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sexual health

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Smarter and safer Education protects against HIV in rural Uganda

Most studies in Africa have shown that higher education levels are linked to greater risk of HIV infection. Research spanning a decade in rural Masaka District, south-west Uganda, suggests that this is changing, especially among young women.

Although schooling can boost access to and understanding of health promotion campaigns, it also leads to greater wealth and mobility, increasing the potential exposure to HIV infection. To clarify the balance of these effects, researchers at the MRC/UVRI Uganda Research Unit on AIDS in Entebbe looked at changes in schooling levels, HIV prevalence and condom use in Masaka between 1989/1990 and 1999/2000.

They found that:

- In 1989/1990, higher educational attainment was associated with greater risk of HIV infection, especially among men, but this could be explained by the age of the groups surveyed.
- In 1999/2000, for females aged 18-29 years, there is a significant link between higher educational level and lower HIV prevalence, even taking into account age, gender, marital status and wealth.
- There is no clear relationship between education and HIV infection in younger or older males.
- Condom use has increased in the surveyed population over time.
- There is a strong association between higher schooling levels and the likelihood of ever having used a condom.
- While the level of condom use is higher among males, the link between education and condom use is stronger for women.

Over the decade there has been an increase in education levels and the supply of schools in the area. Higher education levels are increasingly linked with less HIV infection, especially for young people. More educated young adults, especially women, have become more likely to respond to HIV/AIDS information and prevention campaigns by effectively reducing their sexual risk behaviour. One potential explanation is that education promotes confidence in decision-making and will particularly help women, who typically play a subservient role in sexual negotiation.

This is an age group in which individuals will have started their sexual life after the beginning of HIV/AIDS information campaigns. The study suggests that, once information about HIV and its prevention is spread, more educated young individuals are able to adapt quickly and change their behaviour. From a policy perspective, this study is encouraging. The researchers conclude that:

- Information campaigns can be effective in changing behaviour.
- The role of the education sector in fighting the epidemic should not be overlooked, especially in many African countries where it is itself under great strain due to the disease.
- In the long run, a more educated population is more responsive to health promotion campaigns.
- Alternative approaches are needed to reach less educated individuals.

Damien de Walque
Development Research Group, The World Bank, 1818 H Street, NW, Washington, DC 20433, USA
T +1 202 473 2517 **F** +1 202 522 1154
ddewalque@worldbank.org

'Changing association between schooling levels and HIV-1 infection over 11 years in a rural population cohort in south-west Uganda', *Tropical Medicine and International Health* 10(10): 993-1001, by Damien de Walque et al., 2005

Vouchers for STI treatment in Nicaragua

Controlling sexually transmitted infections (STI) can reduce the spread of HIV in the early stages of the epidemic. But high-risk groups are hard to reach. A trial in Managua, Nicaragua, shows that a targeted competitive voucher scheme is a cost-effective way to reduce STIs among the most vulnerable groups.

The scheme, implemented by researchers from the Instituto Centroamericano de la Salud (ICAS), targeted sex workers (including transvestites and male and female adolescent glue-sniffers), their clients, and men who have sex with men. Users could choose to redeem their vouchers at one of 7 to 12 private and non-governmental organisation (NGO) clinics, in exchange for:

- medical consultation
- screening for syphilis, trichomoniasis, candidiasis, gardenerella and cervical cancer
- diagnosis of other STIs
- presumptive treatment with a single dose of one gram azithromycin for several STIs, including chlamydia and gonorrhoea
- health education including an information booklet aimed at sex workers
- 24 free condoms at each visit.

The researchers found that:

- The annual cost of providing comprehensive STI services through vouchers was US$ 62,495, compared with an estimated US$ 17,112 for regular service provision.
- The scheme distributed 4,815 vouchers, tested 1,543 patients for STI and effectively cured 528 infections.
- In the absence of the scheme, only an estimated 85 STI infections would have been cured from 1,396 consultations.
- The average cost of the voucher scheme per patient treated was US$ 41 and US$ 118 per STI effectively cured, compared with US$ 12 per patient treated and US$ 200 cured without the scheme.

Total direct costs to voucher redeemers were US$ 4.46, including transport, snacks and limited medical expenses. Eighty-seven percent lost income as a result of attending the clinic. The average opportunity cost of time was US$ 2.64. Without the voucher scheme, users would have to spend an additional US$ 5.10 for a consultation in NGO facilities or up to US$ 28.19 at a private clinic, excluding drugs and lab tests.

Additional benefits of the scheme not included in the analysis are: the number of secondary infections averted by preventing or curing STIs in sex workers, the likely increase in condom use; savings in averted medical treatment and productivity gains from HIV cases prevented; and savings from reducing STI illness.

The researchers draw the following conclusions for policymakers:

- Cost-effectiveness would increase significantly in countries with lower personnel costs.
- There are likely to be economies of scale if expanded to a larger population.
- It may be cost-effective to subsidise transport and time costs to increase redemption rates in the lower redeeming groups.

Josephine Borghi
London School of Hygiene and Tropical Medicine, Keppel Street, London, WC1E 7HT, UK
T +44 (0) 20 7612 7887 **F** +44 (0) 20 7637 5391
jo.borghi@lshtm.ac.uk

'The cost-effectiveness of a competitive voucher scheme to reduce sexually transmitted infections in high-risk groups in Nicaragua', *Health Policy and Planning* 20(4): 222-231, by Josephine Borghi et al., 2005

Lady health workers: improving reproductive health care in Pakistan?

