

**Emerging Reproductive Health Issues
Among Adolescents in Asia**

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ABSTRACT

The study examined the existing research findings on adolescent reproductive health issues and their policy implications in the Asian nations. As a result of significant delays in age at marriage, among both girls and boys, and falling age at menarche, the period during which premarital sex can take place is getting longer. Although the mean age at marriage is increasing, the mean age at first intercourse is declining. Poor nutritional status of many female adolescents in the region raise special concern to their reproductive role. Complications of pregnancy, delivery, and puerperium are the main threats and causes of morbidity and mortality among adolescent girls. Family planning can reduce the morbidity and mortality associated with adolescent pregnancies by enabling them to postpone childbearing. However, they are usually excluded from most of the family planning or reproductive health services as currently provided in the region. Even though STDs are also higher among the adolescents in many Asian countries, services are typically targeted for adult married women and tends to ignore men in all ages. Any attempt to expand reproductive health services to adolescents will need to encompass conscious strategies to overcome adults' resistance and obtain their support. In many countries there is few avenues to educate adolescents about possible consequences of sexual activity, consequently there is greater demand for abortion. They are the least able group to gain safe abortion due to many barriers, including the behavior and attitudes of the adolescents themselves and the service providers. Apart from introducing legislative actions to prevent risk-taking behavior of adolescents, improving adolescents access to contraception and abortion services, raising minimum age at marriage and restricting access to tobacco, alcohol and psychoactive substances could have significant impact on their reproductive health.

Emerging Reproductive Health Issues Among Adolescents in Asia

Introduction

Adolescence is a period of sexual maturity that transforms a child into a biologically mature adult capable of sexual reproduction and the potential consequences of that sexual activity.

At the World Health Organization (WHO) meeting on Pregnancy and Abortion in

Adolescence in 1974, adolescence was described as the period of sexual development from the initial appearance of secondary sex characteristics to sexual maturity, psychological development from child to adult identification, and socio-economic development from dependence to relative independence (WHO, 1975). Adolescence starts with a period of very rapid physical growth accompanied by the gradual development of reproductive organs, secondary sex characteristics and menarche in girls. Boys adolescence is generally longer than girls, as girls in many societies are deemed ready for serious courtship or marriage proposals right after menarche.

The new ideas that adolescents acquire from school and other strong social forces often precede social change. Not only will they soon bear the future generation, they are also the breeding ground for new ideas, languages, values, and careers (Esman, 1990). These influences may have significant impacts on society and, therefore, the last decade has seen an explosion of research on adolescence in the social science (Petersen, 1993; Graber et al., 1996).

WHO defines adolescents as persons between 10-19 years of age and many studies throughout the world have adopted this age range as the standard: the present study unless otherwise stated specifically will conform to the WHO age range of 10-19 years when referring to adolescence. The size of the adolescent population in the world commands attention: they numbered nearly 1.1 billion in 1995 of which 913 million lived in developing countries and 160 million in developed countries. In other words, one in every five people in the world is an adolescent, and 85 of every 100 adolescents live in developing countries. The size and growth of the world's adolescent population is determined by its levels and trends fertility, and infant and childhood mortality.

Countries in the Asian region represent about 60% of the world population of which 20% are adolescents. Most countries in the region are currently experiencing an increasingly larger adolescent population, although the rate of that increase is decreasing. During the initial stage of the demographic transition the absolute size and proportion of adolescents rose rapidly.

Subsequently, the proportion of adolescent began to fall as the share of the aged population rose. However, the absolute increase of the adolescent population continues to be explosive. At the next stage absolute decline in the adolescent population, along with rapid increases in the aged population will take place (Xnoes, 1993).

Besides demographic changes adolescents are also experiencing rapid changes in their socio-economic environment. These changes may in many instances be unfavorable to them, creating more vulnerable situation that may negatively impact their overall well-being. All these shifts and changes combined make adolescence a tumultuous, complex and challenging period in ones development. This paper reviews the existing research on emerging adolescent reproductive health issues and their possible links to the socio-economic and cultural change in the Asian countries

Adolescent Reproductive Health

Adolescents generally good health has relegated adolescent health, particularly the reproductive health to a low priority for health professionals and policy makers (Friedman, 1990; Serrano, 1990). However, adolescence is a vulnerable period, and the onset and pace of adolescence are changing, that often disproportionately affect them. Moreover, demographic, epidemiological and socio-economic trends in the Asian region countries are combining to create different patterns of life styles for adolescents which could also create vulnerable environment for them. In addition to the important biological gander differences between adolescents, adolescent girl 's socio-economic status and cultural position in most of the Asian countries differ significantly from those of adolescent males. For large number of girls, adolescence can be best defined as the period which starts with the premature end of education and ends with the premature start of pregnancy and childbearing or even death. Thus, following sections are developed to examine different aspects of adolescent reproductive

health in a setting of changing socio-economic environment of the Asian region countries.

