ask for all household members who are 5 years and older otherwise go to Q1.10**

|   | 01                     | 02                     | 03                     | 04                     | 05                     | 06                     | 07                     | 08                     | 09                     | 10                     |
|---|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| <b>1.9</b> I am now going to ask questions about various skills related to reading and writing.....<br><b>Does .....have difficulty in doing any of the following...</b><br><i>Read all the options.</i><br><i>Use the codes below to indicate the degree of difficulty</i> |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| a = Writing his/her name  | <input type="text"/> a | <input type="text"/> a | <input type="text"/> a | <input type="text"/> a | <input type="text"/> a | <input type="text"/> a | <input type="text"/> a | <input type="text"/> a | <input type="text"/> a | <input type="text"/> a |
| b = Reading (e.g. newspapers, magazines, religious books) at least one language   | <input type="text"/> b | <input type="text"/> b | <input type="text"/> b | <input type="text"/> b | <input type="text"/> b | <input type="text"/> b | <input type="text"/> b | <input type="text"/> b | <input type="text"/> b | <input type="text"/> b |
| c = Filling in a form (e.g. social grant forms) at least one language   | <input type="text"/> c | <input type="text"/> c | <input type="text"/> c | <input type="text"/> c | <input type="text"/> c | <input type="text"/> c | <input type="text"/> c | <input type="text"/> c | <input type="text"/> c | <input type="text"/> c |
| d = Writing a letter in at least one language   | <input type="text"/> d | <input type="text"/> d | <input type="text"/> d | <input type="text"/> d | <input type="text"/> d | <input type="text"/> d | <input type="text"/> d | <input type="text"/> d | <input type="text"/> d | <input type="text"/> d |
| e = Calculating/working out how much change he/she should receive when buying something in at least one language  | <input type="text"/> e | <input type="text"/> e | <input type="text"/> e | <input type="text"/> e | <input type="text"/> e | <input type="text"/> e | <input type="text"/> e | <input type="text"/> e | <input type="text"/> e | <input type="text"/> e |
| f = Reading road signs  | <input type="text"/> f | <input type="text"/> f | <input type="text"/> f | <input type="text"/> f | <input type="text"/> f | <input type="text"/> f | <input type="text"/> f | <input type="text"/> f | <input type="text"/> f | <input type="text"/> f |
| <b>CODES</b><br>1 = No difficulty<br>2 = Some difficulty<br>3 = A lot of difficulty<br>4 = Unable to do<br>5 = Do not know  |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |

Ask for all household members who are 5 years and older

|   | 01   | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 10   |
|---|--|--|--|--|--|--|--|--|--|--|
| <b>1.10 Is or will ....attend an educational institution during this academic year?</b><br><i>e.g. school, university, home school, Early Childhood Development Centre (ECD), e.g. day care, crèche, pre-school, nursery school or pre-primary school, distance/correspondence education. Only include courses of six months and longer.</i><br>1 = Yes → <b>Go to Q1.12</b><br>2 = No<br>3 = Do not know → <b>Go to Section 2</b>  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 |
| <b>1.11 Ask if "No" in Q1.10</b><br><b>What is the main reason why ..... is/will not be attending any educational institution?</b><br>01 = Too old/young<br>02 = Has completed education/satisfied with my level of education/do not want to study<br>03 = School/education institution is too far<br>04 = Difficulties to get to school (transport)<br>05 = No money for fees<br>06 = He or she is working at home or business/job<br>07 = Do not have time/too busy<br>08 = Family commitment (e.g.child minding)<br>09 = Education is useless or not interesting<br>10 = Unable to perform at school<br>11 = Illness<br>12 = Pregnancy<br>13 = Failed exams<br>14 = Got married<br>15 = Disability<br>16 = Violence in school<br>17 = Not accepted for enrolment<br>18 = Other | <input type="checkbox"/> <input type="checkbox"/>                                      | <input type="checkbox"/> <input type="checkbox"/>                                      | <input type="checkbox"/> <input type="checkbox"/>                                      | <input type="checkbox"/> <input type="checkbox"/>                                      | <input type="checkbox"/> <input type="checkbox"/>                                      | <input type="checkbox"/> <input type="checkbox"/>                                      | <input type="checkbox"/> <input type="checkbox"/>                                      | <input type="checkbox"/> <input type="checkbox"/>                                      | <input type="checkbox"/> <input type="checkbox"/>                                      | <input type="checkbox"/> <input type="checkbox"/>                                      |

→ **Go to Section 2**



Ask if someone is currently attending an educational institution: those who answered “Yes” in Q1.10

|   | 01   | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 10   |
|---|--|--|--|--|--|--|--|--|--|--|
| <b>1.12 Which of the following educational institutions does ..... attend?</b><br><i>Read all the options</i><br>1 = Pre-school (including ECD centre, e.g. day care, crèche, play group, nursery school or pre-primary school)<br>2 = School (including Grade R to Grade 12 learners who attend a formal school)<br>3 = Adult Education and Training Learning Centre (AET Centre)<br>4 = Literacy classes (e.g. Kha Ri Gude)<br>5 = Higher Educational Institution (University/ University of Technology)<br>6 = Further Education and Training College (FET)<br>7 = Other College<br>8 = Home based education/home schooling<br>→ <b>Go to Section 2</b><br>9 = Other than any of the above |  |  |  |  |  |  |  |  |  |  |
| <b>1.13 Is the institution that .... is attending public or private?</b><br>1 = Public (Government)<br>2 = Private (Independent)<br>3 = Do not know   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 |
| <b>1.14 Is it a correspondence/distance educational institution?</b><br><i>The student studies by post/via the internet (e.g. UNISA) in a correspondence/distance institution.</i><br>1 = Yes      → <b>Go to Q1.16</b><br>2 = No<br>3 = Do not know  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 |

|              |   | 01   | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 10                       |
|--------------|---|--|--|--|--|--|--|--|--|--|--------------------------|
| <b>1.15a</b> | <b>What means of transport is usually used by ..... to get to the educational institution he/she attends?</b> <i>If more than one mode is used, indicate the one that covers the longest distance.</i><br>1 = Walking<br>2 = Bicycle/motorcycle<br>3 = Minibus taxi/ sedan taxi/bakkie taxi<br>4 = Bus<br>5 = Train<br>6 = Minibus/bus provided by institution/ government and not paid for<br>7 = Vehicle hired by a group of parents<br>8 = Own car or other private vehicle<br>9 = Other | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/> |
| <b>1.15b</b> | <b>How long does it take ..... to get to the educational institution he/she attends?</b> <i>Specify for one direction only, using all the usual means of transport</i><br>1 = Less than 15 minutes<br>2 = 15 - 30 minutes<br>3 = 31 - 60 minutes<br>4 = 61 - 90 minutes<br>5 = More than 90 minutes<br>6 = Do not know  | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/> |
| <b>1.15c</b> | <b>Is this educational institution the nearest of its kind (e.g. pre-school, primary, University) to your dwelling?</b><br>1 = Yes → <b>Go to Q1.16</b><br>2 = No<br>3 = Do not know → <b>Go to Q1.16</b>   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 |                          |

|   | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 |
|---|----|----|----|----|----|----|----|----|----|----|
| <b>1.15d</b> Ask if "No" in Q1.15c<br><b>What is the main reason why ..... is not attending the nearest institution?</b><br>01 = Inadequate facilities (e.g. classroom, laboratories)<br>02 = Lack of resources/equipment (e.g. computers, textbooks, laboratory equipment, sports equipment)<br>03 = Lack of services (e.g. water, electricity, toilets)<br>04 = Quality of teaching is poor<br>05 = Overcrowded classes<br>06 = Lack of safety<br>07 = Weak management<br>08 = Lack of discipline<br>09 = No/too few extra-mural activities<br>10 = Not accepted for enrolment<br>11 = Preferred courses/subject not offered<br>12 = Current institution better than closest<br>13 = Other (specify in the box below)         |    |    |    |    |    |    |    |    |    |    |
| <b>1.16</b> What is the total amount of tuition fees paid by this household for ... this year? Add expenses made to date as well as expected expenses for the remainder of the year. Do not include the cost of uniforms, books and other learning materials, accommodation fees, sports fees and transport fees.<br>00 = None<br>01 = R1 - R100<br>02 = R101 - R200<br>03 = R201 - R300<br>04 = R301 - R500<br>05 = R501 - R1 000<br>06 = R1 001 - R2 000<br>07 = R2 001 - R3 000<br>08 = R3 001 - R4 000<br>09 = R4 001 - R8 000<br>10 = R8 001 - R12 000<br>11 = R12 001 - R16 000<br>12 = R16 001 - R20 000<br>13 = More than R20 000<br>14 = Do not know <div style="position: relative; left: 150px; top: 100px;"> </div> |    |    |    |    |    |    |    |    |    |    |

|              |  | 01   | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 10                       |
|--------------|--|--|--|--|--|--|--|--|--|--|--------------------------|
| <b>1.17</b>  | <p>Ask if "None" in Q1.16</p> <p><b>If no fees were paid for education, why were no fees paid?</b></p> <p>1 = Cannot afford to pay</p> <p>2 = Do not want to pay</p> <p>3 = No fee school (school did not ask for fees)</p> <p>4 = ..... got a fee exemption</p> <p>5 = ..... got a bursary covering all costs</p> <p>6 = Other (specify in the block)</p> | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/> |
| <b>1.18</b>  | <p>Ask for all respondents who are currently attending educational institutions</p> <p><b>This academic year, has ..... benefited from any fee reductions and/or partial bursaries?</b></p> <p>1 = Yes</p> <p>2 = No</p> <p>3 = Do not know</p>  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 |                          |
| <b>1.19a</b> | <p>Ask of respondents who are currently attending grade 1 to 9.</p> <p><b>During the current academic year, has ..... received national work books in:</b></p> <p>a = Languages (any language)</p> <p>b = Mathematics</p> <p><b>CODES</b></p> <p>1 = Yes</p> <p>2 = No</p> <p>3 = Do not know</p>  | <input type="checkbox"/> a<br><input type="checkbox"/> b                               | <input type="checkbox"/> a<br><input type="checkbox"/> b                               | <input type="checkbox"/> a<br><input type="checkbox"/> b                               | <input type="checkbox"/> a<br><input type="checkbox"/> b                               | <input type="checkbox"/> a<br><input type="checkbox"/> b                               | <input type="checkbox"/> a<br><input type="checkbox"/> b                               | <input type="checkbox"/> a<br><input type="checkbox"/> b                               | <input type="checkbox"/> a<br><input type="checkbox"/> b                               | <input type="checkbox"/> a<br><input type="checkbox"/> b                               |                          |

|   | 01   | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 10   |
|---|--|--|--|--|--|--|--|--|--|--|
| <b>1.19b</b> Ask of respondents who are currently attending grade 10-12.<br><b>During the current academic year,....has had access to text books in:</b><br>1 = All his/her subjects<br>2 = Most of his/her subjects<br>3 = Some of his/her subject<br>4 = None of his/her subjects<br>5 = Do not know  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5 |
| <b>1.19c</b> Ask for all respondents who are currently attending educational institutions<br><b>During the current school year, what problems, if any, did ..... experience at the educational institution he/she attended?</b><br><b>Exclude those in distance education.</b><br><i>Read all the options; Use the codes below</i><br>a = Lack of books<br>b = Poor quality of teaching<br>c = Lack of teachers<br>d = Facilities in bad condition<br>e = Fees too high<br>f = Classes too large/too many learners<br>g = Teachers are often absent from school<br>h = Teachers were involved in strike<br>i = Other (specify in the box below)<br><b>CODES</b><br>1 = Yes<br>2 = No<br>3 = Do not know | <input type="checkbox"/> a<br><input type="checkbox"/> b<br><input type="checkbox"/> c<br><input type="checkbox"/> d<br><input type="checkbox"/> e<br><input type="checkbox"/> f<br><input type="checkbox"/> g<br><input type="checkbox"/> h<br><input type="checkbox"/> i<br><br><input type="checkbox"/> | <input type="checkbox"/> a<br><input type="checkbox"/> b<br><input type="checkbox"/> c<br><input type="checkbox"/> d<br><input type="checkbox"/> e<br><input type="checkbox"/> f<br><input type="checkbox"/> g<br><input type="checkbox"/> h<br><input type="checkbox"/> i<br><br><input type="checkbox"/> | <input type="checkbox"/> a<br><input type="checkbox"/> b<br><input type="checkbox"/> c<br><input type="checkbox"/> d<br><input type="checkbox"/> e<br><input type="checkbox"/> f<br><input type="checkbox"/> g<br><input type="checkbox"/> h<br><input type="checkbox"/> i<br><br><input type="checkbox"/> | <input type="checkbox"/> a<br><input type="checkbox"/> b<br><input type="checkbox"/> c<br><input type="checkbox"/> d<br><input type="checkbox"/> e<br><input type="checkbox"/> f<br><input type="checkbox"/> g<br><input type="checkbox"/> h<br><input type="checkbox"/> i<br><br><input type="checkbox"/> | <input type="checkbox"/> a<br><input type="checkbox"/> b<br><input type="checkbox"/> c<br><input type="checkbox"/> d<br><input type="checkbox"/> e<br><input type="checkbox"/> f<br><input type="checkbox"/> g<br><input type="checkbox"/> h<br><input type="checkbox"/> i<br><br><input type="checkbox"/> | <input type="checkbox"/> a<br><input type="checkbox"/> b<br><input type="checkbox"/> c<br><input type="checkbox"/> d<br><input type="checkbox"/> e<br><input type="checkbox"/> f<br><input type="checkbox"/> g<br><input type="checkbox"/> h<br><input type="checkbox"/> i<br><br><input type="checkbox"/> | <input type="checkbox"/> a<br><input type="checkbox"/> b<br><input type="checkbox"/> c<br><input type="checkbox"/> d<br><input type="checkbox"/> e<br><input type="checkbox"/> f<br><input type="checkbox"/> g<br><input type="checkbox"/> h<br><input type="checkbox"/> i<br><br><input type="checkbox"/> | <input type="checkbox"/> a<br><input type="checkbox"/> b<br><input type="checkbox"/> c<br><input type="checkbox"/> d<br><input type="checkbox"/> e<br><input type="checkbox"/> f<br><input type="checkbox"/> g<br><input type="checkbox"/> h<br><input type="checkbox"/> i<br><br><input type="checkbox"/> | <input type="checkbox"/> a<br><input type="checkbox"/> b<br><input type="checkbox"/> c<br><input type="checkbox"/> d<br><input type="checkbox"/> e<br><input type="checkbox"/> f<br><input type="checkbox"/> g<br><input type="checkbox"/> h<br><input type="checkbox"/> i<br><br><input type="checkbox"/> |  |

