

ANNEX 3:
**Rural-urban comparisons in the Multi-indicator
Cluster Survey**

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TABLE OF CONTENTS

1	Introduction	2
2	Rural-urban statistical comparisons	3
2.1	Water and sanitation	4
2.2	Family problems	5
2.3	Education.....	6
2.4	Child nutrition	7
2.5	Child health care.....	8
2.6	Ante-natal and childbirth care	10
2.7	Sexual attitudes and behaviour	11
3	Conclusions	13

1 Introduction

As the 2013 National Human Development Report was being finalised, UNICEF published the results of its latest “Multiple Indicator Cluster Survey” or “MICS”, carried out in BiH during the winter of 2011-12. Its simultaneous coverage of urban and rural settlements gives an almost unique opportunity to make a detailed quantitative comparison and so identify those aspects of human development where rural areas really are different.

The survey interviewed 5,778 households throughout BiH, examining the following topics:

- Nutrition
- Child health
- Water & sanitation
- Reproductive health
- Child development
- Literacy & education
- Child protection
- Sexual attitudes & behaviour
- Access to mass media & use of ICT
- Tobacco & alcohol use
- Subjective wellbeing

The survey used the “settlement approach” to defining rurality, with designated urban settlements classified as urban and everywhere else as rural. This approach is most likely to highlight any differences in infrastructure, nutrition and access to services, which are the some of the main elements covered by the survey.

The full report and appendices may be downloaded from http://www.unicef.org/bih/media_21363.html and a video presentation of the main finding may be viewed at <http://youtu.be/jNTxeXCiOxw>.

A special analysis of the results from 1,788 Roma households may be downloaded from http://www.unicef.org/bih/media_21441.html and the video summary viewed at <http://youtu.be/iLkZP2hyTsE>.

2 Rural-urban statistical comparisons

The survey design gave equal coverage to urban and rural areas, where “urban” and “rural” were defined by the administrative classification of each settlement (essentially the same approach as used in the Rural Household Survey), and in many cases the data are presented and discussed with an urban-rural split. In order to look at possible differences between urban and rural areas, the Human Development Report focuses on 44 indicators presented in Appendix E of the MICS report, where sufficient statistical detail was available not only to compare rural and urban areas, but also to assess how significant were the differences found. The extensive study also contains many other urban-rural comparisons, though without the same level of statistical detail; key findings from other parts of the study are summarised in the NHDR section ***“Error! Reference source not found.”***

Note to the following analyses

Each of the MICS indicators generates a score between 0 and 1; further explanation is given below each graph as necessary.

In each of the charts that follow, the error bars indicate the 5 % confidence interval for the difference between the rural mean and the urban mean. In other words, if the error bars for the rural column overlap those for the urban column, then there is no significant difference between them. If there is a clear gap between the two sets of error bars, then one can be at least 95 % certain that the rural and urban values really are different. This is shown in the text with the standard convention:

(*) = significant at the 95 % confidence level

(**) = significant at the 99 % confidence level

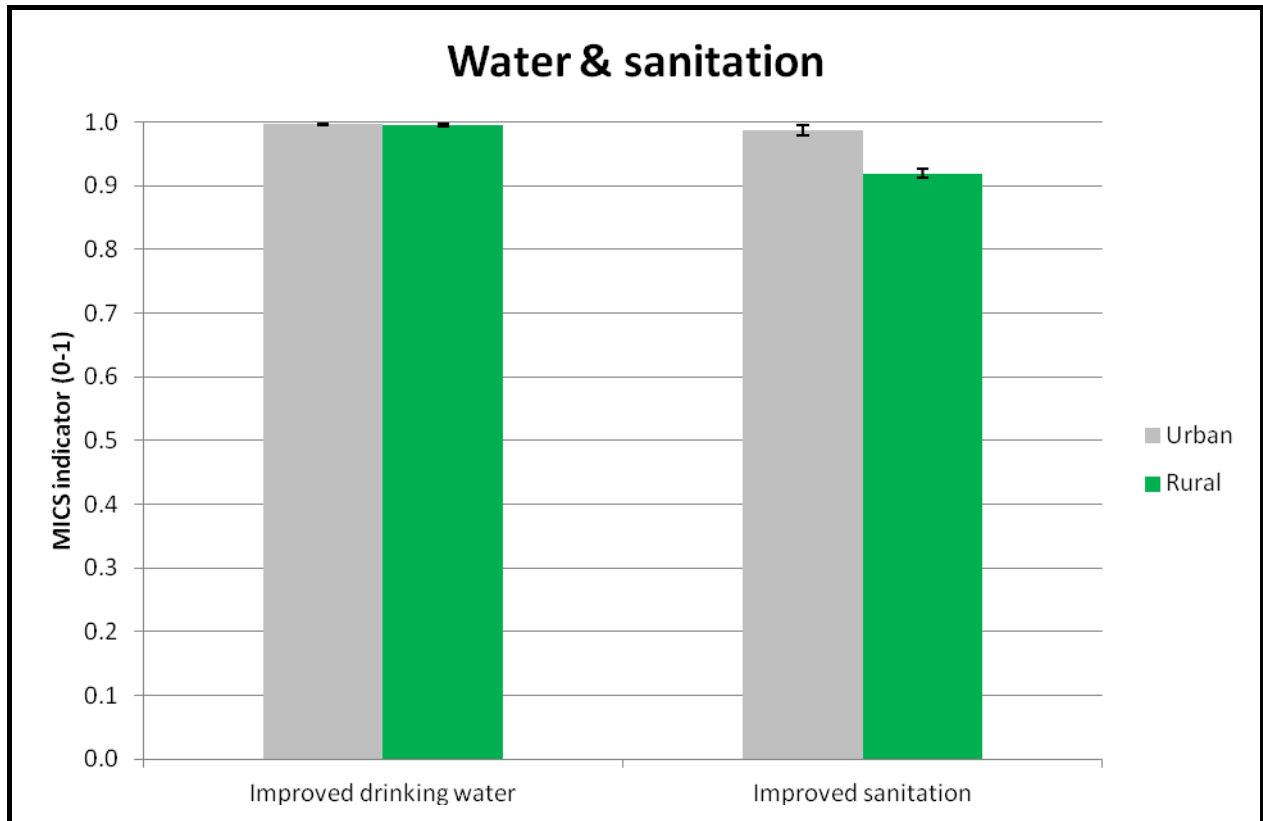
(***) = significant at the 99.9 % confidence level