Malnutrition and Menarche

Adolescence is the only period in which growth accelerates; the growth usually depends on their nutrition and that depends on two factors. The first is the availability of food sufficient quantity and quality, and the second is the ability to digest and utilized which has been consumed. The former depends on the level of poverty, cultural traditions, family structure, the allocation of food etc. (Chen, 1979). The second factor related to the prevalence of infection diseases and also to the metabolic disorders. However it should be noted that adolescents nutrition reflects the cumulative effects of childhood health and nutrition and some instances even maternal factors too.

Undoubtedly poverty is a fundamental factor in adolescent malnutrition, but usually it is mediated by many cultural practices. Adolescents nutritional status could be related to gender discrimination. Discrimination against girls begins early in life, even before birth, in many Asian countries. Significantly higher proportion of female fetus are being aborted in countries such as China, South Korea, India and Pakistan, because of the strong son preference. This preference is reflected in the shorter interval between the birth of girl and the next sibling (Lovel et al., 1984). The discrimination continued in adolescence and in many countries girls receive less food and lower quality food. As noted by (Behrman, 1988), in India males received 5% more food during the lean season than females, with more bias among lower casts.

In many parts of South Asia, girl's food consumption is limited for fear that they will grow too rapidly which will bring more pressure on parents to arrange an early marriage and also to accumulate a dowry early (CHETNA, 1991; Jejeebhoy, 1996). The discrimination practices are expected to be lower in urban areas because of the education and communication. But in many urban areas of the Asia-Pacific region, as a result of western idealization of the thin female body, already achieved success in female nutrition could washed away unexpectedly.

A large increase in nutrient intake is required during adolescence. Most studies of adolescent

nutrition in the region have focused on iron deficiency. Iron requirements in adolescence are greater in many countries in the region because the prevalence of infection diseases, such as, malaria and hookworm, contribute to anemia and affect iron absorption. The iron requirement among adolescent girls are even higher, because of menstrual blood loss, they require 10% more iron than boys and are more likely to be anemic (Friedman, 1990). According to a study done in 1992-93 by the International Center for Research on Women (Kurz & Johnson-Welch, 1994), as high as 42% and 55% of adolescent girls are found to be anemic in Nepal and India respectively. In many parts of India, an adolescent girl's food intake is more likely to be inadequate in all nutrients, and village girls from lower casts have excess mortality (Gopalan, 1989).

Usually for girls most rapid growth spurt occurs in the years prior to menarche, and the timing of menarche varies according to a young woman's nutrition and growth. Poor nutrition may delay menarche from age 12-13 to about age 19, although a two year delay is probably more common (Kulin et al, 1982). The dietary inadequacy is possibly best reflected in changes in the average age of menarche in Asia. For instance in Japan, with no excess female mortality and excellent overall health reflected in high longevity, there has been a decrease of six months per decade in the mean age at menarche since 1940 (Takahashi, 1984). Girls from Japan and more elite sections of India with earlier menarche are also likely to have greater body fat and did not indicate significant difference in their overall nutrition (Gopalan, 1989). In general, mean age at menarche in the Asia-Pacific region countries are on the decline, partly related to reduction in malnutrition and infection diseases, and more importantly to the change in culture.

Other aspects of malnutrition among adolescents are concern, stunting was highly prevalent (Kurz & Johnson-Welch, 1994); in Nepal (47%), India (32%), Philippines (Cebu 43% and Mindanao 65%). Observations from India indicate that, percentage stunting among adolescent females (45%) was significantly higher than the adolescent males (20%). By the age of menarche, well nourished girls in Japan (Hoshi and Kauchi, 1981) are at 90-95% of their adult height, whereas Bangladesh girls continue to grow an additional 20% (Chen et al., 1981). It should be noted that if the earlier malnutrition is severe, complete catch-up growth may not be possible, and permanent stunting can persist in their lives (Merchant and Kurz, 1993). Many

adolescents in the Asian region countries, such as, Nepal, India and Bangladesh, usually marry before the completion of their growth and lead to many reproductive health problems in subsequent lives and also to the survival of their offspring (Williams et al., 1994).

Postponement of Marriage

In many developing countries, especially in Asia where significant declines in fertility are being experienced, reductions in the proportions married have often coincided with or preceded declines in marital fertility. The reduction of proportion married among males and females at young ages has been noted in many countries in the region, and thereby average age at marriage of males and females has increased during last few decades. However, the increase was not unique; for instance, Sri Lanka as a leader in the third world Asia 's marriage pattern (Caldwell et al., 1989; De Silva, 1997a), mean age at marriage of females has increased from 18.1 years in 1901 to 25.5 years in 1993, while in contemporary Bangladesh corresponding estimate is 17 years only.

