

The Individual Deprivation Measure South Africa Country Study Briefing Note No. 3

Results update by age group



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TRANG PHAM, HELEN SUICH AND JANET HUNT

The Individual Deprivation Measure (IDM) is a gender-sensitive, individual measure of multidimensional poverty, which is assessed across 14 dimensions¹, making it possible to see who is poor, in what ways and to what extent.

The IDM has been under development since 2009. The aim of the first phase (2009–2013) was to formulate a just and justifiable measure of poverty, the design of which reflects and is grounded in the experiences and priorities of poor men and women, and which measures things that are known to be important to gender equity. A second phase of research commenced in 2016 to improve the pilot measure and test it in different contexts.² The IDM South Africa Country Study was undertaken in 2019, and was one of two ANU-led country studies designed to test the revised measure during this phase of the research.

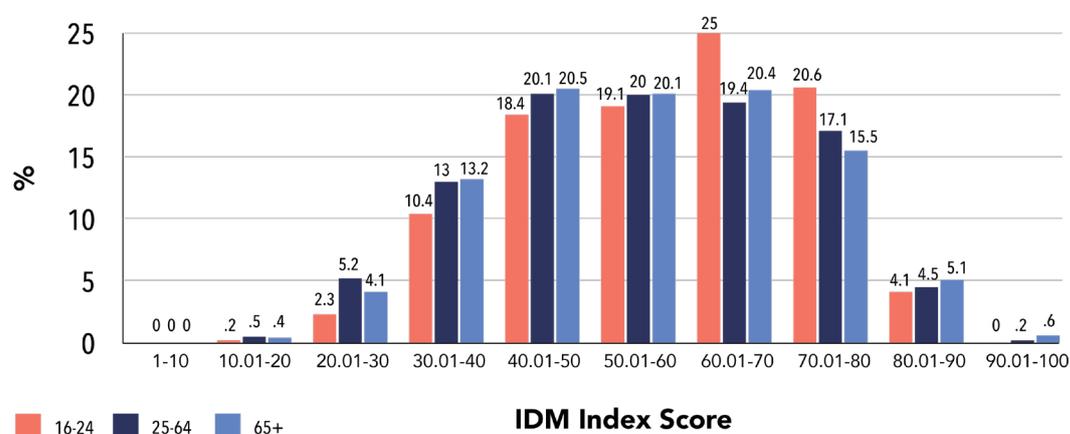
This briefing note presents the overall IDM Index Score disaggregated by age for the first time using the South African data—that is, the score across all 14 dimensions. It also provides an overview of the updated (dimension-level) analyses of the national-level main survey, based on refined scoring and aggregation procedures. A summary of what is measured in each of the 14 dimensions can be found in Briefing Note No. 6, which also provides background information about the South African Country Study and the main sample, and briefly describes the revisions to the scoring and aggregation methods used to generate the results presented here.

The revised scoring procedures and aggregation methods are described in detail in Suich et al. (2020b). The primary difference in the methods used is that the new aggregation method does not allow a low score in one indicator or theme to be fully offset, or compensated for by a high score in another.

1 THE IDM INDEX SCORE

Figure 1 presents the distribution of IDM Index Scores for the main sample in deciles, across the three age groups—the youth (16–24), the middle age group (25–64), and the older age group (65+). The middle age group and the older age group have similar proportions in each decile. The youth are better off than the other two age groups, as for each decile under the IDM Index Score of 60, they have lower proportions than the other two groups and for the 7th and 8th decile, they have higher proportions.

Figure 1 South Africa IDM Index Score deciles, national level sample, by age groups



¹ The research team collected data on an additional dimension—violence—but due to lack of comparability between the types of violence experienced by men and women it is not reported.

² The early development process is described in Wisor et al. (2014), and its more recent development and refinement in Hunt et al. (2017) and with particular reference to South Africa in Suich et al. (2020c).