If the difference between rural and urban areas for a particular MICS indicator is described as “not significance”, it means that if you had simply tossed a coin to decide whether each household should be labelled as “urban” or “rural”, at least 5 times out of a hundred you would have found a difference between the urban and rural equal or greater than that measured by the survey. In other words, the apparent difference shown by the survey could well be down to chance.

However, when the comparison is described as “significant (*)”, it means that it is quite unlikely that such a big urban-rural difference would arise by chance, and so the difference is probably genuine. When a comparison is described as “very highly significant (***)” it means there is almost no possibility that it arose by chance, and so one can be very confident that this is a real difference between urban and rural households.

2.1 Water and sanitation

The following chart shows the finding for rural and urban households:



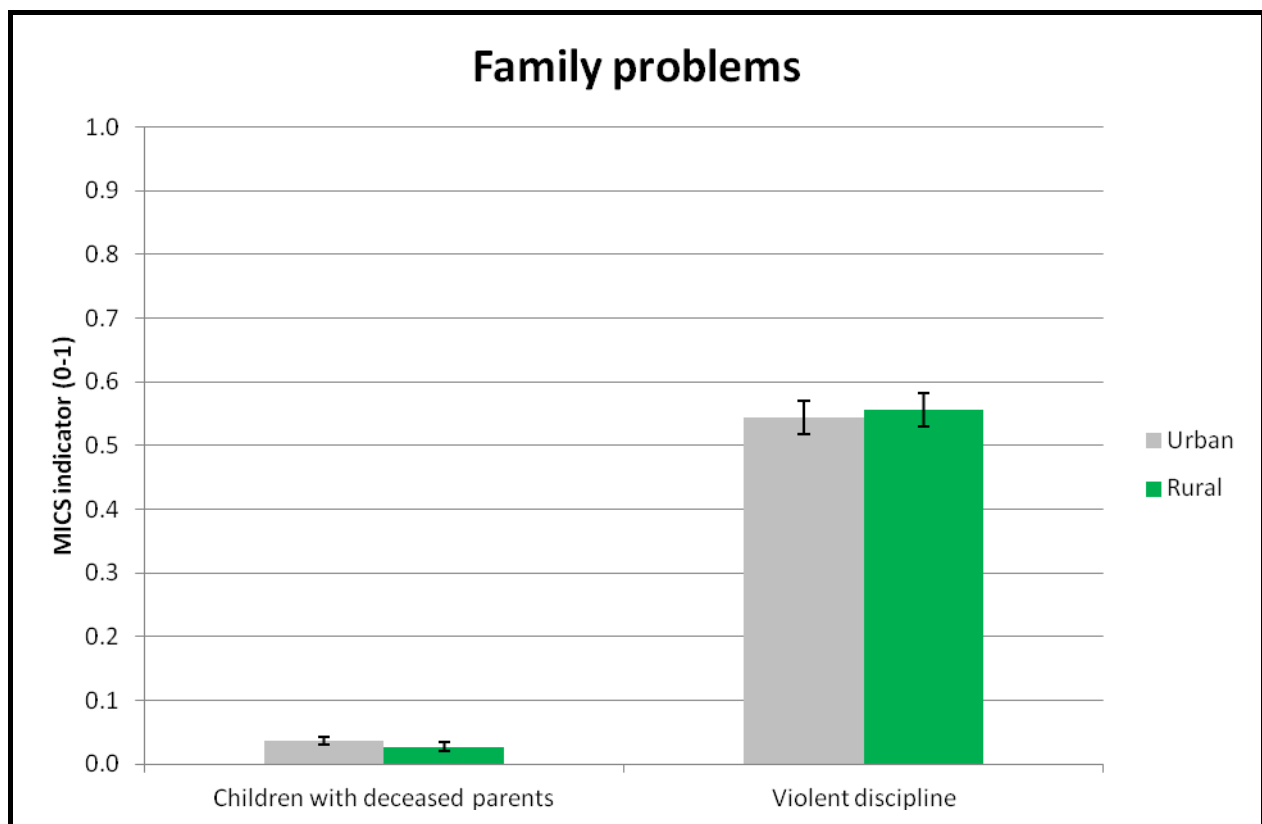
- 99.6 % of households had access to improved sources of drinking water, with no significant difference between urban and rural areas.
- In terms of sanitation, there was a very highly significant difference (***) between rural and urban areas, with only 92.0 % of rural households having access to improved sanitation, compared to 98.7 % in urban areas. In other words, 8 % of rural households use a basic pit latrine or share a toilet with one or more other families, compared to less than 2 % of urban households.

