Improving the Fit: Adolescents' Needs and Future Programs for Sexual and Reproductive Health in Developing Countries

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Demand is growing in developing countries for sexual and reproductive health programs for young people. However, little scientifically based evidence exists about which program approaches are most effective in shaping healthy behaviors. Careful evaluation and research must be increased, but meanwhile, planners need guidance as they expand programming. Research indicates that current programs often do not match the needs and health-seeking behaviors of young people. Behavioral theories and expert opinion agree that adolescents must be taught generic and health-specific skills necessary for adopting healthy behaviors. Constraints on financial and human resources, coupled with the great size of the youth population, highlight the need to find less costly ways to reach young people. These observations generate six programming principles to help planners and communities experiment with a wide variety of programming approaches. (Studies in Family Planning 1998; 29,2: 233–245)

In the last five years, interest in the health of adolescents has begun to grow in developing countries. In many countries, concern about their sexual and reproductive health is great, in part because of real or perceived increases in their sexual activity and rates of pregnancy outside marriage, and in part because of high rates of HIV infection among adolescents. Despite the near-universal adult discomfort with the subject, consensus has begun to build in many countries that young people need expanded information, skills, and services concerning sexual and reproductive health.

Adolescents' overall health and development are shaped by many factors, of which health programming is only one. These factors range from the social, economic, cultural, and political conditions of the wider society, to those that characterize the living situation of an individual adolescent, including family, education, and income level. Improving health programs for young people can be only a partial solution to addressing the issues that concern their health. Nevertheless, health programming is one of the factors most susceptible to change in the short term, and therefore a concerted effort should be mounted to experiment with, and rigorously assess, a wide variety of program approaches.

"Programming" is defined in this article as encompassing any organized primary prevention or care activity designed to make sexual and reproductive health information and services available to young people.[1] The focus here is on the need for approaches that can assist adolescents to obtain, in addition to information, skills-building opportunities, counseling, and needed clinical services. Such approaches can be offered in nonclinical settings in homes, schools, the workplace, and other community venues, as well as in primary health-care and family planning facilities. Several other important types of sexual and reproductive health programming, including inpatient care, mass media, advocacy, policy reform for reproductive health and rights, and classroom programs are not addressed here. Some of these approaches, especially family life education and mass media programs, reach large numbers of young people in some countries. However, the focus in this article is on

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developing programming at the level of primary prevention and care that can provide adolescents with more services than can information alone.[2] Currently, such programs in developing countries tend to be small in scale and reach too few adolescents. To meet the need, program planners in developing-country governments and nongovernmental organizations, as well as international organizations and donor agencies, will need to seek ways to expand existing programs, but also tap a much wider range of settings, providers, and approaches.

Improving Programs

Recently, a number of expert review articles have been produced that assess the state of sexual and reproductive health programs for young people between the ages of 10 and 24. An examination of these reviews, some conducted by academic experts from various disciplines, others by program experts, reveals two overall conclusions about effective programming: First, a broad and strong consensus exists concerning many elements of what constitutes best practice, based on practice, not science. Second, the research knowledge base concerning program effectiveness is weak, especially for developing countries. The literature is replete with case studies, but evaluation studies are too few, often poorly designed, and too inconclusive to yield reliable guidance about program effectiveness (Grunseit and Kippax, 1993; Kirby, 1995; McKaig et al., 1996). A number of studies indicate that programs are successful in increasing young people's knowledge about reproductive health issues. However, their impact on adolescents' behavior is much less certain, in part because it is measured less often. Consequently, few evidence-based answers can be found to the question of what works in developing countries. While more research is being conducted, programmers can draw important guidance from several sources—the evidence about the needs, preferences, and health-seeking behaviors of adolescents; the insights of behavioral theories; the implications of resource constraints.

Evidence about Current Programs versus Young Peoples' Needs

Existing research and evaluation studies indicate that there is a poor fit between current programs and the needs of young people. Research findings can be used to improve and expand programs. Of particular relevance to future programming is the information that has been gathered about how adolescents currently learn about sexuality and where they go to seek help. Many studies indicate that young people are poorly informed about such basic sexual and reproductive health topics as reproductive physiology, contraception, and human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS) (for example, see Agyei and Epema, 1992; Barker and Rich, 1992; Berganza et al., 1989; Caceres et al., 1994; Demographic and Health Surveys, 1992; Kane et al., 1993; Payne Merritt and Raffaelli, 1993; and Pick de Weiss et al., 1990). The evidence indicates a widespread need for information for all kinds of young people—married and unmarried, male and female, rich and poor, sexually active and inactive. When they are surveyed, many parents and young people alike report that they would prefer parents to be the main source of adolescents' information about sexuality and reproductive health (for example, see Castillo, 1993; Hawkins and Ojakaa, 1992; Jaccard and Dittus, 1993; Khoury, 1983; Kumah et al., 1992; and Mueller and Powers, 1990). However, studies also indicate that parents, in fact, do not talk to their children because they feel confused, ill-informed, or embarrassed about these topics (for example, see AZBEF and Population Council, 1993; Desantis and Thomas, 1987; Kumah et al., 1992; and UNFPA, 1993).

