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Health:
Analysis of the NIDS Wave 1 and 2 Datasets

by

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1. Introduction

This report examines the health data from the second wave of the NIDS with a view to assessing the strengths and weakness of the data and highlighting the potential of the NIDS panel for the analysis of the relationship between health status and socio-economic status in South Africa. We begin by investigating associations between health and changes in the panel composition. We then examine data quality both within and between the waves, focussing on item non-response within waves and data consistency between waves. The final section examines changes in nutritional status between the waves of the panel. The analyses in this report are descriptive, preliminary and very much intended to illustrate the potential of the NIDS panel for furthering our understanding of the links between health and socio-economic status.

2. Health and changes in panel composition

In contrast to repeated cross-sectional studies such as the Demographic and Health Surveys and the General Household Surveys, the NIDS aims to follow the same sample of individuals over time allowing us to explore the dynamics between health status and socio-economic status. The panel sample is not, however, completely static. Individuals are lost to the panel through death and attrition and all children born to female sample members are added to the panel. This section examines the association between health and these changes in panel composition.

2.1. Mortality

We begin our analysis of the health data in the NIDS panel with a focus on mortality between the first and second wave. Table 1 presents the status at Wave 2 of the 28247 continuing sample members from Wave 1. Three quarters were successfully re-interviewed, 3.15% had died, 5.26% were not successfully re-interviewed but were established to be alive through the household roster and 16.7%'s vital status is unknown, mostly due to the entire household not being located or refusing to participate in Wave 2. The weighted mortality rate is 2.9% and rises to 3.6% if we exclude those whose vital status is unknown.

The top panel of Figure 1 shows the age distribution of the full Wave 1 sample and of the 889 individuals who died since the Wave 1 interview. As expected, deaths are disproportionately concentrated among very young children and older people. The bottom panel of Figure 1 presents the log odds of dying by age at Wave 1. In most settings, the log odds of dying increase linearly with age in adulthood (Deaton 2003). The NIDS data show the typical decrease in mortality after early childhood and then roughly linear increases from age 15 onwards but also exhibit a distinct hump between the ages of 20 and 40. This is consistent with other South African datasets that show excess mortality in early to middle adulthood associated with the AIDS pandemic.

A simple comparison of mortality rates across sex and population groups is uninformative as there are marked differences in the age profile of NIDS respondents by sex and population group. Table 2 presents selected coefficients from OLS regressions of an indicator that the respondent is deceased at Wave 2 on a range of demographic, socio-economic and health variables. A complete set of indicators for age was included in each regression. Robust standard errors that allow for correlation in the unobservables for individuals drawn from the same primary sampling unit are presented below the regression coefficients. Regressions are weighted using the Wave 1 post-stratification weights. The first regression shows that females are about one percentage point less likely to die between the waves of NIDS once we control for age. Age-adjusted mortality rates vary significantly by population group with Africans having the highest mortality rate, followed by coloureds, then white and then Indian/Asians.

The relationship between self-reported health status and subsequent mortality in other countries is well established (de Salvo et al 2005, Jylha 2009). NIDS is the first dataset that allows us to investigate whether self-reported health is predictive of mortality in South Africa. In Wave 1 respondents were asked to describe their health over the past 30 days as either excellent, very good, good, fair or poor. The second regression includes indicators for the last four categories with "excellent" as the reference category. Self-reported health status is predictive of two-year mortality with individuals reporting good, fair and poor health being 1.0, 3.3 and 6.6. percentage points more likely to die than those individuals reporting excellent health respectively. In the third regression we add controls for household socio-economic status at Wave 1, namely household size, an indicator that the household is in an urban area, a count of assets and per capita income quintiles. Assets appear to be protective, with each additional asset associated with a 0.2 percentage point decrease in the probability of dying by Wave 2. Including the controls for socio-economic status has very little effect on the coefficients for the various categories of self-reported health. In the final regression in Table 2, we interacted the categories of self-reported health with an indicator that the respondent is female. The coefficient for the relationship between self-reported health and mortality for females is found by adding the main effect and interaction effect together. For example, a female who reports poor health is 0.044 (0.097-0.053) percentage points more likely to die than a female who reports excellent health while a male who reports poor health is 0.097 percentage points more likely to die than a male in excellent health. The interaction terms for fair and poor health are significant and negative indicating that self-reported health status is more closely predictive of mortality for men than women. Tests of the joint significance of the coefficients, show that women who report poor health (F-test 6.95, p-value=0.0087) are significantly more likely to die than those who report excellent health but reporting fair health is not associated with subsequent mortality for women. All the regressions in Table 2 exclude those whose vital status is unknown. Including these individuals results in very slight decreases in the coefficients on self-reported health status but the substantive conclusions remain.

In addition to a question about general health status, NIDS asked detailed information about chronic conditions and various health-related behaviours. The relationship between chronic conditions and smoking and mortality is investigated in Table 3. Individuals who report having been diagnosed with at least one of the following chronic conditions - Diabetes, Tuberculosis, High blood pressure, Stroke, Asthma, Heart condition, Cancer – have a 3.2 percentage point higher risk of mortality (i.e. roughly double the odds of dying). In the second regression we include an indicator that the respondent reported more than one chronic condition. Individuals with two or more chronic conditions have a 6 percentage point increased risk of mortality by Wave 2. It is interesting that reports of chronic conditions are predictive of mortality given both the low levels of consistency of these reports across waves and the evidence that knowledge of existing conditions is poor (see Section 6).

The regressions in columns 3 to 5 of Table 3 analyse the association between smoking and subsequent mortality. Individuals who reported smoking at Wave 1 are 2.1 percentage points more likely to be deceased at Wave 2. Ex-smokers do not appear to have significantly higher mortality risk than people who have never smoked. The final regression includes a variable for the length of time that the individual has smoked. For individuals who have ever smoked, the average duration of smoking is 22 years. A current smoker who has smoked for 22 years has a 2.3 percentage point higher risk of mortality than someone who has never smoked. An ex-smoker who smoked for 22 years has a 0.1 percentage point higher risk. Interestingly, we find no association between alcohol consumption and mortality.

2.2. Attrition and health

In this section, we briefly examine the relationship between an individual's health status in Wave 1 and attrition. Table 4 presents selected coefficients from regressions of self-reported health status (where 1=Excellent and 5=Poor) on a set of indicators for an individual's status at Wave 2 with individuals who were successfully re-interviewed forming the reference category. Attrition varies significantly with age, sex and population group and self-reported health status is strongly associated with these demographic variables. We therefore include a full set of indicators for age and controls for sex and population group in the regressions. In line with the results of the previous section, we see that individuals who were deceased by Wave 2 reported significantly worse health than other Wave 1 sample members. Individuals who are known to be alive, through the household roster in Wave 2, but were not interviewed do not appear to have systematically different health status to those that were successfully re-interviewed. Individuals whose status at Wave 2 is unknown, mostly due to the entire household refusing or not being located, reported better health in Wave 1 (although the coefficient is only significant at the 10% level). In the second regression we introduce controls for urban location, household size, household income and assets. Including these household level variables has very little impact of the coefficients of the Wave 2 status variables.

With respect to health status, attrition does not seem to be a concern for individuals whose households were successfully re-interviewed. There is some evidence to suggest that individuals in households that were missed altogether in Wave 2, were on average healthier in Wave 1.

2.3. Births

While mortality and attrition reduce the sample, all children born to female continuing sample members are added to the panel study. From the Wave 2 household roster, we can identify 894 children who were born between the first two waves to women in the Wave 1 sample. Of these children, 97% were interviewed in Wave 2 and have a mother who was interviewed in Wave 1 enabling us to look at association between child outcomes and the mother's characteristics pre birth.

Figure 2 shows the distribution of the age of the mother at the child's birth. There are a handful of observations were the mother's age is implausibly large but the majority of births (three-quarters) are to women aged 30 and under. Just under a quarter (23%) of children were born to teen mothers. This is consistent with estimates of teen childbearing from other national datasets (Ardington et al. 2011)

As these mother-child pairs are identified off the household roster, these children all co-reside with their mothers but the vast majority (74%) of these children do not live with their fathers. These fathers are mostly absent rather than deceased as rates of paternal orphanhood at these young ages are very low. Rates of paternal absence vary dramatically by the age of the mother at birth and by urban/rural location. Almost all (98%) of children born to teen mothers do not live with their father. Two-thirds of urban children have absent fathers as opposed to 80% of rural children.

Branson et al. (2011) find that teen mothers in metropolitan Cape Town were significantly more likely to have children who were underweight at birth and stunted than older mothers. Table 6 investigates the determinants of low birth weight among children born between waves to women in the Wave 1 sample. Birth weight data is available for 78% of these children. Following WHO guidelines we classify the 10% of children with birth weights below 2.5 kilograms as low birth weight (WHO 1992). All regressions in Table 6 include a full set of indicators for the child's year of birth, an indicator that the child is female and indicators for the child's population group. Robust standard errors that allow for correlation in the unobservables for children whose mothers are drawn from the same primary sampling unit are presented below the regression coefficients. Regressions are weighted using the Wave 2 post-stratification weights. In contrast to the findings of Branson et al. (2010), we find a positive association between low birth weight and mother's age at birth – i.e. children born to older mothers are more likely to be underweight at birth. In the second regression in Table 6 the variable for mother's age at birth is replaced by an indicator that the mother was a teenager at the child's birth. Children born to teen mothers are 11.5 percentage points less likely to have low birth weight. The third regression introduces controls for the mother's socio-economic status in Wave 1, prior to the birth. Including these controls, has no impact on the coefficient for mother's age at birth. Children born to urban mothers are at significantly higher risk of being underweight at birth. Higher levels of maternal education also appear to be associated with low birth weight while assets appear to be protective. Relative to children born to mothers whose household is in the poorest income quintile, those with mothers in the fourth quintile are significantly more likely to be low birth weight. The socio-economic variables are likely highly correlated. We therefore ran separate regressions for each socio-economic variable and found that the signs on the coefficients did not differ from the multivariate coefficients. The relationship between socio-economic status and low birth weight appear complex and warrants further investigation.

In the final regression in Table 6, we include indicators that the mother reported drinking alcohol and smoking at Wave 1. While smoking does not appear to be associated with low birth weight, children born to mothers who reported drinking alcohol at Wave 1 are 17.3 percentage points more likely to have low birth weight. Alcohol use is likely to be associated with socio-economic status and demographic factors such as the mother's population group and age at the child's birth. Interestingly, we find that the bivariate association between the mother drinking and low birth weight is only slightly stronger than when we control for socio-economic status and demographic factors.