Ask Q1.20 to Q1.24 for people currently attending Grade R/0 (in school or pre-school, early learning centre), primary, secondary or any other kind of school. Otherwise go to Section 2. Children receiving home based schooling / home school should be excluded from this section.

|  | 01   | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 10   |
|--|--|--|--|--|--|--|--|--|--|--|
| <b>1.20 Which Grade is .....currently attending?</b><br>00 = Grade R/0<br>01 = Grade 1<br>02 = Grade 2<br>03 = Grade 3<br>04 = Grade 4<br>05 = Grade 5<br>06 = Grade 6<br>07 = Grade 7<br>08 = Grade 8<br>09 = Grade 9<br>10 = Grade 10<br>11 = Grade 11<br>12 = Grade 12/Matric<br>13 = NC (V) Level 2 (N1/NTC 1)<br>14 = NC (V) Level 3 (N2/NTC 2)<br>15 = NC (V) Level 4 (N3/NTC 3)<br>16 = Other |  |  |  |  |  |  |  |  |  |  |
| <b>1.21 Is .....doing the same grade that he/she did last year or before (if there was a break in his/her education)?</b><br>1 = Yes<br>2 = No<br>3 = Do not know  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 |
| <b>1.22a Does.... attend a school where food is given as part of the school feeding scheme/ Government nutrition program?</b><br>1 = Yes<br>2 = No<br>3 = Do not know  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 |

|              |   | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  |   |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|
| <b>1.22b</b> | <b>Does..... eat the food provided as part of the school feeding scheme/Government nutrition program? If yes, specify how regularly food is eaten.</b><br>1 = No<br>2 = Yes, every day<br>3 = Yes, a few times a week<br>4 = Yes, sometimes<br>5 = Do not know  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5  |   |
| <b>1.23a</b> | <b>Has .... experienced any form of violence, corporal punishment or verbal abuse at school over the past 3 months?</b><br>1 = Yes<br>2 = No → <b>Go to Q1.24a</b><br>3 = Do not know → <b>Go to Q1.24a</b>   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  |   |
| <b>1.23b</b> | <b>Ask if "Yes" in Q1.23a</b><br><b>What kind of violence did .....experience?</b><br><b>Read all the options</b><br>1 = Corporal punishment by teacher<br>2 = Physical violence by teacher<br>3 = Verbal abuse (being insulted, teased or harassed) by teacher<br>4 = Verbal abuse (being insulted, teased or harassed) by other learners<br>5 = Physical abuse (being hit or punched) by another learner<br>6 = Other | Yes No<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2 | Yes No<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2 | Yes No<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2 | Yes No<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2 | Yes No<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2 | Yes No<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2 | Yes No<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2 | Yes No<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2 | Yes No<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2 | Yes No<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2 | Yes No<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2<br><input type="checkbox"/> 1 <input type="checkbox"/> 2 |

[illegible]



## SECTION 2 : HEALTH AND GENERAL FUNCTIONING

Ask for all household members. Read out: Now I am going to ask you health-related questions for each member of the household

|            |   | 01   | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 10   |
|------------|---|--|--|--|--|--|--|--|--|--|--|
| <b>2.1</b> | <b>Is ..... covered by a medical aid or medical benefit scheme or other private health insurance? If the person is a dependent and covered by someone else's scheme, the answer is "Yes".</b><br>1 = Yes<br>2 = No<br>3 = Do not know   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 |
| <b>2.2</b> | <b>How would you describe ....'s health in general? Would you say it is...</b><br>1 = Excellent<br>2 = Very Good<br>3 = Good<br>4 = Fair<br>5 = Poor<br>6 = Not sure  | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   |
| <b>2.3</b> | <b>During the past three months, did .... suffer</b><br><i>Read all the options</i><br>1 = Flu or acute respiratory tract infection<br>2 = Diarrhoea<br>3 = Severe cough with blood<br>4 = Abuse of alcohol or drugs<br>5 = Depression<br>6 = Sexually transmitted diseases<br>7 = Pneumonia<br>8 = Bronchitis<br>9 = Epilepsy<br><br><b>If all options in Q2.3 are "no" then go to Q2.5a</b> | Yes No<br><input type="checkbox"/> 1 <input type="checkbox"/> 2                        | Yes No<br><input type="checkbox"/> 1 <input type="checkbox"/> 2                        | Yes No<br><input type="checkbox"/> 1 <input type="checkbox"/> 2                        | Yes No<br><input type="checkbox"/> 1 <input type="checkbox"/> 2                        | Yes No<br><input type="checkbox"/> 1 <input type="checkbox"/> 2                        | Yes No<br><input type="checkbox"/> 1 <input type="checkbox"/> 2                        | Yes No<br><input type="checkbox"/> 1 <input type="checkbox"/> 2                        | Yes No<br><input type="checkbox"/> 1 <input type="checkbox"/> 2                        | Yes No<br><input type="checkbox"/> 1 <input type="checkbox"/> 2                        | Yes No<br><input type="checkbox"/> 1 <input type="checkbox"/> 2                        |

|             |   | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <b>2.4a</b> | <b>Did ..... consult a health worker such as a nurse, doctor or traditional healer as a result of this illness?</b><br>1 = Yes → <b>Go to Q2.5a</b><br>2 = No → <b>Go to Q2.5a</b><br>3 = Do not know → <b>Go to Q2.5a</b>  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  |   |   |   |
| <b>2.4b</b> | If "No" in Q2.4a<br><b>What is the main reason, why ..... did not consult any health worker?</b><br>01 = Too expensive<br>02 = Too far<br>03 = Not necessary/the problem was not serious enough<br>04 = Self medicated/treated myself<br>05 = Fear of stigmatization<br>06 = Queues too long<br>07 = Transportation problems<br>08 = Experienced difficulty getting a diagnosis before<br>09 = Do not know<br>10 = Other (specify in the box) | <input type="checkbox"/> <input type="checkbox"/><br><input type="checkbox"/> <input type="checkbox"/><br><input type="checkbox"/> <input type="checkbox"/><br><input type="checkbox"/> <input type="checkbox"/><br><input type="checkbox"/> <input type="checkbox"/><br><input type="checkbox"/> <input type="checkbox"/><br><input type="checkbox"/> <input type="checkbox"/><br><input type="checkbox"/> <input type="checkbox"/><br><input type="checkbox"/> <input type="checkbox"/><br><input type="checkbox"/> <input type="checkbox"/><br><input 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type="checkbox"/><br><input type="checkbox"/> <input type="checkbox"/><br><input type="checkbox"/> <input type="checkbox"/> |
|             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

|             |  | 01                         |                            | 02                         |                            | 03                         |                            | 04                         |                            | 05                         |                            | 06                         |                            | 07                         |                            | 08                         |                            | 09                         |                            | 10                         |                            |
|-------------|--|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| <b>2.5a</b> | <b>In the past three months, did .... suffer from any of the following injuries?</b>     | Yes                        | No                         | Yes                        | No                         | Yes                        | No                         | Yes                        | No                         | Yes                        | No                         | Yes                        | No                         | Yes                        | No                         | Yes                        | No                         | Yes                        | No                         | Yes                        | No                         |
|             | 01 = Motor vehicle injury - occupant   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|             | 02 = Motor vehicle injury - pedestrian   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|             | 03 = Bicycle related   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|             | 04 = Gun shot wounds   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|             | 05 = Severe trauma due to violence, assault, beating                                     | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|             | 06 = Crime related injury  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|             | 07 = Fire or burn  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|             | 08 = Accidental poisoning  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|             | 09 = Intentional poisoning   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|             | 10 = Sports related  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|             | 11 = Other injury (specify in box)   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|             |  |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|             | <i>If all options = "No", then go to Q2.6a</i>   |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <b>2.5b</b> | <b>How many days did .... miss school or work due to this injury mentioned in Q2.5a?</b> |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|             | 1 = None   |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|             | 2 = Less than 7 days   |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|             | 3 = 7-20 days  | <input type="checkbox"/>   |                            | <input type="checkbox"/>   |                            | <input type="checkbox"/>   |                            | <input type="checkbox"/>   |                            | <input type="checkbox"/>   |                            | <input type="checkbox"/>   |                            | <input type="checkbox"/>   |                            | <input type="checkbox"/>   |                            | <input type="checkbox"/>   |                            | <input type="checkbox"/>   |                            |
|             | 4 = 21-31 days   |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|             | 5 = More than 31 days  |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|             | 6 = Does not go to school or work  |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|             | 7 = Do not know  |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |

|                             |  | 01                         |                            | 02                         |                            | 03                         |                            | 04                         |                            | 05                         |                            | 06                         |                            | 07                         |                            | 08                         |                            | 09                         |                            | 10                         |                            |
|-----------------------------|--|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| <b>2.6a</b>                 | <b>Has a doctor/nurse/other healthcare worker at a clinic/hospital/private practice ever told ..... that he/she has /had any of the following?</b> |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <i>Read all the options</i> |  | Yes                        | No                         | Yes                        | No                         | Yes                        | No                         | Yes                        | No                         | Yes                        | No                         | Yes                        | No                         | Yes                        | No                         | Yes                        | No                         | Yes                        | No                         | Yes                        | No                         |
|                             | 01 = Asthma  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|                             | 02 = Diabetes  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|                             | 03 = Cancer  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|                             | 04 = HIV and AIDS  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|                             | 05 = Hypertension/high blood pressure  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|                             | 06 = Arthritis   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|                             | 07 = Stroke  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|                             | 08 = Heart attack / Myocardial infarction  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|                             | 09 = Tuberculosis  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|                             | 10 = Mental Illness  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|                             | 11 = Epilepsy  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|                             | 12 = Meningitis and Sinusitis  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|                             | 13 = Pneumonia   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|                             | 14 = Bronchitis  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|                             | 15 = High Cholesterol  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|                             | 16 = Osteoporosis  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|                             | 17 = Other (specify in the box)  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|                             |  |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |

**If all options in 2.6a are “no” then → Go to Q2.7a**

|             |  | 01                         | 02                         | 03                         | 04                         | 05                         | 06                         | 07                         | 08                         | 09                         | 10                         |
|-------------|--|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| <b>2.6b</b> | If "Yes" to any option in 2.6a<br><b>Is .....taking medication for the illness(es)<br/>listed in Q2.6a? Use codes 1 to 4 in the block<br/>next to the disease to indicate whether<br/>medication is taken or not</b> |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|             | a = Asthma   | <input type="checkbox"/> a | <input type="checkbox"/> a | <input type="checkbox"/> a | <input type="checkbox"/> a | <input type="checkbox"/> a | <input type="checkbox"/> a | <input type="checkbox"/> a | <input type="checkbox"/> a | <input type="checkbox"/> a | <input type="checkbox"/> a |
|             | b = Diabetes   | <input type="checkbox"/> b | <input type="checkbox"/> b | <input type="checkbox"/> b | <input type="checkbox"/> b | <input type="checkbox"/> b | <input type="checkbox"/> b | <input type="checkbox"/> b | <input type="checkbox"/> b | <input type="checkbox"/> b | <input type="checkbox"/> b |
|             | c = Cancer   | <input type="checkbox"/> c | <input type="checkbox"/> c | <input type="checkbox"/> c | <input type="checkbox"/> c | <input type="checkbox"/> c | <input type="checkbox"/> c | <input type="checkbox"/> c | <input type="checkbox"/> c | <input type="checkbox"/> c | <input type="checkbox"/> c |
|             | d = HIV and AIDS   | <input type="checkbox"/> d | <input type="checkbox"/> d | <input type="checkbox"/> d | <input type="checkbox"/> d | <input type="checkbox"/> d | <input type="checkbox"/> d | <input type="checkbox"/> d | <input type="checkbox"/> d | <input type="checkbox"/> d | <input type="checkbox"/> d |
|             | e = Hypertension/high blood pressure   | <input type="checkbox"/> e | <input type="checkbox"/> e | <input type="checkbox"/> e | <input type="checkbox"/> e | <input type="checkbox"/> e | <input type="checkbox"/> e | <input type="checkbox"/> e | <input type="checkbox"/> e | <input type="checkbox"/> e | <input type="checkbox"/> e |
|             | f = Arthritis  | <input type="checkbox"/> f | <input type="checkbox"/> f | <input type="checkbox"/> f | <input type="checkbox"/> f | <input type="checkbox"/> f | <input type="checkbox"/> f | <input type="checkbox"/> f | <input type="checkbox"/> f | <input type="checkbox"/> f | <input type="checkbox"/> f |
|             | g = Stroke   | <input type="checkbox"/> g | <input type="checkbox"/> g | <input type="checkbox"/> g | <input type="checkbox"/> g | <input type="checkbox"/> g | <input type="checkbox"/> g | <input type="checkbox"/> g | <input type="checkbox"/> g | <input type="checkbox"/> g | <input type="checkbox"/> g |
|             | h = Heart attack / Myocardial infarction   | <input type="checkbox"/> h | <input type="checkbox"/> h | <input type="checkbox"/> h | <input type="checkbox"/> h | <input type="checkbox"/> h | <input type="checkbox"/> h | <input type="checkbox"/> h | <input type="checkbox"/> h | <input type="checkbox"/> h | <input type="checkbox"/> h |
|             | i = Tuberculosis   | <input type="checkbox"/> i | <input type="checkbox"/> i | <input type="checkbox"/> i | <input type="checkbox"/> i | <input type="checkbox"/> i | <input type="checkbox"/> i | <input type="checkbox"/> i | <input type="checkbox"/> i | <input type="checkbox"/> i | <input type="checkbox"/> i |
|             | j = Mental Illness   | <input type="checkbox"/> j | <input type="checkbox"/> j | <input type="checkbox"/> j | <input type="checkbox"/> j | <input type="checkbox"/> j | <input type="checkbox"/> j | <input type="checkbox"/> j | <input type="checkbox"/> j | <input type="checkbox"/> j | <input type="checkbox"/> j |
|             | k = Epilepsy   | <input type="checkbox"/> k | <input type="checkbox"/> k | <input type="checkbox"/> k | <input type="checkbox"/> k | <input type="checkbox"/> k | <input type="checkbox"/> k | <input type="checkbox"/> k | <input type="checkbox"/> k | <input type="checkbox"/> k | <input type="checkbox"/> k |
|             | l = Meningitis and Sinusitis   | <input type="checkbox"/> l | <input type="checkbox"/> l | <input type="checkbox"/> l | <input type="checkbox"/> l | <input type="checkbox"/> l | <input type="checkbox"/> l | <input type="checkbox"/> l | <input type="checkbox"/> l | <input type="checkbox"/> l | <input type="checkbox"/> l |
|             | m = Pneumonia  | <input type="checkbox"/> m | <input type="checkbox"/> m | <input type="checkbox"/> m | <input type="checkbox"/> m | <input type="checkbox"/> m | <input type="checkbox"/> m | <input type="checkbox"/> m | <input type="checkbox"/> m | <input type="checkbox"/> m | <input type="checkbox"/> m |
|             | n = Bronchitis   | <input type="checkbox"/> n | <input type="checkbox"/> n | <input type="checkbox"/> n | <input type="checkbox"/> n | <input type="checkbox"/> n | <input type="checkbox"/> n | <input type="checkbox"/> n | <input type="checkbox"/> n | <input type="checkbox"/> n | <input type="checkbox"/> n |
|             | o = High Cholesterol   | <input type="checkbox"/> o | <input type="checkbox"/> o | <input type="checkbox"/> o | <input type="checkbox"/> o | <input type="checkbox"/> o | <input type="checkbox"/> o | <input type="checkbox"/> o | <input type="checkbox"/> o | <input type="checkbox"/> o | <input type="checkbox"/> o |
|             | p = Osteoporosis   | <input type="checkbox"/> p | <input type="checkbox"/> p | <input type="checkbox"/> p | <input type="checkbox"/> p | <input type="checkbox"/> p | <input type="checkbox"/> p | <input type="checkbox"/> p | <input type="checkbox"/> p | <input type="checkbox"/> p | <input type="checkbox"/> p |
|             | q = Other  | <input type="checkbox"/> q | <input type="checkbox"/> q | <input type="checkbox"/> q | <input type="checkbox"/> q | <input type="checkbox"/> q | <input type="checkbox"/> q | <input type="checkbox"/> q | <input type="checkbox"/> q | <input type="checkbox"/> q | <input type="checkbox"/> q |
|             | CODES    1 = Yes<br>2 = No<br>3 = Do not know<br>4 = Not applicable  |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |

**Ask for all female household members between the ages of 12 and 50 years**

[illegible]

**Read out: I am now going to ask about the general functioning of persons within the household aged 5 years and older.**

|            |  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  |
|------------|--|---|---|---|---|---|---|---|---|---|---|
| <b>2.8</b> | <b>Does... have difficulty in doing any of the following?</b> <i>Read all the options; use the codes below to indicate the degree of problems.</i> |   |   |   |   |   |   |   |   |   |   |
|            | a = Seeing (even with glasses if he/she wears them)  | <input type="checkbox"/> a                            | <input type="checkbox"/> a                            | <input type="checkbox"/> a                            | <input type="checkbox"/> a                            | <input type="checkbox"/> a                            | <input type="checkbox"/> a                            | <input type="checkbox"/> a                            | <input type="checkbox"/> a                            | <input type="checkbox"/> a                            | <input type="checkbox"/> a                            |
|            | b = Hearing (even with a hearing aid, if he/she wears one)   | <input type="checkbox"/> b                            | <input type="checkbox"/> b                            | <input type="checkbox"/> b                            | <input type="checkbox"/> b                            | <input type="checkbox"/> b                            | <input type="checkbox"/> b                            | <input type="checkbox"/> b                            | <input type="checkbox"/> b                            | <input type="checkbox"/> b                            | <input type="checkbox"/> b                            |
|            | c = Walking a kilometre or climbing a flight of steps  | <input type="checkbox"/> c                            | <input type="checkbox"/> c                            | <input type="checkbox"/> c                            | <input type="checkbox"/> c                            | <input type="checkbox"/> c                            | <input type="checkbox"/> c                            | <input type="checkbox"/> c                            | <input type="checkbox"/> c                            | <input type="checkbox"/> c                            | <input type="checkbox"/> c                            |
|            | d = Remembering and concentrating  | <input type="checkbox"/> d                            | <input type="checkbox"/> d                            | <input type="checkbox"/> d                            | <input type="checkbox"/> d                            | <input type="checkbox"/> d                            | <input type="checkbox"/> d                            | <input type="checkbox"/> d                            | <input type="checkbox"/> d                            | <input type="checkbox"/> d                            | <input type="checkbox"/> d                            |
|            | e = With self-care, such as washing or dressing  | <input type="checkbox"/> e                            | <input type="checkbox"/> e                            | <input type="checkbox"/> e                            | <input type="checkbox"/> e                            | <input type="checkbox"/> e                            | <input type="checkbox"/> e                            | <input type="checkbox"/> e                            | <input type="checkbox"/> e                            | <input type="checkbox"/> e                            | <input type="checkbox"/> e                            |
|            | f = In communicating in his/her usual language including sign language (understanding others and being understood by others)                       | <input type="checkbox"/> f                            | <input type="checkbox"/> f                            | <input type="checkbox"/> f                            | <input type="checkbox"/> f                            | <input type="checkbox"/> f                            | <input type="checkbox"/> f                            | <input type="checkbox"/> f                            | <input type="checkbox"/> f                            | <input type="checkbox"/> f                            | <input type="checkbox"/> f                            |
|            | <b>CODES</b> 1 = No difficulty<br>2 = Some difficulty<br>3 = A lot of difficulty<br>4 = Unable to do<br>5 = Do not know                            |   |   |   |   |   |   |   |   |   |   |
| <b>2.9</b> | <b>Does ..... use any of the following?</b> <i>Read all the options</i>  | Yes No  | Yes No  | Yes No  | Yes No  | Yes No  | Yes No  | Yes No  | Yes No  | Yes No  | Yes No  |
|            | 1 = Eye glasses/spectacles/contact lenses  | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 |
|            | 2 = Hearing aid  | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 |
|            | 3 = Walking stick/walking frame  | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 |
|            | 4 = A wheelchair   | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 |
|            | 5 = Chronic medication   | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 |
|            | 6 = Other assistive devices (specify in box below)   | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 |
|            |  |   |   |   |   |   |   |   |   |   |   |

### SECTION 3 : SOCIAL GRANTS AND SOCIAL RELIEF

Ask for all household members

Read out: I am now going to ask about the use of social grants and social relief

|             |   | 01   | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 10   |
|-------------|---|--|--|--|--|--|--|--|--|--|--|
| <b>3.1a</b> | <b>Does anyone in this household receive a social grant or social relief assistance from the Government?</b>  |  |  |  |  |  |  |  |  |  |  |
|             | 1 = Yes   | <input type="checkbox"/> 1                               | <input type="checkbox"/> 1                               | <input type="checkbox"/> 1                               | <input type="checkbox"/> 1                               | <input type="checkbox"/> 1                               | <input type="checkbox"/> 1                               | <input type="checkbox"/> 1                               | <input type="checkbox"/> 1                               | <input type="checkbox"/> 1                               | <input type="checkbox"/> 1                               |
|             | 2 = No → <b>Go to Q4.1a</b>   | <input type="checkbox"/> 2                               | <input type="checkbox"/> 2                               | <input type="checkbox"/> 2                               | <input type="checkbox"/> 2                               | <input type="checkbox"/> 2                               | <input type="checkbox"/> 2                               | <input type="checkbox"/> 2                               | <input type="checkbox"/> 2                               | <input type="checkbox"/> 2                               | <input type="checkbox"/> 2                               |
|             | 3 = Do not know → <b>Go to Q4.1a</b>  | <input type="checkbox"/> 3                               | <input type="checkbox"/> 3                               | <input type="checkbox"/> 3                               | <input type="checkbox"/> 3                               | <input type="checkbox"/> 3                               | <input type="checkbox"/> 3                               | <input type="checkbox"/> 3                               | <input type="checkbox"/> 3                               | <input type="checkbox"/> 3                               | <input type="checkbox"/> 3                               |
| <b>3.1b</b> | <b>If "Yes" in Q3.1a</b>  |  |  |  |  |  |  |  |  |  |  |
|             | <b>Does ... receive a(n).....? Answer for each person who qualified for the grant and NOT for the person who applied on behalf of/physically receives the money. Someone who used to work for the Government and receive a pension do <b>not get</b> an old age grant</b> |  |  |  |  |  |  |  |  |  |  |
|             | <b>Read all the options</b>   |  |  |  |  |  |  |  |  |  |  |
|             | 1 = Old-age grant (60-74;R1260; 75+; R1280)   | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No |
|             | 2 = Disability grant (18-59;R1260)  | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    |
|             | 3 = Child support grant (0-17;R300)   | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    |
|             | 4 = Care dependency grant(0-17;R1260)   | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    |
|             | 5 = Foster child grant (<22; R800)  | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    |
|             | 6 = War veterans grant (60+; R1260)   | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    |
|             | 7 = Grant-in-aid (R300 and should have another grant)   | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    |
|             | 8 = Social relief of distress   | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    | <input type="checkbox"/> 1 <input type="checkbox"/> 2    |
| <b>3.2</b>  | <b>If "yes" for disability grant in Q3.1b</b>   |  |  |  |  |  |  |  |  |  |  |
|             | <b>Please state whether the disability grant is.....</b>  |  |  |  |  |  |  |  |  |  |  |
|             | 1 = Permanent disability  | <input type="checkbox"/> 1                               | <input type="checkbox"/> 1                               | <input type="checkbox"/> 1                               | <input type="checkbox"/> 1                               | <input type="checkbox"/> 1                               | <input type="checkbox"/> 1                               | <input type="checkbox"/> 1                               | <input type="checkbox"/> 1                               | <input type="checkbox"/> 1                               | <input type="checkbox"/> 1                               |
|             | 2 = Temporary disability  | <input type="checkbox"/> 2                               | <input type="checkbox"/> 2                               | <input type="checkbox"/> 2                               | <input type="checkbox"/> 2                               | <input type="checkbox"/> 2                               | <input type="checkbox"/> 2                               | <input type="checkbox"/> 2                               | <input type="checkbox"/> 2                               | <input type="checkbox"/> 2                               | <input type="checkbox"/> 2                               |
|             | 3 = Do not know   | <input type="checkbox"/> 3                               | <input type="checkbox"/> 3                               | <input type="checkbox"/> 3                               | <input type="checkbox"/> 3                               | <input type="checkbox"/> 3                               | <input type="checkbox"/> 3                               | <input type="checkbox"/> 3                               | <input type="checkbox"/> 3                               | <input type="checkbox"/> 3                               | <input type="checkbox"/> 3                               |



## SECTION 4 : ECONOMIC ACTIVITIES

Ask for all household members 15 years and older

|             |   | 01   | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 10   |
|-------------|---|--|--|--|--|--|--|--|--|--|--|
| <b>4.1a</b> | <b>In the last week did ..... work for a wage, salary, commission or any payment in kind (including paid domestic work), even if it was for only one hour?</b><br><i>Examples: a regular job, contract, casual or piece work for pay, work in exchange for food or housing, paid domestic work.</i><br>1 = Yes<br>2 = No  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 |
| <b>4.1b</b> | <b>In the last week did ... run or do any kind of business, big or small, for himself/herself or with one or more partners, even if it was for only one hour?</b> <i>Examples: Commercial farming, selling things, making things for sale, construction, repairing things, guarding cars, brewing beer, collecting wood or water for sale, hairdressing, crèche businesses, taxi or other transport business, having a legal or medical practice, performing in public, having a public phone shop, etc.</i><br>1 = Yes<br>2 = No | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 |
| <b>4.1c</b> | <b>In the last week did ..... help without being paid in any kind of business, run by his/her household even if it was for only one hour?</b> <i>Examples: Commercial farming, production of agricultural produce to sell, help to sell things, make things for sale or exchange, doing the accounts, cleaning up for the business, etc.</i><br>1 = Yes<br>2 = No   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 |