Studies of teachers and health-center personnel indicate that these adults are also unprepared to discuss sexuality with adolescents, often because they feel uncomfortable or overworked, or because they disapprove of young people who express an interest in sexuality (for example, see Abdool-Karim et al., 1992; Population Council, 1991; Dynowski, 1987; Hawkins and Ojakaa, 1992; Meekers et al., 1995; Miuto, 1993; and Turner, 1994). When interviewers ask young people where they obtain information about sex, the respondents often cite their friends or the media as their most important sources (McCauley and Salter, 1995; Valenzuela et al., 1989).

The literature also provides examples of how social norms shape the behavior and attitudes of young people about appropriate sexual activity. Several studies document social pressures put on adolescents to adopt unhealthy sexual behaviors. In Brazil, for example, young men are considered unmanly if they suggest using a condom during sex (Childhope and NESA, 1997). In Thailand, young people of both sexes look down on boys who do not have multiple sex partners (Praditwong, 1990). In both of these countries, girls are suspected of being promiscuous if they suggest using a condom (Cash and Anasuchatkul, 1995; Paiva, 1993). Elsewhere, social norms condone or even force young people into unhealthy sexual behavior by encouraging early childbearing and by failing to sanction older men who have sexual intercourse with young girls (Baron et al., 1993; Musinguzi, 1997). Unfortunately, little has been discovered about factors that can help adolescents avoid unsafe sexual behavior.

Research and program experience also indicate that adolescents are not always in a position to control the choices they make, including the decision to choose healthy behavior. For example, those who live in poverty have few choices and may have unsafe sex as an economic necessity. Others are sexually abused. Current programs and health personnel are usually ill-equipped to reach and assist such young people.

Although clinics might seem a logical source for information and services, they are not always helpful to adolescents. Case studies from Senegal and South Africa, for example, indicate that when adolescents approach clinics for help, they are often scolded, refused information, or turned away (Abdool-Karim et al., 1992; Population Council, 1991). In Thailand, young people refuse to go to clinics for fear of being seen by an adult family member or neighbors (Paxman, 1996). Other young people report that they won't go to clinics because they do not think that clinics will serve them, or because they have been sexually abused and fear that clinic personnel will report them (Senderowitz, 1997). Many are simply too young and inexperienced to know how to find a clinic. As a result of these barriers, adolescents usually first contact a sexual and reproductive health program when they must deal with a pregnancy or a sexually transmitted disease.

Clearly, young people do not avoid clinics because they have no unfulfilled sexual or reproductive health needs. When they can find sources of accurate, confidential information, they use them. For example, when a radio call-in show first went on the air in Kenya, the phone lines quickly jammed with calls, and a youthful crowd gathered outside the radio station in the hope of being able to ask a question (Kiragu, 1997). Adolescents also seek services. Preliminary findings from community-based studies under way in India, Cameroon, and Nigeria indicate that adolescents often treat themselves with patent medicines or home remedies and pay visits to private providers such as traditional healers, pharmacists, or physicians (Leslie and Defo, 1997; Joseph et al., 1997; Okonofua, 1997).

The recent spate of reviews highlights the inadequacy of research findings concerning effective interventions. While they await more systematic and credible knowledge concerning program impact, where can program planners turn for guidance in designing interventions to promote the sexual and reproductive health of adolescents?

Relevant Behavioral Theories

Most interventions in adolescent sexual and reproductive health over the past decade have occurred in response to two primary concerns: reducing adolescent childbearing and slowing the spread of HIV/AIDS. The theoretical perspectives that have been most influential in shaping these interventions are the cluster of health-risk-behavior theories, developed for the most part by psychologists. Encompassing the work of such theorists as Becker, Fishbein, and Bandura, and such models as the health-belief model and social learning theory, this body of theory seeks either to predict risky behavior or to predict behavioral change (Auerbach et al., 1994). Hence, it tends to encourage interventions designed to alter an individual's perception of his or her susceptibility to a health problem and of potential personal costs and benefits associated with a given behavior, and to help the individual acquire the motivation and skills needed to reduce risk. Evaluations of interventions based on these models, concentrated in the United States, have shown fairly consistent positive effects on knowledge and attitudes, but disappointing effects on risky behavior. This result has led to the criticism that the individual is an inadequate unit of analysis (Auerbach et al., 1994), and to the argument that interventions also need to take account of the social, economic, and cultural context in which a person lives, including such variables as gender, race/ethnicity, education, marital status, and social background (Aggleton, 1996). This body of theory has grown and acquired multiple aspects too numerous to describe in this article (see Auerbach et al., 1994). This broad cluster of theories is referred to here as health-risk-behavior theory. Little if any of this body of theory is specific to adolescents, although models based upon it have been applied to them, including many in developing country settings.