3. Data quality within and between waves

3.1. Item non-response within waves

Table A1 reports and compares the response rates for each of the questions that were asked in the health section of both the adult and child questionnaires for the first and second wave of NIDS. Response rates were fairly similar across waves as well as between the child and adult questionnaires. The response rate for most questions was far beyond 90% except in cases where respondents were asked to recall some or other event, for example the year in which they were first diagnosed with a chronic illness such as Diabetes or had their eyesight tested, the age at which they started smoking, or how much they paid for medication in their last medical consultation. Although these types of questions were answered poorly in both waves, the rates in wave 2 were found to be slightly lower. This result is in line with recall error/bias and is to be expected, especially when the earliest date of diagnosis dates back as far as 1940.

3.2. Consistency between waves

We begin our assessment of data consistency between the first and second wave with two measures that should be identical across waves – a child's birth weight and adult height. The top panel of Figure 3 plots the Wave 1 birth weight against the Wave 2 birth weight. Rounding of birth weights to the nearest kilogram or half kilogram is a clear issue in Wave 2 that is not evident in Wave 1. The scatter plot suggests a considerable amount of measurement error although it is difficult to get a sense of the density of observations around the 45 degree line. The second panel of Figure 3 shows the distribution of the difference in birth weight between the two waves. Around one-fifth (21%) of observations are identical and just over half (52%) are within 300g of each other.

We restrict the sample to individuals who were over the age of 25 at Wave 1 as there is evidence from other developing country settings that individuals may not have attained their maximum height by young adulthood (Perkins et al. 2011). The top panel of Figure 4 plots Wave 1 height against Wave 2 height. As with birth weight, there is clear evidence of measurement error but there is greater density around the 45 degree line. This is confirmed by the histogram plotting the distribution of differences in height between the two waves in the lower panel of Figure 4. Around 12% of heights are more than 10cm apart. Interestingly for both Wave 1 and Wave 2, the scatter plot suggests that heights at the upper extreme were due to measurement error rather than unusually tall individuals in the sample.

Within the health module there are several questions where it is possible that the answers are logically inconsistent across waves. For example, an individual who reports having been diagnosed with Diabetes in Wave 1 should not report never having been diagnosed with Diabetes in Wave 2. Table 7 presents the number of observations where the error was possible (e.g. individuals diagnosed with Diabetes in Wave 1) and then the percentage of those observations where the error was present (e.g. individuals never diagnosed with Diabetes in Wave 2) for a range of variables. Of the 435 individuals who reporting being diagnosed with Diabetes in Wave 1, half said they had never been diagnosed with Diabetes in Wave 2. There appears to considerable noise for all the self-reported health conditions with error rates ranging from 45% to 72%. In addition to the lack of consistency of reports between waves there is evidence within waves that people's knowledge about chronic health conditions is poor. Ardington and Case (2009) found that among those who were classified as hypertense based on their blood pressure measurements, only 49% of women and 26% of men reported that they had ever been told by a health professional that they had high blood pressure.

Consistency error rates for health related behaviours such as smoking and drinking are lower. Of those who reported never having smoked at Wave 2, 11% reporting smoking or having smoked at Wave 1. Inconsistent reports for alcohol use were almost double at 19%. In the previous section, we saw that item non-response is high for questions that require respondents to recall when an event occurred. Consistency problems are also apparent in the question about when an individual last consulted someone about their health with 64% of individuals giving inconsistent answers across waves. Error rates for birth location (hospital, clinic or home) and having a birth certificate for children were fairly low at 5.9% and 1% respectively.

Table 8 presents correlations between variables which are plausibly different between waves but where, on average, we expect the correlation between waves to be high. For adults aged 25 and older we show the correlation between waves for BMI, weight, the score on the CESD-10 depression index, self-reported health status, systolic blood pressure and diastolic blood pressure. For children we show correlations for the standardized z-scores for height-for-age, weight-for-age, weight-for-height and BMI-for-age. The correlations range from 0.12 to 0.73. Without a benchmark, it is difficult to assess whether these correlations are reasonable.

4. Changes in nutritional status between waves

4.1. Obesity amongst adul*ts*

Obesity is a serious health concern in South Africa, particularly among women. In the first wave of NIDS, 33% of women and 11% of men aged 15 and older were classified as obese (Ardington and Case 2009). Obesity increases sharply with age in young adulthood with women having a steeper age-BMI profile than men. Ardington and Case (2009) compared data from the first wave of NIDS to the 1998 Demographic and Health Survey (DHS) and found the age-BMI profile had shifted upwards over time although the shape was very similar in both periods. The NIDS panel offers the opportunity to investigate whether the age-BMI profile has continued to shift upwards and importantly to analyse changes not only in the aggregate but also at the individual level. We can use the rich socio-economic data collected by NIDS to examine the determinants of both the levels of obesity and changes in obesity.

Table 9 presents transitions in obesity status between the two waves of the panel separately for men and women aged 10 to 50 at Wave 1. Individuals aged 20 and older are defined as obese if their Body Mass Index (BMI) is greater than 30. Individuals aged 10 to 19 are classified as obese if their BMI-for-age is more than two standard deviations above the median of the WHO reference distribution (see Ardington and Case (2009) for more details). We focus on individuals aged 10 to 50 as the age-BMI profile is steepest in the late teens and early adulthood and relatively flat after the age of 40. The overall obesity rate in this sample rose between waves from 6.4% to 8.7% for men and from 27.6% 32% for women. There are considerable transitions into and out of obesity with only 3% of men and 21% of women classified as obese in both waves. On a relative basis, men exhibit greater movements into and out of obesity. For example, over half (54%) of the men who were classified as obese in Wave 1 are no longer obese at Wave 2 and of those men who are classified as obese at Wave 2, two thirds were not obese at Wave 1. While some of these transitions are likely the result of measurement error, those who transition out of obesity are on average younger suggesting that some of the change is due to increasing height. For example, 62% of the men who transition out of obesity are younger than 25 years of age and there is a significant increase in average height for this group between waves.

Ardington and Case (2009) show that the age-BMI profile is sharply increasing in young adulthood, particularly for women. On average, we would therefore expect individuals' BMIs to increase between waves as they age and that the increases would be greatest for young women. Figure 5 shows the average change in BMI by age at Wave 1 separately for men and women. The graph lies above zero everywhere indicating that for all age-groups there has been an increase in BMI. For women, increases in BMI are very large at younger ages but by the age of 20, increases in male BMI are larger.

Figure 6 presents BMI by sex and age at interview for individuals aged 10 to 50 at Wave 1. This graph allows us to compare the average BMI of 20 year olds in Wave 1 with 20 year olds in Wave 2. If the age-BMI profile is static we would expect the lines for Wave 1 and Wave 2 to lie on top of each other. It is clear for both men and women that the age-BMI profile has shifted upwards in the two years between waves. Twenty year olds in 2010 had, on average, higher BMIs than 20 year olds in 2008. For women, the upward shift is most marked between the ages of 12 and 20.

From a health perspective, we are really interested in changes in BMI at the upper extreme. Figure 7 shows the proportion of individuals aged 10 to 50 at Wave 1 who are classified as obese by their age at the Wave 1 and Wave 2 interviews. Similar to the age-BMI profile, the age-obesity profile has also shifted upwards for both men and women. Figure 8 shows separately for men and women, the proportion of individuals who became obese between the waves by their age at Wave 1. Not only are levels of obesity higher for women than men at every age so too is the proportion becoming obese at each age. For women, the proportion becoming obese between waves doubles from 6% at age 10 to around 12% at age 20 and then flattens out.

Table 10 investigates the determinants of both the levels of and changes in obesity. Indicators that the individual is classified as obese are regressed on a range of socio-economic variables. All regressions include a full set of indicators for age. The first column presents select coefficients from regressions of obesity status at Wave 1 for women aged 20 and older. In the second column the sample is restricted to those women who were not classified as obese in Wave 1 and an indicator of obesity status in Wave 2 is regressed on the same set of variables as the first regression. For women, levels of obesity are higher in urban areas but changes are significantly lower in urban areas suggesting that the gap between urban and rural areas is closing over time. Both the levels and the changes in obesity between waves are highest for African females followed by coloured females, then Asian/Indian females and then white females. Years of schooling is positively associated with both the level and the change in obesity for women. Assets appear to be positively associated with levels of obesity while per capita income is positively associated with changes in obesity for women. For men, there are no rural-urban and racial differences are not as marked as those for women. Education, assets and household income are positively associated with the level of obesity for men, but increases in obesity are only associated with household income.

4.2. Malnutrition among children

Using the first wave of NIDS, Ardington and Case (2009) report that 17% of children aged 6 months to 14 years were stunted in 2008. Table 11 presents a transition matrix of stunted status in Wave 1 and Wave 2 for children aged 16 and under in Wave 1. Children are classified as stunted if their height-for-age z-score falls two or more standard deviations below the WHO reference population. Around 9% of children were classified as stunted in both waves. A similar number were classified as stunted in Wave 1 and not-stunted in Wave 2. Around 12% of children changed classification from not-stunted to stunted between waves. There appears to be a lot of mobility in stunted status with half the children who were classified as stunted in Wave 1, no longer being classified as stunted in Wave 2.

We investigate the extent to which these changes in stunted status are likely due to measurement error by looking at changes in height-for-age z-scores. Figure 9 presents a scatter plot of the height-for-age standardised z-scores for Wave 1 and Wave 2 for the sample of children whose stunted status changed between waves. While there is definitely some suggestion of measurement error with stunted children in one wave having very high z-scores for height-for-age in another wave, the distribution is concentrated around z-scores close to the cut-off of -2 standard deviations, where individuals are classified as stunted. This suggests that the majority of changes in stunted status are due to plausible changes in the child's height.

Using a cross-sectional dataset collected in 1993, Duflo (2003) found that female eligibility for the state old age pension is associated with improved nutritional outcomes for girls. Ambler (2011) found similar results using the cross-sectional data from the first wave of NIDS. The NIDS panel allows us to investigate whether changes in a child's household pension status are associated with changes in the child's nutritional status. Children were classified as having "got" a pension if they were not living with a pension age-eligible individual in Wave 1 and were living with someone who was age-eligible for the pension in Wave 2. Similarly, a child "lost" the pension if they were living with someone of pension eligible age in the first wave and were not living with such a person at the second wave. Table 12 presents selected coefficients from regression of a child's nutritional status at Wave 2 on their nutritional status at Wave 1 and indicators for whether they "got" or "lost" a pension between the waves. The sample is restricted to households where the oldest person is at least 50 years of age. Each regression includes a full set of indicators for the child's age and a quadratic in the age of the oldest household member in both Wave 1 and Wave 2. Robust standard errors that allow for correlation in the unobservables for individuals drawn from the same primary sampling unit are presented below the regression coefficients. Regressions are weighted using the Wave 2 post-stratification weights.