Although many countries in the Asia-Pacific region has shown a trend towards increasing age at marriage of both sexes, marriage during adolescence is by no means rare (Jones, 1994; Singh & Samara, 1996). In Bangladesh, almost one-half of the women aged 20-24 were married by age 15 and by age 20 as high as 82% of the cohort has married (Table 1). Data gathered from the 1989 Bangladesh Fertility Survey indicate that a relatively large proportion (18%) of the adolescent marriages took place even before the onset of menarche and there was a clustering of majority of adolescent marriages immediately after the menarcheal period (Islam & Mahmud, 1996). India also shows a high rate of adolescent marriages; among the women aged 20-24, as high as 71% had already married by age 20. Demonstrating a strong trend towards late marriage, in each Philippines, Sri Lanka and Vietnam only less than one-third of women aged 20-24 married during the adolescence. Japan, not only among the Asia-Pacific region countries, but also among the developed countries too, showed a unique nuptiality

pattern; virtually no adolescent marriages occur.

Table 1

Among all the countries in the region the incidence of adolescent marriages tend to decrease. For instance, among the older women of aged 40-44 in Indonesia 72% were married before age 20 but among the 20-24 age cohort only 48% did the same, thus incidence of adolescent marriages were declined by 24% points (Table 2). However, the level of decline noted in Bangladesh, India and Nepal is not impressive; countries such as Thailand and Philippines which already had a relatively low proportions of adolescent marriages among the cohort aged 40-44, than the former countries, were nonetheless were further successful in reducing early marriages by significant proportions.

Table 2

Socio-economic change, ranging from urbanization, structural changes in labor force to ideational change associated with spread of education, communication and transportation all has influenced age at marriage of males and females. Increasingly large proportion of women in the Asian region countries now gain access to paid employment is thought to significantly influence both women 's and their partners desires and ability to postpone marriages. Changes in the labor markets in Asia attracts large numbers of moderately and better educated unmarried girls to the manufacturing and service sectors which are largely located in urban areas. As such one would expect lower percentage of young women in urban areas to marry during adolescence than their counterparts in rural; in India, the country which demonstrated with a high incidence of early marriages, among the rural females aged 20-24 almost 80% had married by age 20, while among urban only about one-half do the same (Figure 1). Marriage during the early adolescence (10-14) is also common for the rural cohort, nearly one-third married in rural but it was only 11% in urban (IIPS, 1995).

Figure 1

Presumably, urban living could encourage for better education and this lead to delay marriage because a girl generally does not marry while she is studying at a education institute. Better education largely lead to paid employment in formal sector, particularly increasing opportunities in the service sector, that provides clear alternative to the early marriage. On the other hand rural girls in many Asian countries have less opportunities for higher education, which lead them to dropout early from schools and then as a result of traditional family pressure, since they also have no alternatives, enter to a early marriage. Moreover, individual adolescent girl's capacity to avoid premarital pregnancies will also avoid most of the haparharzadly organized early marriages, thus better availability and accessibility to contraception in urban than in rural localities may also caused to delay marriage during the adolescence. Apart from the changes in socio-economic and cultural environment, marriage squeeze - the numerical imbalance between males and females of marriageable age - can also be an explanation for the rise in age at marriage in Asia, particularly for countries which has prolong experience with civil war (De Silva, 1997a).

Arrange Marriage Vs. Love Marriage

Higher education, more opportunities for entry to formal labor sector, along with less peer pressure, all contributed to more freedom for adolescent girls in the region, consequently traditional marriage market practices started to change. Thus one of the most conspicuous single changes regarding marriage has been Asia's transformation from a society in which marriages were arranged by parents to one in which marriages are based on the individuals own selection (Caldwell et al., 1989). Shifting marriage practices are presumably helping adolescents to reshape the conceptions of fate in gender relations. But, how frequent is the prevalence of love marriages in compared to arrange marriages in Asia

As the average age at which women get married their marriage practices also changing rapidly in countries of the region. Few decades ago almost all marriages were arranged by families but now love marriages increasingly becoming common in Asia. In Japan, as the leader in marriage transition in Asia, arranged marriages declined from 50% before World War II to less than 30% after the war, particularly due to a change in the civil code to institute freedom of

marriage (Otani, 1991). In Japan as well as in China rural residence was more strongly related to arranged marriages than urban, and women who lived separately from their parents before marriage were less like to have an arranged marriage (Liao & Heaton, 1992).

In Sri Lanka also about one-quarter of pre-war marriages were love marriages rather than arranged. However, as observed in the 1985 Contraceptive Survey, that love marriages made up 52 % of all marriages (De Silva, 1990). This indicate that, in contrast to the customary courtship that allows young Thai 's to meet and get to know their future husbands and wives and then seek parental consent, forms of arranged marriage exist in Sri Lanka, along with love marriage (Gamage, 1984).

Presumably in many traditional cultures in Asia, such as, India, Bangladesh, Nepal, major share of the marriages were arranged by parents or relatives. A survey done in Lacnow, India, in 1985 revealed that most of the unmarried females (84%) favored their marriages being settled by their parents but with their own final approval and consent. Only 3% preferred a love marriage. Nearly 13% of these girls were of the opinion that their marriage should be settled entirely by their parents and that they need not be consulted (Kumari, 1985).

