Contraceptive use in urban Kenya: Recent trends and differentials set in the policy and program context

Fotso JC, Kizito P, Lumumba V, Moran G, Mukiira C, Speizer I

(in alphabetic order)

Corresponding author: Jean Christophe Fotso (PhD), African Population and Health Research Center (APHRC), P.O Box 10787, 00100 Nairobi, Kenya, Email (jcfotso@aphrc.org); Fax: + 254-20-2720380

1. Introduction

Between the 1970s and late 1990s, the number of married women using contraceptives in developing countries increased to 60% from a mere 10%, and the total fertility rate (TFR) fell by half, from six children per woman to three (Cleland et al, 2006). Kenya followed a similar pattern of increased contraceptive adoption and substantial declines in fertility in the same period; TFR went from a high of eight children per woman in the mid 1970s to around five by the mid 1990s. Increased contraceptive use in the 1980s and 1990s in Kenya was partly due to the government's commitment to family planning (FP) and to the programmatic emphasis on increasing contraceptive use (Warwick, 1982; NCPD, 1984). These positive trends, however, came to a halt in the 1990s (Westoff & Cross, 2006; Curtis & Neitzel, 1996). In Kenya, unmet need for family planning - the percentage of women who report that they do not want to get pregnant ever or for two or more years and are not using contraception - remains high with about one in four married women having an unmet need for FP (Kazuyo, 2010; PRB & APHRC, 2008). High unmet need in Kenya is likely related to scarcity of funding and problems with existing programs that fail to meet the concerns and desires of their users (Prata et al., 2008; Casterline & Sinding, 2000). For instance, according to a population donor landscape analysis of international grant making in population, sexual and reproductive health and rights undertaken in 2004, investments towards international FP by developed countries had dropped to 13% of the mark laid down at the 1994 International Conference on Population and Development (Speidel, 2005). With the continued rise in the number of reproductive age women, the need for modern contraceptives is expected to continue to rise and thus there is a need for rigorous programmatic efforts and increased funding for FP programs.

In Kenya, low contraceptive use and the high unmet need for FP have resulted in an increase in unintended pregnancies; these pregnancies are associated with negative health consequences such as increased infant and maternal ill-health and death (Adetunji, 1998; Gipson et al., 2008). According to the 2008/09 Kenya Demographic Health Survey (DHS), about 43% of all births in the country are mistimed or unwanted, that is unintended (KNBS, 2010). The latest census results further reveal the gravity of the alarming growth in the population and has led to calls for aggressive intensification of FP programs in the country (Magadi & Curtis, 2003). The projections indicate that if the current trend continues, Kenya's population would grow to 85 million by 2050 instead of the 51 million that was earlier projected on the assumption that the fertility decline would continue, indicating an additional 67% (34 million persons) growth burden (Ezeh et al., 2010). Overall, high population growth, coupled with high levels of unintended

births, will undoubtedly hinder progress toward the Millennium Development Goals (Potts & Fotso, 2007; Cleland et al., 2006; White & Speizer, 2007). As a result of rapid urbanization, the number of non-users of contraceptives is on the rise in urban areas, despite the fact that use of contraceptive is higher in urban than rural areas in Kenya (APHRC, 2002). Importantly, there are significant inequities in reproductive health outcomes, with the urban poor tending to have not only the lowest CPR, but the highest TFR and the highest unmet need for FP (Gillespie et al., 2007; Ezeh et al., 2010).

The 2009 Population and Housing census estimated Kenya's population at 38.6 million with a growth rate that is close to 3.0 percent per annum, which is higher than 2.9 percent per annum reported for the 1989-1999 inter-censal period and lower than the 3.4 percent per year in the 1979-1989 period. Although the growth rate was supposed to decline as a realization of the efforts called for by the National Population Policy for Sustainable Development (NCPD, 2000), improvements in child survival and reduction in mortality could have contributed to this increase. Urbanization in Kenya has proceeded tremendously over the past four decades, especially after political independence in the early 1960s. In 1962, for example, only one Kenyan out of twelve lived in urban centers. With an urban growth of 4% and an urban population of more than 30% (NCAPD, 2010), one out of every two Kenyans will live in urban areas before 2030 (and probably by 2015).