A different strain is sometimes called adolescent-development theory, drawn chiefly from psychology and adolescent medicine. This school of thought defines adolescent development as a complex process of physical, cognitive, social, emotional, and moral maturation (WHO, 1993). It posits that in order to meet basic personal and social needs, young people must develop a fundamental set of skills and competencies (Kirby, 1997; Millstein et al., 1993). A young person's readiness to acquire one or more of these skills varies according to his or her stage of development (WHO/UNFPA/UNICEF Study Group, 1998). (For example, young adolescents generally find it difficult to plan ahead.) Individual traits also affect the rate of development, especially a person's vulnerability and resilience. Adolescent-development theory also posits that a young person is shaped by his or her environment, both the immediate environment of home, family, and community, and the wider environment created by the media, prevailing policy, and cultural norms (WHO/UNFPA/UNICEF Study Group,

1998). Both health-risk-behavior and adolescent-development theory share an implicit view that information and services alone are not sufficient to influence a young person to adopt safe health behaviors, and both stress that an adolescent's acquisition of skills is also a critical step in the process. Health-risk-behavior theory stresses skills specific to risk reduction, such as the ability to negotiate safe sex and to use condoms correctly. According to adolescent-development theory, on the other hand, generic skills (sometimes called life skills) that apply to behavior in general, such as planning ahead, seeking help, and forming positive relationships are considered the most important skills to acquire.

Resource Constraints

Programs that address young people's sexual and reproductive health have, to date, paid little attention to the effect of resource constraints. This perspective is often found in macro-level analyses, such as the World Bank's *World Development Reports* (see, for example, World Bank, 1993) and the United Nations Development Program's *Human Development Reports* (see, for example, UNDP, 1996). It is uncommon in reviews of program directions for discrete populations, such as adolescents, or program categories, such as sexual and reproductive health. However, this perspective is essential to any programming framework meant to apply to developing countries. Resources are now, and will likely continue to be, sharply limited in most program settings, so that the match between available resources and the scale of the program challenge must be assessed.

The scale of the challenge for adolescent sexual and reproductive health programs is formidable. The generation entering the adolescent years is the largest generation in history (Rockefeller Foundation, 1997). Those in the 10–24 age group amount to 30 percent of the population in many developing countries. Although the proportion of the youthful population who want and need expanded sexual and reproductive health information and services is uncertain, the assumption can be made that the demand far exceeds the numbers programs currently reach in most developing countries. To reach such large populations in resource-limited settings means that cost effectiveness and sustainability are of paramount importance. One approach is to program for scale, that is, to assess the size and characteristics of the target population of young people and to design interventions that seem to have good potential to reach large numbers, if such a program proves effective in a pilot version. Also, low-cost models must be designed and existing public and private resources allocated more efficiently.

Relevant resources for programs addressing adolescent sexual and reproductive health include financial resources of governments, NGOs, and communities; human resources to provide information and services; and the resources, financial and nonfinancial, of young people and their families. Resource limitations are most severe for poor and marginalized residents of the poorest countries, which include many young people, but they also restrict the reach of programs to the poor even in more prosperous countries.

Going Beyond Existing Approaches

Although program practice for adolescent sexual and reproductive health varies from country to country, it is generally characterized by small-scale programs with few, if any, links to one another. The largest intervention in most developing countries is some version of school-based sex education. Another widespread intervention is periodic media campaigns aimed at young people. Programs offering skills development or counseling to young people are rare, as are programs offering sexual and reproductive health services, such as access to a choice of contraceptive methods, diagnosis and treatment of sexually transmitted diseases (STDs), methods for protection against HIV, and, where legal, safe abortion. In sum, young people are most likely to encounter the limited information and services that do exist in three settings: in schools, periodically in the media, and, for girls, in local clinics or hospitals when they visit for pregnancy-related services including antenatal care, delivery, or complications of abortion. Although many of these existing interventions are of good quality, they fall short of meeting some basic needs of young people, and they do not begin to meet the challenge of adequate coverage.

What approaches might improve the content, scope, and reach of developing country programs enough to serve a group that often represents one-third of the population? Answers to these questions turn mainly on two tasks: rethinking the needs of young people and rethinking the dominant ideas of "programming" as applied to sexual and reproductive health in these settings.

Who Must Be Reached

To design effective programs to improve adolescents' sexual and reproductive health, planners must take into account differences in young peoples' level of sexual activity. Depending upon their stage of individual development as well as their sociocultural environment, adolescents' sexual experience and activity vary greatly. Upon examination, three groupings of young people

emerge,[3] and the information, skills, and, services needed differ for each group.