Analyzing data collected from 3,846 unmarried young people aged 15-29 from India, Watsa (1993), found no significant change in their marriage attitudes. Response to the question whether they would prefer to have an arranged or a love marriage, 58% preferred to have arranged marriage. More females than males also preferred an arranged marriage. Among the graduates almost 60% preferred arranged marriage while undergraduates preference was almost equally divided. Presumably graduates with more social experience than the undergraduates, become more mature and aware of social pressures, and thus more realistic about their marital preferences. Unmarried young college students aged 15-22 in Mumbai, India (on-going study) also noted that the success of arranged marriages is reported to be largely due to the parents and parents-in-law, who are perceived to be very important actors in early married life. They generally held a view that love and marriage do not go together; love is only with the opposite sex and marriage is with the whole family (ICRW, 1997). Early onset of sexual activity through early marriage, which pressure adolescent girl to prove her fertility

immediately after marriage, largely responsible for the major share of the adolescent fertility. In the same time sexual activity, pregnancy and unwanted fertility among the unmarried adolescent boys and girls also attracts major attention since their behavior have not been investigated adequately enough in almost all the countries in the region.

Fertility and Pregnancy Among Adolescents

Many countries in the developing region of the world have seen an unprecedented decline in their fertility rates. Reduction in fertility among younger women has been achieved through postponement of marriage while among older women, it has been achieved mainly through the use of birth control. Because early marriage occurs in some of the countries in the region it is important to ask, "whether there has been any significant change in the trend in adolescent fertility behavior between these countries. Clearly large declines were noted in many countries in the region during the past three decades. For example, in Bangladesh adolescent age-specific fertility (AFSR) declined from 219 per 1000 female adolescents 15-19 years in 1970 to 140 in 1990s. In Indonesia the decline was more significant, demonstrating a 50% decline over the same period. Countries such as, the Philippines and Sri Lanka, although the level of adolescent fertility was not high to begin with, have only changed marginally over the same period of time (Figure 2).

Figure 2

How frequently do adolescents bear children compared to all women of reproductive age (15-49 years) Countries with high overall total fertility rates (TFR) also usually have high adolescent fertility rates. For instance adolescent fertility (ASFR of 15-19) in India, has contributed 17% of the TFR in 1992-3, while adolescent rates in Korea contributed little to TFR (Table 3). There are exceptions, however, in countries of the Asian region that demonstrate low fertility rates (for instance Indonesia), adolescent fertility made a relatively high contribution to the TFR of their countries (ESCAP, 1992).

Table 3

As generally observed in countries of the region TFR for urban women tend to be lower than their rural counterparts as does the urban and rural adolescents contribution to urban and rural TFRs. Again there are exceptions, for example, in contemporary Nepal, a rural mother usually completes her fertility with two additional children compared to urban mothers who usually give birth to 2.8 children. This pattern does not translate to the Nepalese adolescents where urban adolescents contribute more to the TFR than do rural adolescents. What demographic factors can explain this transition As fertility desires began to decrease in many South Asian Populations, particularly in urban localities (De Silva, 1990), and use of contraception has increased significantly among women in the older reproductive ages, fertility tends to increasingly be concentrated among the adolescent group. An alarming larger share of all births in India by adolescents between 15-19 years has been observed. The proportion has increased from 11%, to 13% and 17% from 1971, 1981 and 1992-93 respectively (IIPS, 1995).

Except the countries in South Asia, early childbearing, births that occur before age 20, affects only a relatively small segment of the population. This does not necessarily mean, however, that the insignificant level of adolescent childbearing and motherhood does not pose social and health threats to society. Childbearing and pregnancy during early adolescence is clearly unwelcome in many Asian societies because it will usually reduce the mothers social position and contribution to society. Unfortunately, however, large numbers of adolescents in many South Asian countries continue to have children, even though many governments and institutions have attempted to minimize the incidence of adolescent childbearing.

As noted in Table 4, over 3% of adolescents aged 15 in Nepal were either pregnant or had given birth to a child at the time of the survey, while in the Philippines the corresponding estimate is much lower. Inter country differences on adolescent reproductive behavior in the region is more evident when experiences of those aged 19 are considered. For example, fertility rates for 19 year olds in Nepal are almost three times higher than in the Philippines. As noted in contemporary India overall 17% of adolescent girls aged 13-19 have already given birth or are pregnant, while among the ever-married adolescent girls of the same age, 65%

have done so (IIPS, 1995).