Kenya's population & family planning program and policy context

The Government's concern over the rapidly rising population growth rate in the 1960s and 1970s stimulated the adoption of policy strategies that laid the foundation for the onset of fertility transition in the late 1980s. For example the Government officially adopted a family planning policy in 1967 by establishing a maternal child health and family planning programme (MCH/FP) in the Ministry of Health (Kiereini, 1982). To further consolidate policy strategies, the Government established in 1982 the National Council for Population and Development (NCPD) to be in charge of population policy and to coordinate all research activities on population and development in the country (MLE & NCAPD, 2011). In 1984 the government issued the Sessional Paper No.4 on 'Population Policy Guideliness' to guide implementation of the population programme. These guidelines provided the framework that contributed to the increased use of family planning and reduction in fertility to the early 1990's.

The 1994 Programme of Action of the International Conference on Population and Development (ICPD) in Cairo was domesticated in the National Population Policy for Sustainable Development. The overriding concern of this population policy was the implementation of appropriate policies, strategies and programs that will consistently match the population growth to the available national resources over time in order to improve the well-being and the quality of life of the individual, the family and the nation as a whole (NCPD, 2004). In 2007, Kenya's Ministry of Health (MOH) formally approved and adopted the country's first ever National Reproductive Health Policy. With the theme "Enhancing the Reproductive Health Status for All Kenyans," the policy provided a framework for equitable, efficient, and effective delivery of high-quality reproductive health services throughout the country, and emphasized reaching those in greatest need and most vulnerable. It aimed to guide planning, standardization, implementation, and monitoring and evaluation of reproductive healthcare provided by various stakeholders. A Kenya National leaders' Population Conference took place in November, 2010 and recommendations arising from their deliberations are being incorporated in the new National Population Policy (2011-2020) that is currently under review.

Within this background, this paper seeks to 1) describe trends in modern contraceptive use, types of methods used and the sources of contraceptives in urban Kenya; 2) examine how these trends vary between the urban poor and the urban non-poor, with poverty status captured by household wealth and women's education; and 3) investigate the extent to which these findings are linked to the Kenya's family planning and RH policy context.

2. Data and Methods

The study uses secondary data from the 1993, 1998, 2003 and 2008/9 Kenya Demographic and Health Survey (KDHS). As in other countries, the surveys are household-based, and designed to allow representative samples for urban and rural areas, separately. Urban areas are over-sampled to get enough cases for analysis (KNBS, 2010). The surveys utilized a two-stage sample design, with sample clusters selected in the first stage, and households selected in the second stage. In the KDHS individual women's questionnaire, a set of questions about contraceptive use and source of the contraceptive methods were asked. The key variables of interest in this paper are 1) modern contraceptive use; 2) type of method used, classified as short-tem (pills, injections and condoms), long-term (intrauterine device and Norplant), and permanent (sterilization); and 3) the source of contraceptives (public and private). For the analyses focused on urban Kenya, three independent variables are used, namely, the survey

year, household wealth recalculated based on all urban households, and women's education. The most detailed analyses which are mainly bivariate are restricted to urban, currently married women. The number of currently married women surveyed in urban and rural areas in the four datasets is presented in Table 1. We supplement the DHS data with information from a review of family planning and reproductive health policies.

3. Results

3.1. Use of contraceptives

Figure 1 shows the trends and urban-rural differentials in the use of traditional contraceptive methods (Graph 1.1) and modern contraceptive methods (Graph 1.2), and the trends and socioeconomic differentials in the modern contraceptive prevalence rate (CPR) by household wealth and women's education. As can be seen, the use of traditional methods of contraception among Kenyan currently married women has remained low at between 5% and 9% during the period under review with no observable differences by place of residence. After an initial increase between 1993 and 1998, traditional CPR declined noticeably in 2003 and 2008/09 (Graph 1.1). Three distinct phases emerge from Graph 1.2 on modern CPR. Across urban and rural areas of Kenya, modern CPR increased between 1993 and 1998, stalled during the following inter-survey period, and increased markedly between 2003 and 2008/09, from 29.2% to 37.7% in rural Kenya, and from 39.9% to 46.6% in urban areas.

Graph 1.3 shows a pattern of slow narrowing of the urban poor-urban rich gap in modern CPR between 1993 and 2003, with modern CPR increasing from 22.0% to 31.0% among the urban poor, and stalling around 50% among the urban rich. As a result, urban rich women were about 2.4 times (51.7% versus 22.0%) as likely as the urban poor to use modern contraceptive in 1993; the ratio dropped to 2.0 (50.6% versus 25.9%) in 1998, and to 1.6 (49.5% versus 31.0%) in 2003. During 2003 and 2008/09, there was an abrupt trend that resulted in virtually no difference between the urban poor and the urban rich in the use of modern methods of contraceptives in 2008/09. Modern CPR increased by nearly 12 percentage points among the urban poor, and declined by five percentage points among the urban rich, resulting in a two percentage points difference between the poor and the rich (CPR of 42.8% among the poor and 44.9% among the rich).