The summary statistics of the IDM Index Score are presented in Table 1 for the three age groups. While the range of IDM Index Scores for the older age group is not the smallest, it has the highest minimum, and also reaches the highest maximum, indicating that among those with the lowest IDM Index Scores, the older age group is slightly better off than the younger two age groups. The range of scores is largest for the middle age group, which also has by far the lowest individual IDM Index Score, indicating high inequality within this age group. The median and mean for the youth group is higher than that for either of the other two groups, meaning they are on average better off than other age groups.

Table 1 IDM Index Score summary statistics and quartiles, national-level main sample, South Africa, by age

SUMMARY STATISTICS	16-24	25-64	65+
Minimum	16.07	10.58	18.63
Maximum	89.66	93.81	94.10
Range	73.59	83.23	75.47
Median	59.84	55.29	55.48
Mean	58.30	54.54	55.70
n=	2,101	5,586	965
IDM INDEX SCORE OVERALL SAMPLE QUANTILES (%)			
Lowest quartile: 10.58-44.41	19.5	26.9	25.9
Second quartile: 44.42-56.38	24.1	25.2	25.7
Third quartile: 56.39-68.79	28.4	23.7	25.1
Highest quartile: 68.80-94.10	28.0	24.1	23.3
n=	2,101	5,586	965

The IDM Index Score quartile cut-offs presented in Table 1 are created from the overall sample. The scores of every individual are ranked from lowest to highest and then the entire list is divided into four equal groupings (i.e. 25% of the total sample fits in to each of the four categories). The cut offs for these groupings will vary with each data set as the range of scores will vary, and thus the quartile results are specific to each context.

The bottom part of Table 1 presents the proportion of respondents by age group whose IDM Index Scores fall within these ranges. Overall, there are only minor differences between the middle age group and the older age group, while, the youth are better off, reflected in the fact that they have lower proportions in the lowest and second quartiles (the lowest scoring quartiles) and higher proportions in the third and highest quartiles (the two higher scoring quartiles).