Table 4

In many instances, an adolescent mother irrespective of her marital status, with a low level of education and with no employment prospects is not only unable to contribute to the development of the community, but also she and her family may become a burden to it. Such situation may force the adolescent mothers to perform hard physical labor; a form of hazardous child labor. Such labor whether performed inside or outside of her residence may compromise her reproductive and overall health. This situation places an adolescent mother into a more hazardous environment. Worse, unmarried adolescent girls, after giving a birth, because of economic hardship may, in addition, to hard labor perform one or more other hazardous activities, such as prostitution, drug trafficking, sale of alcoholic beverages or domestic aid in more vulnerable households.

Sexual Behavior and Attitudes

Although there is a clear trend among young men and women in the Asian region countries to marry later in their lives, sexual relations prior to marriage are on the rise. The period of exposure to sexual activities also becomes longer because the average age at menarche continues to decline. Social and economic changes, including urbanization, industrialization and education, have eliminated many of the traditional restraints on early sexual activity outside marriage and have exposed many adolescents and young people, especially adolescent girls, to the risks of unwanted pregnancy and abortion, which, in turn, increase the risks to their reproductive health and well-being (Dixon-Mueller, 1993; Cho, 1995).

Undoubtedly, economic development promotes youth autonomy, the decline of parental authority, and an increase in gender equality through the extension of education, all of which may have an influence on sexual activities and thereby foster higher rates of sexuality among the young. The change also gives rise to a transformation of culture that makes sexual activity more appealing and acceptable. Moreover, an increasingly large number of countries in the

Asian region now have a full range of Western type media, including both electronic and printed formats. Access to this media appeals to age group consciousness through music, dress, language and promotes a message of liberation, self-development, and marginality from traditional ways of life. Unfortunately, these messages implicitly or explicitly encourage sexual freedom without putting much weight on responsibility for sexual behavior. The presence and reach of such media will be stronger in countries that have strong market economics and high religious and media freedom. Therefore, the environments that will promote sexual attitudes and behavior among youth, including both married and unmarried, will depend on a variety of different socio-economic, cultural and political factors of each nation in the Asian region.

Sexual Behavior: Direct Evidence

There is relatively little information available in Asian countries regarding unmarried adolescent and young adults sexual behavior. Of the large number of Demographic and Health Surveys (DHS) conducted in the Asian region only the 1993 Philippine study obtained any direct information on their sexual behavior: the reported sexual contacts among never-married women aged 15-19 and 20-24 were 0.4% and 2.1% only; while 13% and 20% of the ever-married youth of the same age groups respectively reported a premarital sexual experience (National Statistical Office, 1994). Clearly the percentages of never-married adolescents who had premarital sex are much lower than the estimates of the percentages of ever-married adolescents who had premarital sex. Although teens who had premarital sex are more likely to marry than other teens, the size of the differences suggests that there may have been substantial underreporting of sexual experience by never-married teens in Asia. A more recent study in Dumaguete City, the Philippines, found 18% of college students were sexually active. The study also noted that only 3% of all students, and 10% of those who were currently sexually active, were involved in prostitution (Cadelina & Cadelina, 1996).

A couple of more recent country specific studies were done in Asia, sponsorship by WHO. These studies indicate that there is increasing risky sexual activity among the young people in the region. A study in rural Thailand on sexual behavior has obtained data from 582 and 526 unmarried young males and females, and 41 and 79 ever-married males and females. Of those

who had never been married, there was considerable gender difference in the reporting of sexual experience; of never married males 37% of 15-19 and 79% of 20-24 reported that they had had sexual intercourse, while only 2% of never-married females reported the same. Among the unmarried males, the average age at first sexual intercourse was only 16.6 years (Isarabhakdi, 1995). Nearly one-half (46%) of never-married males who were sexually experienced, as well as 34% of the married males, said their first sexual intercourse was with a prostitute. As expected ever-married men had much higher incidence of premarital sexual activity than those who had never been married; 90% of ever-married youth men had premarital sexual intercourse and again prostitutes were frequent targets. Among the ever-married young women 19% reported premarital sexual intercourse which was much higher than the never married youth women.

Demonstrating how early in adolescence sexual activities begins in the Thai society, another study found that of 601 male factory workers in the city of Chiang Mai, 81% had sexual experience and 52% of them had their first intercourse when they were between 16-18 years. Again of those who had sexual intercourse 77% reported having had sex with a prostitute (Rugpao, 1995). Virtually all of them said they were persuaded to visit a prostitute by friends, and 58% said they were drunk before visiting a prostitute. Similar types of findings were noted in another study again in the city of Chiang Mai, in which university students (524), military recruits (550) and workers of the city (398) were interviewed. Virtually all students and one-half of military recruits were never-married at the time of the survey while the majority of city workers were married. VanLandingham and others (1993) focused on never-married males and found that, risky sexual behavior is most common among men in the lower socio-economic groups. The majority of soldiers and laborers reported that they had visited a prostitute during the six months that preceded the survey. Less than half of these two groups consistently used condoms with prostitutes during this period. However, a large proportion of students, compared to the other groups, demonstrated less sexual exposure; life table analysis revealed that more than one-half of the students had no sexual intercourse until 23 years of age, however, of the soldiers and clerks 10% and 20% respectively, had no sexual intercourse by that age.