Unlike Graph 1.3, Graph 1.4 depicts a gradual, consistent widening of the gap between urban women with no education and their counterparts with secondary or higher education in

contraceptive use, as a result of a declining trend among women with no education (from 18.2% in 1993 to 14.3% in 2008/09) and a plateau around 50% among women with secondary education. While in 1993, secondary educated urban women were about 2.8 times more likely than their counterparts with no education to use a modern method of contraception (50.7% versus 18.2%), the ratio rose to 4.1 in 2003 (51.3% versus 12.6%), and declined slowly afterwards to 3.6 (52.2% versus 14.3%). There was also a sharp increase among women with primary education.

3.2. Method-mix

Table 2 presents the distribution of urban currently married women who were currently using a modern method, by the type of method used (short-term, long-term or permanent). As can be seen in Panel 1 (all women), 72% of current users on average resort to short-term methods (pills, injections and condoms); while only about 17% on average use long-terms methods (IUCD and Norplant). More worrying is the sharp declining trend in the proportion of long-term method users (from 25.2% in 1993 to 12.1% in 2008/09), and of permanent method users (13.8% to 6.6%). During the same period, the proportion of users who were using short-term methods rose steadily from 31.0% to 81.4%.

Panel 2 of Table 2 displays the same information by wealth group. On average, more than 79% of the urban poor use short-term methods, while only 9% use long-term methods. Among the middle class, the proportions are 79% (for short-term method on average) and 13.5%, (for long-term method on average), among the urban rich, they are 62.2% and 25.0%, respectively. The declining trend in long-term and permanent methods and the increasing trend in the short-term methods, as described above, are apparent in all three wealth groups. Panel 3 of Table 2 shows differences in method-mix by education. Overall the patterns are similar to those observed in Panel 2 (on wealth differentials).

3.3. Source of contraceptives

Table 3 presents the percentage of urban, married women using modern contraception that report that they received this method from a public source. On average, about half of urban current users of modern contraceptives sought their method from a public source, as can be seen in Panel 1 of Table 3. The proportion using public sources has slightly declined over time, from 56.5% in 1993 to 50.0% in 2008/09, with a low of 45% in 2003. Expectedly, there is a graded, inverse association between use of a public source of contraceptive and wealth and

education, with the urban poor about twice as likely on average to resort to a public source, compared to the urban rich, and urban women with no education about 1.5 times more likely on average to use a public source, compared with their counterparts with secondary or higher education (see Panels 2 and 3 of Table 3).

Panel 2 illustrates a general downward trend in the use of public sources for contraceptives among all wealth groups; no discernable differences are found between the extent of decline for the urban poor and the urban rich. By contrast, Panel 3 shows that the use of public source went down more dramatically among women with no education (-42% decline – from 89.0% to 51.8%), than among women with secondary or higher education (-13% decline – from 54.3% to 47.4%).

Finally, Panel 4 presents the use of the public sector by type of method (short-term, long-term and permanent methods). On average across the four survey periods, about half of short-term method users resort to a public facility; slightly less than half (47.3%) of long-term method users seek supply from a public facility, and slightly more than half (54.1%) of permanent method users resort to a public place. Over time, the proportion of public source dropped markedly among short-term method users (by 18% - from 60.6% in 1993 to 49.9% in 2008/09); it remained almost unchanged among long-term method users; and increased slightly among permanent method users (by 5% - from 52.9% to 55.7%).

Discussion

These findings will be discussed against the country's policy and program context which is under review.

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References

Adetunji J. 1998. Unintended Childbearing in Developing Countries: Levels, Trends, and Determinants. DHS Analytical Reports No. 8. Calverton, MD: Macro International.

APHRC (African Population and Health Research Center), 2002. Population and Health Dynamics in Nairobi's Informal Settlements. Nairobi (Kenya): African Population and Health Research Center

Casterline JB, Sinding SW. 2000. Unmet need for family planning in developing countries and implications for population policy. Population and Development Review 26(4):691-723.