Conclusion:

- ***Inadequate sanitation is a problem affecting 8 % of rural households but is rare in urban areas.***

2.2 Family problems

The following chart shows two indicators of family problems:



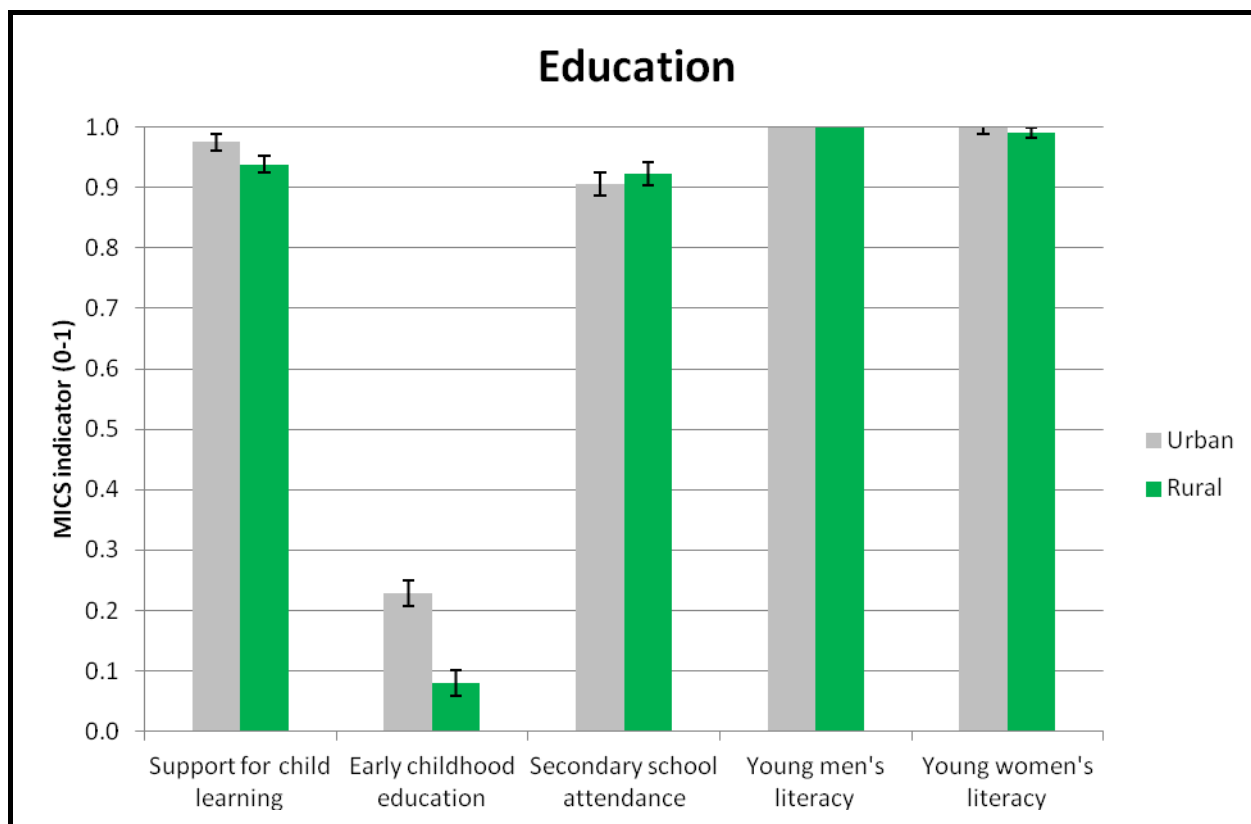
- Overall, 3 % of children are orphans, having lost one or both parents; this is slightly less common in rural areas but the difference is not significant.
- Just over half of children has been subjected to violent discipline at some point in the month preceding the survey; this was slightly more common in rural households but the difference was not at all significant (whereas severe physical punishment was 5-6 times more frequent where the head of household was uneducated, compared to households whose head had completed at least primary education).

Conclusion:

- ***The two family problems of deceased parents and violent discipline show no correlation with rurality.***

2.3 Education

The following chart shows the finding for rural and urban households:



Out of these five indicators, three show a significant difference between rural and urban areas:

- More than 95 % of relevant surveyed families had recently spent time with their 3-5-year old children in activities that promote learning, but this was somewhat less common (*) amongst rural families.
- Attendance at kindergartens is relatively uncommon throughout BiH, and in rural areas is only a third of the level in urban areas (***).
- Literacy amongst men aged 15-24 is very high in both rural and urban areas, but illiteracy is more common in rural areas (***). To put this in context, in a rural population of 1,000 young men, three will be illiterate compared to one in a comparable urban population; female illiteracy is also higher in rural areas but the difference is not at all significant.