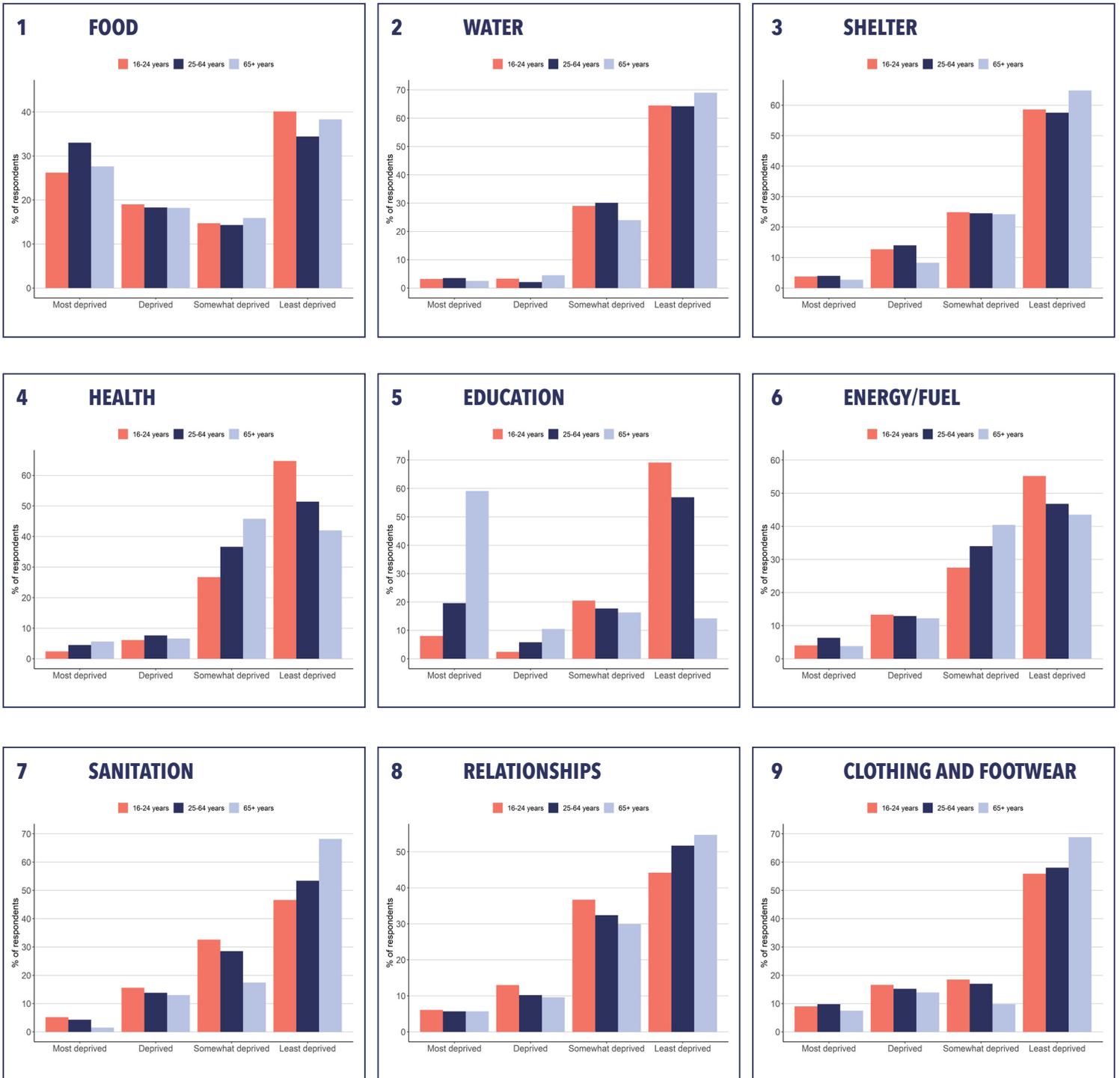
2 DIMENSION LEVEL RESULTS

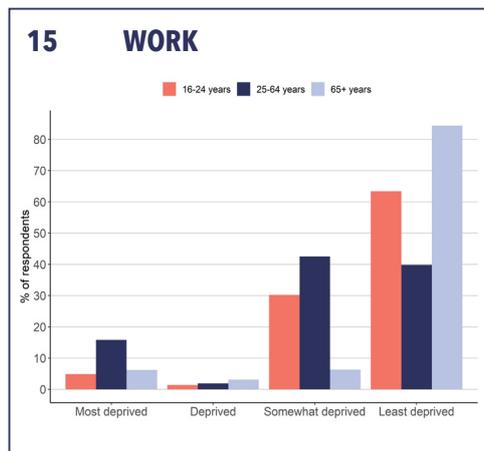
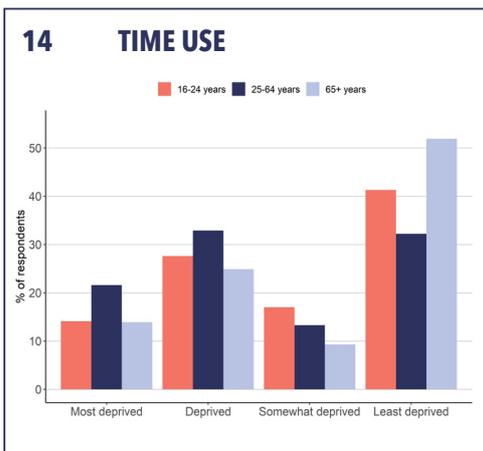
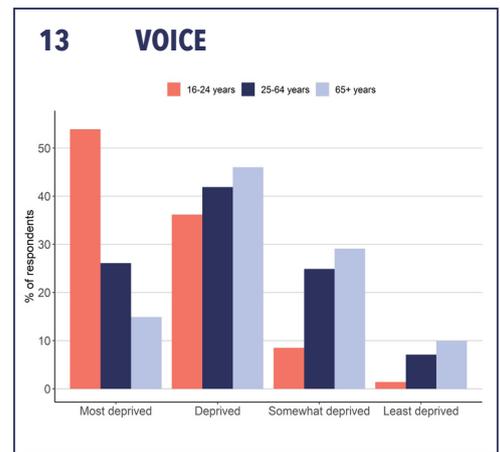
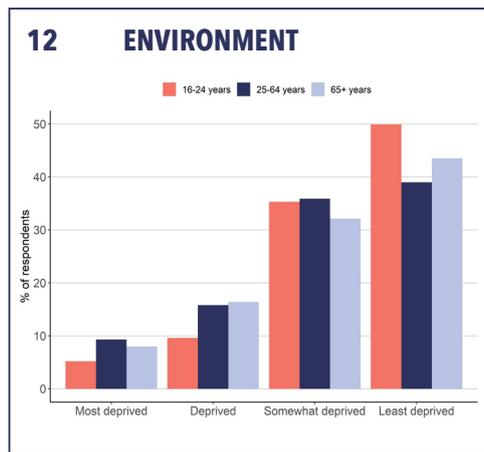
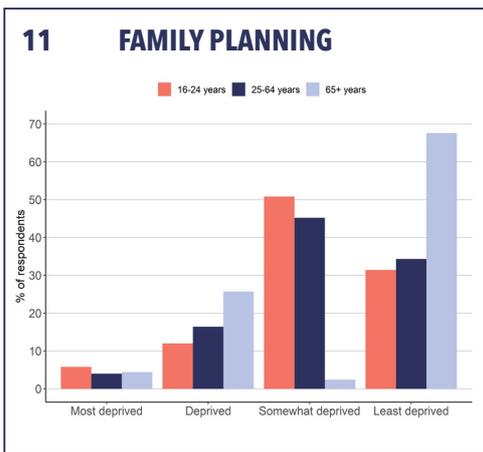
In this section, the main sample results for each dimension, disaggregated by age groups are presented. The overall main sample results for each dimension are grouped according to the depth of deprivation—the four categories are least deprived, somewhat deprived, deprived and most deprived. The scores for each dimension are normalised (i.e. put onto a scale of 0.01 to 1.00). The scores from 0.01 to 0.25 are categorised most deprived, between 0.25 and 0.5 are categorised as deprived, between 0.5 and 0.75 are categorised as somewhat deprived and those above 0.75 are categorised as least deprived. The dimension results show the proportion of individuals categorised in each level of deprivation. The IDM does not measure the full extent of achievement, which means that being categorised as least deprived does not mean a person is not deprived at all—in many cases, the least deprived category indicates a relatively low level of attainment, such as in the clothing and footwear dimension. Rather, the IDM distinguishes between different levels of poverty and deprivation.

It should be remembered that the novel combination of variables included in each dimension and the index construction approach, combined with measurement at an individual (not household) level, means that, even where variable-level data is very similar to data from other sources, the results presented may differ in important ways from other poverty assessments in South Africa.

Figure 2 shows the results for the national-level sample for the 14 dimensions, disaggregated by these three age groups. The text below highlights the most important differences between the three groups. The importance is determined not only by statistical significance, but also by the size of these differences—only those of more than approximately 2% from the overall figures across two or more of the four deprivation categories reported. The detailed results for each indicator, theme and dimension, across each of the subgroup analyses can be seen in the results tables in Suich et al. (2020a).

Figure 2 Overall results for the IDM dimensions, South African main sample by age (updated)





1 FOOD

The food dimension is constructed from one indicator and one theme, and measures food insecurity. Overall, for the whole sample, 36.2% are least deprived, 14.6% somewhat deprived, 18.5% deprived and 30.7% most deprived.