The Asian nations Korea and Vietnam shows a somewhat different scenario. The survey results of 849 school and university students between 15-23 years in Kwangju metropolitan area of Korea revealed that 23% of males and 10% of females had had sexual intercourse (Lim, 1995). The sexual intercourse experience among high school students were on the rise; in the 1960s only about 18% of males and 3% of females had it (Kang, 1971; Seo & Chun, 1962). Sexual intercourse with multiple partners clearly exists; two out of three sexually experienced males and one in three sexually experienced females claimed to have had more than one partner. Lim (1995) believe that there may be a bias towards under-reporting because of the resistance to report early sexual activities in Korea. Another study conducted in Korea, surveyed of 1,039 male students and 1,003 male industrial workers, and found that the industrial workers were more sexually active (78%) than the students (36%). The age at first sexual intercourse was 20 and 21 years for students and industrial workers respectively (Youn, 1996). A study among the 1600 university students in Hanoi and Ho Chi Minh City, Viet Nam, found that 15% of males and only 2% of females were sexually active. Their mean age when sexual intercourse occurred was 19.5 years for both males and females. This age is relatively higher than those reported in places such as Thailand.

Sexual activity begins in early adolescence for many men and women in Asia. However, unlike other parts of Asia, the onset of sexual activity occurs largely within the context of marriage in South Asia, where the age at marriage is relatively low for both males and females (Jejeebhoy, 1996). Largely due to more conservative attitudes towards sexual behavior in South Asia, few studies have attempted to examine sexual activity, whether premarital or within marriage. Most of the information and studies come from India, even though they also have limitations to their designs and sampling selection procedures as do other studies done in other parts of Asia.

As reported in many self-reported types of studies, from India, among unmarried male youths about 20-25% has engaged in sexual relations (FPAI, 1995; Goparaju, 1993; Savara & Sridhar, 1994). However a Gujarat study (direct interview type) reported a relatively lower rate; only 16% of rural boys and 9% of urban college boys admitted sexual activity (Sharma and Sharma, in press). Strong cultural norms may have resulted in underestimating the rates of

sexual activity when they are obtained through face-to-face interviews. Because of the cultural restrictions few studies have included female samples; results indicate that among the unmarried young females fewer than 10% had had sexual experience (Watsa, 1993). In India rape and, voluntary and forced prostitution among young women are believed to be significantly higher than reported. Their numbers are underreported to the authorities and well designed surveys (Ministry of Welfare, 1990).

Responses to a self-administered questionnaire from 4,709 youth males and females (15-19, 20-23 and 24-29) in the multicenter study of Family Planning Association of India (FPAI, 1995), noted that premarital sex was relatively more acceptable to boys (18%), particularly in the group aged 20-23, than girls (4.2%). Of the total respondents a vast majority (90%) were unmarried. While most of the girls (63%) felt that sexual relations should begin only after marriage, only 38% boys felt so. Higher percentage of males (34%) than females (12%) reported sexual contact, and the gender gap was mostly seen among the younger age groups (15-19 and 20-23). Males across each age group were younger than females when they had their first sexual experience; on average males were 16 years and females 18 years.

As noted in the multicenter study of FPAI there was clear evidence to support that age at which first sexual experience took place was on the decline in India; average age at first sexual experience among males has declined from 17.2 years in aged 24-29 to 14.8 years in aged 15-19, while the corresponding decline among females was 19.9 to 16.1 years. Overall, only 19% males and 6% females reported to have had sexual intercourse. Even though among the males aged 15-19 the percentage who had sexual intercourse was 16%, while the females in same age group it was only 3% (FPAI, 1995). Around 7% of males also reported having had sexual contact with either a prostitute or call girl. Highlighting the risk involved in child labor, particularly for female domestic help, a significant proportion of male respondents in urban areas reported having had sexual contacts with female servants in their houses.

In the same multicenter study a significantly large proportion of respondents (32% males and 3% females) were engaged in masturbation, while another 10% and 9% males reported sex between thighs and fondling partners genitals. Oral or anal sex were found to be relatively

uncommon in this part of the world. In the same study, 10% of male respondents reported homosexual contacts but in the Savara and Sridhar (1994) study of males in Nashik and Thane, the corresponding estimate were only 2% .

Sexual behavior among special segments of young people such as migrants and working girls and boys attracts attention since they are largely by products of economic development strategies. For instance in Sri Lanka, Bangladesh, the Philippines and some other countries in Asia, garment workers are under greater risk to have early sexual activity relative to single girls who are not working (Kibria, 1995; Salway, 1996; De Silva, 1997b). Increased sexual activity among them may be a function of night shift work, work with young men for long hours in a situation that is unsupervised by parents and guardians. Most of the girls working in garment or other factories, both in Free Trade Zones (FTZs) or out side of them in many Asian countries, are migrants from rural areas and they hold traditional values about marriage and sexuality. Therefore men, either unmarried or married, sometimes make promises of marriage to persuade women to have sex with them. As a result, the FTZ has become notorious for premarital sex and having induced abortions (De Silva, 1997b). Sexual violence against working girls, particularly factory girls, is also rapidly increasing in countries such as Bangladesh, Sri Lanka, Indonesia and in India. Female victims seldom report their plight for fear of being shamed and stigmatized.

