Population Council scientists have recently completed a landmark survey covering almost every aspect of the lives of young people in India. See story, page 4.
Donors Should Prioritize Prevention, Analysis Finds

In the journal *Science*, Population Council distinguished scientist and vice president John Bongaarts and Center for Global Development senior fellow Mead Over recently offered sobering opinions on AIDS program funding in the developing world.

According to Bongaarts and Over, universal access to HIV treatment is financially unsustainable. Many developing countries have rapidly expanded their provision of antiretroviral treatment for HIV. Many providers argue that medical and ethical considerations endow each person currently on treatment with a lifelong entitlement to receive at least his or her current treatment. But at prevailing incidence rates, two to three new HIV infections occur for every new patient put on treatment. As a result, despite years of extraordinary effort only a fraction of those in need have access, and the population in need of treatment is growing much faster than the population treated.

The authors argue that the current allocation of health assistance to developing countries is far from optimal. Resource allocation for a particular disease could be expected to be roughly proportional to the potential ill health averted by those expenditures. However, as of 2007, 23 percent of development assistance is allocated to AIDS programs, but the proportion of deaths attributable to AIDS is less than 5 percent. In a few African countries, foreign assistance for HIV and AIDS exceeds the entire budget of the Ministry of Health. The huge influx of donor funding for HIV and AIDS sometimes crowds out other pressing health needs and distorts health priorities, in part by putting pressure on a meager supply of doctors, nurses, and clinics.

“To maximize a population’s health status for a given amount of funding, the international donor community is ethically obliged to spend foreign aid funds and allocate healthcare resources as cost-effectively as possible,” says Bongaarts.

Bongaarts and Over suggest that donor organizations should prioritize the most cost-effective interventions when determining health assistance to developing countries. Yet the authors note that even with recent price decreases, antiretroviral therapy (ART) for AIDS treatment is one of the least cost-effective of the health interventions that they compared. The overall objective of international donors should be transition to an HIV and AIDS policy that preserves recently achieved mortality reductions while lowering the annual number of new infections to less than the annual number of AIDS deaths.

“Donors should continue to expand support for treatment,” says Bongaarts. “But this needs to be done at a somewhat slower pace than in the past in order to allocate an increasing share of resources to HIV prevention and to other more cost-effective health interventions.”

Such highly cost-effective interventions include those focusing on HIV prevention, including the prevention of mother-to-child transmission of HIV; childhood immunizations; malaria; tuberculosis; maternal mortality; and family planning. Enhancing these efforts will improve global health for a few dollars for each year of life saved, instead of postponing deaths at hundreds of dollars per year of life saved with ARTs.

According to Population Council HIV and AIDS program director and vice president Naomi Rutenberg, “HIV is often a disease of the highly vulnerable, and it can be more expensive to reach and treat these individuals. But that does not mean we should give up. Policies regarding allocation are a delicate balance between rationally deploying resources and protecting the safety net of the most vulnerable. We have an obligation to use the AIDS resources wisely. Prevention is the only way out of the epidemic, and we must use funding to develop better prevention methods and technologies and more integrated and higher-quality health systems.”

**Cost-effectiveness estimates of interventions in low and middle income countries**

![Graph showing cost-effectiveness estimates](image)

Mirena® Proved Useful in Women with Endometrial Cancer and Precancer, Preserving Fertility

In September 2010, researchers from the European Institute of Oncology in Milan, Italy, announced that, in a 13-year study, the contraceptive Mirena® successfully treated endometrial precancers and early endometrial cancers when used in combination with another hormone. This treatment allowed young women with these conditions to preserve their fertility. Mirena, a progestin-releasing intrauterine system (IUS), was co-developed and tested by the Population Council, its International Committee for Contraception Research, and the pharmaceutical company Leiras (now Bayer Schering Pharma) of Finland. The researchers who conducted this study were not affiliated with the Population Council.

Population Council researchers and their colleagues who developed Mirena set out to create a highly effective and safe family planning method that would impart additional health benefits. They succeeded. One aim was to reduce menstrual blood loss. Doctors have known for years that Mirena substantially reduces the excessive menstrual bleeding experienced by many women. Mirena is the only contraceptive that is FDA-approved for the treatment of heavy menstrual bleeding. Clinical studies have also shown that Mirena can help women with excessive menstrual bleeding avoid hysterectomies, can reduce pain associated with endometriosis, and may prevent the development of endometrial cancer. The European study, however, goes a step beyond to show that the IUS can treat some cancerous and precancerous lesions when combined with a drug known as a gonadotropin-releasing hormone (GnRH) analogue.