The first regression shows that controlling for stunted status in Wave 1, children in households that "got" the pension between waves are 9 percentage points less likely to be stunted Wave 2. Children in households that "lost" the pension are 14 percentage points more likely to be stunted in Wave 2. In the second regression we introduce some controls for household socio-economic status. This has little effect on the coefficients for pension gain or loss. The final column presents results from a regression of the height-for-age z-score on the pension status variables. Controlling for their height-for-age in Wave 1, children in households that "got" the pension have 0.3 standard deviations higher height-for-age in Wave 2. Children who "lost" the pension have 0.6 standard deviations lower height-for-age.

5. Conclusions

While there is some evidence of measurement error, overall the NIDS panel appears very promising from a health perspective. The age profile of mortality looks reasonable, including the expected hump for excess mortality in early adulthood due to AIDS. In line with studies in many other settings, self-reported health status is predictive of subsequent mortality. The distribution of the age of mothers at their child's birth is consistent with other national data sets. The majority of changes in nutritional status appear plausible and the age-BMI profiles look similar across waves and are consistent with earlier datasets. This paper has hopefully highlighted the enormous potential of the NIDS panel for the analysis of health in South Africa.

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Figure 1: Age distribution of Wave 1 respondents by Wave 2 vital status

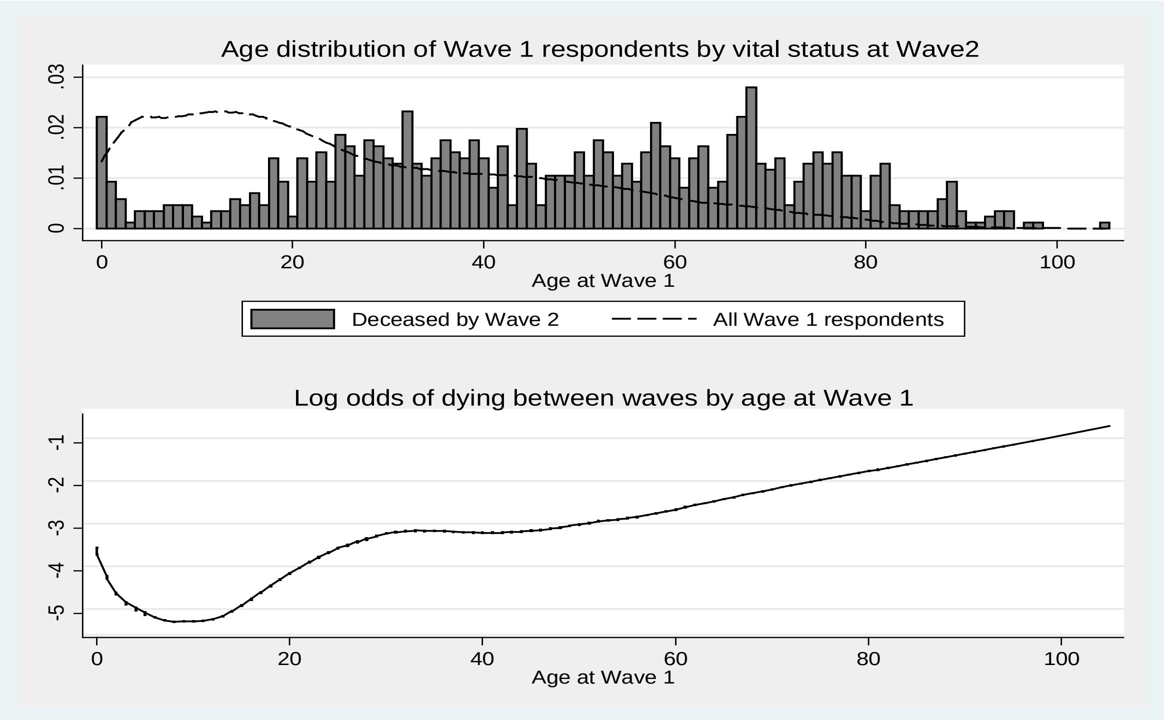


Figure 2: Age of mother at child's birth for children born between Wave 1 and Wave 2

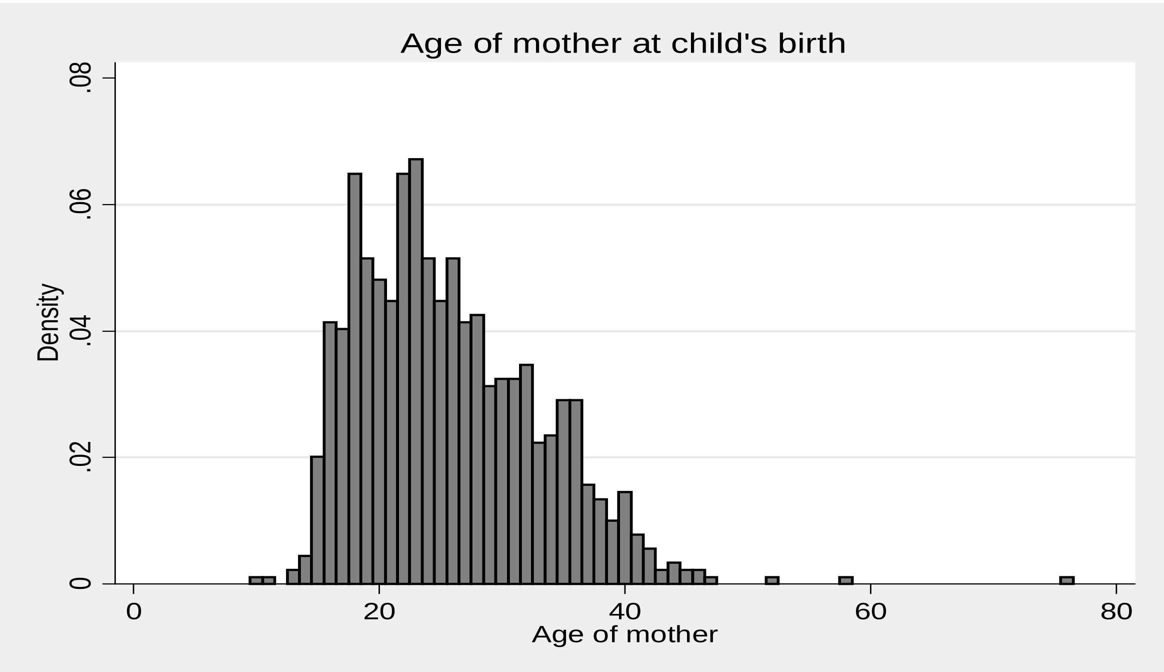
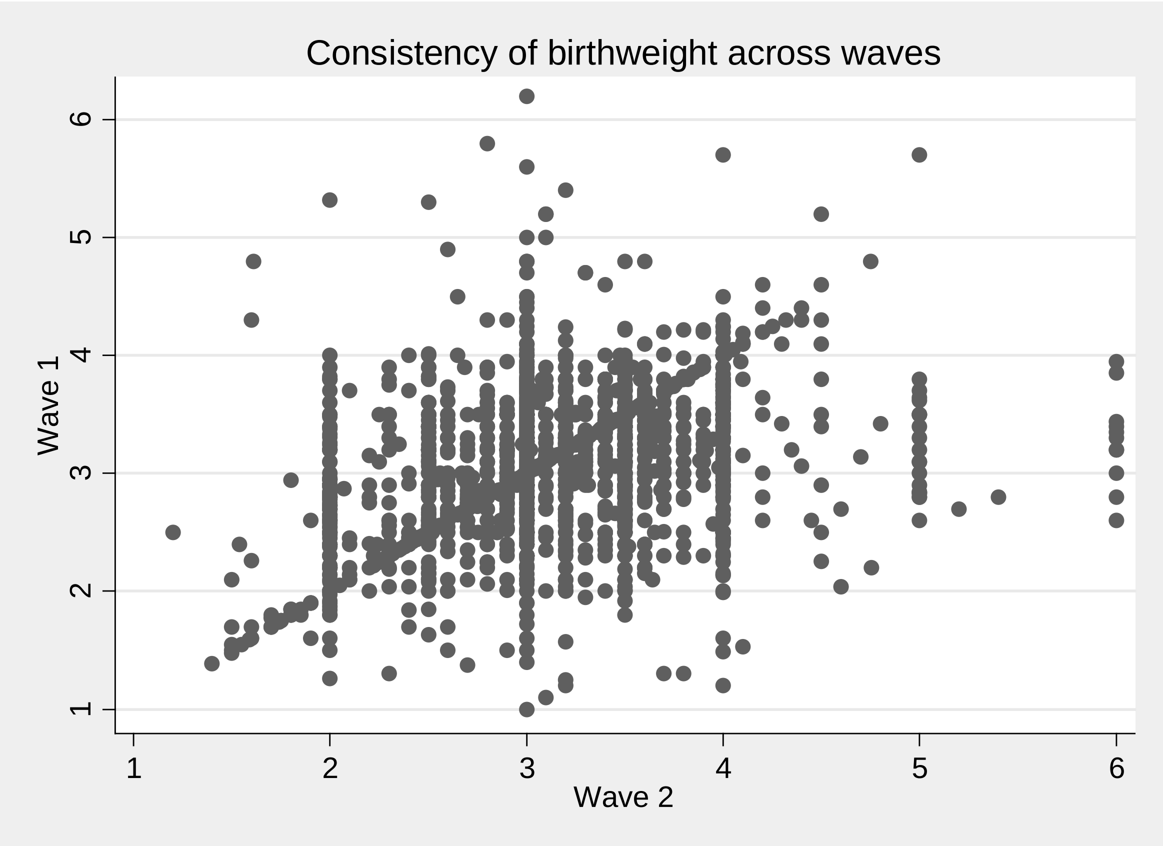