However, those in the middle age group are more likely to be in the most deprived category (33.0%), followed by the older age group (27.6%) and the youth (26.2%). The youth are more likely to be in the least deprived category (40.1%), followed by the older (38.3%) and the middle age groups (34.4%). The three age groups are similar in their likelihood of being in the deprived and somewhat deprived categories. In sum, the middle age group is more likely to be worse off in food than other age groups, while the youth are the least likely to be worse off in this dimension.



2 WATER

The water dimension is constructed from three themes: drinking water; domestic water; and water collection threats. Overall, the majority of the respondents are least deprived in water with 64.8% in this category, 29.2% somewhat deprived and a total of 6.1% in the most deprived and deprived categories. The youth and the middle age group are similar in their distribution of deprivation, and follow the overall trend. The older age group is most likely to be in the least deprived category and less likely to be in the somewhat deprived category.

The difference between the three groups in the lower two categories is small. The older group is more likely to be in the least deprived category due to their score in the third theme on water collection threats. In this theme, 71.6% of the older age group are not responsible for collecting water, and are therefore categorised in the least deprived category, compared to 58.9% of the youth and 56.8% of the middle age group.



The shelter dimension is constructed from three themes: habitability; ownership of essential household items; and security of tenure. Overall, more than half of the respondents (58.6%) are least deprived, 24.5% somewhat deprived, 13.0% deprived and 3.8% most deprived. The youth and the middle age group follow similar patterns, and generally follow this overall distribution of deprivation. The older group follows a slightly different pattern. They are more likely to be in the least deprived category and less likely to be in the deprived category than the other two groups. In general, the older group is better off than the other two age groups, thanks to their better outcomes in constituent themes. For example, in the habitability theme 72.3% of the older group are least deprived compared to 67.3% for each of the other two age groups. In the security of tenure theme, 89.3% of the older group are least deprived compared to 83.6% of the youth and 81.7% of the middle age group.



The health dimension is constructed from two themes: health status; and health care access and quality. For the whole sample, 53.6% are least deprived, 35.2% somewhat deprived, 7.1% deprived and 4.1% most deprived. The middle age group follows this overall pattern of deprivation. However, there are large differences between the youth and the older group in the least deprived and somewhat deprived categories. It may be not surprising that health conditions correlate strongly with age—younger people are more likely have better health and older people are more likely to have poorer health. At the dimension level, the older age group is less likely to be in the least deprived and more likely to be in the somewhat deprived category than the other two age groups. In particular while 64.7% of the youth are least deprived (and 51.4% of the middle age group), only 42.0% of the older group are so categorised.

These dimension-level results are driven by differences at the theme level where the youth are consistently better off, and the older age group is more deprived than the younger groups. At the theme level, 54.0% of the youth are least deprived in the health status theme compared to 44.4% of the middle group and 43.2% of the older group; 84.4% of the youth are least deprived in the health care access and quality theme compared to 79.7% of the middle group and 77.3% of the youth. The deprivation of the older group shows in three out of four indicators used to construct the dimension, but it shows most clearly in the general health care access indicator, where only 19.2% of the older group are least deprived, compared to 39.3% of the middle group and 56.2% of the youth.



The education dimension is constructed from two themes: education level; and functional literacy and numeracy. Overall, 21.1% are most deprived, 5.5% deprived, 18.2% somewhat deprived and 55.1% least deprived. However, there are big differences between the three age groups. This dimension also has the largest difference of the four subgroup analyses, indicating that for education, the generational difference is greater than differences based on gender, locality or disability status. The older group is around six times more likely to be most deprived in education than the youth—59.1% of the older group, compared to 19.6% of the middle age and 8.0% of the youth. In contrast, only 14.2% of the older age group are in the least deprived category compared to 56.9% of the middle age group and 69.1% of the youth. In general, the youth are less likely to be in the bottom two categories and more likely to be in the top two categories; the reverse is true for the older group, while the middle age group broadly follows the overall pattern of deprivation.