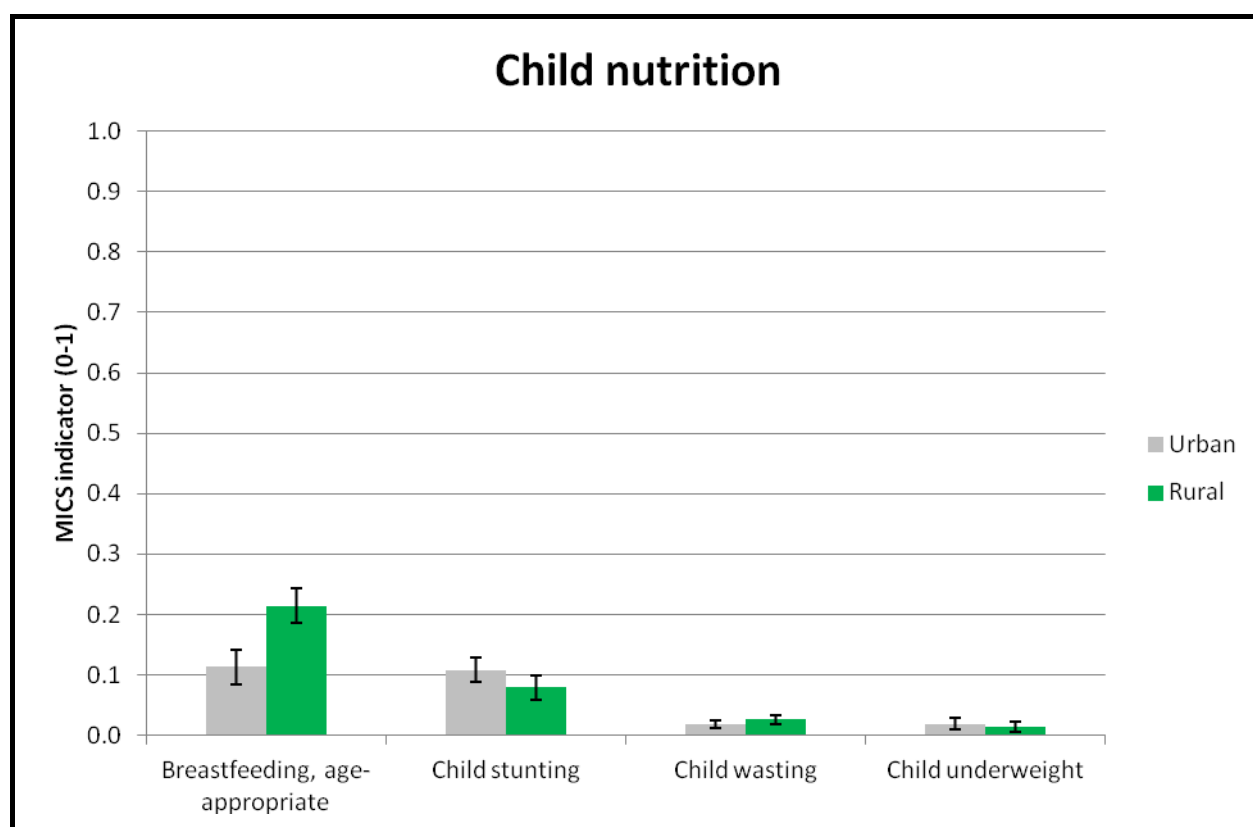
Secondary school attendance is actually higher in rural areas, but the difference is not significant.

Conclusions:

- *Throughout BiH, support for early childhood learning comes much more from the family than from kindergartens, and rural children have slightly less family support than do urban children.*
- *Rural children are considerably less likely to attend a kindergarten but this could reflect a rural “disadvantage”, such as greater travel distance to the nearest kindergarten &/or reduced ability to afford a private kindergarten, or a rural “advantage” of mothers being more likely to be at home with their children than out at work.*
- *Literacy amongst young people is very high throughout BiH, with a small but significant tendency for illiteracy amongst rural men.*
- *Despite the potential difficulties of travel to school discussed elsewhere in this report, the MICS survey presented no indication at all that rurality excludes children from school.*

2.4 Child nutrition

The following chart presents four indicators of child nutrition:



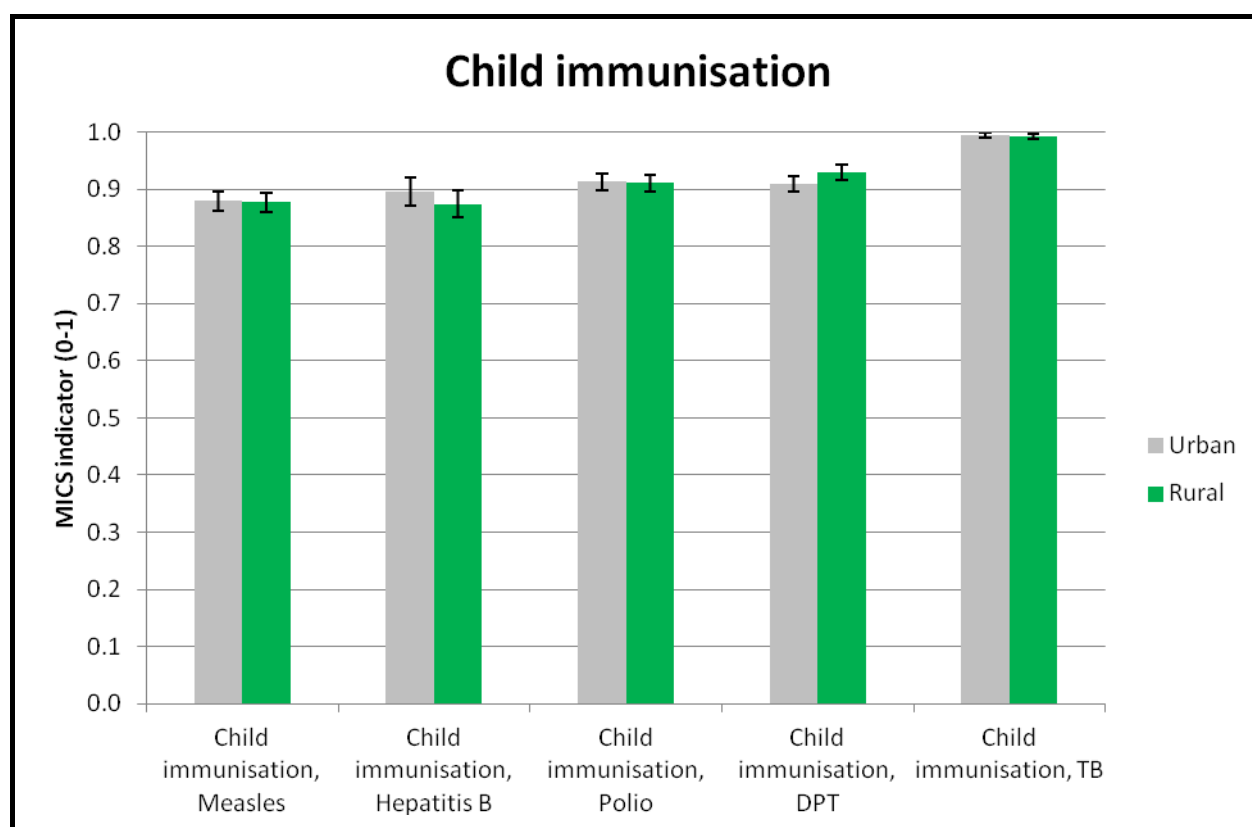
- Children are almost twice as likely (***) to be breast-fed in rural areas.
- The three indicators of child growth are inconsistent: rural children are less likely than urban to be underweight or to display stunting, but are more likely to display wasting – however none of these urban-rural differences is statistically significant.

Conclusions:

- *Breast-feeding (a practice strongly encouraged by UNICEF) is considerably more common in rural areas; again, this might reflect rural “disadvantage” such as reduced access to milk substitutes, or rural “advantage”, with mothers being more likely to stay at home with their young children rather than return to a job straight after their statutory period of maternity leave.*
- *Various other sections of the report suggest that household nutrition is better in rural areas, but this does not appear to have any significant impact on child development.*