Sexual Behavior: Indirect Evidence

Marriage in the Asia-Pacific region countries has long been used by researchers as a determinant of exposure to sexual relations. The age at entry into first marriage is often viewed as the age of initiation into sexual intercourse. More recent information collected from many surveys indicates that this assumption is no longer valid in Asian societies. The increase in age at marriage tends to increase pre-marital sexual activity and use of contraception (McCuley & Salter, 1995). In many cases marital unions had probably been precipitated by a pre-marital conception; there is evidence in the form of rising proportions of first births with short intervals since marriage. Quite high proportions of women in the Philippine, Thailand and Hong Kong reported they had sexual intercourse with their spouse before marriage (Riley et al., 1983;

Maungman, 1983; Tsang, 1989; Xenos, 1992). In Indonesia, one in five married women aged 20-24 at the time of the survey had a first birth that was pre-maritally conceived.

Another indirect way of investigation of sexual behavior and resulting fertility is to retrieve the numbers of adopted children from adolescents in the region as well as from other developed countries. For instance, as reported in *The Chosen Daily* in Korea, a popular news paper, about 6,000 Korean infants are adopted every year by American and European families. An overwhelmingly large majority of these children are believed to be born to unmarried adolescent girls. More or less the same situation appears in the Philippines. Adoption of children born to unmarried girls are not a uncommon phenomenon in Asia. Vast numbers of induced abortions, infanticide and abandoned children are reported in many parts of the Asia. It indicate that adolescents are passing through one of the most hazardous period of time.

Changing Attitudes About Sex

Attitudes toward sex and sexuality among the young people are concerns in the Asian region. Premarital sex appears to be more acceptable to males than females. In India, a relatively strong conservative culture, as many as 87% of females and 72% of males disapproved of it (FPFI, 1993). However, a more recent multicenter study of young people in India, showed that the percentage of disapproval of premarital sex has changed to 63% of female and 38% for males (FPAI, 1995). Similarly, in Vietnam, 89% of female students and 55% of male students stated that casual sex was against their standards (Nahn, 1995). In Korea male students and industrial workers were more likely to expect women to maintain their chastity than men, although students were not as strict about this as the industrial workers were.

Commercial sex is a more integral part of the Thai society, factory workers surveyed in Chiang Mai found that 98% of males and 44% of females felt that premarital sex was acceptable for men. However, only 50% of the males and 15% of the females believed that this was acceptable behavior for women. With respect to premarital sexual behavior in China, Pan's (1993) recent analysis indicates an increase in both its level and tolerance. Males for the most

part have been found to be more likely to engage in premarital sex, and to have more positive attitudes toward premarital sex, than females (Miller & Olson, 1988; Alexander et al., 1989). An adolescent with a boyfriend or girlfriend will more likely have premarital sex or positive attitudes toward premarital sex than those without (Perlman et al., 1978; Bell & Coughy, 1980).

Using a sample of 5,343 students (55% males) in grades seven to twelve in Sichuan Province, China, found there was a strong opposition to premarital sex among the Chinese adolescents (Kaufman et al., 1996). Two-thirds of the males, and three-fourths of the females, do not favor engaging in sexual activity prior to marriage. And slightly less than half of the males, but more than 70% of the females, would refuse, or try to refuse, if the girlfriend /boyfriend wanted to have sexual relations. While these survey results from 1988 do not indicate total opposition to premarital sexual activity, they do not reflect the attitudes of a sexually permissive society. It should be noted that in China, it is not legal for teenagers to marry, teenage sexuality is, by definition, premarital. However, with the increasing open economic policies, western media and urbanization all presumably influencing Chinese adolescents and presumably they are in the transition of changing sexual attitudes and behavior.

Major Health Consequences

Contraception and Abortion

Contraceptives have recently been made available to young women but legal restrictions and limited access still make use difficult (Tusi, 1985). As a result, the level of contraceptive use in most of Asian countries is higher among older women (aged 25-39) and typically lower among teenaged women (United Nations, 1989a). Data on contraceptive use is mainly available for married adolescents. The unmarried adolescent group has rarely been interviewed about their contraceptive use. A study in Bangkok, Thailand, found that 48% of unmarried adolescent females had never used contraception (Suporn, 1990). Why have almost one-half of sexually

active adolescents never used contraception. Possibly because there is little concern or worry about pregnancy, poor knowledge about contraception or because of the partners unwillingness to use contraception.