Figure 3: Consistency of birth weight across Wave 1 and Wave 2



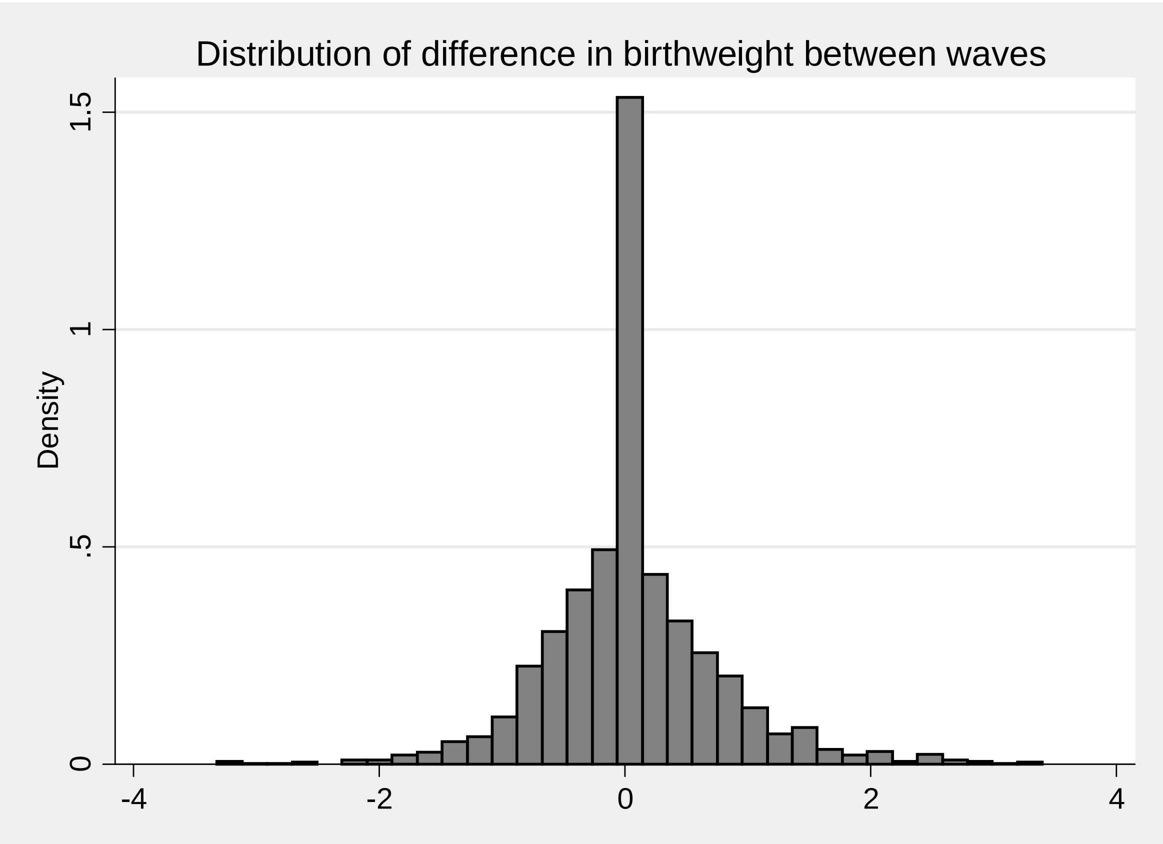
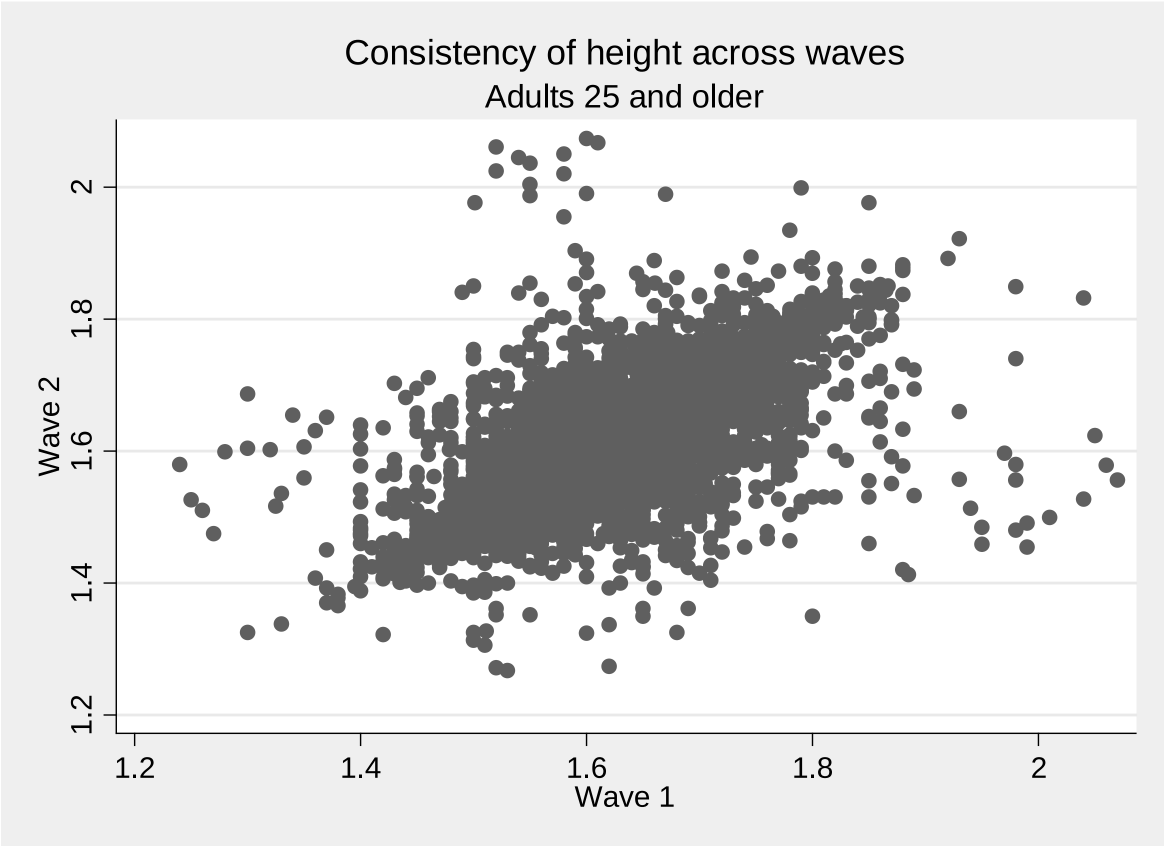


Figure 4: Consistency of adult (25 years and older) height across Wave 1 and Wave 2