Past efforts to control population growth in Pakistan have been disappointing. However, contraceptive use has more than doubled in a decade following the introduction of female health workers who visit women in their own homes.

The London School of Hygiene and Tropical Medicine, together with Oxford Policy Management UK, looked at the effect of Pakistan's Lady Health Worker Programme on the use of contraceptives in rural areas. In a country where women's movement is restricted due to the laws of purdah, lady health workers (LHW) are able to take health services into the home. As well as family planning, they promote childhood immunisation, monitor children's growth, and provide health education. They treat minor complaints and refer more serious cases.

The LHW programme was introduced in the early 1990s by the Ministry of Health. The Pakistan government was keen to make contraception more readily available to women, particularly in rural areas where contraceptive use was low. However, by the year 2000, only 38,000 of the 58,000 LHW positions had been filled. In the stricter Muslim communities stigma may be attached to women working outside the home, making it difficult to fill the posts. In addition, the job requires eight years of education. As a result LHWs tend to operate in areas where women are more educated and have greater freedom.

Nevertheless, contraceptive use increased from 12 percent to 28 percent between 1990 and 2000 and fertility rates are beginning to fall. The study compared the use of contraception in rural areas served by a LHW with areas that had no health visitor. It found that:

- Almost twice as many women were using modern reversible contraceptives, such as the contraceptive pill or the intrauterine device, in areas with a LHW.
- In LHW areas, 30 percent of married women were using some form of contraceptive including sterilisation, withdrawal and rhythm method, compared with 21 percent in control areas.
- Even when the effect of education and other socio-economic variables was taken into account, LHWs made a significant difference to levels of contraception use in the areas where they were working.

Pakistan's policy on population control, adopted in 2002, aims to make safe methods of family planning available to everyone by the end of the decade. By 2020 the policy aims to have a stable population which is no longer growing. LHWs who visit women in their own home are key to achieving this goal. However, the programme's finances have a shortfall of 39 percent. This lack of funds effects payment of salaries, purchase of contraceptives and vehicle maintenance. For the programme to be successful the study recommends:

- an increase in its funding
- LHWs should continue to visit women at home who would otherwise have no access to information about family planning
- health clinics should continue be utilised as they are often much cheaper to run and can be used in areas where women have greater freedom to leave their village unaccompanied.

Megan Douthwaite
1726 Seaton Street, NW, Washington DC, 20009, USA
megan.douthwaite@lshtm.ac.uk

'Increasing contraceptive use in rural Pakistan: an evaluation of the lady health worker programme', *Health Policy and Planning* 2:20, by Megan Douthwaite and Patrick Ward, 2005

The risk of sexually transmitted infections in a Tanzanian mining town

Mining communities' transient populations can be high risk environments for sexually transmitted infections. Are there particular groups in these communities that are most at risk and how can their sexual behaviour change?

The National Institute for Medical Research, Tanzania, together with the Medical Research Council, UK, looked at sexual behaviour in a small gold mining town in north-western Tanzania to discover who was most at risk of contracting HIV and other sexually transmitted infections. Miners and sex workers are commonly identified as two potentially high risk groups. Miners come for short-term jobs without their wives and families, whilst sex workers visit the town to look for business. Sex workers are often blamed for the spread disease within and between communities.

In such communities it can be difficult to distinguish between sex workers and women receive payment for sex. A third of the women surveyed who work in the recreation industry, such as bars and hotels, said they had been paid for sex in the week before the survey. Almost half of all women surveyed in the recreation industry were HIV positive.

Paying for sex and having more than one partner is normal behaviour amongst many men in the mining community. To exacerbate the problem, the majority of men do not use condoms for paid sex. Subsequently, women who are faithful to their husbands are still at risk of HIV if they have an unfaithful husband.

The study found that:

- It is difficult to distinguish between people who are at high risk and those at low risk. However certain places are linked with higher levels of sexual activity, for example, bars, discos and video evenings.
- 'Modern' values were important in the town surveyed. The townspeople valued brand-name clothes and looked down on rural traders who were poor and uneducated.
- The town is seen as a place of opportunity and wealth. Sex workers are attracted to the town as a source of income, while men were attracted to the greater freedom the town has to offer.

Gold mining towns are high sexual health risk environments for all residents and visitors. Their relative wealth attracts large flows of people. This can make prevention and management more difficult. The study recommends that:

- Health education should be presented in ways that are considered modern and popular, such as through video shows, music and theatre.
- Miners should be prioritised for health education, for example, on the need for condoms. These men are held in high esteem by the town and are likely to be opinion leaders.
- In addition, health programmes should target certain groups, for example, the technical advisors at the mine, unemployed girls who live together and are more likely to sell sex, and young people at discos and video shows.
- Low cost housing schemes could be set up so miners can bring their families with them.
- The income inequalities between the town and the surrounding areas should be lessened by creating jobs in rural areas.

Nicola Desmond
National Institute for Medical Research, PO Box 11936, Mwanza, Tanzania
nic_desmond@hotmail.com

'A typology of groups at risk of HIV/STI in a gold mining town in north-western Tanzania' *Social Science and Medicine* 60(8): 1739-1749, by Nicola Desmond et al., 2005

id21
Institute of Development Studies
University of Sussex
Brighton, BN1 9RE UK

T +44 (0) 1273 678787
F +44 (0) 1273 877335
E id21@ids.ac.uk

Institute of Development Studies

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