Group 1

Adolescents who have not yet begun having intercourse receive relatively little attention from those concerned about sexual and reproductive health programming for young people. This group includes primarily younger adolescents and can offer planners major opportunities for influencing the early formation of safe behaviors. Adolescents in this group have as their primary sexual and reproductive health needs information, counseling, and skills-building (both generic and specific to sexual and reproductive health). They do not yet need clinical services and are likely to be reluctant to go to clinical settings in any event, as was documented in a number of the studies cited earlier.

Group 2

Adolescents who have engaged in intercourse and have experienced no unhealthy consequences receive somewhat greater attention from programmers than do those in group 1. They need information, training in skills, and counseling, but of broader scope in each area. In addition, they need access to screening for STDs and, for girls, pregnancy testing. They also need reliable access to sexual and reproductive health supplies, that is, a choice of contraceptive methods and condoms for protection against STDs/HIV. Those with a wanted pregnancy, many of whom will be married or in consensual unions, need antenatal, obstetric, and postpartum care.

Group 3

Adolescents who have engaged in intercourse and have experienced unhealthy consequences are the most common concern of providers of sexual and reproductive health services. In many developing countries, young people in group 3 make up a substantial share of cases of maternal morbidity and mortality, and of hospital admissions for complications of pregnancy, delivery, and abortion. Increasingly, this group is viewed as critical if the HIV pandemic is to be slowed. Older adolescents tend to predominate in group 3, although age is an unreliable predictor of membership in any of the three groups. Adolescents in this group need access to the full range of clinical services as well as to information, training in skills, and counseling.

An analysis of the health-seeking behaviors and service needs of those in each of the three groups raises several important points. In many countries, current programs in formal primary-care settings such as government clinics serve a narrow range of young people, primarily those in group 3 who need and seek clinical services. Group 1 gets little attention beyond insufficient school programs, and group 2 is often neglected as well. Most of the needs of those in groups 1 and 2 are generic, and can best be met in nonclinical settings. The same is true for the nonclinical needs of many members of group 3. Young people may also move between these groups, for example, by shifting from unsafe sex to safer sex, or even back to abstinence. Still, once an individual adopts a behavior, especially if it has led to an unhealthy consequence, that individual's program needs are likely to remain in the highest grouping he or she has ever occupied.

The concept of the three groups can be used as an analytic tool for program planning, not as formal categories to use in daily program practice. As Table 1 illustrates, the health needs of the three groups of young people increase as they begin to have sexual intercourse and magnify if they experience an unhealthy consequence as the result of sexual intercourse. Some programming sites can serve the needs of all three groups for information, training in skills, and counseling. Others may concentrate on one or two of the three groups. Planners should ensure, however, that overall programming meets the needs of all three groups.

The grouping of young people according to their sexual experience also suggests that resources for programming are greater than planners might think. Many, perhaps most, young people need only information, skills, and access to counseling. This observation is key to solving the problem of how to deliver sexual and reproductive health services to the great number of ado-

Table 1 Adolescents, by group, with examples of their needs for generic and sexual and reproductive health skills and services

Group	Generic skills[b]	SRH skills[c]	SRH services[c]
Group 1: Not yet sexually active[a]	Seeking help and information Decisionmaking Planning ahead Negotiating	Communicating about sex Avoiding unwanted sex	Providing information on such topics as sexuality, reproductive health, hygiene, relationships Individual and group counseling, as needed
Group 2: Sexually active, without unhealthy consequences	Same as for group 1	Same as for group 1, plus: Using contraceptives correctly Using condoms correctly Developing parenting skills as needed	Same as for group 1, plus: STD/HIV screening Providing choice of contraceptive methods Pregnancy testing
Group 3: Sexually active, with unhealthy consequences	Same as for group 1	Same as for group 2	Same as for group 2, plus: STD treatment Antenatal, delivery, and postpartum care

Note: In addition to differences in sexual experience, programs must also take into account other key differences among young people, such as sex, age, and marital status (WHO and UNICEF, 1996; Hughes and Berkley, 1998). [a]Sexually active refers to having sexual intercourse. [b]The skills and services listed are selected examples only. [c]SRH = sexual and reproductive health.

lescents who need them. Programs can provide information and skills in many less costly settings to the large number of young people in groups 1 and 2, while more expensive clinics serve the smaller number of adolescents in group 3.

Future Programming: Improving the Fit

What would produce a better fit between what we know about young people's needs and behaviors, as drawn from the evidence and theory, and primary prevention and care programs? Prevailing approaches to health-program planning in developing countries assume that most health care, as well as much of health promotion, is delivered by health workers employed by governments or large NGOs.