Between 3 percent and 5 percent of women diagnosed with endometrial cancer are younger than 40 years, and more than 70 percent of these young women have never given birth. The usual course of treatment for endometrial cancer includes a hysterectomy, the surgical removal of the uterus. However, this surgery leaves women unable to bear children. A successful treatment that preserves fertility would be welcomed by many young women with this disease.

A hormonal cancer

Endometrial cancer cells typically have excess receptors for a number of hormones, including progesterone. Researchers from the European Institute of Oncology took note of published reports that young women with atypical endometrial hyperplasia—a precancerous condition—or with early and well-defined endometrial cancer could be successfully treated with oral progestins. (Progestins mimic the action of the natural hormone progesterone.) The scientists treated these conditions with the Mirena IUS, stating in their report, “The rationale for treating endometrial malignancy with the device, instead of oral progesterone, is that it provides...the hormone at the specific site of the pathology. This avoids the adverse effects produced by systemic administration, which include serious medical complications and suboptimal compliance.” Mirena is the only progestin-releasing IUS approved by the U.S. Food and Drug Administration.

Between 1996 and 2009, the scientists enrolled 20 women with atypical endometrial hyperplasia and 14 women with early and well-defined endometrial cancer. The women were checked extensively to ensure that their disease did not spread, and they were followed closely for the duration of the study. They received Mirena for one year along with monthly injections of a gonadotropin-releasing hormone analogue for six months.

Nine of the women achieved spontaneous pregnancies.

Nineteen of the 20 women with atypical endometrial hyperplasia (95 percent) experienced a complete response, meaning that a biopsy taken after treatment showed normal endometrium. The disease progressed in one of the 20 women. Eight of the 14 women with early endometrial cancer experienced a complete response. The disease progressed in four of the 14, and remained stable in the other two. Nine of the women achieved spontaneous pregnancies, one of them three times. Two of the women’s pregnancies ended in miscarriage.

The women in whom the disease progressed were treated and, at the end of the study, all patients were alive with no evidence of disease, in most cases many years after their initial diagnosis.

“Mirena is not FDA-approved to aid in treating early endometrial cancers and precancers, and more work is needed to confirm the promising results,” says Régine L. Sitruk-Ware, distinguished scientist at the Population Council’s Center for Biomedical Research and chair of the Council’s International Committee for Contraception Research. “However, this study in a limited number of patients suggests that when combined with a GnRH analogue it might be of use, and more research and larger studies should be done.”

More than 2 million American women use Mirena and it has been used by more than 15 million women in over 100 countries worldwide. Mirena is an extremely effective contraceptive, with fewer than 1 in 100 women becoming pregnant during five years of use. Bayer HealthCare Pharmaceuticals Inc., the U.S.-based pharmaceuticals operation of Bayer HealthCare LLC, markets Mirena in the United States.
Young People in India: Their Situation and Their Needs

Population Council scientists in India have collaborated with researchers at the International Institute for Population Sciences to investigate the many facets of the lives of the country’s young people. This landmark study covered almost every aspect of the lives of young people in India: growing up, socialization, education and work, romance and sex, marriage, domestic violence, voting behavior, religious beliefs, and more. “This is the first sub-nationally representative study focused on young people in India,” says Shireen Jejeebhoy, Population Council social scientist and a lead researcher on the study. “It was the first to cover multiple dimensions of young people’s lives and the first to obtain in-depth state-wide data on premarital relationships and sex, as well as on symptoms of mental health problems.”

The study was undertaken between 2006 and 2007 in six states: Andhra Pradesh, Bihar, Jharkhand, Maharashtra, Rajasthan, and Tamil Nadu. It covered all districts of these states, and thus can give reliable information on the lives of young men and women: married and unmarried, rural and urban. The women surveyed were between 15 and 24 years old. The unmarried men surveyed were between 15 and 24 years old. Married men up to age 29 were surveyed. More than 50,000 young people were interviewed. The six states taken together are representative of the country as a whole in such sociodemographic indicators as percentage of youth aged 15–24, literacy rate, and percentage of the population living in urban areas. Additionally, these states lie at extremes of the socioeconomic and cultural spectrum of the country, reflecting the regional diversity within India.

According to the most recent estimates, young people aged 10–24 constitute some 354 million of India’s more than 1.1 billion people, representing about 30 percent of India’s population. Thus, investments made in India’s young people and behaviors formed by them will play a key role in the development, health, and future of India. The study shows that young people in India are poorly equipped to come of age in a world with a global economy.