Cleland J, Bernstein S, Ezeh A, Faundes A, Glasier A, Innis J. 2006. Family planning: the unfinished agenda. The Lancet 368(9549):1810-1827.

Curtis SL, Neitzel K. 1996. Contraceptive Knowledge, Use and Sources. DHS Comparative Studies No. 19. Calverton, Maryland: Macro International Inc.

Ezeh A, Kodzi I, Emina J. 2010. Reaching the Urban Poor with Family Planning Services. *Studies in Family Planning* 41(2): 109–116

Gillespie D, Ahmed S, Tsui A, Radloff S. 2007. Unwanted fertility among the poor: an inequity? Bulletin of the World Health Organization 85:100-107.

Gipson JD, Koenig MA, Hindin M. 2008. The effects of unintended pregnancy on health outcomes: a review of the literature. Studies in Family Planning 39(1): 18-38.

Kazuyo M. 2010. *A Re-examination of Recent Fertility Declines in Sub-Saharan Africa.* DHS Working Papers No. 68. Calverton, Maryland, USA: ICF Macro

Kenya National Bureau of Statistics (KNBS) and ICF Macro. 2010. Kenya Demographic and Health Survey 2008-09. Calverton, Maryland: KNBS and ICF Macro

Kiereini EM. 1982. Kenya's Maternal Child Health Family Planning Program (Family Health). J Famil Health Train 1(1):17-19

Magadi, M. A. and Curtis, S., (2003) "*Trends and Determinants of Contraceptive* Method Choice in Kenya" Studies in Family Planning 34(3):149-159

Measurement, Learning and Evaluation (MLE) Project & National Coordinating Agency for Population and Development (NCAPD). 2011. *Family Planning and Reproductive Health in Urban Kenya: Levels, Trends and Differentials*. Chapel Hill, NC: Measurement, Learning and Evaluation (MLE) Project & National Coordinating Agency for Population and Development (NCAPD).

National Coordinating Agency for Population and Development (NCAPD). 2010. National Population Policy for Sustainable Development (NPPSD). 2010.

National Council for Population and Development (NCPD). 2000. National Population Policy for Sustainable Development.

National Council for Population and Development (NCPD). 1984. Population Policy Guidelines, Sessional Paper 4. Nairobi: National Council for Population and Development

National Council for Population and Development (NCPD). 2004. Population Policy Guidelines,ICPD+10, September, 2004

Potts M, Fotso JC. 2007. Population growth and the Millennium Development Goals. The Lancet 369(9559): 354-355.

Prata N, Sreenivas A, Vahidnia F, Potts M. 2008. Saving maternal lives in resource-poor settings: Facing reality. Health Policy. 89:131-148.

PRB & APHRC. 2008. The 2008 Population Africa Data Sheet. Population Reference Bureau (PRB) & African Population and Health Research Center (APHRC). October 2008, Washington, DC, 2008.

Speidel J. "Population Donor Landscape Analysis for Review of Packard foundation International Grantmaking in Population, Sexual and Reproductive Health and Rights" (Packard Foundation, Los Altos, CA, 2005).

Warwick, D.P. 1982. Population Policies and their Implementation in Eight Developing Countries. Cambridge: Cambridge University Press.

Westoff CF, Cross AR. 2006. The Stall Fertility Transition in Kenya. DHS Analytical Studies No. 9. Calverton, Maryland: ORC Macro.

White J, Speizer I. 2007. Can family planning outreach bridge the urban-rural divide in Zambia? BMC Health Services Research 7:143.

Table 1. Number and distribution of currently married women in the 1993, 1998, 2003 and 2008/09 Kenya DHS