These approaches define the main task as re-engineering this government/NGO infrastructure to make it more effective, more "friendly" to adolescents. Indeed, this approach has much to offer through such measures as improved training for providers, more flexible program hours, and areas dedicated to young people. In some countries, public-sector programs such as Ministry of Education courses in schools can reach large numbers of adolescents with information and skills. Ministry of Health clinic care for young people has a vital role to play in delivering health care to those in group 3, and health services can be expanded to serve increased numbers of adolescents by means of referrals. National and local government agencies also have other crucial roles to play in many countries—such as setting standards, providing training, and maintaining quality and cost control.

Nonetheless, although this approach is necessary, it can never be sufficient to the challenge, either in terms of the sheer size of the adolescent population, or of the range of adolescents' needs and behaviors. An expansion of programming to employ more varied content, settings, and providers is essential.

In seeking new programming approaches, the work of the WHO/UNFPA/UNICEF Study Group on Adolescent Health and Development cited earlier is drawn upon here as the most comprehensive of the recent expert reviews.[4] The Study Group's technical report states that the purposes of adolescent health programming are to promote healthy development and to provide care when needed. Recommended major interventions include promoting a safe and supportive environment, providing information, building skills, providing counseling, and improving health services (WHO/UNFPA/UNICEF Study Group, 1998).

The Study Group's mandate was to address acceleration of programming for all aspects of adolescent health. However, its recommended interventions are also those needed for effective sexual and reproductive health programming at the level of primary prevention and care. The task, then, is to translate these interventions into practice so that they are available, at significant and sustainable scale, to a wide range of young people in developing countries. Although no developing country can claim to have accomplished this task, many are beginning to ask how they should go about doing so.

Programming Principles

Six programming principles are suggested below as tools for program planners to use in designing expanded sexual and reproductive health programs for young people. These principles build upon the Study Group's findings, and upon the sources of insight described at the beginning of this article. First, the current behavior of young people indicates that they want sexual and reproductive health information and skills, but lack access to sources with which they are comfortable. Second, health-risk-behavior and adolescent-development theories suggest that young people need to learn the skills involved in adopting healthy behaviors. Third, resource constraints argue for cost-effective interventions that can reach large numbers of young people. In addition, the principles take into account the differing sexual and reproductive health needs of young people in groups 1, 2, and 3. The principles are intended to offer guidance for identifying needs and available resources and linking and strengthening a wider-than-usual variety of content, providers, and settings to create appealing, flexible, effective, and sustainable programs at significant scale.

The six programming principles are:

1. Recognize and address the fact that the program needs of young people differ according to their sexual experience and other key characteristics.
2. Start with what young people want and with what they are doing already to obtain sexual and reproductive health information and services.
3. Include building skills (both generic and specific to sexual and reproductive health) as a core intervention.
4. Engage adults in creating a safer and more supportive environment in which young people can develop and learn to manage their lives, including their sexual and reproductive health.
5. Use a greater variety of settings and providers—both private and public, clinical and nonclinical—to provide sexual and reproductive health information and services.
6. Make the most of what exists. Build upon and

link existing programs and services in new and flexible ways so that they reach many more young people.

In the elaboration of these principles below, examples are cited from existing programs in developing countries. Most of these examples are modest in scale or are in early stages of development. As such, they offer partial but encouraging illustrations of how planners and programmers can apply a principle in practice.

1. Recognize and address the fact that the program needs of young people differ according to their sexual experience and other key characteristics. An analysis of programming needs based on sexual experience leads to three conclusions. First, even young people in group 1, who are not yet having sexual intercourse, need sexual and reproductive health information and skills, and access to counseling. In addition, future programming should be planned so that all three groups are reached, not in every service-delivery site, but at enough points to be effective for the whole spectrum of young people. Also, the primary sexual and reproductive health needs of many, perhaps most, adolescents are for information and skills that are nonclinical in nature. Most of these can be met in community settings, provided by well-trained and supervised nonmedical adults and peers.

Programming for young people in all three of the groups must be appropriate to their ages and experience. Such programs are more likely to be appealing to young people and acceptable to adults. Age and experience vary, however, even within one location. Street youths are often more likely to be sexually active than better-off adolescents. Girls married at 15 have different needs from those of their brothers at the same age. Although sexual experience is the most fundamental variable for planning such programs, other factors must be taken into consideration when determining appropriate sites, designing materials, writing curricula, and so on. Such characteristics of young people include gender, age, marital status, education, social and cultural background, and living situation.

2. Start with what young people want, and with what they are doing already to obtain sexual and reproductive health information and services. Expert reviews indicate that young people are poorly informed, that they often experience social and economic pressures that lead to high-risk behavior, and that they frequently seek sexual and reproductive health information and services through sources other than formal programs. To address these issues, program planners can reach adolescents more effectively by analyzing their needs and health-seeking behaviors. The first step would be to work with young people to determine where and how local adolescents spend time, obtain health information, and seek health services. Then programs would be designed to use approaches favored by those they are intended to reach.