If "Yes;" to any of the above go to Q4.2a. Otherwise answer Q4.1d

|             |  |  |  |  |  |  |  |  |  |  |  |
|-------------|--|--|--|--|--|--|--|--|--|--|--|
| <b>4.1d</b> | <b>In the last week even though ..... did not do any work for pay or profit, does ..... have a job or business that he/she would definitely return to?</b><br>1 = Yes<br>2 = No<br>→ Go to Q4.6a | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 |
|-------------|--|--|--|--|--|--|--|--|--|--|--|

|             |  | 01                         | 02                         | 03                         | 04                         | 05                         | 06                         | 07                         | 08                         | 09                         | 10                         |
|-------------|--|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| <b>4.2a</b> | <b>What is .....’s total salary/pay at his/her main job? Including overtime, allowances and bonus, before any tax or deductions. Give amount in whole figures, without any text or decimals. If “NONE”, “REFUSE” or “DO NOT KNOW” write 999 999 999 and → Go to Q4.3</b> | <b>Rands</b>               | <b>Rands</b>               | <b>Rands</b>               | <b>Rands</b>               | <b>Rands</b>               | <b>Rands</b>               | <b>Rands</b>               | <b>Rands</b>               | <b>Rands</b>               | <b>Rands</b>               |
|             |  | <input type="text"/>       | <input type="text"/>       | <input type="text"/>       | <input type="text"/>       | <input type="text"/>       | <input type="text"/>       | <input type="text"/>       | <input type="text"/>       | <input type="text"/>       | <input type="text"/>       |
|             |  | <input type="text"/>       | <input type="text"/>       | <input type="text"/>       | <input type="text"/>       | <input type="text"/>       | <input type="text"/>       | <input type="text"/>       | <input type="text"/>       | <input type="text"/>       | <input type="text"/>       |
|             |  | <input type="text"/>       | <input type="text"/>       | <input type="text"/>       | <input type="text"/>       | <input type="text"/>       | <input type="text"/>       | <input type="text"/>       | <input type="text"/>       | <input type="text"/>       | <input type="text"/>       |
| <b>4.2b</b> | <b>Ask only if an amount is given in Q4.2a</b>   |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|             | <b>Is this ....</b>  |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|             | 1 = Per week   | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 |
|             | 2 = Per month  | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 |
|             | 3 = Annually   | <input type="checkbox"/> 3 | <input type="checkbox"/> 3 | <input type="checkbox"/> 3 | <input type="checkbox"/> 3 | <input type="checkbox"/> 3 | <input type="checkbox"/> 3 | <input type="checkbox"/> 3 | <input type="checkbox"/> 3 | <input type="checkbox"/> 3 | <input type="checkbox"/> 3 |
|             | → Go to Q4.4a  |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <b>4.3</b>  | <b>Only if “NONE”, “REFUSE” or “DO NOT KNOW” in Q 4.2a. Show prompt card 3 and mark the applicable code</b>  |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|             | Weekly      Monthly      Annually  |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|             | 01 NONE      NONE      NONE  |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|             | 02 R1 - R46      R1 - R200      R1 - R2 400  |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|             | 03 R47 - R115      R201 - R500      R2 401 - R6 000  |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|             | 04 R116 - R231      R501 - R1 000      R6 001 - R12 000  |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|             | 05 R232 - R346      R1 001 - R1 500      R12 001 - R18 000   |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|             | 06 R347 - R577      R1 501 - R2 500      R18 001 - R30 000   |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|             | 07 R578 - R808      R2 501 - R3 500      R30 001 - R42 000   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   |
|             | 08 R809 - R1 039      R3 501 - R4 500      R42 001 - R54 000   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   |
|             | 09 R1 040 - R1 386      R4 501 - R6 000      R54 001 - R72 000   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   |
|             | 10 R1 387 - R1 848      R6 001 - R8 000      R72 001 - R96 000   |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|             | 11 R1 849 - R2 540      R8 001 - R11 000      R96 001 - R132 000   |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|             | 12 R2 541 - R3 695      R11 001 - R16 000      R132 001 - R192 000   |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|             | 13 R3 696 - R6 928      R16 001 - R30 000      R192 001 - R360 000   |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|             | 14 R6 929 OR MORE      R30 001 OR MORE      R360 001 OR MORE   |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|             | 15 DON'T KNOW      DON'T KNOW      DON'T KNOW  |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|             | 16 REFUSE      REFUSE      REFUSE  |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |

|             |   | 01   | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 10   |
|-------------|---|--|--|--|--|--|--|--|--|--|--|
| <b>4.4a</b> | <b>What means of transport is usually used by ..... to get to his/her place of employment? If more than one mode is used, indicate the one that covers the longest distance.</b><br>1 = Office is at home → <b>Go to Q4.5</b><br>2 = Walking<br>3 = Bicycle/motorcycle<br>4 = Minibus taxi/ sedan taxi/bakkie taxi<br>5 = Bus<br>6 = Train<br>7 = Lift club by a group of people sharing a private vehicle<br>8 = Own car/other private vehicle/company vehicle<br>9 = Other (specify in the block) |  |  |  |  |  |  |  |  |  |  |
| <b>4.4b</b> | <b>How many minutes does it take ..... to get to his/her place of employment? Specify for one direction only, using all the usual means of transport</b><br>1 = Less than 15 minutes<br>2 = 15 - 30 minutes<br>3 = 31 - 60 minutes<br>4 = 61 - 90 minutes<br>5 = More than 90 minutes<br>6 = Do not know  |  |  |  |  |  |  |  |  |  |  |
| <b>4.5</b>  | <b>Is the organization/business/branch where..... works</b><br>1 = In the formal sector (registered to perform activity)<br>2 = In the informal sector (not registered to perform activity)<br>3 = Do not know  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 |

→ **Go to Q4.7**

|             |  | 01   | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 10   |
|-------------|--|--|--|--|--|--|--|--|--|--|--|
| <b>4.6a</b> | <b>During the last four weeks, was.....<br/>looking for any kind of job or trying to start<br/>any type of business?</b><br>1 = Yes      → <b>Go to Q4.6d</b><br>2 = No  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 |
| <b>4.6b</b> | <b>Would .... have liked to work during the last<br/>week?</b><br>1 = Yes<br>2 = No      → <b>Go to Q4.7</b>   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 |
| <b>4.6c</b> | <b>What was the main reason why .... did not try<br/>to find work or start a business in the last<br/>four weeks?</b><br>01 = Awaiting the season for work<br>02 = Waiting to be recalled to former job<br>03 = Health reasons<br>04 = Pregnancy<br>05 = Disabled or Unable to work (Handicapped)<br>06 = Housewife/Homemaker (Family<br>considerations/child care)<br>07 = Undergoing training to help find work<br>08 = No jobs available in the area<br>09 = Lack of money to pay for transport to look<br>for work<br>10 = Unable to find work requiring his/her skills<br>11 = Lost hope of finding any kind of work<br>12 = No transport available<br>13 = Scholar or student<br>14 = Retired<br>15 = Too old/young to work<br>16 = Did not want to work<br>17 = Other | <input type="checkbox"/> <input type="checkbox"/>        | <input type="checkbox"/> <input type="checkbox"/>        | <input type="checkbox"/> <input type="checkbox"/>        | <input type="checkbox"/> <input type="checkbox"/>        | <input type="checkbox"/> <input type="checkbox"/>        | <input type="checkbox"/> <input type="checkbox"/>        | <input type="checkbox"/> <input type="checkbox"/>        | <input type="checkbox"/> <input type="checkbox"/>        | <input type="checkbox"/> <input type="checkbox"/>        | <input type="checkbox"/> <input type="checkbox"/>        |

|             |   | 01   | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 10   |
|-------------|---|--|--|--|--|--|--|--|--|--|--|
| <b>4.6d</b> | <b>If a suitable job had been offered or circumstances had allowed, would..... have been able to start work or a business in the last week?</b><br>1 = Yes<br>2 = No<br>3 = Do not know   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 |
| <b>4.7</b>  | <b>Has ..... participated in a Government or municipal job creation programme or expanded public works programme in the past 6 months? This includes community based workers such as community development workers, home based care workers etc.</b><br>1 = Yes<br>2 = No | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               |
| <b>4.8</b>  | <b><i>Ask of everybody</i></b><br><b>Did.....own a mobile telephone in working order during some or all of the past 12 months?</b><br>1 = Yes<br>2 = No   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               |

[illegible]

## SECTION 5 : GENERAL HOUSEHOLD INFORMATION AND SERVICE DELIVERY

This section covers general information regarding the household.

Ask a responsible person in the household to answer on behalf of the household.

**HOUSING** Ask all households

|            |  |   |   |
|------------|--|---|---|
| <b>5.1</b> | <b>Indicate the type of main dwelling and other dwelling that the household occupies?</b><br><br>01 = Dwelling/house or brick/concrete block structure on a separate stand or yard or on farm<br>02 = Traditional dwelling/hut/structure made of traditional materials<br>03 = Flat or apartment in a block of flats<br>04 = Cluster house in complex<br>05 = Town house (semi-detached house in complex)<br>06 = Semi-Detached house<br>07 = Dwelling/house/flat/room in backyard<br>08 = Informal dwelling/shack in backyard<br>09 = Informal dwelling/shack not in backyard, e.g. in an informal/squatter settlement or on farm<br>10 = Room/flatlet on a property or a larger dwelling/servants' quarters/granny flat<br>11 = Caravan/tent<br>12 = Other (specify) | <b>Main dwelling</b>                              | <b>Other dwelling</b>                             |
|            |  | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
|            |  | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| <b>5.2</b> | <b>What is the main material used for the walls and the roof of the main dwelling?</b><br>01 = Bricks<br>02 = Cement block/concrete<br>03 = Corrugated iron/zinc<br>04 = Wood<br>05 = Plastic<br>06 = Cardboard<br>07 = Mud and cement mix<br>08 = Wattle and daub<br>09 = Tile<br>10 = Mud<br>11 = Thatching/grass<br>12 = Asbestos<br>13 = Other (specify)   | <b>Walls</b>                                      | <b>Roof</b>                                       |
|            |  | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
|            |  | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
|            |  | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |

|            |  |                                       |                            |                            |
|------------|--|---------------------------------------|----------------------------|----------------------------|
| <b>5.3</b> | <b>What is the main material used for the floor of the main dwelling?</b><br><b>NATURAL FLOOR</b><br>01 = Earth/Sand<br>02 = Dung<br><b>RUDIMENTARY FLOOR</b><br>03 = Wood/Planks<br><b>FINISHED FLOOR</b><br>04 = Parquet/polished wood<br>05 = Vinyl or asphalt strips<br>06 = Ceramic Tiles<br>07 = Cement<br>08 = Carpet<br>09 = Other Specify |                                       |                            |                            |
| <b>5.4</b> | <b>In what condition are the walls, roof and floor of the main dwelling? Is it very weak, weak, needing repairs, good or very good?</b>  | <b>Walls</b>                          | <b>Roof</b>                | <b>Floor</b>               |
|            | 1 = Very weak  | <input type="checkbox"/> 1            | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 |
|            | 2 = Weak   | <input type="checkbox"/> 2            | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 |
|            | 3 = Need minor repairs   | <input type="checkbox"/> 3            | <input type="checkbox"/> 3 | <input type="checkbox"/> 3 |
|            | 4 = Good   | <input type="checkbox"/> 4            | <input type="checkbox"/> 4 | <input type="checkbox"/> 4 |
|            | 5 = Very good  | <input type="checkbox"/> 5            | <input type="checkbox"/> 5 | <input type="checkbox"/> 5 |
| <b>5.5</b> | <b>How many of the following rooms does this household occupy?</b>   | <b>All dwellings in the household</b> |                            |                            |
|            | Open plan dining rooms/sitting rooms/TV rooms  | <input type="checkbox"/>              | <input type="checkbox"/>   |                            |
|            | Lounge/dining room/sitting room/TV room (closed)   | <input type="checkbox"/>              | <input type="checkbox"/>   |                            |
|            | Bedrooms   | <input type="checkbox"/>              | <input type="checkbox"/>   |                            |
|            | One room with multiple uses  | <input type="checkbox"/>              | <input type="checkbox"/>   |                            |
|            | Kitchen  | <input type="checkbox"/>              | <input type="checkbox"/>   |                            |
|            | Bathrooms  | <input type="checkbox"/>              | <input type="checkbox"/>   |                            |
|            | Toilets (room with only a toilet)  | <input type="checkbox"/>              | <input type="checkbox"/>   |                            |
|            | Other rooms  | <input type="checkbox"/>              | <input type="checkbox"/>   |                            |
|            | <b>Total</b>   | <input type="checkbox"/>              | <input type="checkbox"/>   |                            |

|            |   |                          |
|------------|---|--------------------------|
| <b>5.6</b> | <b>What is the tenure status of the dwelling that the household occupies at present?</b><br><i>Read all the options</i><br>1 = Rented from private individual<br>2 = Rented from other (incl municipality and social housing institutions)<br>3 = Owned, but not yet paid off to bank/financial institution<br>4 = Owned, but no yet paid off to private lender<br>5 = Owned and fully paid off → <b>Go to Q5.8</b><br>6 = Occupied rent-free → <b>Go to Q5.8</b><br>7 = Other → <b>Go to Q5.8</b><br>8 = Do not know → <b>Go to Q5.8</b> | <input type="checkbox"/> |
| <b>5.7</b> | <b>How much rent or mortgage do you pay per month?</b><br>1 = Less than R500<br>2 = R501 - R1 000<br>3 = R1 001 - R3 000<br>4 = R3 001 - R5 000<br>5 = R5 001 - R7 000<br>6 = More than R7 000<br>7 = Do not know   | <input type="checkbox"/> |
| <b>5.8</b> | <b>What would you estimate the market value or the municipal valuation of this property to be?</b><br>1 = Less than R50 000<br>2 = R50 001 - R250 000<br>3 = R250 001 - R500 000<br>4 = R500 001 - R1 000 000<br>5 = R1 000 001 - R1 500 000<br>6 = R1 500 001 - R2 000 000<br>7 = R2 000 001 - R3 000 000<br>8 = More than R3 000 000<br>9 = Do not know   | <input type="checkbox"/> |

| <b>5.9</b>                 | <b>When was this dwelling originally built?</b><br><i>Mark the period in which the building was completed, not the time of any later remodeling, additions or conversions. If year is not known, give best estimate.</i><br>1 = 2010 - 2014 (0 - 5 years)<br>2 = 2005 - 2009 (6 - 10 years)<br>3 = 1995 - 2004 (11 - 20 years)<br>4 = 1985 - 1994 (21 - 30 years)<br>5 = 1975 - 1984 (31 - 40 years)<br>6 = 1965 - 1974 (41 - 50 years)<br>7 = 1945 - 1964 (51 - 70 years)<br>8 = Prior to 1945 (Older than 70 years)<br>9 = Do not know | <input type="checkbox"/>  |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|----------------------------|--|---|-----|----|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| <b>5.10a</b>               | <b>Is the dwelling you live in an RDP or state subsidised dwelling?</b><br><i>Do not include housing subsidies for government employees.</i><br>1 = Yes<br>2 = No → <b>Go to Q5.11</b><br>3 = Do not know → <b>Go to Q5.11</b>   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <b>5.10b</b>               | <i>Ask if "Yes" in 5.10a</i><br><b>Was this household the original beneficiary (first occupants) of this dwelling?</b><br>1 = Yes<br>2 = No<br>3 = Do not know   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <b>5.10c</b>               | <b>Has the household ever used the RDP or State subsidised dwellings as security to obtain a loan or credit for:</b><br>1 = Establishing a business<br>2 = Covering health costs<br>3 = Covering educational expenses<br>4 = Making improvements to the house<br>5 = Buying another property or house<br>6 = Other   | <table border="1"> <thead> <tr> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> </tbody> </table> | Yes | No | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
| Yes                        | No   |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2   |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2   |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2   |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2   |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2   |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2   |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |



|                 |   |                            |
|-----------------|---|----------------------------|
| <b>5.11</b>     | <b>Did any member of this household receive a government housing subsidy, such as an RDP housing subsidy, to obtain this dwelling or any other dwelling? Do not include housing subsidies for government employees.</b> |                            |
| 1 = Yes         |   | <input type="checkbox"/> 1 |
| 2 = No          |   | <input type="checkbox"/> 2 |
| 3 = Do not know |   | <input type="checkbox"/> 3 |