The energy dimension is constructed from four themes: cooking energy; lighting energy; heating energy; and energy collection threats. Overall, 48.5% of the main sample respondents are least deprived, 33.1% somewhat deprived, 12.9% deprived and 5.5% most deprived, and the middle age group by and large follows this overall pattern. The difference between groups is relatively small in the most deprived and deprived categories. The older group is more likely to be in the somewhat deprived category (40.4%), followed by 34.0% of the middle age group and 27.5% of the youth. They are also less likely to be in the least deprived category compared to the other two groups, making them the worst off group of the three. The youth are the better off than the other groups. They are more likely to be in the least deprived category, a result which is partially driven by the results of the energy collection threats theme—82.8% of the youth did not have to collect fuel compared to the middle and older age groups (63.4% and 66.1%, respectively).

7 SANITATION



The sanitation dimension is constructed from three themes: toilet facilities; washing facilities; and private changing place during menstruation. For the main sample, 53.4% of the respondents are least deprived, 28.3% somewhat deprived, 14.1% deprived and 4.2% most deprived. The middle age group follows this overall trend, but the other groups digress.

The older group is more likely to be in the least deprived category (68.2%), compared to the middle age group (53.4%) and the youth (46.6%). The older group is correspondingly less likely to be in the three more deprived categories than other two. These results are, in part, driven by the high proportion of the older group (97.1%) in the least deprived category for the last theme—private changing place during menstruation. Men and non-menstruating women are regarded as least deprived in this theme, and most of the women in this age group no longer menstruate, and are therefore categorised as least deprived, compared to 68.3% of the middle age group and 59.8% of the youth. In contrast, at the dimension level, the youth are least likely to be least deprived, and consistently more likely to be in the three more deprived categories. The youth are also more likely to be worse off than other two groups because they are less likely to be in the least deprived category in the first and third themes, and more likely to be most deprived in the second theme, indicating consistently higher levels of deprivation.

8 RELATIONSHIPS



The relationships dimension is constructed from two themes: dependence and support, and participation in community events. Overall, 50.2% of the main sample respondents are least deprived, 33.2% somewhat deprived, 10.8% deprived and 5.8% most deprived. The middle age group, by and large, follows the overall distribution of deprivation, but the other two age groups differ from this overall trend. The older group is more likely to be in the least deprived category and less likely to be in the other three categories.

The three age groups face different patterns of deprivation in different themes. For example, the older group is more likely to be most deprived than the other two groups in the dependence and support theme, with 5.6% being in this category, followed by the middle age group (3.8%) and the youth (3.4%), while a higher proportion of the middle age group are least deprived in this theme (66.1%), than the youth (60.1%) and the older group (56.2%).

For the participation in community events theme, a higher proportion of the older group is in the least deprived category (51.7%), than the middle age group (41.3%) and the youth (35.2%). The main driver for the high proportion of the older group in the least deprived category at the dimension level is their relatively high scores for this second theme. In particular, on the participation during menstruation indicator, 97.1% of those over 65 years old are least deprived compared to 68.3% of the middle age group and 59.8% of the youth.

9 CLOTHING



The clothing and footwear dimension is constructed from three themes: basic clothing and footwear; other clothing and footwear; and sanitary product use. Of the main sample respondents, 58.7% are least deprived in this dimension, 16.6% are somewhat deprived, 15.4% are deprived and 9.4% are categorised as most deprived. The middle age group generally follows this overall pattern of deprivation. The older group is more likely to be least deprived (68.8%) compared to the middle age group (58.0%) and the youth (55.9%), while the youth are more likely to be categorised as somewhat deprived and deprived than the other two age groups.