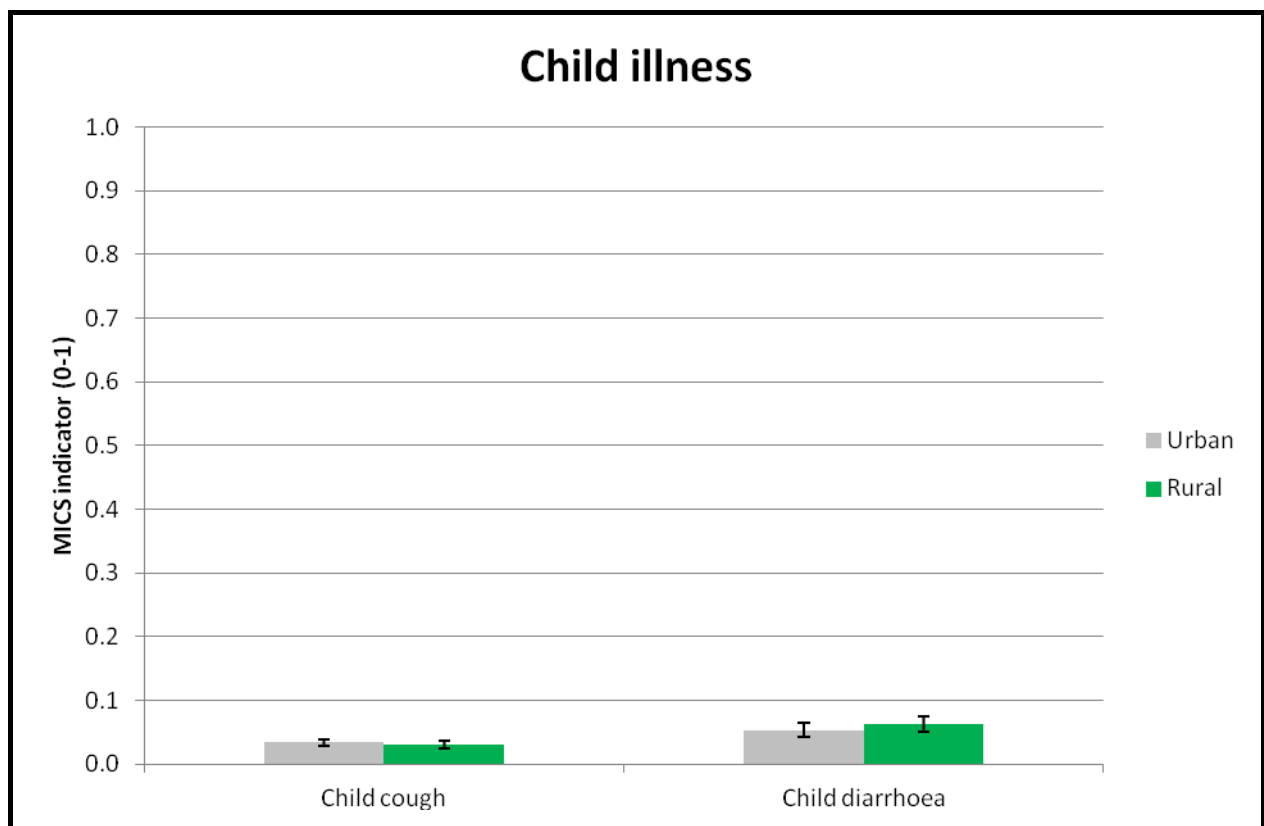
2.5 Child health care

The following chart shows the proportion of children in urban and rural areas who had received vaccination by the appropriate age:



Overall levels of child immunisation are quite high, with no obvious pattern and no significant differences between urban and rural areas.

The next chart shows two indicators of childhood illness (the survey also looked at the frequency of treatment for diarrhoea and suspected pneumonia, but without sufficient detail to make a clear urban-rural comparison):



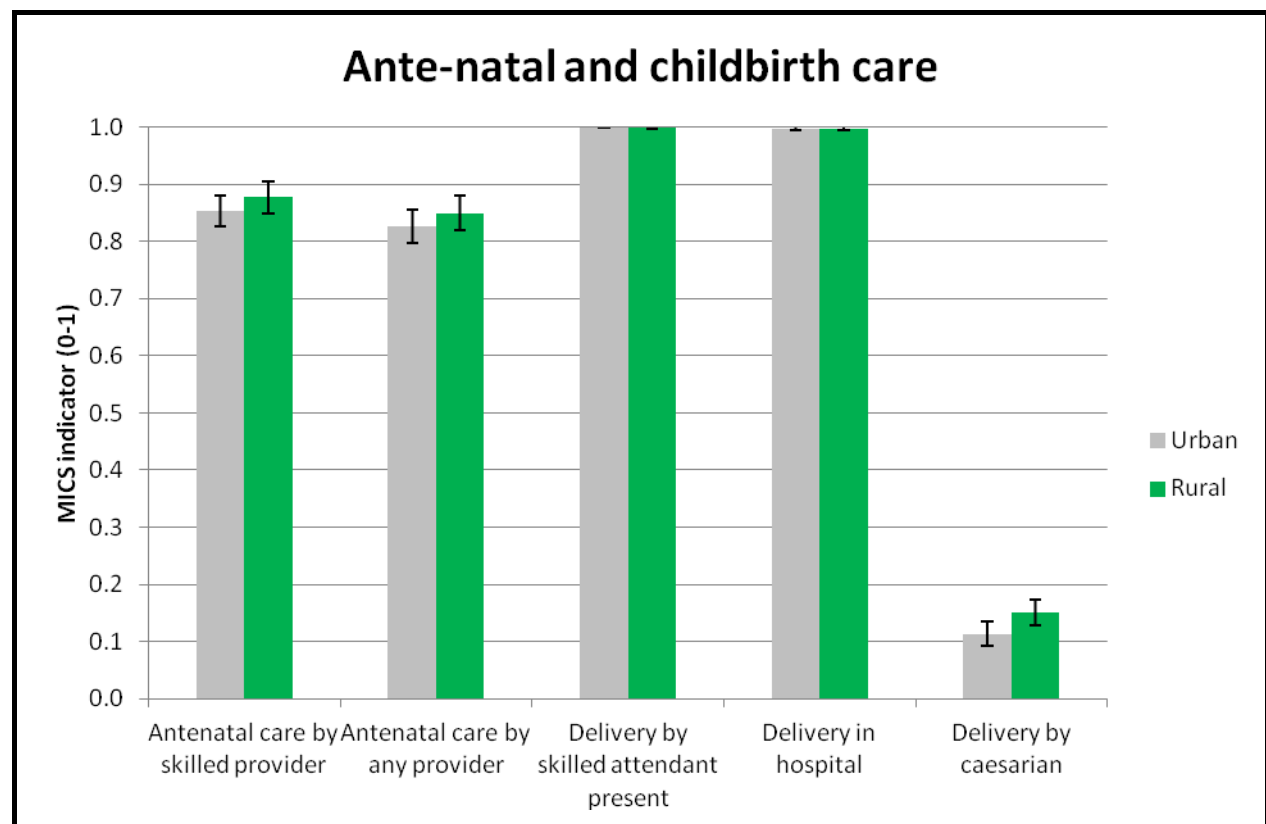
Coughs are slightly more common amongst urban children, diarrhoea amongst rural children, but the differences are small and not significant.