Some programs have responded to the evidence that young people are poorly informed by increasing access to accurate information presented in contexts that they find meaningful and comfortable, such as call-in shows and hotlines. Other programs have successfully used discussion groups, reproductive health clubs, peer-education groups in factories and schools, drama competitions, soap operas, and comic books. These approaches can be used to make information meaningful and attractive.

Young people also seek medical care in settings they find friendly and private. Studies have documented that young people often seek out private providers when they become concerned about treatment for a sexual or reproductive health problem (Leslie and Defo, 1997; Joseph et al., 1997; Okonofua, 1997). Program planners should identify the range of providers used by young people in each area, and design interventions that include those who can offer care of good quality.

Some programs have built upon what young people are already doing to obtain information. For example, young people already rely on their peers for much of their information about sexuality. Therefore, peer-education programs are likely to be an efficient way to reach them. A program in northern Thailand was offered in the dormitories of young female workers who had left home to find work. The program trained peer leaders and provided education using a variety of popular media including a comic book, a romance novel, and peer-group discussions. The discussions were also an opportunity for participants to learn and practice generic skills, such as negotiating and planning, and sexual and reproductive health skills, such as using a condom. Positive effects, such as increased willingness and confidence in condom use and better negotiating skills were measured in a study that enrolled unmarried girls between the ages of 14 and 25 (Cash and Anasuchatkul, 1995).

3. *Include training in building skills (both generic and those specific to sexual and reproductive health) as a core intervention.* Although evaluations indicate that programs can increase adolescents' knowledge, knowledge alone is not sufficient to ensure the adoption of healthy behaviors. Both theory and expert consensus argue that training in skills is a fundamental component of effective programs for young people. The two schools of theory discussed above are most relevant—adolescent-development theory and health-risk-behavior theory.

These two bodies of theory generate different but complementary programming approaches for young people. Adolescent-development theory supports the idea that young people need to learn generic skills such as planning ahead, making decisions, and forming posi-

tive relationships. Programs based on this theory also focus on the individual adolescent's environment, including parents, community, and social norms. Health-risk-behavior theories center on teaching young people the skills they need to avoid high-risk behaviors, including, for example, communicating with a partner about safe sex and learning to use a condom.

Some groups in developing countries have embraced the centrality of training in skills for young people. They have developed curricula or programs that are given names such as life-skills training, family life education, or life planning. For example, the "Choose a Future" curriculum developed by the Centre for Development and Population Activities (CEDPA) aims to prepare girls to make choices. Facilitators use the curriculum to help girls learn to set goals and to communicate with family and friends. The curriculum also uses exercises, role-playing, community visits, and other means to teach health skills, including how to protect yourself from a sexually transmitted disease.

Such skills can be taught in or outside of school. In Latin America, many countries have experimented with skills-based school curricula for students. Organizations such as the Foundation for Adolescent Development in the Philippines and the International Planned Parenthood Association in Indonesia have introduced outreach programs. In Mexico, government health clinics include skills training as one of the services they offer young women (Gómez de León, 1997). Thus, some current practice with this approach exists, although the capability and willingness of community groups to take on sexual and reproductive health programming differs from place to place.

Evaluation of the impact of training in skills on behavior remains inadequate, but some evidence shows that this approach is more effective than that of offering information alone. In Zimbabwe, for example, researchers compared a lecture on AIDS prevention with a session in which students put a condom on a model and practiced negotiating condom use. When measured four months later, those who took the training in skills course knew more about condoms and reported having fewer sexual partners than did those who had attended only the lecture (Wilson et al., 1992). In the United States, a survey of programs concluded that the most effective ones used teaching methods that involved students directly and included modeling and practice in communication, negotiation, and refusal skills (Kirby, 1997).

4. Engage adults in creating a safer and more supportive environment in which young people can develop and learn to manage their lives, including their sexual and reproductive health. A central tenet of adolescent-development theory is that a young person's environment influences her or his growth and development in multiple ways. As used by the WHO/UNFPA/UNICEF Study Group and other programming experts, the term "safe and supportive environment" is employed to encompass the social, economic, cultural, and political context of an adolescent's life, and the types of safety and support that are present. At the micro level, family, community, and school define this environment, whereas at the societal level, it is chiefly defined by social and cultural norms, government laws and policies, mass media, and sometimes religion.

The most critical element in creating a safe and supportive environment is to engage adults as positive actors in young people's lives. Little can be done to improve the sexual and reproductive health of adolescents without the support of adults in their private roles as parents and family members and in their public roles as policymakers, teachers, community leaders, and health workers. Adult attitudes and behaviors concerning adolescent sexuality are often the greatest barrier to creative and effective programs that reach large numbers of young people. Many adults avoid the topic because they are unsure about the best way of handling the sexual and reproductive health needs of young people. Some believe that such programs lead to increased sexual activity, although a number of studies have shown that this is not the case (Grunseit and Kippax, 1993). Wherever adults ignore or oppose the sexual and reproductive health of young people, programs remain small and adolescents receive inadequate information.