The findings are “deeply informative and thought provoking,” said Amartya Sen, Nobel Prize-winning economist and former Population Council trustee, in the keynote address at the meeting to discuss the study’s outcomes. The study “can serve as the basis of a necessary understanding of the lives of young people in India.”

Education and employment

The study found that education is far from universal. Eight percent of young men and 25 percent of young women had never been to school. Seventy-five percent of young men and 57 percent of young women had completed seven years of schooling, and only 42 percent of young men and 30 percent of young women had completed secondary education. Although more urban than rural youth finish school, the researchers observed the widest differences by household economic status, suggesting that poor boys and girls, whether rural or urban, face greater obstacles to school completion than their wealthier peers.

The researchers also detected variations by state. In Maharashtra, Andhra Pradesh, and Tamil Nadu 44–52 percent of young men and 36–48 percent of young women completed secondary education, compared with only 30–38 percent of young men and 13–18 percent of young women in Bihar, Jharkhand, and Rajasthan. Between 14 and 16 percent of young men and women in the six states were unemployed. Unemployment rates were much higher among the well educated than the poorly educated.

Sexual and reproductive health

Young people are poorly informed about sexual and reproductive health, even about the most basic facts. For example, only 37 percent of young men and 45 percent of young women knew that a woman can become pregnant the first time she has sex. Only 45 percent of young men and 28 percent of young women knew what HIV is, how it is transmitted, and how to prevent transmission.

The study confirms that young people engage in premarital romance and sex. Fifteen percent of unmarried young men and 4 percent of unmarried young women reported engaging in sexual relations, mostly with a romantic partner. Most of these relations are unprotected, putting youth at risk of infection and unintended pregnancy; just 13 percent of sexually experienced young men and 3 percent of sexually experienced young women reported consistent condom use. Further, 18 percent of young women reported that their sexual relations were forced, exposing them to adverse physical and mental health consequences.
The study confirmed that marriage happens very early for young women in most states: one-fifth were married before age 15 and half were married before age 18 (with considerable variation by state). These girls are vulnerable. Few are aware of what to expect from marriage and sexual and physical violence is common: one quarter of young women had experienced physical violence in marriage, and an equal percentage of young men said they have physically abused their wife. One-third of young women reported experiencing sexual violence in marriage.

Early marriage is often followed by early pregnancy. Nearly half of married young women had their first pregnancy before age 18. The first pregnancy occurred within six months of marriage for almost two-fifths of young women. And contraceptive use is limited; just 18 percent of both young men and women reported that they were practicing contraception at the time of the interview, even though many (25 percent of young women and 14 percent of young men) stated that their last pregnancy was mistimed or unwanted.

**Gender bias**

The study found that twice as many young men as women made decisions in their everyday lives (56 percent of unmarried young men versus 27 percent of all young women); for the rest, decisions were made by parents, husbands, and others. Young women, married and unmarried, were much less likely than unmarried young men to have freedom of movement. For example, just 4 percent of unmarried young men were not permitted to go to a shop or a friend’s house in their own area, but 31 percent of married young women and 22 percent of unmarried young women were not permitted to do this. Even among the young, attitudes support male superiority. For instance, 54 percent of young men and 58 percent of young women believe that it is acceptable for a man to beat his wife under some conditions. One-quarter of young people had witnessed their father beating their mother.

**Mental health problems**

The researchers found that 14 percent of young men and young women reported signs of mental health disorders. For example, they reported feeling they were not playing a useful role, that they were unhappy and depressed in the month before the interview, that they felt stressed and were losing sleep over worry, and that they felt incapable of making decisions. “The Indian Health Ministry has finalized a revised National Mental Health Program focused on increasing the number of providers for combating mental health problems,” said Rajib Acharya, a Council scientist and lead researcher on the study. “It is important that this program incorporates a special focus on the mental health needs of youth, including those in rural areas.”

**Civil society and politics**

The study found that less than half of young men (45 percent) and only about one in seven young women (15 percent) took part in community-led activities, such as celebrations of national days, cleanliness drives, and health promotion activities. A higher percentage—more than 70 percent of young men and 60 percent of young women who were eligible—voted. While most young people (83–86 percent) believed they could vote freely, two-thirds of young men (68 percent) and more than half of young women (57 percent) were disillusioned about the ability of political parties to improve their lives.