**WATER - Ask all households**

|  |   |   |
|--|---|---|
| <b>5.12</b>                              | <b>What is the household's main source of drinking water?</b> |   |
| 01 = Piped (tap) water in dwelling/house | → <b>Go to Q5.14</b>  | <input type="checkbox"/> <input type="checkbox"/> |
| 02 = Piped (tap) water in yard           | → <b>Go to Q5.14</b>  |   |
| 03 = Borehole in yard                    | → <b>Go to Q5.14</b>  |   |
| 04 = Rain-water tank in yard             | → <b>Go to Q5.14</b>  |   |
| 05 = Neighbour's tap                     |   |   |
| 06 = Public/communal tap                 |   | <input type="checkbox"/>                          |
| 07 = Water-carrier/tanker                |   |   |
| 08 = Borehole outside yard               |   |   |
| 09 = Flowing water/stream/river          |   |   |
| 10 = Stagnant water/dam/pool             |   |   |
| 11 = Well                                |   |   |
| 12 = Spring                              |   |   |
| 13 = Other (specify)                     |   |   |

**Ask if water is not in dwelling, or in yard.**

|                              |   |                            |
|------------------------------|---|----------------------------|
| <b>5.13a</b>                 | <b>How far is the water source from the dwelling or yard (200m is equal to the length of two football/soccer fields)?</b> |                            |
| 1 = Less than 200 metres     |   | <input type="checkbox"/> 1 |
| 2 = 201 - 500 metres         |   | <input type="checkbox"/> 2 |
| 3 = 501 metres - 1 kilometre |   | <input type="checkbox"/> 3 |
| 4 = More than 1 kilometre    |   | <input type="checkbox"/> 4 |
| 5 = Do not know              |   | <input type="checkbox"/> 5 |

**Ask if water is not from a pipe or a tap. Otherwise go to Q5.14**

|              |   |                            |
|--------------|---|----------------------------|
| <b>5.13b</b> | <b>Did you use piped or tap water at any time in the past while living in this community, but have stopped as a result of the system breaking down?</b> |                            |
| 1 = Yes      |   | <input type="checkbox"/> 1 |
| 2 = No       |   | <input type="checkbox"/> 2 |

**Ask all households**

|  |   |                            |                            |
|--|---|----------------------------|----------------------------|
| <b>5.14</b>                              | <b>Is the water from the main source of drinking water before any treatment .....</b><br><i>Read all the options</i>                    | Yes                        | No                         |
| 1 = Safe to drink?                       |   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
| 2 = Clear (has no colour / free of mud)? |   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
| 3 = Good in taste?                       |   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
| 4 = Free from bad smells?                |   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
| <b>5.15</b>                              | <b>Do household members treat the water used for drinking? This may include boiling, adding chlorine or other chemicals, filtering.</b> |                            |                            |
| 1 = Yes, always                          |   | <input type="checkbox"/> 1 |                            |
| 2 = Yes, sometimes                       |   | <input type="checkbox"/> 2 |                            |
| 3 = No, never                            |   | <input type="checkbox"/> 3 |                            |
| <b>5.16</b>                              | <b>Is your main source of drinking water supplied by a municipality?</b>  |                            |                            |
| 1 = Yes                                  |   | <input type="checkbox"/> 1 |                            |
| 2 = No                                   | → <b>Go to Q5.22</b>  | <input type="checkbox"/> 2 |                            |
| 3 = Do not know                          | → <b>Go to Q5.22</b>  | <input type="checkbox"/> 3 |                            |
| <b>5.17</b>                              | <b>Ask if "Yes" in Q5.16</b><br><b>How do you rate the municipal water services you receive?</b>  |                            |                            |
| 1 = Good                                 |   | <input type="checkbox"/> 1 |                            |
| 2 = Average                              |   | <input type="checkbox"/> 2 |                            |
| 3 = Poor                                 |   | <input type="checkbox"/> 3 |                            |

|   |   |
|---|---|
| <b>5.18a</b> Does the household pay for municipal water? <i>If cost of water is included in a levy/rent paid to a housing complex/owner/landlord, the response should be "No".</i><br>1 = Yes → <b>Go to Q5.19a</b><br>2 = No   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                          |
| <b>5.18b</b> <i>Ask if "No" in Q5.18a</i><br><b>What is the main reason why the household does not pay for water</b><br>01 = Use own source of water<br>02 = Use a free water source<br>03 = Pay directly to landlord as part of rent<br>04 = Payment included in levy<br>05 = Permission from municipality not to pay<br>06 = Do not have water meter<br>07 = Water meter not working/broken<br>08 = Do not receive water bill<br>09 = Community decision not to pay<br>10 = Cannot afford to pay<br>11 = Water supply irregular<br>12 = Water supply has been stopped<br>13 = Other (specify) | <input type="checkbox"/> <input type="checkbox"/><br><br><input type="checkbox"/> |
| <b>5.19a</b> Has your municipal water supply been interrupted at any time during the last 12 months?<br>1 = Yes<br>2 = No → <b>Go to Q5.22</b>  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                          |
| <b>5.19b</b> <i>Ask if 'Yes' in 5.19a</i><br><b>If yes, what was the main reason for the interruption?</b><br>1 = General maintenance<br>2 = Water only delivered at fixed times<br>3 = Non-payment for services (cut off)<br>4 = Other (specify)<br>5 = Do not know  | <input type="checkbox"/><br><br><input type="checkbox"/>                          |

|  |  |
|--|--|
| <b>5.20</b> Thinking about the interruptions in your municipal water supply over the last 12 months, was any specific interruption longer than two days?<br>1 = Yes<br>2 = No<br>3 = Do not know | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 |
| <b>5.21</b> If you add all the days that your municipal water supply was interrupted over the last 12 months, was it more than 15 days in total?<br>1 = Yes<br>2 = No<br>3 = Do not know         | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 |

**SANITATION - Ask all households**

|  |  |
|--|--|
| <b>5.22</b> What type of toilet facility is used by this household?<br>01 = Flush toilet connected to a public sewerage system<br>02 = Flush toilet connected to a septic tank → <b>Go to Q5.24</b><br>03 = Chemical toilet → <b>Go to Q5.24</b><br>04 = Pit latrine/toilet with ventilation pipe → <b>Go to Q5.24</b><br>05 = Pit latrine/toilet without ventilation pipe → <b>Go to Q5.24</b><br>06 = Bucket toilet (collected by municipality) → <b>Go to Q5.24</b><br>07 = Bucket toilet (emptied by household) → <b>Go to Q5.24</b><br>08 = Ecological Sanitation Systems → <b>Go to Q5.24</b><br>09 = None → <b>Go to Q5.27</b><br>10 = Other (specify) → <b>Go to Q5.24</b> | <input type="checkbox"/> <input type="checkbox"/><br><br><input type="checkbox"/>      |
| <b>5.23</b> <i>Ask if flush toilet connected to public sewerage (option1) in Q5.22</i><br><b>Does this household pay for the sewerage system?</b><br>1 = Yes<br>2 = No<br>3 = Do not know  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 |
| <b>5.24</b> Is the toilet facility shared with other households?<br>1 = Yes<br>2 = No  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               |

|                  |   |                            |
|------------------|---|----------------------------|
| <b>5.25a</b>     | <b>Is the toilet facility in the dwelling, in the yard or outside the yard?</b> |                            |
| 1 = In dwelling  | → Go to Q5.26   | <input type="checkbox"/> 1 |
| 2 = In yard      | → Go to Q5.26   | <input type="checkbox"/> 2 |
| 3 = Outside yard |   | <input type="checkbox"/> 3 |

**Ask if the toilet is outside the yard. Otherwise go to Q5.26**

|  |   |  |
|--|---|--|
| <b>5.25b</b>   | <b>How far is the nearest toilet facility to which the household has access? (200m is equal to the length of two football/soccer fields)</b>            |  |
| 1 = Less than 50m  |   | <input type="checkbox"/> 1   |
| 2 = 51m - 100m   |   | <input type="checkbox"/> 2   |
| 3 = 101m - 200m  |   | <input type="checkbox"/> 3   |
| 4 = 201m - 500m  |   | <input type="checkbox"/> 4   |
| 5 = More than 500m   |   | <input type="checkbox"/> 5   |
| <b>5.26</b>  | <b>During the past 6 months, have you experienced any of the following problems with regards to the toilet facility usually used by this household?</b> | Yes No N/A   |
| <b>Read all options</b>  |   |  |
| 01 = No water to flush the toilet                                  |   | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 |
| 02 = Toilet blocked up   |   | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 |
| 03 = Toilet pit or chamber full                                    |   | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 |
| 04 = Toilets not well maintained and broken                        |   | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 |
| 05 = Poor lighting   |   | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 |
| 06 = Toilet unsafe to use, due to risk of assault                  |   | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 |
| 07 = Toilet unsafe to use, due to health risks                     |   | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 |
| 08 = Toilet not enclosed well or structure damaged                 |   | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 |
| 09 = Broken pipes or blockages in the municipal system             |   | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 |
| 10 = Too many people, long waiting times                           |   | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 |
| 11 = No tap or water point to wash hands after using the toilet    |   | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 |
| 12 = Problem reported but not repaired within 5 working days       |   | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 |
| 13 = Toilet system overflowing in yard                             |   | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 |
| 14 = Toilet system not working properly causing odours and insects |   | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 |
| 15 = Toilet not cleaned (if shared public toilet)                  |   | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 |

## ENERGY

**Ask all households**

|   |   |                            |
|---|---|----------------------------|
| <b>5.27</b>   | <b>Does this household have access to/use electricity?</b>  |                            |
| 1 = Yes   |   | <input type="checkbox"/> 1 |
| 2 = No  | → Go to Q5.31   | <input type="checkbox"/> 2 |
| 3 = Do not know   | → Go to Q5.31   | <input type="checkbox"/> 3 |
| <b>5.28a</b>  | <b>Does this household presently have a connection to the MAINS electricity supply?</b>   |                            |
| 1 = Yes   | → Go to Q5.28c  | <input type="checkbox"/> 1 |
| 2 = No  |   | <input type="checkbox"/> 2 |
| 3 = Do not know   |   | <input type="checkbox"/> 3 |
| <b>5.28b</b>  | <b>Ask if no or do not know in Q5.28a<br/>If the electricity that households have access to is not from mains, what is the household's source of electricity?</b> |                            |
| 1 = Connected to other source which household pay for (e.g. connected to neighbour's line and paying neighbour, paying landlord)  |   | <input type="checkbox"/>   |
| 2 = Connected to other source for which household is not paying for (e.g. connected to neighbour's line and not paying neighbour) |   | <input type="checkbox"/>   |
| 3 = Generator   |   | <input type="checkbox"/>   |
| 4 = Home solar system   |   | <input type="checkbox"/>   |
| 5 = Battery   |   | <input type="checkbox"/>   |
| 6 = Other (specify)   |   | <input type="checkbox"/>   |
|   | <b>Go to Q5.31</b>  |                            |
| <b>5.28c</b>  | <b>Is your electricity supplied by :</b>  |                            |
| 1 = Municipality (pre-paid)   |   | <input type="checkbox"/>   |
| 2 = Municipality (receive a bill from municipality)   |   | <input type="checkbox"/>   |
| 3 = Eskom (pre-paid)  |   | <input type="checkbox"/>   |
| 4 = Eskom (receive a bill from Eskom)   |   | <input type="checkbox"/>   |
| 5 = Other supplier  |   | <input type="checkbox"/>   |
| 6 = Do not know   |   | <input type="checkbox"/>   |

|                            |  |  |     |    |                            |                            |                            |                            |                            |                            |
|----------------------------|--|--|-----|----|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| <b>5.29a</b>               | <b>How do you rate the quality of the electricity supply services (maintenance, meter reading, billing, complaint handling, connection installation) you receive?</b><br>1 = Good<br>2 = Average<br>3 = Poor   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3   |     |    |                            |                            |                            |                            |                            |                            |
| <b>5.29b</b>               | <b>Did you contact the call centre with a complaint related to electricity during the past 12 months?</b><br>1 = Yes<br>2 = No<br>3 = Do not know  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3   |     |    |                            |                            |                            |                            |                            |                            |
| <b>5.29c</b>               | <b>If yes, what kind of service did you receive?</b><br>1 = Was the call centre available the first time?<br>2 = Did you get a response within a reasonable time?<br>3 = Was the problem resolved in one call?   | <table border="0"> <tr> <td>Yes</td> <td>No</td> </tr> <tr> <td><input type="checkbox"/> 1</td> <td><input type="checkbox"/> 2</td> </tr> <tr> <td><input type="checkbox"/> 1</td> <td><input type="checkbox"/> 2</td> </tr> <tr> <td><input type="checkbox"/> 1</td> <td><input type="checkbox"/> 2</td> </tr> </table> | Yes | No | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
| Yes                        | No   |  |     |    |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2   |  |     |    |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2   |  |     |    |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2   |  |     |    |                            |                            |                            |                            |                            |                            |
| <b>5.29d</b>               | <b>Was your electricity cut during the past 3 months without prior notification, even though you paid your bill or bought pre-paid electricity? If yes, how many times did it happen?</b><br><i>Write 0 if it did not happen at all and</i> → <b>Go to Q5.30</b>                                       | <input type="checkbox"/> <input type="checkbox"/>  |     |    |                            |                            |                            |                            |                            |                            |
| <b>5.29e</b>               | <b>Did any of these interruptions last for more than 12 hours? If yes, how many of them?</b>   | <input type="checkbox"/> <input type="checkbox"/>  |     |    |                            |                            |                            |                            |                            |                            |
| <b>5.30</b>                | <b>Was the electricity cut off during the past 30 days for non-payment for this household? If there was no electricity because the pre-paid card was empty it is not considered to be an electricity cut off because of non-payment.</b><br>1 = Yes<br>2 = No<br>3 = Not applicable<br>4 = Do not know | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4   |     |    |                            |                            |                            |                            |                            |                            |