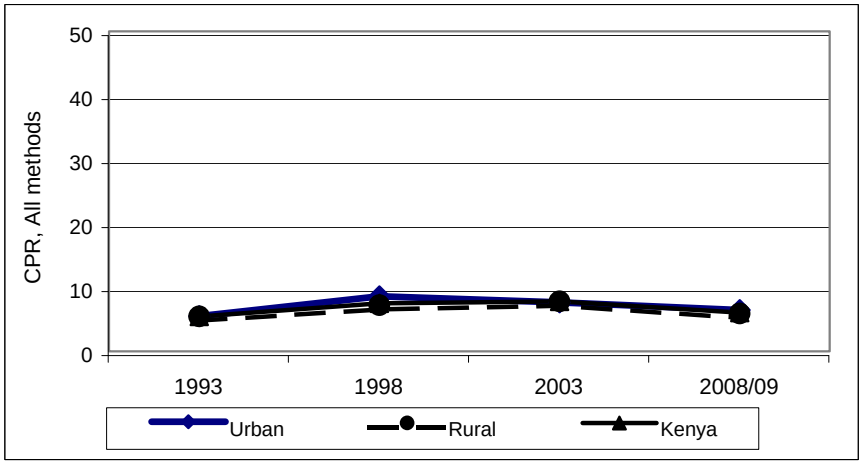
	All four surveys	1993	1998	2003	2008/09
Total Kenya	19,347	4,583	4,847	4,876	5,041
Rural Kenya	15,041	3,976	4,009	3,436	3,620
Urban Kenya	4,306	607	838	1,440	1,421
Urban sample by wealth[1,2]					
Poor	30.1	28.6	28.3	31.3	31.6
Middle	34.0	31.8	33.9	34.5	34.9
Rich	35.9	39.6	37.9	34.2	33.6
Total	100.0	100.0	100.0	100.0	100.0
Urban sample by education[1]					
No education	6.9	10.2	5.3	8.1	5.1
Primary	42.3	43.2	44.4	44.1	38.3
Secondary+	50.8	46.6	50.3	47.8	56.6
Total	100.0	100.0	100.0	100.0	100.0

[1]Weighted percentages

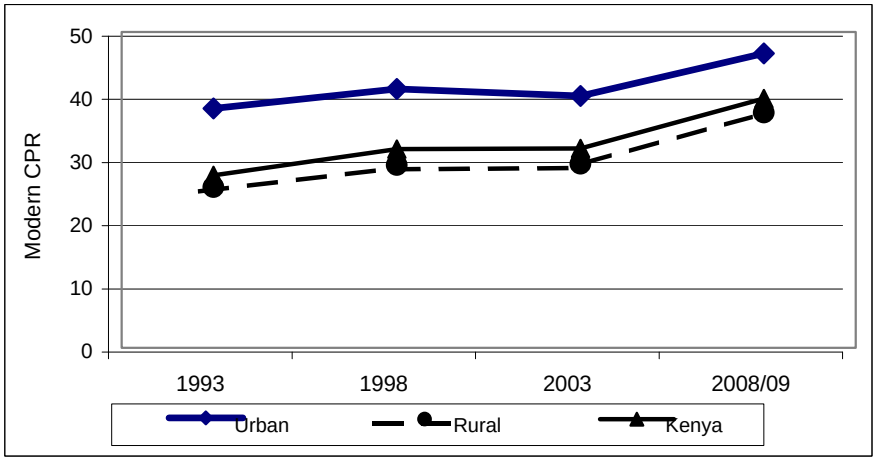
[2]The distribution is not perfectly as tertiles because the wealth variable is constructed at the household level

Figure 1. Trends in contraceptive prevalence rate (CPR) in Kenya

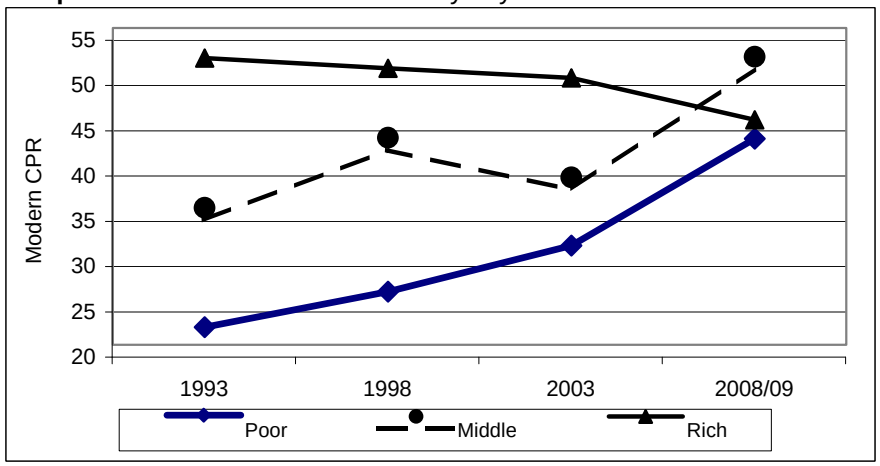
Graph 1.1. CPR-Traditional methods in Kenya