The older group is slightly more likely to be most deprived in the basic clothing and footwear theme—15.3% compared to 14.5% of the middle age group and 13.0% of the youth. The higher scores for the older age group in the remaining themes—other clothing footwear and sanitary product use—explain the high proportion of this group in the least deprived category at the dimension level. 97.1% of the older group are least deprived in the sanitary product use theme, compared to 68.4% of the middle age group and 59.8% of the youth. Further, 63.5% of the older group are least deprived in the other clothing and footwear theme, followed by 46.7% of the middle age group and 45.2% of the youth.

11 FAMILY PLANNING



The family planning dimension is constructed from only a single indicator and theme—unmet need for contraception. Overall, 37.3% of the main sample respondents are categorised as least deprived, 41.8% are somewhat deprived, 16.4% are categorised as deprived and 4.5% are most deprived. Individuals who are classified as least deprived and somewhat deprived are those who have no need for contraception or who use modern methods of contraception. Individuals in the deprived category are those men and women who personally use traditional methods of contraception, or who refused to answer this series of questions.

Those in the most deprived category are women whose (male) partners use traditional methods, and individuals who do not use any methods themselves and do not know if their partner uses any method. Because the majority of those aged 65 or above reported not needing contraception, not surprisingly, those in that age group have the highest proportion in the least deprived category. The older group is around twice as likely as the middle age group and the youth to be least deprived (67.6%, compared to 34.3% and 31.4% respectively), though they are as likely as the other age groups to be in the most deprived category. Although the difference between age groups is the largest difference compared with those of other subgroups in family planning, the difference is partially driven by the way the dimension is scored and because need for contraception is less relevant for the older age group.

12 ENVIRONMENT



The environment dimension is constructed from three themes: exposure to environmental problems; natural resource utilisation; and safe environment. Across the whole of the sample, 42.2% are least deprived in the environment dimension, 35.4% are somewhat deprived, 14.3% are deprived and 8.2% are categorised as most deprived. The youth have the best outcomes, followed by the older group who share a similar distribution of deprivation to the overall pattern, and the middle age group is the worst off. Of the youth, 49.9% are least deprived, compared to only 39.0% of the middle age group and 43.5% of the older group. The middle age group is more likely to be in the deprived and most deprived categories in the constituent themes and indicators, though they do not always have the highest proportion in these categories.

13 VOICE



The voice dimension is constructed from two themes: voice in the public domain; and personal control over decision making. The results for this dimension—the majority of respondents are most deprived—is the opposite direction of distribution of deprivation compared to other dimensions. Overall, 31.6% of respondents are classified as most deprived, 41.0% are deprived, 21.4% are somewhat deprived, and only 6.0% are classified least deprived. This dimension also has marked differences between the three age groups, and the size of the differences between age groups is larger than found in the gender, locality and disability status sub-group comparisons.

The middle age group follows the overall trend, while the youth are the worst off and the older group have the highest scores (and therefore better outcomes). Of the youth, 53.9% are in the most deprived category, compared to 26.1% of the middle age group and 14.9% of the older group. Only 1.4% of the youth are in the least deprived category, compared to 7.1% of the middle age group and 9.9% of the older age group.

The high proportion of the youth in the most deprived category at the dimension level is explained by their high proportion in the most deprived category in the voice in the public domain theme and its indicators compared to other age groups. In the theme of voice in the public domain, 89.5% of the youth are most deprived, compared to 67.5% of the middle age group and 60.5% of the older age group. Further, in two indicators in this theme—voting and participation in local decision making—clear differences between age groups can be seen.

In terms of voting, 63.4% of the youth are most deprived, meaning they did not vote or were not able to choose freely who to vote for, compared to 33.7% of the middle age group and 16.8% of the older age group. In terms of participation in public decision making, 77.1% of the youth are categorised as most deprived compared to 53.7% of the middle age group and 53.6% of the older age group.



The time use dimension has only a single one theme (and indicator)—time burden—measuring time burden and on-call time. For the whole of the main sample, 36.6% of respondents are classified as least deprived, 13.8% are somewhat deprived, 30.7% are deprived and 18.9% are most deprived. Those in the most deprived category are individuals who spend more than one-third of their time on-call, and whose time burden is at least 10.5 hours per day.