Many young people reported religious tolerance. For example, 90 percent or more said they would interact with people of different castes and religions. Somewhat fewer said they would eat together with those from other castes or religions (82 percent of young men and 67 percent of young women) or talk to someone who had an inter-caste marriage (68–71 percent). Better educated and urban youth were much more likely to report religious tolerance than their less educated and rural counterparts. Also, youth in Maharashtra and the southern states were much more likely than those in the northern states to report religious tolerance.

**Spreading the word**

The Population Council and the International Institute for Population Sciences held meetings to disseminate these ground-breaking findings and release reports in each of the six states in which the study was conducted. They also held a meeting in Delhi to release the consolidated six-state report. Since the release of these reports, the Council has received and responded to numerous requests from state government authorities and nongovernmental organizations to assist in the development of appropriate programmatic responses to the findings, and in the improvement of existing programs.

“Our findings suggest that much more needs to be done to prepare youth in India for a globalizing world,” says K.G. Santhya, a Council scientist and lead researcher on the study. “Our findings have documented the need for changes in the education, health, and employment sectors, for new ways of parenting, and for new skills to be imparted to youth. We look forward to working closely with policymakers and program managers to develop strategies for improving the lives of young people in India.”

Shri Ghulam Nabi Azad, India’s Minister of Health and Family Welfare, presented the inaugural address at the Delhi dissemination meeting. He stated, “The challenges are many and our government is committed to ensuring a better quality of life for our young people. We will make full use of the recommendations that have been made.”

**SOURCES**


**OUTSIDE FUNDING**

The John D. and Catherine T. MacArthur Foundation and the David and Lucile Packard Foundation

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who reported IPV were twice as likely as women who did not to test positive for syphilis—8 percent versus 4 percent—a statistically significant result that remained significant after controlling for socioeconomic factors.

“Sexual and physical violence by a male partner may increase a woman’s risk for STIs because the power imbalance in the relationship may diminish her ability to negotiate condom use or refuse sex,” said Sandy Garcia, country director of the Population Council’s Mexico City office and a researcher on the study. “In our study, additional sociodemographic factors significantly associated with positive syphilis tests—for example, number of previous pregnancies and male partners’ education level—are similar to those significantly associated with a history of IPV. This suggests that both problems emerge from the same socioeconomic and cultural contexts.”

The Council scientists concluded that Bolivia’s new maternal and infant health program in antenatal clinics, which includes universal syphilis screening, should also provide screening and follow-up care for new mothers who have experienced IPV. “Antenatal clinics are important locations for addressing a number of sensitive health issues, including intimate partner violence and STIs,” says Garcia. “Among pregnant women, antenatal clinics often serve as a first encounter with the medical system and provide a less stigmatizing environment than an STI clinic.”

**Vietnam**

Over the last decade, the Population Council has provided technical assistance to the Hanoi Health Department in Vietnam to tackle gender-based violence. The Council helped develop and introduce procedures to assist health workers in screening for gender-based violence (GBV) and to support survivors by providing or referring them for services. A pilot project at Duc Giang Hospital, which arose from this collaboration, is the first model in the Vietnamese health system that systematically screens for GBV and provides treatment and referrals. The project included the establishment of the Women’s Center for Counseling and Health Care at the hospital.

In addition, the Council assisted the Hanoi Health Department in the development of training curricula for health care providers and trained trainers to conduct these lessons. Health care workers use forms developed by the Council to record and report on the number of cases, types of violence, treatment provided, and referrals to in-house counseling centers and to other social and legal services. The hospital and counseling center work together with local authorities, advocacy organizations, police, and the courts in order to deal effectively with cases.

In 2009, Population Council scientists in Vietnam, in collaboration with the Hanoi Health Department, evaluated the staff of Duc Giang Hospital to assess the extent to which awareness and perceptions of GBV had changed because of the project.

The assessment revealed that between 2007 and 2009, 67,970 women visitors were screened for GBV at Duc Giang. Within the Women’s Center for Counseling and Health Care itself, the number of women presenting has increased dramatically, from 108 in 2003 to more than 380 per quarter in 2009; about 33 percent of cases are for issues related to gender-based violence. The women’s center has become widely accepted and the right of women to live free of violence. The center has well supported by police and court personnel and the media. Important and unique aspects of the women’s center are its comprehensive referral network, its efforts to strengthen the capacity of law enforcement and justice officials, and its focus—both within the center and within the broader community—on raising public awareness of domestic violence and the right of women to live free of violence.