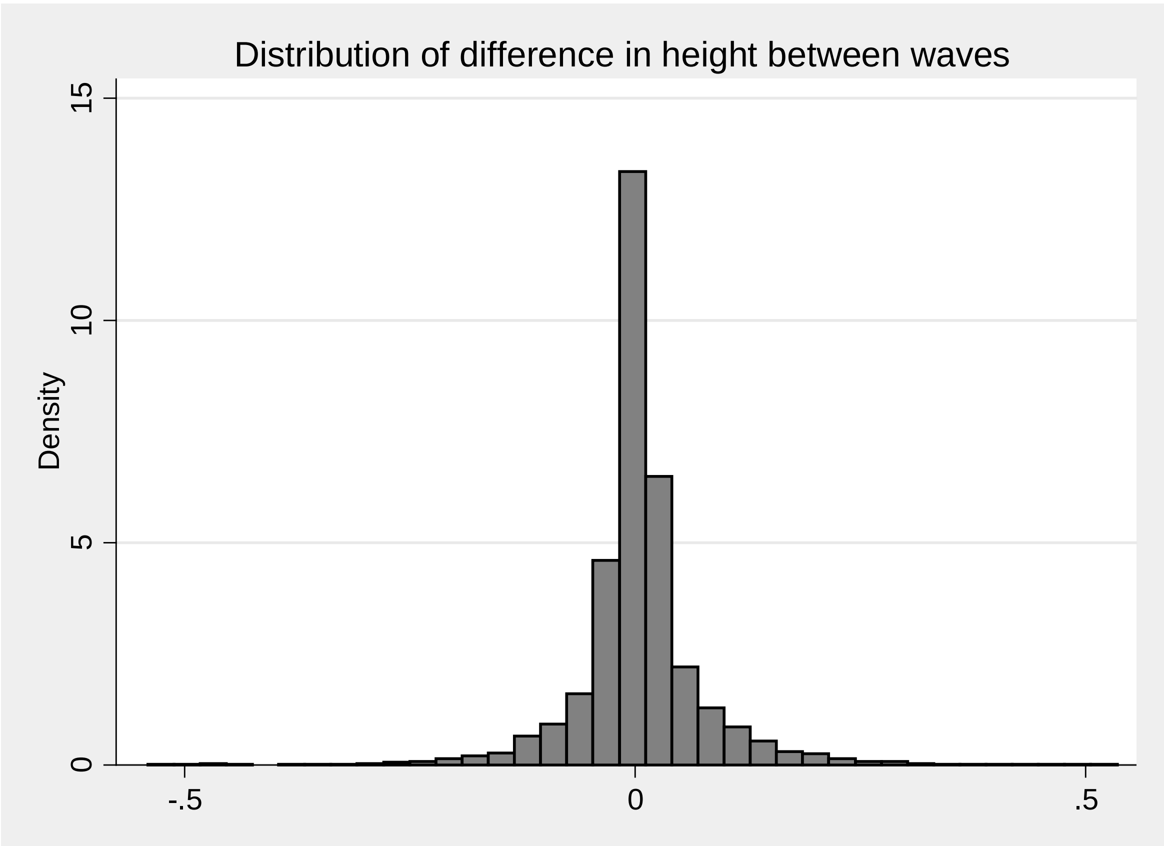


Figure 5: Changes in BMI and obesity by age at interview in Wave 1

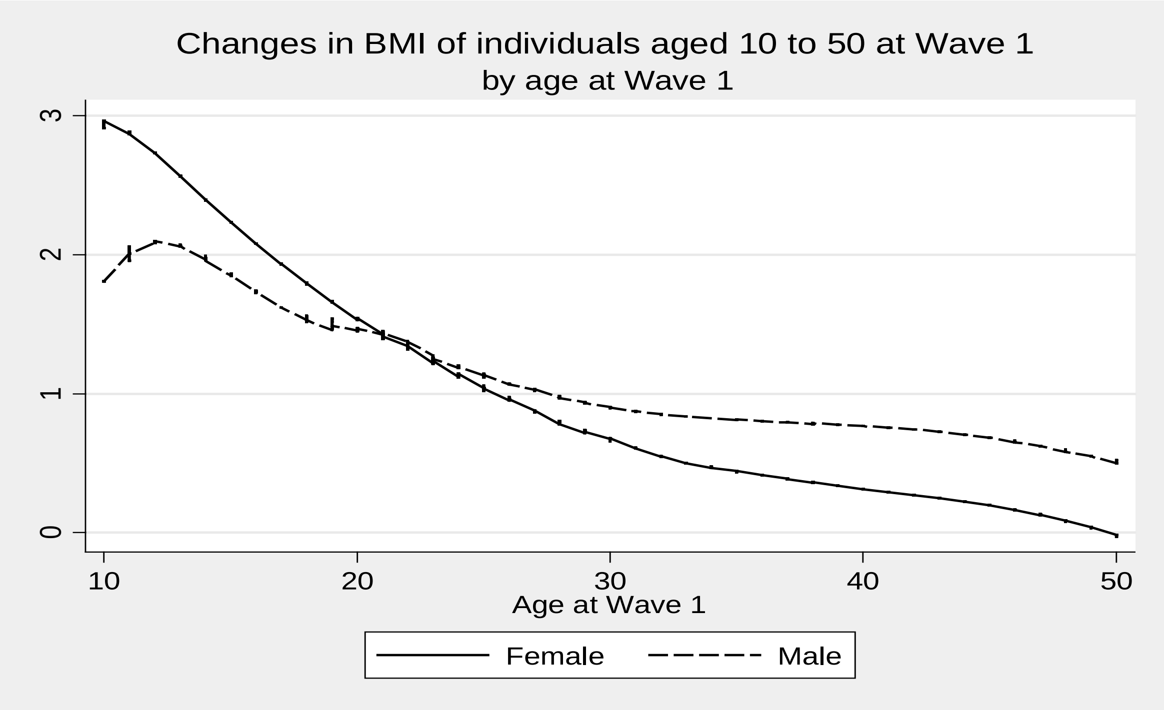


Figure 6: BMI of individuals aged 10 to 50 at Wave 1 by age at interview in Wave 1 and Wave 2

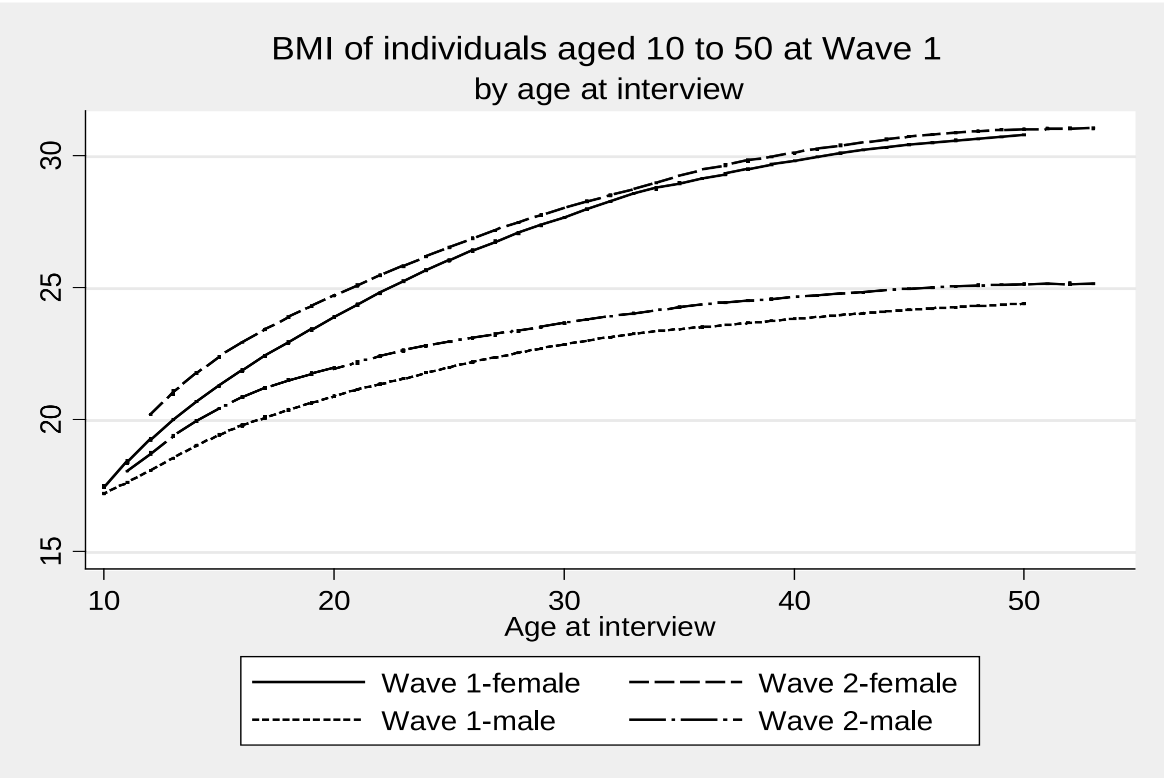


Figure 7: Obesity of individuals aged 10 to 50 at Wave 1 by age at interview in Wave 1 and Wave 2

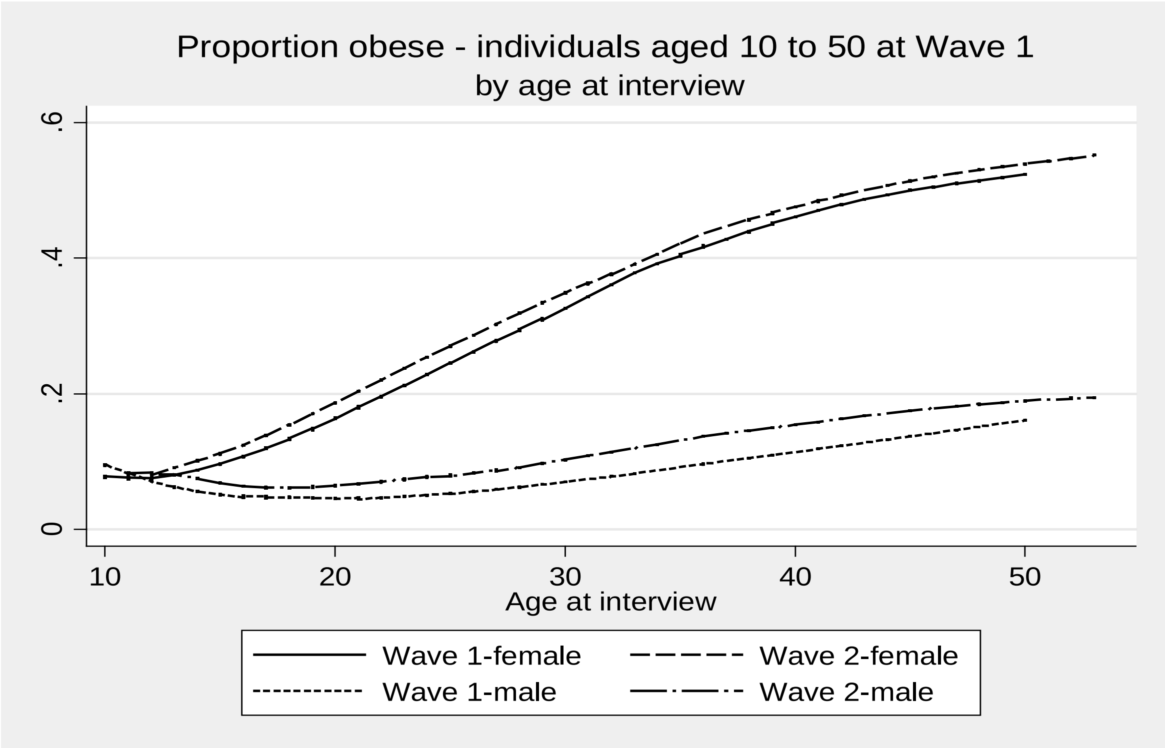


Figure 8: Proportion becoming obese between waves by age at Wave 1 interview

Figure 9: Comparison of height-for-age z-scores for children whose stunted status changed between Wave 1 and Wave 2

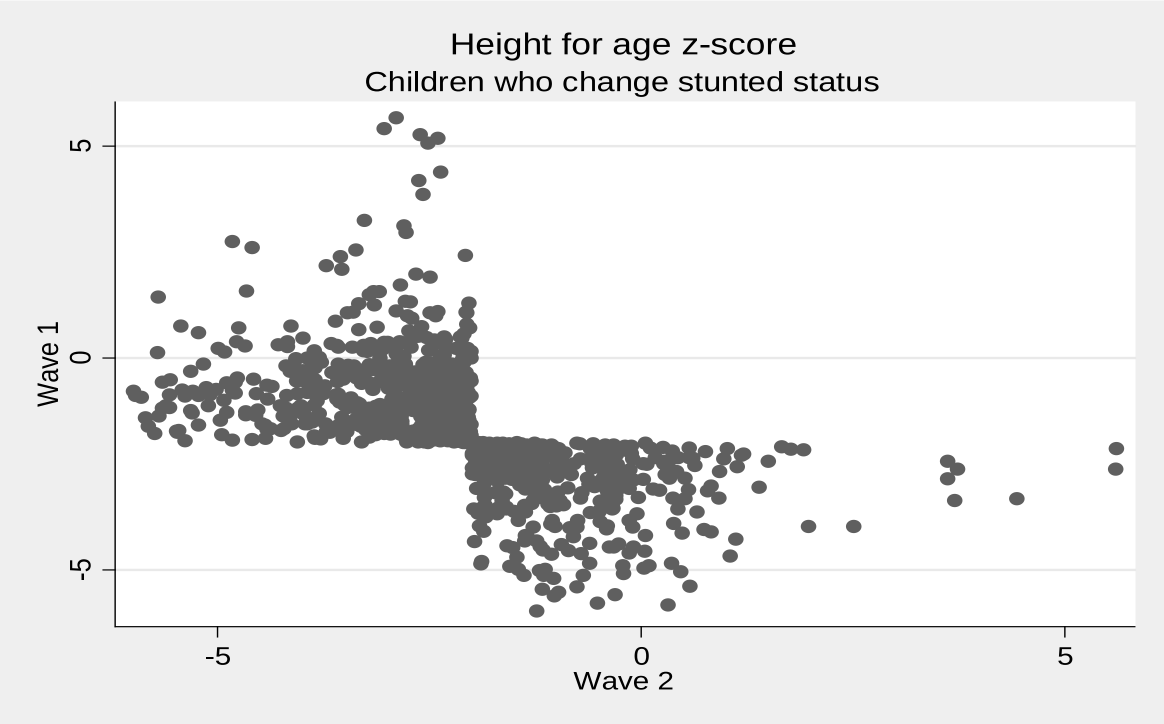


Table 1: Status of Wave 1 permanent sample members at Wave 2

	Status at Wave 1:					
	Interviewed		Not interviewed		Total	
	obs	%	obs	%	obs	%
Status at Wave 2:						
Interviewed	20,283	75.7	871	59.94	21,154	74.89
Dead	846	3.16	43	2.96	889	3.15
Alive	1,314	4.9	172	11.84	1,486	5.26
Unknown	4,351	16.24	367	25.26	4,718	16.7
Total	26,794	100	1,453	100	28,247	100