Graph 1.2. Modern CPR in Kenya



Graph 1.3. Modern CPR in urban Kenya by household wealth



Graph 1.4. Modern CPR in urban Kenya by education

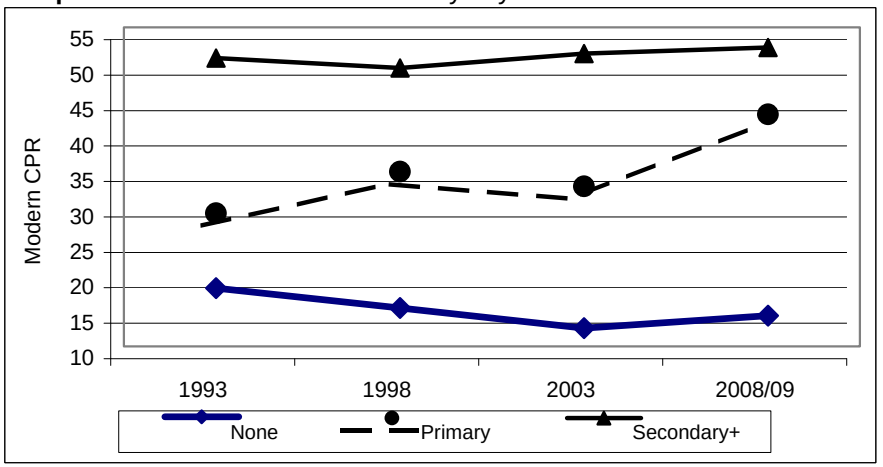


Table 2. Percent distribution of currently married women currently using a modern method, by the type of method, Urban Kenya

	All four surveys	1993	1998	2003	2008/09
1. All women					
Short-tem	72.0	61.0	66.4	72.7	81.4
Long-term	17.3	25.2	19.2	17.0	12.1
Permanent	10.7	13.8	14.4	10.4	6.6
Total	100.0	100.0	100.0	100.0	100.0
N	1,705	222	318	550	615
2. By household wealth					
Poor					
Short-tem	79.4	76.3	73.8	74.5	86.2
Long-term	9.0	7.8	13.5	15.1	2.9
Permanent	11.7	16.0	12.7	10.4	10.9
Total	100.0	100.0	100.0	100.0	100.0
Middle					
Short-tem	79.0	61.2	75.8	78.6	88.3
Long-term	13.5	28.0	12.5	15.1	7.6
Permanent	7.5	10.8	11.7	6.3	4.1
Total	100.0	100.0	100.0	100.0	100.0
Rich					
Short-tem	62.2	56.1	56.5	67.0	68.5
Long-term	25.0	29.1	26.5	19.5	25.9
Permanent	12.8	14.8	17.0	13.5	5.6
Total	100.0	100.0	100.0	100.0	100.0
3. By Education					
None					
Short-tem	63.6	56.7	55.0	58.9	90.2
Long-term	2.7	0.0	5.5	4.8	1.1
Permanent	33.8	43.3	39.5	36.3	8.8
Total	100.0	100.0	100.0	100.0	100.0
Primary					
Short-tem	79.6	65.3	75.5	81.4	88.0
Long-term	9.6	15.4	11.5	10.3	4.9
Permanent	10.8	19.3	13.1	8.3	7.1
Total	100.0	100.0	100.0	100.0	100.0
Secondary+					
Short-tem	68.0	59.0	61.2	68.2	77.4
Long-term	22.3	32.3	24.5	21.4	16.4
Permanent	9.7	8.7	14.4	10.5	6.2
Total	100.0	100.0	100.0	100.0	100.0

Table 3. Public source of contraceptives among currently married women currently using a modern method, Urban Kenya[1]

	All four surveys	1993	1998	2003	2008/09
1. All women	50.4	56.5	52.6	44.9	50.0
N	1,705	222	318	550	615
2. By household wealth					
Poor	66.3	77.0	54.4	65.7	69.4
Middle	57.8	76.8	65.2	52.9	48.9
Rich	35.4	39.1	42.3	26.7	33.9
3. By education					
None	62.5	89.0	21.9	69.7	51.8
Primary	57.9	55.8	59.5	61.5	54.7
Secondary+	45.5	54.3	49.3	34.1	47.4
4. By method					
Short-tem	50.5	60.6	52.4	44.6	49.9
Long-term	47.3	48.6	50.8	41.8	48.1
Permanent	54.1	52.9	55.5	51.8	55.7

[1]The source is categorised as public, private and other. Other is less than 4%