Many adults are in a position to become reliable sources of reproductive health information for young people. In some European countries, adults consider helping adolescents prepare for sexual adulthood as part of their role as parents, teachers, and sports coaches. The adults teach young people to be sexually responsible, and they are sympathetic and accurate sources of information (Jones et al., 1989; Scott et al., 1995). In such countries, adolescents have low rates of abortion, STDs, and unplanned pregnancy (Alan Guttmacher Institute, 1995). Adults' willingness to fill this role greatly extends coverage of reproductive health information and skills to the adolescent population.

In many studies conducted in developing countries, young people report that they would prefer to receive sexual and reproductive health information, training in skills, and services from well-informed, caring adults, especially parents. Programs need to strengthen parents' and other adults' ability to provide accurate information and training in skills in a range of settings, and some programs are currently doing so. For example, the Family Planning Association of Kenya is testing a parent-centered model for expanding information and services to young people living in the town of Nyeri and surrounding farm

areas. The emphasis is on meeting the needs of young people who are not yet sexually active, although those with greater experience also benefit. Through the program, parents are trained to be friends to their children, to provide adolescents and other parents with information, basic counseling, and referrals. In addition, a diverse group of private and public providers are trained to receive referrals of those adolescents who need more advanced information, counseling, or clinical care (Family Planning Association of Kenya, 1996).

In Indonesia, the Ministry of Population and Family Welfare (BKKBN) has launched a parent education program in two Javanese provinces. BKKBN has produced separate parent-education curricula for younger and older adolescents covering reproductive physiology, family relationships, contraception, and other topics. This program works through parents' groups that hold a series of meetings to discuss the content of the curricula and review parents' experience in discussing these issues with their children. Other adults, including religious and youth-group leaders, are also using the curricula to discuss these issues with young people (World Bank, 1997).

Another type of adult engagement in programming is early and continuous involvement of adult stakeholders, such as local elders, officials, and opinion leaders, in program planning and implementation. If key adults are engaged in assessing the needs and behaviors of young people in their area, are consulted about intervention ideas, and are kept informed about program performance, opposition is less likely to arise, and local ownership and support will be strengthened. In Jamaica, this type of process of sustained community participation created strong support for an urban adolescent program despite concern at the outset that divisive politics would be the biggest threat to its success (Vadies and Clark, 1990).

5. Use a greater variety of settings and providers—both private and public, clinical and nonclinical—to provide sexual and reproductive health information and services. Because so many young people in groups 1 and 2 need only nonclinical services, information, skills, and services can be provided in a variety of coordinated, flexible ways. This approach is likely to be both more appealing to adolescents and less expensive than approaches relying principally on health facilities or special, multiservice centers. Such an approach is also better suited to reach adolescents who are not in school, and others at great risk for unhealthy consequences of sexual activity. Most sites, even villages, have some existing activities and programs that attract some young people, and these activities offer resources that are generally untapped or poorly tapped by programmers.

Research indicates that adolescents prefer to obtain reproductive health information and services in community settings. Programming resources can be expanded by providing information, training in skills, and counseling in the home, community, workplace, and schools through lay providers who have received training and supervision from health workers. For example, information and training in skills can be added to nonhealth programs such as scouting groups, sports teams, religious groups, and apprenticeship training courses. Project staff can receive training or host regular visits by health workers to provide first-line clinical services. In Ghana, for example, the YWCA added reproductive health education at a center that had been established to provide job skills and other services to girls who live in urban areas.

Community programs may be the only way to reach adolescents with the least resources, such as street children, highly restricted young wives, abused adolescents, servants, and those caught in war or civil unrest. The *kuleana* (support) program in Mwanza, Tanzania, for example, has involved street children and housemaids in operating a small restaurant and arts projects, as well as in community campaigns focusing on children's rights. The program staff report that these activities make the program trusted and appealing to young people, making them more receptive to sexuality counseling and other services (Rajani and Kudrati, 1995). Elsewhere, peer educators have provided information in schools, factories, military bases, bars, sports events, adult education classes, universities, and street gangs (McCauley and Salter, 1995).

For those young people in groups 2 and 3 who need clinical services, many prefer settings that are confidential and informal. As discussed above, existing clinic personnel are often unwilling or unable to offer young people services. This situation argues for embracing a wider variety of settings and providers in designing new models of service delivery for young people. Programs can identify all types of providers, both public and private, already being sought out by young people, assess the quality of care they offer, and provide training and referral links to upgrade the care of those providers willing to participate.