Table 2: Self-reported health status and mortality

	(1)	(2)	(3)	(4)
Female	-0.012***	-0.015***	-0.015***	-0.006
	(0.004)	(0.004)	(0.004)	(0.005)
Population group (relative to African):				
Coloured	-0.010**	-0.002	0.001	-0.003
	(0.005)	(0.005)	(0.006)	(0.005)
Indian/Asian	-0.030***	-0.021**	-0.013	-0.021**
	(0.009)	(0.011)	(0.011)	(0.010)
White	-0.024**	-0.017	-0.009	-0.018
	(0.010)	(0.012)	(0.014)	(0.012)
Health status (relative to Excellent):				
Very good		0.005	0.005	0.006
		(0.004)	(0.004)	(0.006)
Good		0.010*	0.010*	0.015*
		(0.005)	(0.005)	(0.008)
Fair		0.032***	0.031***	0.064***
		(0.009)	(0.009)	(0.017)
Poor		0.064***	0.063***	0.097***
		(0.013)	(0.013)	(0.020)
Urban			0.003	
			(0.004)	
Household size			0.001	
			(0.001)	
Assets			-0.002***	
			(0.001)	
Household per capita income quintile (relative to poorest):				
Quintile 2			-0.005	
			(0.005)	
Quintile 3			0.003	
			(0.006)	
Quintile 4			0.003	
			(0.007)	
Quintile 5			0.010	
			(0.010)	
Health status interacted with female dummy:				
Very good				-0.001
				(0.007)
Good				-0.010
				(0.008)
Fair				-0.053***
				(0.020)
Poor				-0.054**
				(0.025)
Constant	0.045***	0.033***	0.040***	0.029***
	(0.003)	(0.004)	(0.007)	(0.004)
Observations	23,478	20,980	20,980	20,980
R-squared	0.050	0.055	0.056	0.057

Notes to Table 2: Each regression includes a full set of indicators for age. Robust standard errors that allow for correlation in the unobservables for individuals drawn from the same primary sampling unit are presented below the regression coefficients in parentheses (*** p<0.01, ** p<0.05, * p<0.1). Regressions are weighted using the Wave 1 post-stratification weights.

Table 3: Chronic conditions, smoking and mortality

	(1)	(2)	(3)	(4)	(5)
At least one chronic condition	0.032***	0.024***			
	(0.009)	(0.009)			
More than one chronic condition		0.036**			
		(0.016)			
Currently smokes			0.021**	0.022**	-0.021*
			(0.009)	(0.009)	(0.012)
Ex-smoker				0.006	-0.043**
				(0.013)	(0.019)
Number of years smoked/smoking					0.002***
					(0.001)
	-	-	-	-	-
Female	0.014***	0.014***	0.020***	0.020***	0.019***
	(0.004)	(0.004)	(0.006)	(0.006)	(0.007)
Population group (relative to African):					
Coloured	-0.006	-0.006	-0.011	-0.012	-0.015
	(0.005)	(0.005)	(0.009)	(0.009)	(0.010)
Indian/Asian	-0.017*	-0.018*	-0.016	-0.016	-0.019
	(0.010)	(0.010)	(0.016)	(0.016)	(0.016)
White	-0.010	-0.010	-0.016	-0.017	-0.027
	(0.013)	(0.013)	(0.017)	(0.018)	(0.017)
Urban	0.002	0.002	0.006	0.005	0.005
	(0.004)	(0.004)	(0.006)	(0.006)	(0.006)
Household size	0.001	0.001	0.001	0.001	0.002
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
	-	-	-	-	-
Assets	0.003***	0.003***	0.003***	0.003***	0.003***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Household per capita income quintile (relative to poorest):					
Quintile 2	-0.005	-0.005	-0.013	-0.013	-0.014
	(0.005)	(0.005)	(0.010)	(0.010)	(0.010)
Quintile 3	0.007	0.006	-0.002	-0.002	-0.003
	(0.007)	(0.007)	(0.011)	(0.011)	(0.011)
Quintile 4	0.001	0.001	-0.002	-0.002	-0.003
	(0.007)	(0.007)	(0.012)	(0.012)	(0.012)
Quintile 5	0.010	0.010	-0.004	-0.004	-0.002
	(0.012)	(0.012)	(0.015)	(0.015)	(0.015)
Constant	0.048***	0.048***	0.071***	0.071***	0.069***
	(0.007)	(0.007)	(0.012)	(0.012)	(0.013)
Observations	23,478	23,478	12,900	12,881	12,481
R-squared	0.055	0.056	0.048	0.048	0.053

Notes to Table 3: Each regression includes a full set of indicators for age. Robust standard errors that allow for correlation in the unobservables for individuals drawn from the same primary sampling unit are presented below the regression coefficients in parentheses (*** p<0.01, ** p<0.05, * p<0.1). Regressions are weighted using the Wave 1 post-stratification weights.

Table 4: Attrition and self-reported health status

		(1)	(2)
Wave 2 status (relative to interviewed):			
	Deceased	0.434***	0.424***
		(0.071)	(0.069)
	Alive but not interviewed	0.038	0.045
		(0.068)	(0.070)
	Unknown	-0.064*	-0.051
		(0.034)	(0.033)
Female		0.115***	0.097***
		(0.023)	(0.022)
Population group (relative to African):			
	Coloured	-0.156***	-0.099*
		(0.050)	(0.052)
	Indian/Asian	-0.032	0.180
		(0.128)	(0.112)
	White	-0.378***	-0.131*
		(0.060)	(0.072)
Urban			0.075
			(0.054)
Household size			-0.001
			(0.005)
Household per capita income quintile (relative to poorest):			
	Quintile 2		0.072
			(0.050)
	Quintile 3		0.037
			(0.048)
	Quintile 4		-0.116**
			(0.055)
	Quintile 5		-0.280***
			(0.063)
Assets			-0.010*
			(0.006)
Constant		2.152***	2.217***
		(0.029)	(0.060)
Observations		24,884	24,884
R-squared		0.172	0.183

Notes to Table 4: Each regression includes a full set of indicators for age. Robust standard errors that allow for correlation in the unobservables for individuals drawn from the same primary sampling unit are presented below the regression coefficients in parentheses (*** p<0.01, ** p<0.05, * p<0.1). Regressions are weighted using the Wave 1 post-stratification weights.

Table 5: Children born between waves to women interviewed in Wave 1

	Questionnaire completed by mother in Wave 1			
	Adult	Child	Proxy	Total
Status of child in Wave 2:				
Interviewed	795	32	41	868
Not interviewed	23	0	3	26
Total	818	32	44	894

Table 6: Determinants of low birth weight (<2.5kg) for children born between waves

	(1)	(2)	(3)	(4)
Mother's age at birth	0.005**		0.005*	0.005*
	(0.003)		(0.003)	(0.003)
Mother was teenager at birth		-0.115**		
		(0.053)		
Mother drinks alcohol (wave 1)				0.173**
				(0.082)
Mother smokes (wave 1)				0.010
				(0.122)
Female	0.034	0.027	0.010	0.011
	(0.043)	(0.042)	(0.047)	(0.046)
Population group (relative to African):				
Coloured	-0.073	-0.079	-0.170*	-0.196**
	(0.062)	(0.061)	(0.097)	(0.098)
Indian/Asian	-0.142***	-0.181***	-0.310***	-0.297**
	(0.036)	(0.048)	(0.114)	(0.120)
White	-0.153***	-0.147***	-0.186*	-0.224*
	(0.045)	(0.045)	(0.098)	(0.126)
Mother characteristics at wave 1:				
Urban			0.134**	0.110**
			(0.059)	(0.054)
Assets			-0.018**	-0.019**
			(0.008)	(0.008)
Education			0.018*	0.019**
			(0.010)	(0.009)
HH per capita income quintile 2			0.055	0.038
			(0.062)	(0.050)
HH per capita income quintile 3			0.009	0.010
			(0.064)	(0.062)
HH per capita income quintile 4			0.270**	0.265**
			(0.117)	(0.114)
HH per capita income quintile 5			0.057	0.080
			(0.108)	(0.103)
Constant	0.059	0.218***	-0.141	-0.145
	(0.058)	(0.069)	(0.110)	(0.102)
Observations	675	675	585	585
R-squared	0.034	0.040	0.139	0.165

Notes to Table 6: All regressions include a full set of indicators for the child's year of birth. Robust standard errors that allow for correlation in the unobservables for children whose mother are drawn from the same primary sampling unit are presented below the regression coefficients in parentheses (*** $p<0.01$, ** $p<0.05$, * $p<0.1$). Regressions are weighted using the Wave 2 post-stratification weights.