#### Ask all households

|               |  |  |         |   |          |   |               |   |               |   |
|---------------|--|--|---------|---|----------|---|---------------|---|---------------|---|
| <b>5.31</b>   | <b>What is the main source of energy/fuel for this household?</b><br><br>01 = Electricity from mains<br>02 = Other source of electricity<br>03 = Gas<br>04 = Paraffin<br>05 = Wood<br>06 = Coal<br>07 = Candles<br>08 = Animal dung<br>09 = Solar energy<br>10 = Other, (specify)<br>11 = None | <table border="0"> <tr> <td>Cooking</td> <td><input type="checkbox"/> <input type="checkbox"/></td> </tr> <tr> <td>Lighting</td> <td><input type="checkbox"/> <input type="checkbox"/></td> </tr> <tr> <td>Water Heating</td> <td><input type="checkbox"/> <input type="checkbox"/></td> </tr> <tr> <td>Space Heating</td> <td><input type="checkbox"/> <input type="checkbox"/></td> </tr> </table> | Cooking | <input type="checkbox"/> <input type="checkbox"/> | Lighting | <input type="checkbox"/> <input type="checkbox"/> | Water Heating | <input type="checkbox"/> <input type="checkbox"/> | Space Heating | <input type="checkbox"/> <input type="checkbox"/> |
| Cooking       | <input type="checkbox"/> <input type="checkbox"/>  |  |         |   |          |   |               |   |               |   |
| Lighting      | <input type="checkbox"/> <input type="checkbox"/>  |  |         |   |          |   |               |   |               |   |
| Water Heating | <input type="checkbox"/> <input type="checkbox"/>  |  |         |   |          |   |               |   |               |   |
| Space Heating | <input type="checkbox"/> <input type="checkbox"/>  |  |         |   |          |   |               |   |               |   |

#### WASTE MANAGEMENT AND REFUSE REMOVAL

##### Ask all households

|                      |  |  |                      |                      |                      |
|----------------------|--|--|----------------------|----------------------|----------------------|
| <b>5.32</b>          | <b>How is the refuse or rubbish of this household collected or removed?</b><br><br>01 = Removed by local authority/private company at least once a week<br>02 = Removed by local authority/private company less often than once a week<br>03 = Removed by community members, contracted by the Municipality, at least once a week<br>04 = Removed by community members, contracted by the Municipality, less often than once a week<br>05 = Removed by community members at least once a week<br>06 = Removed by community members less often than once a week<br>07 = Communal refuse dump<br>08 = Communal container/Central collection point<br>09 = Own refuse dump<br>10 = Dump or leave rubbish anywhere<br>11 = Other (specify) | <table border="0"> <tr> <td>→ <b>Go to Q5.34</b></td> </tr> <tr> <td>→ <b>Go to Q5.34</b></td> </tr> <tr> <td>→ <b>Go to Q5.34</b></td> </tr> </table> | → <b>Go to Q5.34</b> | → <b>Go to Q5.34</b> | → <b>Go to Q5.34</b> |
| → <b>Go to Q5.34</b> |  |  |                      |                      |                      |
| → <b>Go to Q5.34</b> |  |  |                      |                      |                      |
| → <b>Go to Q5.34</b> |  |  |                      |                      |                      |

Ask if answer was options 1-8 in Q5.32. Otherwise go to Q5.34

|              |  |  |
|--------------|--|--|
| <b>5.33a</b> | Is this household currently paying for the removal of refuse or rubbish?<br>1 = Yes → Go to Q5.34<br>2 = No → Go to Q5.34<br>3 = Do not know → Go to Q5.34   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3   |
| <b>5.33b</b> | Ask if "No" in Q5.33a<br>Would this household be willing to pay for the removal of refuse or rubbish?<br>1 = Yes<br>2 = No<br>3 = Do not know  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3   |
| <b>5.34</b>  | What does this household use to store waste before it is collected or dumped?<br>1 = Waste bin provided by municipality<br>2 = Waste bin provided by the household<br>3 = Plastic Bag<br>4 = Any other container<br>5 = None | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5 |

#### RECYCLING Ask all households

| <b>5.35a</b>               | Does this household separate waste for recycling?<br>1 = Yes → Go to Q5.35c<br>2 = No<br>3 = Do not know  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|----------------------------|---|---|-----|----|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| <b>5.35b</b>               | Why does the household not separate waste for recycling?<br>1 = Thrown out into dustbin for refuse collection<br>2 = Do not think it is important<br>3 = Do not have adequate facilities<br>4 = Too few recyclables<br>5 = No/Not enough financial benefit<br>6 = Takes too much time to separate waste<br>7 = No recycling services available<br>8 = Recycling dropoff points not conveniently located | <table border="1"> <thead> <tr> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> </tbody> </table> | Yes | No | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
| Yes                        | No  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |

| <b>5.35c</b>                                       | Does your neighbourhood have a community/school programme for recycling?<br>1 = Yes<br>2 = No<br>3 = Do not know  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|--|---|---|-----|----|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| <b>Answer if Q5.35a = "Yes", else go to Q5.36a</b> |   |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <b>5.35d</b>                                       | Which of the following does the household separate for recycling?<br>Read all the options<br>1 = Paper, cardboard/boxes<br>2 = Glass/glass bottles<br>3 = Plastic/plastic bags/plastic bottles<br>4 = Metal / Aluminium cans<br>5 = Oil (household/automotive)<br>6 = Ash, rubble and bricks                              | <table border="1"> <thead> <tr> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> </tbody> </table>   | Yes | No | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |                            |                            |
| Yes  | No  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1                         | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1                         | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1                         | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1                         | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1                         | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1                         | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <b>5.35e</b>                                       | What do you do with the waste that is separated for recycling?<br>1 = Fetched by municipality<br>2 = Fetched by companies contracted by municipality<br>3 = Fetched by private companies<br>4 = Taken to drop off point by household<br>5 = Other   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5  |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <b>5.35f</b>                                       | How often is separated waste fetched or removed?<br>1 = Weekly<br>2 = Bi-Weekly<br>3 = Monthly<br>4 = Less Often  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4  |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <b>5.35g</b>                                       | Why does the household separate waste for recycling?<br>1 = To reduce waste<br>2 = To save energy / natural resources<br>3 = To save landfill space<br>4 = To reduce litter and pollution<br>5 = Because a recycling service is easily accessible<br>6 = To support a community/school recycling programme<br>7 = To sell | <table border="1"> <thead> <tr> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> </tbody> </table> | Yes | No | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
| Yes  | No  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1                         | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1                         | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1                         | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1                         | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1                         | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1                         | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1                         | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |

# WASTE COLLECTION *Ask all households*

| 5.36a                      | <b>Does this household collect waste for recycling?</b><br>1 = Yes<br>2 = No → <i>Go to Q5.37</i><br>3 = Do not know → <i>Go to Q5.37</i>   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|----------------------------|---|---|-----|----|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| 5.36b                      | <b>Which of the following does the household collect for recycling?</b><br><i>Read all the options</i><br>1 = Paper, cardboard/boxes<br>2 = Glass/glass bottles<br>3 = Plastic/plastic bags/plastic bottles<br>4 = Metal / Aluminium cans<br>5 = Oil (household/automotive)<br>6 = Ash, rubble and bricks | <table border="1"> <thead> <tr> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> </tbody> </table> | Yes | No | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
| Yes                        | No  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| 5.36c                      | <b>Does your household sell any of the waste collected for recycling?</b><br>1 = Yes<br>2 = No<br>3 = Do not know   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |

# ENVIRONMENT *Ask all households*

| 5.37                       | <b>Which of the following environmental problems do you experience in your community/on your and neighbouring farms?</b><br><i>Read all the options</i><br>1 = Irregular or no waste removal<br>2 = Littering<br>3 = Water pollution<br>4 = Outdoor/indoor air pollution<br>5 = Land degradation/over-utilisation of natural resources (e.g. soil erosion, potholes and dongas, overgrazing, cutting of trees for firewood)<br>6 = Excessive noise/noise pollution<br>7 = Other (specify) | <table border="1"> <thead> <tr> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> </tbody> </table> | Yes | No | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
|----------------------------|---|---|-----|----|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Yes                        | No  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| 5.38                       | <b>In the past 12 months have you or any member of your household .....</b><br><i>Read all the options</i><br>1 = Used pesticides in your dwelling?<br>2 = Used pesticides in your garden/yard?<br>3 = Used herbicides/weed killers in your garden/yard?  | <table border="1"> <thead> <tr> <th>Yes</th> <th>No</th> <th>N/A</th> </tr> </thead> <tbody> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td><td></td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td><td><input type="checkbox"/> 3</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td><td><input type="checkbox"/> 3</td></tr> </tbody> </table>   | Yes | No | N/A                        | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |                            | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 |                            |                            |                            |                            |
| Yes                        | No  | N/A   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  | <input type="checkbox"/> 3  |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  | <input type="checkbox"/> 3  |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |

## SECTION 6 : COMMUNICATION AND TRANSPORT

### COMMUNICATION AND POSTAL SERVICES - Ask all households

|             |   |  |
|-------------|---|--|
| <b>6.1</b>  | <b>Does this household have a functional/working landline telephone in the dwelling?</b><br>1 = Yes<br>2 = No | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 |
| <b>6.2a</b> | <b>Is there a functional/working cellular telephone available within this household?</b><br>1 = Yes<br>2 = No | <input type="checkbox"/> 1<br><input type="checkbox"/> 2 |
| <b>6.2b</b> | <b>If yes, how many?</b>  | <input type="text"/> <input type="text"/>                |

Ask if answer is "No" to Q6.1 and Q6.2a. Otherwise go to Q6.4

| <b>6.3</b>                 | <b>How far is the nearest accessible telephone?</b><br>1 = 500 metres or less<br>2 = 501 metres to 1 kilometres<br>3 = More than 1km up to 5 kilometres<br>4 = More than 5 kilometres   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4  |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|----------------------------|---|---|-----|----|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| <b>6.4</b>                 | <b>Do members of this household use any of the following internet services?</b><br><i>Read all the options</i><br>1 = Internet connection in the household<br>2 = Internet in a library/community hall/Thusong centre<br>3 = Internet for students at a school/university/college<br>4 = At place of work<br>5 = Internet Café 2km or less from the household<br>6 = Internet Café more than 2km from the household<br>7 = Any place via a mobile cellular telephone<br>8 = Any place via other mobile access services<br>9 = Other (specify) | <table border="1"> <thead> <tr> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> </tbody> </table> | Yes | No | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
| Yes                        | No  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |

If option 1, 7 or 8 in Q6.4 =1 then answer Q6.5, else go to Q6.6

| <b>6.5</b>                 | <b>What type/s of Internet access services are used for Internet access at home?</b><br>1 = Narrowband<br>2 = Fixed broadband<br>3 = Mobile broadband  | <table border="1"> <thead> <tr> <th>Yes</th> <th>No</th> <th>DNK</th> </tr> </thead> <tbody> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td><td><input type="checkbox"/> 3</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td><td><input type="checkbox"/> 3</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td><td><input type="checkbox"/> 3</td></tr> </tbody> </table> | Yes | No | DNK | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 |
|----------------------------|--|---|-----|----|-----|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Yes                        | No   | DNK   |     |    |     |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2   | <input type="checkbox"/> 3  |     |    |     |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2   | <input type="checkbox"/> 3  |     |    |     |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2   | <input type="checkbox"/> 3  |     |    |     |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <b>6.6</b>                 | <b>What is the main reason for not having internet access at home?</b><br>1 = Lack of interest / no need<br>2 = Lack of knowledge /skills/confidence<br>3 = Have access to internet elsewhere<br>4 = Cost of equipment too high<br>5 = Cost of subscription too high<br>6 = Concern about exposure to inappropriate or harmful contents<br>7 = Do not know                     | <input type="text"/>  |     |    |     |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <b>6.7</b>                 | <b>How does this household receive most of its mail/post?</b><br>1 = Delivered to the dwelling<br>2 = Delivered to a post box/private bag<br>3 = Through friend or neighbour or relative<br>4 = Through a shop<br>5 = Through a school<br>6 = Through a workplace<br>7 = Through a tribal/traditional/local authority office<br>8 = Do not receive mail<br>9 = Other (specify) | <input type="text"/>  |     |    |     |                            |                            |                            |                            |                            |                            |                            |                            |                            |