In Zimbabwe, for example, the Zimbabwe National Family Planning Council (ZNFPC) is working with the local government in a remote rural district to test a model of expanded sexual and reproductive health services. The organizers started by determining, with young peoples' help, where adolescents obtained information and services. Then, working with them and with local leaders, ZNFPC developed a model that uses only existing providers. Private medical doctors and local *sahwiras* (wise people) were identified. Other providers, including the local government clinic and ZNFPC's own staff,

were approached to identify those willing to serve young people. All these providers are receiving training from the ZNFPC provincial staff in how to provide information and counseling to young people, where to refer them, how to give them coupons to use if they need subsidized care, and how to maintain a basic management information system for use in common. These providers are prepared to offer information and referrals to adolescents in groups 1, 2, and 3 (ZNFPC, 1996).

Too often, once a decision is made to expand sexual and reproductive health services, programmers' first impulse is to create special youth clinics or multipurpose centers. This approach has two potential problems. Many young people do not use formal health settings for such services. Evaluations conducted in Mexico (Townsend et al., 1987), Zimbabwe, and Kenya (Phiri and Erulkar, 1997; Erulkar and Mensch, 1997) revealed that special youth clinics experience gender imbalance—in Mexico, mostly females attend them, in Africa, mostly males—and disappointing levels of use. Secondly, the operating costs of such facilities are likely to be too high to be sustainable, or to permit their widespread use in resource-constrained countries. However, adolescents often need "safe spaces" where they can meet and socialize with community approval. For this purpose, modest youth centers might be created, and then linked to other settings and providers for sexual and reproductive health information and services.

6. Make the most of what exists. Build upon and link existing programs and services in new and flexible ways so that they reach many more young people. A number of shortcomings of existing primary-care programs seeking to provide services to young people have been noted, especially among those seeking to meet the needs of adolescents in groups 1 and 2. At the same time, these programs are a critically necessary part of future planning. In addition to expanding and improving existing programs, planners also need to draw in more settings and providers in order to increase coverage and to provide the full range of services needed. Linked approaches might include networks of public and private providers and settings that refer clients among themselves; combined program approaches, such as clinics or schools with outreach efforts; and coalitions of youth-serving organizations that share resources and referrals.

Cooperation and coordination between public and private efforts are crucial elements of flexible programming. Planners and health officials can expand and improve large public-sector programs by linking them with experienced private-sector programs. Coordination between government and private-sector programs is now being tried in Colombia where experienced NGO personnel train government schoolteachers in family life education, and in Ghana where a government–NGO coalition works on curricula and training materials.

Health programs also increase their coverage when they link with nonhealth programs. The Women's Center of Jamaica Foundation (WCJF), for example, is a nationwide network that assists young mothers to complete their schooling and avoid a second pregnancy. The program is part of a large, two-way referral system that includes the WCJF's seven centers and 13 outreach stations, as well as schools, churches, health centers, family planning centers, legal services, and social services (Barnett et al., 1996). The program has been effective in connecting young women to the support they need (Chevannes, 1996). Another promising way to build on what exists is to incorporate sexual and reproductive health information, training in skills, and services into NGO networks and infrastructures that already engage young people. Some examples are national youth-service programs, Scouts, Girl Guides, YM/YWCAs, the Red Cross, and sports programs and leagues.

In sum, few single programs are likely to incorporate all the elements necessary to match the variety of preferences, developmental stages, and behaviors of young people. But most sites, even villages, have some existing activities and providers that attract young people, particularly when the inventory encompasses more than public-sector and large NGO health facilities. Programmers need to tap into and strengthen the full range of private and public settings and providers.

Conclusion

Two observations characterize the current status of sexual and reproductive health programming for young people in developing countries—that demand is growing for expanded programming, but that few evidence-based answers have been found to the question, "What kind of programs work?" The absence of definitive answers means that planners must devise new and expanded programs that build upon the evidence about adolescents' needs, preferences, and health-seeking behaviors; and insights drawn from behavioral theory and from the reality of resource constraints.

Most of the needs of adolescents can be met in community settings of the sort that young people prefer. Programs must be flexible if they are to meet, at reasonable cost and in sufficient number, the various needs of young people. Communities, planners, and programmers should seek out many different approaches and models and promote careful evaluation to determine which designs or components lead young people to adopt healthy behaviors.

Notes

1 The World Health Organization's definition of young people as those aged 10 to 24 is used in this article; the principal focus here is the subgroup aged 10 to 19.

2 The United Nations Convention on the Rights of the Child mandates a child's rights to health information and services. "Child" is defined as every human being younger than 18. (See Articles 17, 23, 24, 29, as quoted in UNICEF, 1997.)

3 The authors are indebted to Ayo Ajayi, Regional Director for Africa, Population Council, for first suggesting a three-group configuration of this type.

4 The WHO/UNFPA/UNICEF Study Group's technical products include *Action for Adolescent Health: Towards a Common Agenda: Recommendations from a Joint WHO/UNFPA/UNICEF Study Group*, which includes "Framework for country programming for adolescent health" and a technical report, "Programming for adolescent health and development."

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