Table 7: Logical consistency errors in the health module between Wave 1 and Wave 2

	Number of observations where error is possible	Proportion of observations with error	Description of error
Diabetes	435	0.497	Reports having been diagnosed with diabetes in Wave 1 and never having been diagnosed with diabetes in Wave 2
TB	474	0.660	Reports having been diagnosed with TB in Wave 1 and never having been diagnosed with TB in Wave 2
High blood pressure	1849	0.449	Reports having been diagnosed with high blood pressure in Wave 1 and never having been diagnosed with high blood pressure in Wave 2
Stroke	104	0.692	Reports having been diagnosed with a stroke in Wave 1 and never having been diagnosed with a stroke in Wave 2
Asthma	399	0.609	Reports having been diagnosed with asthma in Wave 1 and never having been diagnosed with asthma in Wave 2
Heart condition	339	0.723	Reports having been diagnosed with a heart condition in Wave 1 and never having been diagnosed with a heart condition in Wave 2
Cancer	51	0.627	Reports having been diagnosed with cancer in Wave 1 and never having been diagnosed with cancer in Wave 2
Alcohol	7768	0.191	Reports never having drunk alcohol in Wave 2 and drinking alcohol in Wave 1
Smoking	8936	0.108	Reports never having smoked in Wave 2 and smoking in Wave 1
Health consultation	2318	0.641	Reports last consulting someone about their health more than 5 years ago in Wave 2 but less than 2 years ago in Wave 1
Birth location	6480	0.059	Reports a different location (hospital, clinic or home) of birth in Wave 1 and Wave 2
Birth certificate	6119	0.008	Reports that they do not have a birth certificate in Wave 2 and that they did have a birth certificate in Wave 1

Table 8: Correlation between selected health variables in Wave 1 and Wave 2

	Correlation between waves	Observations
Adults aged 25 and older:		
BMI	0.7064	5947
Weight	0.7231	6189
Depression score	0.1184	7513
Self-reported health status	0.3125	7862
Systolic blood pressure	0.4711	6046
Diastolic blood pressure	0.3773	6013
Children		
Height-for-age z-score	0.3646	5073
Weight-for-age z-score	0.4048	1940
Weight-for-height z-score	0.1735	154
BMI-for-age z-score	0.3516	4761

Table 9: Obesity status by wave of men and women aged 10 to 50 at Wave 1

	Men aged 10 to 50			Women aged 10 to 50		
	Wave 2 status:			Wave 2 status:		
	Not-obese	Obese	Total	Not-obese	Obese	Total
Wave 1 status:						
Not-obese	2,973	196	3,169	3,087	568	3,655
	87.83	5.79	93.62	61.18	11.26	72.43
Obese	117	99	216	344	1,047	1,391
	3.46	2.92	6.38	6.82	20.75	27.57
Total	3,090	295	3,385	3,431	1,615	5,046
	91.29	8.71	100	67.99	32.01	100

Table 10: Determinants of obesity levels and changes in obesity

	Women aged 20 and older	Women aged 20 and older who were not obese at wave 1	Men aged 20 and older	Men aged 20 and older who were not obese at Wave 1
Dependent variable	Obese at wave 1	Obese at Wave 2	Obese at wave 1	Obese at Wave 2
	(1)	(2)	(3)	(4)
Urban	0.056***	-0.044**	0.012	-0.017
	(0.018)	(0.020)	(0.013)	(0.014)
Population group (relative to African):				
Coloured	-0.076***	-0.106***	-0.016	-0.048***
	(0.024)	(0.022)	(0.018)	(0.017)
Indian/Asian	-0.205*	-0.233***	-0.062	-0.122***
	(0.109)	(0.069)	(0.088)	(0.019)
White	-0.185***	-0.265***	0.023	-0.022
	(0.048)	(0.055)	(0.047)	(0.058)
Years of schooling	0.005**	0.005*	0.003*	0.001
	(0.002)	(0.003)	(0.002)	(0.002)
Assets	0.016***	-0.000	0.008***	0.002
	(0.002)	(0.003)	(0.002)	(0.002)
Household per capita income quintile (relative to poorest):				
Quintile 2	0.025	-0.015	0.009	-0.002
	(0.020)	(0.023)	(0.014)	(0.021)
Quintile 3	0.046**	-0.023	0.014	0.008
	(0.020)	(0.023)	(0.015)	(0.021)
Quintile 4	0.023	-0.017	0.047***	0.006
	(0.023)	(0.026)	(0.016)	(0.019)
Quintile 5	0.028	0.140***	0.116***	0.050*
	(0.033)	(0.042)	(0.023)	(0.027)
Constant	0.232***	0.204***	-0.012	0.064***
	(0.021)	(0.024)	(0.014)	(0.020)
Observations	5,440	2,845	2,845	2,152
R-squared	0.095	0.050	0.109	0.038

Notes to Table 10: Each regression includes a full set of indicators for age. Robust standard errors that allow for correlation in the unobservables for individuals drawn from the same primary sampling unit are presented below the regression coefficients in parentheses (*** p<0.01, ** p<0.05, * p<0.1).

Table 11: Changes in stunted status between Wave 1 and Wave 2 for children aged 16 and under at Wave 1

	Wave 2 status:		
	Not-stunted	Stunted	Total
Wave 1 status:			
Not-stunted	3,557	615	4,172
	70.12	12.12	82.24
Stunted	451	450	901
	8.89	8.87	17.76
Total	4,008	1,065	5,073
	79.01	20.99	100

Table 12: Child nutritional status and household pension status

Dependent variable:	Stunted (wave 2)	Stunted (wave 2)	Height-for-age z-score (wave 2)
	(1)	(2)	(3)
Got pension	-0.090***	-0.092***	0.310*
	(0.031)	(0.032)	(0.183)
Lost pension	0.144**	0.140**	-0.549**
	(0.061)	(0.065)	(0.253)
Stunted (wave 1)	0.365***	0.366***	
	(0.033)	(0.033)	
Female	-0.073***	-0.075***	0.247***
	(0.018)	(0.018)	(0.076)
Population group (relative to African):			
Coloured	0.024	0.042	-0.272
	(0.080)	(0.074)	(0.215)
Indian/Asian	-0.027	0.002	-0.046
	(0.042)	(0.045)	(0.127)
White	-0.085**	-0.031	-0.173
	(0.038)	(0.070)	(0.259)
Household size (wave 1)		-0.003	0.018
		(0.004)	(0.018)
Household size (wave 2)		0.004	-0.019
		(0.005)	(0.020)
Urban (wave 1)		0.422*	-0.837**
		(0.249)	(0.392)
Urban (wave 2)		-0.405	0.748**
		(0.248)	(0.377)
Assets (wave 1)		-0.004	0.015
		(0.004)	(0.014)
Household per capita income quintile (relative to poorest):			
Quintile 2		0.015	-0.077
		(0.029)	(0.095)
Quintile 3		-0.047*	0.100
		(0.027)	(0.103)
Quintile 4		-0.012	0.009
		(0.034)	(0.141)
Quintile 5		-0.041	-0.022
		(0.066)	(0.203)
Height-for-age z score (wave 1)			0.406***
			(0.034)
Constant	-0.856**	-0.901**	1.595
	(0.375)	(0.376)	(1.250)
Observations	2,934	2,922	2,922
R-squared	0.162	0.171	0.208

Notes to Table 12: Each regression includes a full set of indicators for age. Robust standard errors that allow for correlation in the unobservables for individuals drawn from the same primary sampling unit are presented below the regression coefficients in parentheses (*** p<0.01, ** p<0.05, * p<0.1). Regressions are weighted using the Wave 2 post-stratification weights.

Appendix

Table A1:Item non-response rates for NIDS Section J: Health – Wave 1 and Wave 2

NIDS Section J: Health response rates

Adult Questionnaire			Wave 1		Wave 2		
W1 Question No.	W2 Question No.	Label	Observations	Response Rate	Observations	Response Rate	Excluded: Phase 2
j1	j1	Respondent's perceived health status	15634	99.4	17744	99.7	0
j2_1	j2_1	In the last 30 days the respondent experienced Flu symptoms	15634	99.5	16988	99.7	1
j2_2	j2_2	In the last 30 days the respondent experienced Fever	15634	99.5	16988	99.7	1
j2_3	j2_3	In the last 30 days the respondent experienced Persistent cough	15634	99.5	16988	99.6	1
j2_4	j2_4	In the last 30 days the respondent experienced cough with blood	15634	99.4	16988	99.6	1
j2_5	j2_5	In the last 30 days the respondent experienced a tight chest	15634	99.5	16988	99.6	1
j2_6	j2_6	In the last 30 days the respondent experienced chest pain	15634	99.4	16988	99.6	1
j2_7	j2_7	In the last 30 days the respondent experienced body ache	15634	99.5	16988	99.6	1
j2_8	j2_8	In the last 30 days the respondent experienced headache	15634	99.5	16988	99.6	1
j2_9	j2_9	In the last 30 days the respondent experienced back ache	15634	99.5	16988	99.6	1
j2_10	j2_10	In the last 30 days the respondent experienced joint pain / arthritis	15634	99.5	16988	99.6	1
j2_11	j2_11	In the last 30 days the respondent experienced vomiting	15634	99.5	16988	99.6	1
j2_12	j2_12	In the last 30 days the respondent experienced diarrhoea	15634	99.5	16988	99.6	1
j2_13	j2_13	In the last 30 days the respondent experienced weakness	15634	99.5	16988	99.6	1
j2_14	j2_14	In the last 30 days the respondent experienced pain in the upper abdomen	15634	99.5	16988	99.6	1
j2_15	j2_15	In the last 30 days the respondent experienced pain in the lower abdomen	15634	99.5	16988	99.6	1

j2_16	j2_16	In the last 30 days the respondent experienced painful urination	15634	99.5	16988	99.5	1
j2_17	j2_17	In the last 30 days the respondent experienced swelling of ankles	15634	99.5	16988	99.6	1
j2_18	j2_18	In the last 30 days the respondent experienced a rash	15634	99.5	16988	99.6	1
j2_19	j2_19	In the last 30 days the respondent experienced skin disorders	15634	99.5	16988	99.5	1
j2_20	j2_20	In the last 30 days the respondent experienced eye infection	15634	99.5	16988	99.6	1
j2_21	j2_21	In the last 30 days the respondent experienced severe weight loss	15634	99.5	16988	99.5	1
j2_22	j2_22	In the last 30 days the respondent experienced yellow eyes	15634	99.5	16988	99.5	1
j2_23	j2_23	In the last 30 days the respondent experienced memory loss	15634	99.5	16988	99.5	1
j2_24	j2_24	In the last 30 days the respondent experienced serious injury	15634	99.3	16988	99.5	1
j3	j3	Respondent consulted someone about their health	15634	96.5	16988	97.8	1
j4	j4	Location that the consultation took place in	7243	98.4	5207	98.9	1
j7	j7	There was a consultation fee	7243	99.3	5207	98.6	1
j8	j8	Amount for consultation	2532	85.5	1471	85.4	1
j9	j9	Consultation was paid by	2528	96.5	1473	98.2	1
j10	j10	Medicine was prescribed	7243	99.1	5207	98.8	1
j11	j11	Amount spent on medicine	5037	88.0	3535	79.7	1
j12	j12	Medicine was paid for by	5043	94.9	3535	98.6	1
j13_1	j13_1_a	Respondent was diagnosed with TB	15634	99.6	17744	99.5	0
j14_1	j13_1_b	Year in which Respondent was diagnosed with TB	751	82.8	668	85.5	0
j15_1	j13_1_c	Respondent is currently taking medication for TB	757	88.4	668	90.6	0
j16_1	j13_1_d	Respondent still has TB	671	94.3	475	83.4	0
j13_2	j13_2_a	Respondent was diagnosed with high blood pressure	15634	99.6	17744	99.3	0
j14_2	j13_2_b	Year in which Respondent was diagnosed with high blood pressure	2535	83.2	2176	80.7	0
j15_2	j13_2_c	Respondent is currently taking medication for high blood pressure	2535	94.4	2177	92.9	0
j16_2	j13_2_d	Respondent still has high blood pressure	2399	97.9	474	52.1	0
j13_3	j13_3_a	Respondent was diagnosed with Diabetes	15634	99.4	17744	99.4	0