Training of health care providers has been a central element of the project. Provider knowledge of psychological violence as a punishable offense increased by 22 percent between 2005 and 2009. “We’ve found that it’s easier for hospital staff to screen for physical violence than psychological violence,” says Meiwita Budiharsana, Population Council country director in Vietnam. “So, this increase in knowing how to screen for psychological violence is quite an achievement.” New and younger health care providers seem to be more sensitive and responsive to GBV issues. Compared to 2005, those surveyed in 2009 were more likely to perceive the severity and health consequences of GBV; to agree that the incidence of GBV is increasing; and to identify the relationship between husband and wife as the critical factor. The new law on domestic violence (enacted in 2007) and the establishment of the Women’s Center for Counseling and Health Care have been important steps in integrating GBV screening in health services and increasing access to care for victims of GBV.

Obstacles to the incorporation of GBV screening into daily medical practice include a heavy workload, the reluctance of most families to admit the problem exists (women victims regard violence as a problem that should be “tolerated”), and a lack of resources and facilities to support immediate treatment and long-term solutions.

“The time is ripe for a much greater and more coordinated effort to build on advances already made,” says Budiharsana. “To map out where gender-based violence is most prevalent, who is most vulnerable, and how it can be most effectively addressed, high-quality population-based surveys on the problem should be a priority for Vietnam.”

“Thousands of survivors of abuse have benefited from the Council’s projects, and thousands more will benefit as we share lessons learned through a wide network of organizations, spreading best practices across developing countries,” says Ian Askew, Population Council director of reproductive health services and research.

**SOURCES**


**OUTSIDE FUNDING**

Ford Foundation and the Susan Thompson Buffett Foundation
Recent Publications

HIV AND AIDS


Samet, Jeffrey H., Christine A. Pace, Debbie M. Cheng, Sharon Coleman, Caryn Briden, Manoj Paridesi, Niranjan Saggurti, and Anita Raj. “Alcohol use and sex risk behaviors among HIV-infected female sex workers (FSWs) and HIV-infected male clients of FSWs in India,” AIDS and Behavior 14(suppl 1): 74–83.


POVERTY, GENDER, AND YOUTH


REPRODUCTIVE HEALTH


Directorate General of Health Services (DGHS), Population Council, and UNICEF. “Guidelines for introducing pay-for-performance (P4P) approach and subsidized coupons to increase utilization of maternal, newborn and child health services in Bangladesh.” Dhaka: DGHs, Population Council, and UNICEF.


Hu, Guo-Xin, Guang Liang, Yanhui Chu, Xiaokun Li, Qing-Quan Lian, Han Lin, Yi He, Yadong Huang, Dianne O. Hardy, and Renshan Ge. “Curcumin derivatives inhibit testicular 17ß-hydroxysteroid dehydrogenase 3,” Bioorganic and Medicinal Chemistry Letters 20(8): 2548–2551.


Pachauri, Saroj. “Investing in women: We must focus attention on the lacunae in maternal health in India,” *The Times of India*, 4 August.


**OTHER PUBLICATIONS**


Population and Development Review 36(2) and 36(3).

Studies in Family Planning 41(2) and 41(3).
SEXUAL AND GENDER-BASED VIOLENCE

Targeting Violence Against Women in Bolivia and Vietnam

Sexual and gender-based violence is a pervasive global health and rights problem rooted deeply in societal beliefs about the role of women and the low status of women and girls compared to men and boys. Most commonly, men are the perpetrators of such acts of violence, which can be physical, sexual, or psychological. When the aggressor is someone the woman or girl knows intimately, such violence is referred to as intimate partner violence or domestic violence. The Council is working around the world to strengthen and integrate health and other services to fully respond to the needs of women who experience sexual and gender-based violence. Council scientists recently reported on studies in Bolivia and Vietnam that explore gender-based violence and seek to help survivors.

Bolivia

Intimate partner violence (IPV) and sexually transmitted infections (STIs) are epidemics that disproportionately affect women. Council researchers and their colleagues surveyed pregnant women attending antenatal clinics in three provinces in Bolivia to determine the prevalence of IPV and the association between IPV and infection with syphilis. This survey is one of the first large-scale studies on the co-occurrence of IPV and STIs in Latin America and the first conducted in Bolivia.

After routine syphilis testing during antenatal care, women were asked four questions to assess their experience of physical and sexual violence:
1. In the last year, were you hit, slapped, kicked, or otherwise physically hurt frequently?
2. Who was the person who hit you?
3. Within the last year, did someone force you to have sexual intercourse against your will?
4. Who was this person?

Of the 6,002 women who responded and had a syphilis test, 20 percent (1,227 women) reported physical or sexual abuse, or both, committed by their partner in the past year. Women

continued on page 6