Conclusion:

- ***The greater distance to health-care facilities in rural areas does not have any detrimental effect on childhood immunisation.***
- ***Basic indicators of childhood illness show no important differences between rural and urban areas.***

2.6 Ante-natal and childbirth care

The following chart shows five indicators related to ante-natal care and childbirth:



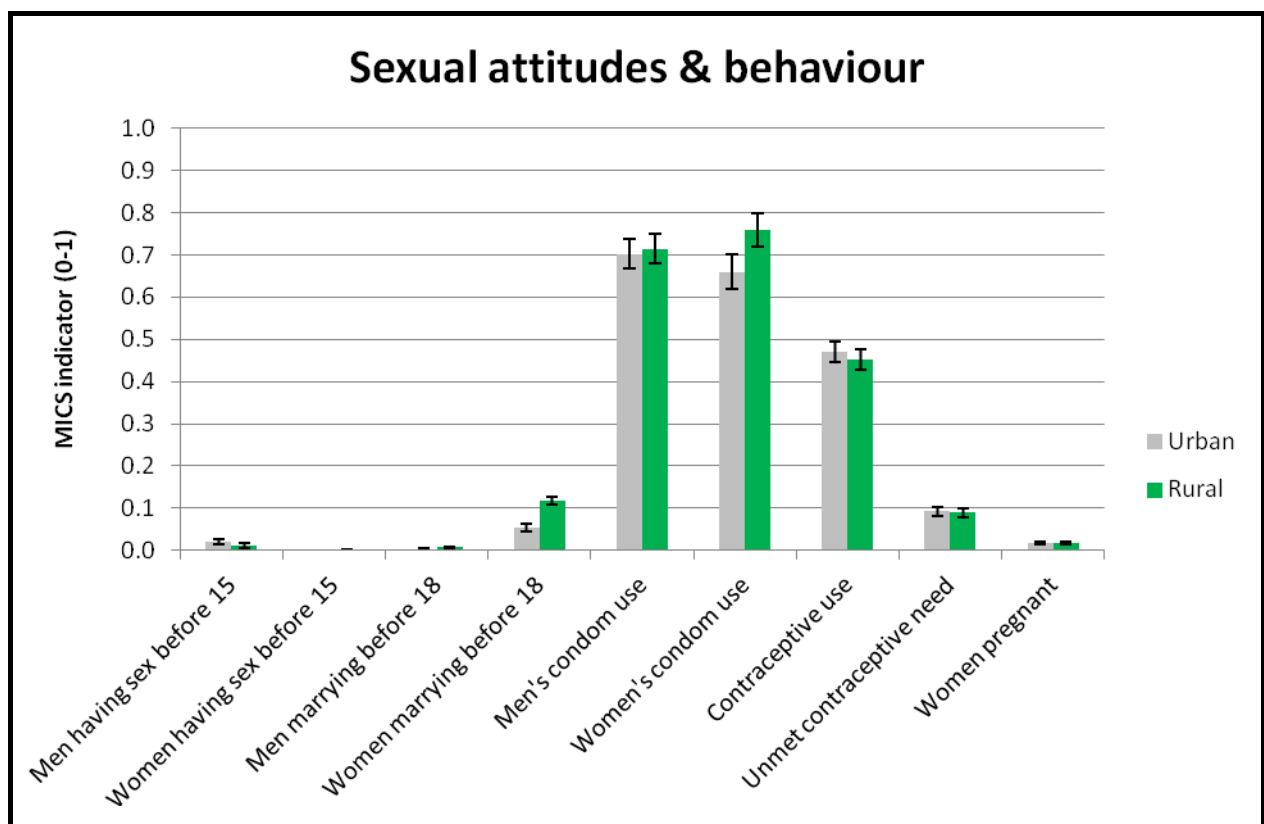
- More than 80 % of mothers received some form of ante-natal care (measured as at least one visit by a skilled professional, and as at least four visits by any provider); such care was somewhat more common in rural areas but the difference was not at all significant.
- More than 99.9% of births had a doctor or midwife in attendance and 99.7 % took place in a hospital, with no difference between urban and rural areas.
- 15 % of rural births took place by caesarean section, compared to 11 % of urban births; the difference is statistically significant at the 90 % confidence level but not at the normally-accepted statistical threshold of 95 %.

Conclusions:

- ***There are no significant differences in ante-natal and childbirth care between urban and rural areas.***
- ***There is some tendency, below the level of statistical significance, for rural mothers to receive more ante-natal care but also to be more likely to give birth by caesarean section.***

2.7 Sexual attitudes and behaviour

The following chart presents a number of indicators related to sex, marriage and contraception:

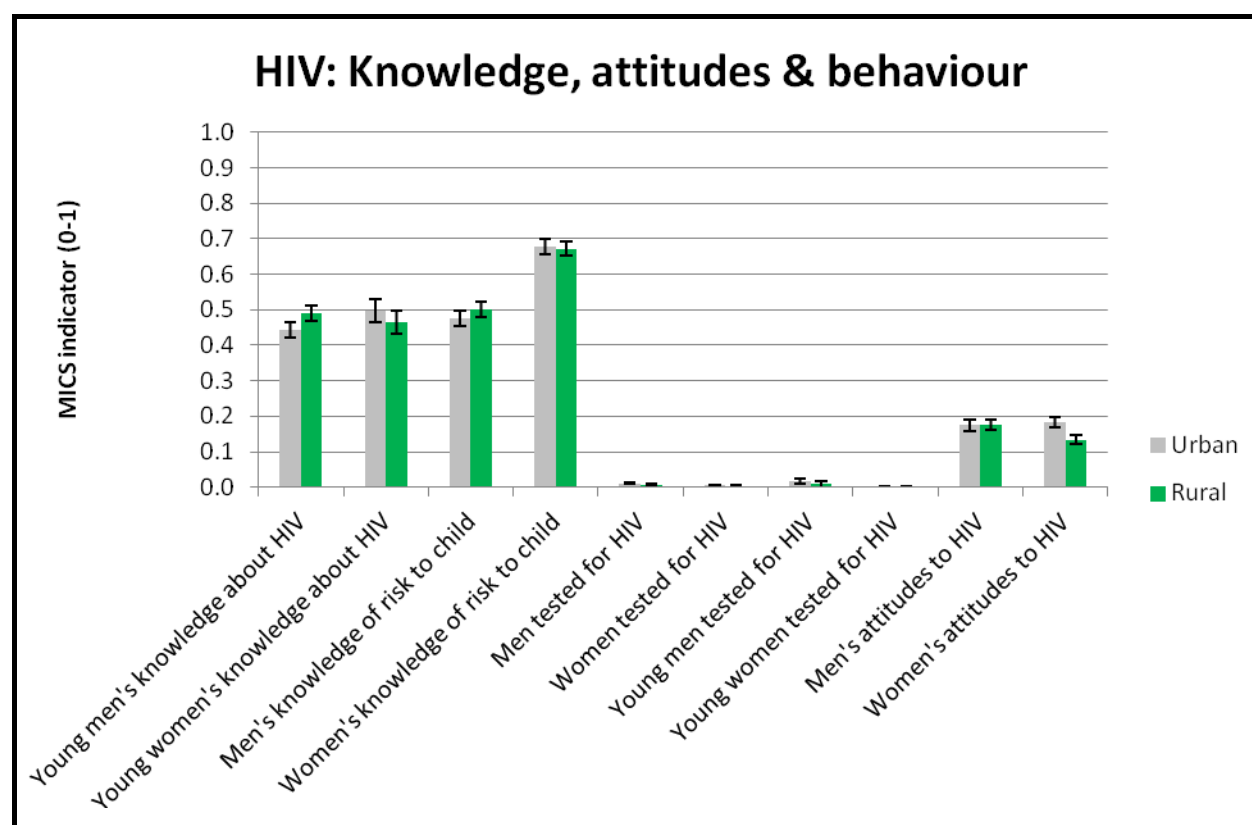


Of these 9 indicators, there are two significant differences between rural and urban households:

- Rural women were more than twice as likely to marry before the age of 18 (**); rural men were more than three times as likely as urban men to marry before 18, but there was considerable variation in the responses and so this difference is not quite strong enough to count as statistically significant.
- Rural women were more likely than their urban counterparts to use condoms when having sex with someone who is not their regular partner (*); rural men were also slightly more likely to use condoms with non-regular partners, but the difference is small and not significant.

For the other 7 indicators there was no obvious rural-urban pattern and no significant differences.

The next chart shows respondents' knowledge of and attitudes to HIV:



Of these 10 indicators, there are two significant (but contradictory) differences between rural and urban households:

- Rural men aged 15-24 are more likely (*) than their urban counterparts to have comprehensive knowledge about HIV prevention; for rural women the situation is reversed, but the rural-urban difference is not significant.
- Rural women are less likely (***) than urban women to have accepting attitudes to people with HIV; for rural men the situation is reversed, but again the rural-urban difference is not significant.

The other 8 indicators show no consistent pattern: sometimes knowledge is higher in rural areas, sometimes in urban; sometimes men have more knowledge, sometimes women.

These two charts together show two areas in which the rural population appears to have better knowledge or practice of safe sex, two areas in which they appear to have poorer knowledge, and 15 areas where there is no significant urban-rural difference. Probably the best conclusions that can be drawn on this topic are:

- ***In rural areas, people are more likely to marry young;***
- ***In all other respects, sexual attitudes and behaviour are very similar in rural and urban areas.***

3 Conclusions

Of the 44 MICS indicators available for statistical analysis, the large majority show either no statistically significant differences between urban and rural households, or inconsistent patterns of urban-rural difference across related indicators. However, the following differences do appear to be sufficiently important to merit further investigation and possibly a policy response:

- [1] The number of ***rural households that are still without adequate sanitation*** is a clear rural issue;
- [2] The overall ***low level of kindergarten attendance***, particularly in rural areas, should be investigated to see to what extent it is a weakness that needs to be addressed, and to what extent it reflects families' ability or preference to look after their children at home;
- [3] There is some indication that ***birth by caesarean section*** is more common in rural areas; the possible causes and implications of this should be investigated;
- [4] The problem of ***early marriage*** is more prevalent in rural than urban areas, but may well be linked to particular ethnic groups (see for example the MICS Roma report).

With these four possible exceptions, the MICS data do not indicate any consistent, serious problem of rural disadvantage amongst the specific topics covered.