## TRANSPORT

Ask all households

|      |   |   |
|------|---|---|
| 6.8  | <p><b>Please specify if members of this household used minibus taxi/ sedan taxi/bakkie taxis during the last calendar week (Sunday to Saturday)?</b></p> <p>1 = Total number of trips during the last calendar week<br/>Write 0 if no trip was made → <b>Go to Q6.9</b></p> <p>2 = How much money was spent in total on this form of transport by all household members during the last calendar week?<br/>Write 8888 if do not know</p> <p>3 = How far (in kilometers) do you have to travel to get to the nearest minibus taxi /sedan taxi/bakkie taxi stop?<br/>Write 0 for less than one kilometer and 888 if do not know</p> | <input type="text"/> <input type="text"/> <input type="text"/><br><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/><br><input type="text"/> <input type="text"/> <input type="text"/> |
| 6.9  | <p><b>Please specify if members of this household used buses during the last calendar week (Sunday to Saturday)?</b></p> <p>1 = Total number of trips during the last calendar week<br/>Write 0 if no trip was made → <b>Go to Q6.10</b></p> <p>2 = How much money was spent in total on this form of transport by all household members during the last calendar week?<br/>Write 8888 if do not know</p> <p>3 = How far (in kilometers) do you have to travel to get to the nearest bus stop?<br/>Write 0 for less than one kilometer and 888 if do not know</p>   | <input type="text"/> <input type="text"/> <input type="text"/><br><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/><br><input type="text"/> <input type="text"/> <input type="text"/> |
| 6.10 | <p><b>Please specify if members of this household used trains during the last calendar week (Sunday to Saturday)?</b></p> <p>1 = Total number of trips during the last calendar week<br/>Write 0 if no trip was made → <b>Go to Section 7</b></p> <p>2 = How much money was spent in total on this form of transport by all household members during the last calendar week?<br/>Write 8888 if do not know</p> <p>3 = How far (in kilometers) do you have to travel to get to the nearest train station?<br/>Write 0 for less than one kilometer and 888 if do not know</p>   | <input type="text"/> <input type="text"/> <input type="text"/><br><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/><br><input type="text"/> <input type="text"/> <input type="text"/> |

## SECTION 7 : HEALTH, WELFARE AND FOOD SECURITY

### HEALTH AND WELFARE

Ask all households

|      |  |  |
|------|--|--|
| 7.1  | <p><b>If any member of this household becomes ill and decides to seek medical help, where do they usually go first?</b><br/><b>Public sector</b> (i.e. government, provincial or community institution)</p> <p>01 = Hospital<br/>02 = Clinic<br/>03 = Other in public sector (specify in block below)</p> <p><b>Private sector</b> (including private clinics, surgery, private hospitals and sangomas)</p> <p>04 = Hospital<br/>05 = Clinic<br/>06 = Private doctor/specialist<br/>07 = Traditional healer<br/>08 = Spiritual healer's workplace/church<br/>09 = Pharmacy/chemist<br/>10 = Health facility provided by employer<br/>11 = Alternative medicine, e.g. homoeopathist<br/>12 = Other in private sector (specify)<br/>13 = Do not know</p> | <input type="text"/> <input type="text"/><br><input type="text"/> <input type="text"/>   |
| 7.2a | <p><b>What means of transport is usually used by most household members to get to the health facility the household normally uses?</b></p> <p>1 = Walking<br/>2 = Minibus taxi/sedan taxi/bakkie taxi<br/>3 = Bus<br/>4 = Train<br/>5 = Own transport<br/>6 = Bicycle/motorcycle<br/>7 = Other (specify)</p>   | <input type="text"/><br><input type="text"/>   |
| 7.2b | <p><b>How long does it take when using the usual means of transport to get to the health institution that your household normally goes to? Specify for one direction only, using the usual means of transport</b></p> <p>1 = Less than 15 minutes<br/>2 = 15 - 29 minutes<br/>3 = 30 - 89 minutes<br/>4 = 90 minutes and more<br/>5 = Do not know</p>  | <input type="text"/> 1<br><input type="text"/> 2<br><input type="text"/> 3<br><input type="text"/> 4<br><input type="text"/> 5 |





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| 7.11 | <p><b>Did you skip any meals during the past 12 months because there was not enough food in the house?</b> → If "No" Go to Q7.12</p> <p>Has it happened 5 or more days in the past 30 days?</p>  | <p>Yes No</p> <p><input type="checkbox"/> 1 <input type="checkbox"/> 2</p> <p><input type="checkbox"/> 1 <input type="checkbox"/> 2</p>   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7.12 | <p><b>Did you eat a smaller variety of foods during the past 12 months than you would have liked to, because there was not enough food in the house?</b> → If "No" Go to Q7.13</p> <p>Has it happened 5 or more days in the past 30 days?</p>  | <p>Yes No</p> <p><input type="checkbox"/> 1 <input type="checkbox"/> 2</p> <p><input type="checkbox"/> 1 <input type="checkbox"/> 2</p>   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7.13 | <p><b>Please specify how many times the respondent ate the following foods during the past 24 hours.</b></p> <p><i>Read all the options</i></p> <p>01 = Maize, rice, sorghum, millet, bread and other cereals</p> <p>02 = Potatoes, sweet potatoes, cassava</p> <p>03 = Beans, peas, groundnuts, cashew nuts or other nuts</p> <p>04 = Spinach and wild green leaves</p> <p>05 = Other vegetables, carrots, relish, tomatoes, cabbage, beetroot etc</p> <p>06 = Fruit</p> <p>07 = Beef, goat, poultry (chicken), pork, fish, eggs</p> <p>08 = Milk, yoghurt and other dairy products</p> <p>09 = Sugar and sugar products</p> <p>10 = Oils, fat and butter</p> | <table border="1"> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> </table> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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## SECTION 8 : HOUSEHOLD LIVELIHOODS

### AGRICULTURAL ACTIVITIES *Ask all households*

|      |  |   |
|------|--|---|
| 8.1  | <p><b>Has the household been involved in the production of any kind of food or agricultural products during the past twelve months?</b> (e.g. livestock, crops, poultry, food gardening, forestry, fish, etc.)</p> <p>1 = Yes<br/>2 = No</p> <p>→ Go to Q8.9a</p>  | <p><input type="checkbox"/> 1</p> <p><input type="checkbox"/> 2</p>   |
| 8.2  | <p><b>How many household members, aged 15 years or older, were involved in these agricultural activities, even if only once in a while?</b></p>  | <p><input type="text"/> <input type="text"/></p>  |
| 8.3  | <p><b>What kind of food production/agricultural activities is the household involved in?</b></p> <p><i>Read all the options</i></p> <p>01 = Livestock production (cattle, goats, sheep, pigs, etc.)</p> <p>02 = Poultry production (chickens, ducks, geese, guinea fowl, etc.)</p> <p>03 = Grains and food crops (maize, wheat, beans, sorghum, millet, groundnuts etc.)</p> <p>04 = Industrial crops (e.g. tea, coffee, cotton, tobacco)</p> <p>05 = Fruit and vegetable production</p> <p>06 = Fodder, grazing/pasture or grass for animals</p> <p>07 = Fish farming/aquaculture</p> <p>08 = Forestry</p> <p>09 = Game farming</p> <p>10 = Other</p> | <p>Yes No</p> <p><input type="checkbox"/> 1 <input type="checkbox"/> 2</p> <p><input type="checkbox"/> 1 <input type="checkbox"/> 2</p> <p><input type="checkbox"/> 1 <input type="checkbox"/> 2</p> <p><input type="checkbox"/> 1 <input type="checkbox"/> 2</p> <p><input type="checkbox"/> 1 <input type="checkbox"/> 2</p> <p><input type="checkbox"/> 1 <input type="checkbox"/> 2</p> <p><input type="checkbox"/> 1 <input type="checkbox"/> 2</p> <p><input type="checkbox"/> 1 <input type="checkbox"/> 2</p> <p><input type="checkbox"/> 1 <input type="checkbox"/> 2</p> <p><input type="checkbox"/> 1 <input type="checkbox"/> 2</p> |
| 8.4  | <p><b>Why do you grow farm produce or keep stock for the household?</b></p> <p>1 = As a main source of food for the household</p> <p>2 = As the main source of income/earning a living</p> <p>3 = As an extra source of income</p> <p>4 = As an extra source of food for the household</p> <p>5 = As a leisure activity or hobby e.g. gardening</p>  | <p><input type="checkbox"/> 1</p> <p><input type="checkbox"/> 2</p> <p><input type="checkbox"/> 3</p> <p><input type="checkbox"/> 4</p> <p><input type="checkbox"/> 5</p>   |
| 8.5a | <p><b>Did your household sell any of its produce?</b></p> <p>1 = Yes<br/>2 = No</p> <p>→ Go to Q8.6a</p>   | <p><input type="checkbox"/> 1</p> <p><input type="checkbox"/> 2</p>   |

| <b>8.5b</b>                | <b>To whom do your household sell most of its produce?</b><br><i>Read all the options</i> <ul style="list-style-type: none"> <li>1 = Local buyers from this district</li> <li>2 = Buyers from neighbouring cities and towns</li> <li>3 = Formal markets in South Africa</li> <li>4 = Export agencies in international buyers.</li> <li>5 = Other</li> </ul>   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5  |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
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| <b>8.6a</b>                | <b>Has your household received any of the following kinds of agricultural related assistance from the government during the past 12 months?</b><br><i>Read all the options</i> <ul style="list-style-type: none"> <li>1 = Training</li> <li>2 = Advice from government extension officers</li> <li>3 = Grants (money that does not have to be paid back)</li> <li>4 = Loans (money that has to be paid back)</li> <li>5 = Inputs (seed, fertilizer, etc.) as part of a loan</li> <li>6 = Inputs (seed, fertilizer, etc.) for free</li> <li>7 = Dipping and vaccination services for livestock from State veterinarian or other Department</li> <li>8 = Other (specify)</li> </ul> <b>Go to Q8.6b if households answered yes to any of the categories above, else go to Q8.7</b> | <table border="0"> <thead> <tr> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> </tbody> </table> | Yes | No | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
| Yes                        | No  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
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| <b>8.6b</b>                | <b>Did your household find this agriculture-related assistance:</b> <ul style="list-style-type: none"> <li>1 = Very useful</li> <li>2 = Somewhat useful</li> <li>3 = Not useful</li> </ul>  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3  |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <b>8.6c</b>                | <b>Did your household receive agriculture-related assistance from any other entity than government?</b> <ul style="list-style-type: none"> <li>1 = Yes</li> <li>2 = No</li> </ul>   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2  |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |

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|--|---|--------------------------|--------------------------|--------------------------|--------------------------|
| <b>Only answer if option 1 in Q8.3 = "Yes", else go to Q8.8a</b> |   |                          |                          |                          |                          |
| <b>8.7</b>   | <b>How many of the following does the household own? Please mark the most appropriate category with an x.</b> | 0                        | 1-10                     | 11-100                   | 100+                     |
| 1 = Cattle   |   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 = Sheep  |   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 = Goats  |   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 = Pigs   |   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 = Other  |   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**Continue if the household planted grains/vegetables/fruits/trees (forestry)/pastures/industrial crops. Otherwise go to Q8.9a**

| <b>8.8a</b>                | <b>Where does the household practise its crop planting activities?</b><br><i>Read all the options</i> <ul style="list-style-type: none"> <li>1 = Farm land (communal or private)</li> <li>2 = Backyard garden (can include, vegetables, fruits, grains )</li> <li>3 = School garden (can include, vegetables, fruits, grains)</li> <li>4 = Communal garden (more than one household involved, can include vegetables, fruits, grains )</li> <li>5 = On verges of roads and unused public/municipal land</li> <li>6 = Other</li> </ul>                                     | <table border="0"> <thead> <tr> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> </tbody> </table> | Yes | No | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
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| Yes                        | No  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
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| <b>8.8b</b>                | <b>Approximately how big is the land that the household use for production? Estimate total area if more than one piece.</b> <ul style="list-style-type: none"> <li>1 = Less than 500m<sup>2</sup> (approximately one soccer field)</li> <li>2 = 500m<sup>2</sup> to 9 999m<sup>2</sup> (between one soccer field and one hectare)</li> <li>3 = 1 but less than 2 hectares</li> <li>4 = 2 but less than 5 hectares</li> <li>5 = 5 but less than 10 hectares</li> <li>6 = 10 but less than 20 hectares</li> <li>7 = 20 or more hectares</li> <li>8 = Do not know</li> </ul> | <input type="checkbox"/>  |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |

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| 8.8c | <p><b>On what basis does this household have access to the land used for crop production? If more than one kind of tenure system applies for different pieces of land, give an answer for the biggest piece.</b></p> <p>1 = Owns the land<br/> 2 = Rents the land<br/> 3 = Sharecropping<br/> 4 = Tribal authority<br/> 5 = State land<br/> 6 = Other (specify)<br/> 7 = Do not know</p> | <div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto; margin-bottom: 10px;"></div> <div style="border: 1px solid black; width: 60px; height: 30px; margin: 0 auto;"></div> |
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## HOUSEHOLD INCOME SOURCES AND EXPENDITURE

Ask all households

| 8.9a                       | <p><b>What are the sources of income for this household?</b></p> <p><i>Read all the options</i></p> <p>1 = Salaries/wages/commission<br/> 2 = Income from a business<br/> 3 = Remittances (money received from people living elsewhere)<br/> 4 = Pensions<br/> 5 = Grants (include old age grant here)<br/> 6 = Sales of farming products and services<br/> 7 = Other income sources e.g. rental income, interest<br/> 8 = No income → <b>Go to Q8.12</b></p> | <table border="0"> <thead> <tr> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> </tbody> </table> | Yes | No | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
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| Yes                        | No  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
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| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| 8.9b                       | <p><b>Which one of the above income sources is the main source of income?</b></p> <p><i>Write the option number in the block provided. If only one source of income write the code of that one source.</i></p>  | <div style="border: 1px solid black; width: 40px; height: 30px; margin: 0 auto;"></div>   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |

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| 8.10 | <p><b>If the household receives an income from remittances, please specify approximately how much they receive per month? If no income received from remittances write 0.</b></p>   | <div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto; margin-bottom: 10px;"></div> <div style="border: 1px solid black; width: 60px; height: 30px; margin: 0 auto;"></div>   |
| 8.11 | <p><b>If the household receives an income from pensions (do not include income from old age grants), please specify approximately how much they receive per month? If no income received from pensions write 0.</b></p>   | <div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto; margin-bottom: 10px;"></div> <div style="border: 1px solid black; width: 60px; height: 30px; margin: 0 auto;"></div>   |
| 8.12 | <p><b>Which net household income per month in Rand would be the absolute minimum for your household? That is to say, that you would not able to make ends meet if your earned less.</b></p>   | <div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto; margin-bottom: 10px;"></div> <div style="border: 1px solid black; width: 60px; height: 30px; margin: 0 auto;"></div>   |
| 8.13 | <p><b>Is the total monthly income of your household higher, lower or more or less the same as the minimum income given above?</b></p> <p>1 = Much higher<br/> 2 = Higher<br/> 3 = More or less the same<br/> 4 = Lower<br/> 5 = Much lower</p>  | <div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 5px;"><input type="checkbox"/> 1</div> <div style="margin-bottom: 5px;"><input type="checkbox"/> 2</div> <div style="margin-bottom: 5px;"><input type="checkbox"/> 3</div> <div style="margin-bottom: 5px;"><input type="checkbox"/> 4</div> <div style="margin-bottom: 5px;"><input type="checkbox"/> 5</div> </div> |
| 8.14 | <p><b>What was the total household expenditure in the last month?</b></p> <p><i>Include money spent on food, clothing, transport, rent and rates, alcohol and tobacco, school fees, entertainment and any other expenses.</i></p> <p>01 = R0<br/> 02 = R1 - R199<br/> 03 = R200 - R399<br/> 04 = R400 - R799<br/> 05 = R800 - R1 199<br/> 06 = R1 200 - R1 799<br/> 07 = R1 800 - R2 499<br/> 08 = R2 500 - R4 999<br/> 09 = R5 000 - R9 999<br/> 10 = R10 000 or more<br/> 11 = Do not know<br/> 12 = Refuse</p> | <div style="border: 1px solid black; width: 40px; height: 30px; margin: 0 auto;"></div>  |

|      |  |  |
|------|--|--|
| 8.15 | <p>Does the household own one or more motor vehicle(s) in working condition (e.g. a car/bakkie/van/truck)?</p> <p>1 = Yes<br/>2 = No</p> <p style="text-align: right;">→ Go to Q8.16</p> <p>How many are there in the household?</p>                                       | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> <input type="checkbox"/>        |
| 8.16 | <p>Does your household own a radio in working condition? If yes, how many?</p> <p>Please exclude car radios.</p>   | <input type="checkbox"/> <input type="checkbox"/>  |
| 8.17 | <p>In the previous month, did this household make use of a domestic or household workers' services (excluding for business purposes)?</p> <p>1 = Yes<br/>2 = No</p>  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2   |
| 8.18 | <p>Did the household receive a Government land grant as part of the land reform program or another Government support program to obtain a plot of land for residence or farming?</p> <p>1 = Yes, for residence<br/>2 = Yes, for farming<br/>3 = No<br/>4 = Do not know</p> | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4 |
| 8.19 | <p>Would you say you and your household are at present?</p> <p>1 = Wealthy<br/>2 = Very comfortable<br/>3 = Reasonably comfortable<br/>4 = Just getting along<br/>5 = Poor<br/>6 = Very poor</p>   | <input type="checkbox"/>   |

| 8.20                       | <p>Are you happier, the same or less happy with life than you were ten years ago?</p> <p>1 = Happier<br/>2 = The same<br/>3 = Less happy<br/>4 = Refuse to answer<br/>5 = Do not know</p>   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3<br><input type="checkbox"/> 4<br><input type="checkbox"/> 5  |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
|----------------------------|---|---|-----|----|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| 8.21                       | <p>Does the household own any of the following?</p> <p>01 = TV Set<br/>02 = Swimming Pool<br/>03 = DVD Player / Blu ray Player<br/>04 = Pay TV (M-Net / DSTV / Top TV) Subscription<br/>05 = Air Conditioner (Excluding Fans)<br/>06 = Computer / Desktop / Laptop<br/>07 = Vacuum Cleaner / Floor Polisher<br/>08 = Dish washing machine<br/>09 = Washing Machine<br/>10 = Tumble Dryer<br/>11 = Deep Freezer - free standing<br/>12 = Refrigerator or Combined Fridge Freezer<br/>13 = Electric Stove / Gas Stove<br/>14 = Microwave Oven<br/>15 = Built-in Kitchen sink<br/>16 = Home Security Service<br/>17 = Home Theatre System<br/>18 = Geyser, providing hot running water</p> | <table border="0"> <thead> <tr> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> <tr><td><input type="checkbox"/> 1</td><td><input type="checkbox"/> 2</td></tr> </tbody> </table> | Yes | No | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
| Yes                        | No  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2  |   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| 8.22                       | <p>Indicate the column number of the person who answered most of the questions in Section 5 - 8</p>   | <input type="checkbox"/> <input type="checkbox"/>   |     |    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |

## SECTION 9: MORTALITY IN THE LAST 12 MONTHS

|     |   |   |  |   |  |   |  |   |  |   |  |
|-----|---|---|--|---|--|---|--|---|--|---|--|
| 9.1 | Has any member of this household passed away in the last 12 months?   | <input type="checkbox"/> 1 Yes<br><input type="checkbox"/> 2 No<br><input type="checkbox"/> 3 Do not know         } → <b>Go to Section 10</b>                           |  |   |  |   |  |   |  |   |  |
| 9.2 | How many members of the household passed away in the last 12 months?  | <div style="display: flex; justify-content: space-around; width: 100px;"> <div><input type="text"/></div> <div><input type="text"/></div> </div>                        |  |   |  |   |  |   |  |   |  |
|     |   | <b>Person 1</b>   |  | <b>Person 2</b>   |  | <b>Person 3</b>   |  | <b>Person 4</b>   |  | <b>Person 5</b>   |  |
| 9.3 | What was the first name of the deceased?  | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |  | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |  | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |  | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |  | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |  |
| 9.4 | What was the month and the year of the deceased's death?  | M M Y Y Y Y<br><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>                            |  | M M Y Y Y Y<br><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>                            |  | M M Y Y Y Y<br><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>                            |  | M M Y Y Y Y<br><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>                            |  | M M Y Y Y Y<br><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>                            |  |
| 9.5 | Was the deceased male or female?  | <input type="checkbox"/> 1 Male<br><input type="checkbox"/> 2 Female  |  | <input type="checkbox"/> 1 Male<br><input type="checkbox"/> 2 Female  |  | <input type="checkbox"/> 1 Male<br><input type="checkbox"/> 2 Female  |  | <input type="checkbox"/> 1 Male<br><input type="checkbox"/> 2 Female  |  | <input type="checkbox"/> 1 Male<br><input type="checkbox"/> 2 Female  |  |
| 9.6 | What was the deceased's age in completed years at the time of death?  | <input type="text"/> <input type="text"/> <input type="text"/>  |  | <input type="text"/> <input type="text"/> <input type="text"/>  |  | <input type="text"/> <input type="text"/> <input type="text"/>  |  | <input type="text"/> <input type="text"/> <input type="text"/>  |  | <input type="text"/> <input type="text"/> <input type="text"/>  |  |
| 9.7 | What caused the death of the deceased?  | <input type="checkbox"/> 1 Unnatural<br><input type="checkbox"/> 2 Natural  |  | <input type="checkbox"/> 1 Unnatural<br><input type="checkbox"/> 2 Natural  |  | <input type="checkbox"/> 1 Unnatural<br><input type="checkbox"/> 2 Natural  |  | <input type="checkbox"/> 1 Unnatural<br><input type="checkbox"/> 2 Natural  |  | <input type="checkbox"/> 1 Unnatural<br><input type="checkbox"/> 2 Natural  |  |
|     | <i>Please note: The deceased individuals must have been members of the household at the time of their deaths.</i> |   |  |   |  |   |  |   |  |   |  |

## SECTION 10: INTERVIEWER TO ANSWER QUESTIONS BELOW

|      |  |  |
|------|--|--|
| 10.1 | <b>In what language was the main part of the interview conducted?</b><br>01 = Afrikaans<br>02 = English<br>03 = Isindebele/South ndebele/North ndebele<br>04 = Isixhosa/Xhosa<br>05 = Isizulu/Zulu<br>06 = Sepedi/Northern sotho<br>07 = Sesotho/Southern sotho/Sotho<br>08 = Setswana/Tswana<br>09 = Siswati/Swazi<br>10 = Tshivenda/Venda<br>11 = Xitsonga/Tsonga<br>12 = Other, (specify) | <input type="checkbox"/> <input type="checkbox"/><br><input type="checkbox"/>          |
| 10.2 | <b>What type of living quarters are these?</b><br>1 = Private dwelling<br>2 = Workers' hostel  | <input type="checkbox"/> 1<br><input type="checkbox"/> 2                               |
| 10.3 | <b>Did this household live in this dwelling during 2013?</b><br>1 = Yes<br>2 = No<br>3 = Do not know   | <input type="checkbox"/> 1<br><input type="checkbox"/> 2<br><input type="checkbox"/> 3 |

|                              |                      |                      |                      |                      |
|------------------------------|----------------------|----------------------|----------------------|----------------------|
| <b>Thank the respondent!</b> |                      |                      |                      |                      |
| h h m m                      |                      |                      |                      |                      |
| <b>INTERVIEW END TIME</b>    | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

**GENERAL COMMENTS**

| Question Number | Person Number | General comments |
|-----------------|---------------|------------------|
|                 |               |                  |
|                 |               |                  |
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|                 |               |                  |
|                 |               |                  |



Subject: Re: Permission to use data from the General Household Survey (2014)

From: isabelsc@statssa.gov.za  
To: MathandoL@statssa.gov.za  
Cc: Info@statssa.gov.za; mandyv@h@yahoo.com  
Date: Thursday, March 1, 2018, 10:01:37 AM GMT+2

Dear Mandy

You are given permission to use the GHS 2014 data as it is already in the public domain. It is available to download from the Datafirst website of UCT.

Regards  
Isabelle

Sent from my iPad

On 01 Mar 2018, at 09:53, Mathando Lukoto <Mathandol@statssa.gov.za> wrote:

Good day Isabel.

Kindly assist with the request below.

Regards.

>>> Mandy Van harmelen <mandyv@h@yahoo.com> 2018/02/28 2:57 PM >>>

Good afternoon

My name is Mandy and I am currently a Clinical Psychology Masters student at the University of KwaZulu-Natal in Pietermaritzburg. Part of my training is to complete a thesis this year. Please can I receive permission to use your original data from your General Household Survey, collected between January 2014 and December 2014? I will ensure that Statistics South Africa is acknowledged as the primary source of this data.

Please let me know if you require any further information from me,

Many thanks and kind regards

Mandy van Harmelen  
076 124 6904



ISibalo House, Koch Street, Salvokop, Pretoria



29 October - 4 November 2017  
Cape Town International Convention Centre (CTICC)

Subject: Case LoggedCAS-07884-S6K4C7

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From: CRMResponse@statssa.gov.za

To: mandyvh@yahoo.com

Date: Thursday, March 1, 2018, 10:01:56 AM GMT+2

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Dear Customer,

We have opened a case in response to your request My name is Mandy and I am currently a Clinical Psychology Masters student at the University of KwaZulu-Natal in Pietermaritzburg. Part of my training is to complete a thesis this year. Please can I re and assigned it to Mathando Lukoto. Should you need to follow up on this case, please contact us on 012 310 8600 with this reference CAS-07884-S6K4C7. We will do our best to resolve this case as soon as possible.

Statistics South Africa

</



ISibalo House, Koch Street, Salvokop, Pretoria



29 October - 4 November 2017  
Cape Town International Convention Centre (CTICC)

24 October 2018

**Ms Mandy Van Harmelen (218056504)**  
**School of Applied Human Sciences – Psychology**  
**Pietermaritzburg Campus**

Dear Ms Van Harmelen,

**Protocol reference number: HSS/1494/018M**

**New project title:** The influence of a household's income, access to food and education level on the prevalence of diabetes in adults: A secondary analysis on data from the General Household Survey of 2014

**Approval Notification – Amendment Application**

This letter serves to notify you that your application and request for an amendment received on 16 October 2018 has now been approved as follows:

- Change in Title
- Change in Objectives
- Change in Data Analysis

Any alterations to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form; Title of the Project, Location of the Study must be reviewed and approved through an amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

**PLEASE NOTE:** Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for period of 3 years from the date of original issue. Thereafter Recertification must be applied for on an annual basis.

Best wishes for the successful completion of your research protocol.

Yours faithfully



.....  
**Dr Shamila Naidoo (Deputy Chair)**

/ms

cc Supervisor: Ms Kershia Sunjeevan  
cc Academic Leader Research: Dr Maud Mthembu  
cc School Administrator: Ms Priya Konan

---

**Humanities & Social Sciences Research Ethics Committee**  
**Professor Shenuka Singh (Chair)/Dr Shamila Naidoo (Deputy Chair)**  
**Westville Campus, Govan Mbeki Building**

Postal Address: Private Bag X54001, Durban 4000

Telephone: +27 (0) 31 260 3587/8350/4557 Facsimile: +27 (0) 31 260 4609 Email: [ximbap@ukzn.ac.za](mailto:ximbap@ukzn.ac.za) / [snymanm@ukzn.ac.za](mailto:snymanm@ukzn.ac.za) / [mohunp@ukzn.ac.za](mailto:mohunp@ukzn.ac.za)

Website: [www.ukzn.ac.za](http://www.ukzn.ac.za)



**Appendix E:** Methodology: sequence of events