The middle age group is the worse off among the three groups, followed by the youth and the older group. Only 32.2% of the middle age group are least deprived, compared to 41.3% of the youth and 51.9% of the older group. Further, of the middle age group, 21.6% are most deprived compared to just 14.1% of the youth and 13.9% of the older group. The fact that the middle age group is more likely than other two groups to be in the most deprived and deprived categories is perhaps not too surprising given that individuals in this age group are at their peak economic and reproductive age, so they are more likely to shoulder considerable domestic and work duties, and/or spend more time caring for their children, or others, while doing their main activities.



The work dimension has three themes: work for pay, profit and production; unpaid domestic and care work; and double labour burden. Overall in the main sample, 50.5% are least deprived, 35.5% are classified as somewhat deprived, 1.9% as deprived and 12.1% are classified as most deprived, and there is a big variation between the three age groups. The older group is better off, followed by the youth and the middle age group. Only 39.8% of the middle age group are least deprived at the dimension level, along with 63.% of the youth and 84.4% of the older group.

Furthermore, the middle age group is more than twice as likely to be in the most deprived category compared to the older group, and three times more likely than the youth. The middle age group's lower scores in both the work for pay, profit and production and in the double labour burden themes explain the high proportions of the group in the most deprived and deprived categories at the dimension level. Their results in work corroborate the results in time use, where labour burden and on-call time are evaluated.

3 CONCLUSION

Education, family planning, voice and work are the four dimensions where the differences between age groups are larger than any differences found in the comparisons between men and women, between rural and urban residents, and between those with and without disabilities.

Overall, the youth are more likely than the other two age groups to be more deprived in sanitation, relationships, clothing and footwear, family planning and voice. The reason this group is the most deprived group in sanitation, relationship, and clothing and footwear is partially due to the themes related to sanitary products and menstruation in each of these dimensions, and the way these themes are scored. For these themes, individuals who do not menstruate (i.e. men and non-menstruating women) are regarded as least deprived, while menstruating women are categorised into one of the three lower deprivation categories. This has the effect of pushing the score of those individuals for whom the themes are relevant (because they menstruate) down.

The middle age group is more likely to be more deprived in food, environment, time use and work. While the difference between age groups in the first three of these dimensions is relatively small, the difference in the work dimension is large.

The older group is more likely to be more deprived in health, education and energy. While the difference in deprivation levels between groups in energy is not large, the older group is markedly more deprived in education and health. Regarding health, the older group is 1.5 times less likely than the youth to be in the least deprived category, and is less likely to be least deprived in three of the four indicators of health, especially general health care access.

In water and shelter, the youth and the middle group are similar in their distribution in each deprivation category while the older age group is less deprived than the two younger groups in these dimensions.

SUPPORTING DOCUMENTS

This is one of a series of six IDM South Africa Briefing Notes. They provide a summary of the overall results, comparisons by age, gender, locality and disability status, and finally, an overview of the South African Country Study and revised data analysis methods. Two further documents have been produced to support this series of briefing notes:

1. The updated index construction and dimension scoring procedures for South Africa (v2), see Suich et al. (2020b).
2. The detailed tables of updated results for each of the indicators, themes and dimensions for the South African main sample, see Suich et al. (2020a). The differences in results arising from the use of the revised methods can be observed in detail by comparing them with the original results generated from the original methods, provided in Appendix A.2 of Suich et al. (2020c).

These can all be found at: <https://www.individualdeprivationmeasure.org>

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From July 2020, the research reported here will be taken forward under the name Individual Measure of Multidimensional Poverty (IMMP). The IMMP Program will be housed in the Poverty and Inequality Research Centre at the Crawford School of Public Policy, The Australian National University. Information at [IMMP.crawford.anu.edu.au](https://immp.crawford.anu.edu.au) For more information, contact immp.crawford@anu.edu.au