j14_3	j13_3_b	Year in which Respondent was diagnosed with Diabetes	685	78.0	680	82.2	0
j15_3	j13_3_c	Respondent is currently taking medication for diabetes	684	84.2	680	90.7	0
j16_3	j13_3_d	Respondent still has diabetes	579	97.9	132	40.2	0
j13_4	j13_4_a	Respondent was diagnosed with a stroke	15634	99.4	17744	99.5	0
j14_4	j13_4_b	Year in which Respondent was diagnosed with a stroke	234	55.1	166	72.9	0
j15_4	j13_4_c	Respondent is taking medication for a stroke	234	62.0	166	18.1	0
j16_4	j13_4_d	Respondent still has a stroke	150	93.3	146	7.5	0
j13_5	j13_5_a	Respondent was diagnosed with asthma	15634	99.4	17744	99.5	0
j14_5	j13_5_b	Year in which Respondent was diagnosed with asthma	643	73.1	533	82.7	0
j15_5	j13_5_c	Respondent is taking medication for asthma	643	83.4	533	90.8	0
j16_5	j13_5_d	Respondent still has asthma	540	96.5	209	64.6	0
j13_6	j13_6_a	Respondent was diagnosed with heart problems	15634	99.3	17744	99.4	0
j14_6	j13_6_b	Year in which Respondent was diagnosed with heart problems	580	68.1	351	75.2	0
j13_7	j13_7_a	Respondent was diagnosed with cancer	15634	99.3	17744	99.5	0
j14_7	j13_7_b	Year in which Respondent was diagnosed with cancer	192	41.7	99	66.7	0
j17	j14	Respondent has other illness or disability	15634	97.5	17744	99.5	0
j18_1	j15_1a	Other illness 1st answer	1366	93.2	609	100	0
j18_2	j15_2a	Other illness 2nd answer	55	98.2	103	100	0
j18_3	j15_3a	Other illness 3rd answer	8	100.0	16	100	0
	j15_4a	Other illness 4th answer	-	-	3	100	0
j19	j16	Respondent uses glasses or contact lenses	15634	99.7	17744	99.4	0
j20	j17	Year in which respondent's eye sight was last tested	15634	23.9	17744	21.2	0
j21	j18	Respondent's eyesight strength	15634	93.1	16988	66.9	1
j22	j19	Respondent uses a hearing aid	15635	99.2	17744	98.7	0
j23	j20	Respondent's hearing strength	15634	91.9	16988	60.2	1
j24_1	j21_1	Level of difficulty in dressing	15634	99.7	16988	99.7	1
j24_2	j21_2	Level of difficulty in bathing	15634	99.7	16988	99.7	1
j24_3	j21_3	Level of difficulty in eating	15634	99.7	16988	99.7	1

j24_4	j21_4	Level of difficulty in toileting	15634	99.6	16988	99.7	1
j24_5	j21_5	Level of difficulty in taking public transport alone	15634	99.6	16988	99.6	1
j24_6	j21_6	Level of difficulty in doing light housework	15634	99.7	16988	99.7	1
j24_7	j21_7	Level of difficulty in managing money	15634	99.4	16988	99.6	1
j24_8	j21_8	Level of difficulty in climbing a flight of stairs	15634	99.2	16988	99.6	1
j24_9	j21_9	Level of difficulty in lifting or carrying heavy objects	15634	99.5	16988	99.7	1
j24_10	j21_10	Level of difficulty in walking 200 - 300 metres	15634	99.5	16988	99.7	1
j24_11	j21_11	Level of difficulty in cooking for oneself	15634	99.5	16988	99.7	1
j25	j22	Respondent exercises'	15634	99.3	16988	99.2	1
j26	j23	Respondent smokes cigarettes	15634	99.6	16988	99.6	1
j27	j24	Respondent smoked cigarettes regularly	12353	99.4	14327	99.5	1
j28	j25	Age when respondent last smoked cigarettes	760	85.1	412	75.7	1
j29	j26	Age when respondent began to smoke cigarettes	4036	87.2	3074	84.4	1
j30	j27	Average amount of cigarettes per day consumed	4032	90.6	3075	92.3	1
j31	j28	How often respondent consumes alcohol	15634	99.6	16988	99.5	1
j32	j29	Amount of standard drinks consumed	3828	98.2	3552	91.6	1
-	j30	Have you ever had an HIV test?	-	-	16988	98.8	1
j33	j31	Respondent is covered by medical aid	15634	99.3	16988	99.5	1
j34	j32	Pcode of person who pays for medical aid	1820	92.3	1421	98.2	1
-	j32	PID of person who pays for medical aid	-	-	1421	98.2	1
n1_1	n1_1	Height measure one	15622	90.1	16988	91.8	1
n1_2	n1_2	Height measure two	15622	89.9	16988	91.7	1
n1_3	n1_3	Height measure three	1072	8.8	1778	1.6	1
n2_1	n2_1	Weight measure one	15589	89.3	16988	90.4	1
n2_2	n2_2	Weight measure two	15586	89.0	16988	90.3	1
n2_3	n2_3	Weight measure three	1204	13.8	2103	3.0	1
n4_1	n4_1	Blood Pressure: Systolic - 1	15634	90.1	16988	90.1	1
n4_1_2	n4_1_2	Blood Pressure: Diastolic - 1	15634	90.1	16988	90.1	1

n4_1_3	n4_1_3	Blood Pressure: Pulse - 1	15634	90.1	16988	90.1	1
n4_2_1	n4_2_1	Blood Pressure: Systolic - 2	15634	89.8	16988	89.8	1
n4_2_2	n4_2_2	Blood Pressure: Diastolic - 2	15634	89.9	16988	89.8	1
n4_2_3	n4_2_3	Blood Pressure: Pulse - 5	15634	89.8	16988	89.8	1
Child Questionaire							
d1	d1	Perceived Health Status	9405	99.8	9893	99.8	0
d4	d4	The child has a clinic card	9403	96.6	9893	99.4	0
d9	d9	The child has/had any serious illnesses or disabilities	9408	98.8	9893	99.6	0
d10	d10_1	What is the main serious illness or disability? 1st answer	503	95.2	258	100	0
d10	d10_2	What is the main serious illness or disability? 2nd answer	24	100.0	38	100	0
d10	d10_3	What is the main serious illness or disability? 3rd answer	1	100.0	11	100	0
-	d10_4	What is the main serious illness or disability? 4th answer	-	-	3	100	0
-	d10_5	What is the main serious illness or disability? 5th answer	-	-	0	0	0
-	d10_6	What is the main serious illness or disability? 6th answer	-	-	0	0	0
-	d10_7	What is the main serious illness or disability? 7th answer	-	-	0	0	0
-	d10_8	What is the main serious illness or disability? 8th answer	-	-	0	0	0
-	d10_9	What is the main serious illness or disability? 9th answer	-	-	0	0	0
-	d10_10	What is the main serious illness or disability? 10th answer	-	-	0	0	0
-	d10_11	What is the main serious illness or disability? 11th answer	-	-	0	0	0
-	d10_12	What is the main serious illness or disability? 12th answer	-	-	0	0	0
-	d10_13	What is the main serious illness or disability? 13th answer	-	-	0	0	0
d11	-	The child was born with this illness or disabilty	503	96.0	-	-	-
d12	d11	Number of times health profressional was consulted in last 12 months	9408	96.5	9893	97.3	0
d13	d12	The child has been ill for at least 3 days in the last month	9408	99.2	9893	99.6	0
d14	d13	Child was taken to healthcare facility	780	99.6	469	97.2	0
d17	d16	Reason why no health facilty was consulted	175	97.7	454	32.2	0

d18	d17	Child has had their eyes tested	9408	99.6	9893	98.4	0
d19	d18	Child wears glasses/contact lenses	9407	99.2	9893	99.5	0
d20	d19	The child is covered by medical aid	9408	99.7	9879	99.5	0
d21_p	d20_p	Pcode of person who pays for medical aid	737	98.2	614	97.6	0
	d20_p	PID of person who pays for medical aid			614	97.6	0
d21_r	d20_r	Relationship code of person who pays for medical aid	736	89.0	614	97.7	0
g4_1	g4_1	Height measure one (cm)	8158	92.8	6569	98.6	1
g4_2	g4_2	Height measure two (cm)	8157	92.6	6569	98.6	1
g4_3	g4_3	Height measure three (cm)	655	2.9	9525	0.1	1
g5_1	g5_1	Weight measure one (kg)	8000	92.6	6569	96.8	1
g5_2	g5_2	Weight measure two (kg)	7989	92.4	6569	96.8	1
g5_3	g5_3	Weight measure three (kg)	623	2.4	6323	0.2	1

southern africa labour and development research unit

The Southern Africa Labour and Development Research Unit (SALDRU) conducts research directed at improving the well-being of South Africa's poor. It was established in 1975. Over the next two decades the unit's research played a central role in documenting the human costs of apartheid. Key projects from this period included the Farm Labour Conference (1976), the Economics of Health Care Conference (1978), and the Second Carnegie Enquiry into Poverty and Development in South Africa (1983-86). At the urging of the African National Congress, from 1992-1994 SALDRU and the World Bank coordinated the Project for Statistics on Living Standards and Development (PSLSD). This project provide baseline data for the implementation of post-apartheid socio-economic policies through South Africa's first non-racial national sample survey.

In the post-apartheid period, SALDRU has continued to gather data and conduct research directed at informing and assessing anti-poverty policy. In line with its historical contribution, SALDRU's researchers continue to conduct research detailing changing patterns of well-being in South Africa and assessing the impact of government policy on the poor. Current research work falls into the following research themes: post-apartheid poverty; employment and migration dynamics; family support structures in an era of rapid social change; public works and public infrastructure programmes, financial strategies of the poor; common property resources and the poor. Key survey projects include the Langeberg Integrated Family Survey (1999), the Khayelitsha/Mitchell's Plain Survey (2000), the ongoing Cape Area Panel Study (2001-) and the Financial Diaries Project.

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