More recent data from DHS from Asia, with ever married female samples, revealed consistently higher levels of knowledge about contraception. Over 90% of married adolescents (15-19) and women aged 20-24 are familiar with some contraceptive method (Table 5). Although many adolescents know family planning, the overall level of contraceptive knowledge (3 or more methods) lags behind the level of knowledge observed among the women 20-49. In general the pill and condom are the most widely know modern methods among adolescents while methods like diaphragm, form or jelly and Norplant are least known. Periodic abstinence is the most widely familiar traditional method used among the adolescents in Asia (Singh, 1995).

Table 5

The poor correspondence between knowledge and use of modern contraceptives has drawn attention to adolescents perceptions about the positive and negative aspects of modern contraceptive use. The current use among adolescents varies markedly, from 7% in India to 36% in Indonesia (Table 5). However women aged 20-49 have not shown such variation in contraceptive use. There is considerable need for family planning, particularly for spacing births, among married adolescents. In some countries, however, there are positive motivations for engaging in unprotected intercourse just after a teenager marries; for instance in India there is a pressure to show her fertility soon after her marriage. It should also be noted that, first sex is often experimentation and those involved usually do not prepare for it by obtaining contraceptives, even if they know where to get them.

In cultures where early marriage is common, adolescent pregnancy is generally welcome by the family, if not always by the adolescent girl. At the same time, it is more likely that unprotected sexual behavior among many unmarried adolescents in Asian countries has lead to unwanted pregnancy. Many of these pregnancies end in abortion. Therefore, unmarried adolescents

constitute a significantly large proportion of abortion seekers. In most Asian countries, abortion is still illegal even if the laws have eased, adolescents are more likely than older women to have illegal abortions.

As noted in many studies from India unmarried adolescents are considerably more likely than older women to delay seeking abortion and hence undergo more hazardous second trimester abortions (Chhabra, 1992; Solapurkar & Sangam, 1985). The delay in seeking abortion, is largely related to lack of awareness of pregnancy, cost, as well as ignorance of services and fear of social stigmatization (Jejeebhoy, 1996). Significantly large proportion of adolescent abortion seekers in Korea and Thailand became pregnant as a result of rape or non-consensual sexual activity (Shim, 1992; Heise, 1993a). There is a tendency that abortion seekers tend to repeat abortion without relying on post abortion contraception (Mandal, 1982). Not only do a large number of adolescent abortion seekers die every year in the Asian region another large proportion suffer due to abortion complications; these include hemorrhage, septicemia, cervical and vaginal lacerations, pelvic abscess and secondary sterility (CPO, 1990).

Sexually Transmitted Diseases

Increased sexual behavior and lower use of contraception result in more adolescents being exposed to sexually transmitted diseases (STD). Increased sexual behavior together with rapid urbanization and large cities with a high proportion of young people, along with a ready market for sex, has led to large numbers of adolescents entering prostitution. Some adolescents are homeless and some are sold into prostitution. In Thailand alone there are 800,000 prostitutes under age 20, and of these 200,000 are under 14 who serve westerners demand for sex tourism (IPPF, 1992).

Prostitution has began to fuel STD and HIV transmission in Asia. While adolescents are becoming an international focus for STD efforts, our knowledge about the epidemiology of STD in Asian populations remain limited (Hannum, 1997). Where data on STD levels is available, the highest rates occur in 15-19 and 20-24 years old. WHO data indicate that an estimated one in every 20 adolescents worldwide will contract an STD every year (Senanayake

& Ladjali, 1994).

Upper genital tract infection, known syndromically as pelvic inflammatory disease (PID) has a special importance for adolescents (Berger & Westrom, 1992). PID typically results from lower genital tract infection from chlamydia or gonorrhea. These infections are more prevalent among sexually active adolescent females. Young women are at greater risk than young men for serious complications; because symptoms are less obvious in women their treatment is more likely to be delayed (WHO 1989a).

In an epidemiological study of 450 sex workers in Calcutta's largest red light area only 1% were found to use condoms on a regular basis, HIV prevalence was 1%, and STDs confirmed by laboratory diagnosis was 81% (AIIHPH, 1992). Research in this area has been neglected, in part because of a perception that sexual behavior would be difficult, embarrassing or controversial to investigate (Evans & Lambert, 1997). As far as STDs and women's health is concerned, a common misconception until recently has been that STDs affect only a small proportion of extremely sexually active women, primarily commercial sex workers (Dixon-Mueller & Wasserheit, 1991; Elias, 1991). Recent studies, prompted in part by the efforts to understand and control the spread of HIV infection, make it clear that the problem of STDs for women extends well beyond commercial sex workers (Winikoff, 1988).

Undoubtedly hazardous child labor, as noted in many Asian countries, largely resulted in physical and sexual abuse that has been linked to both current and future risk of STD and HIV (Heise, 1994). This is because adolescent girls and boys with a history of abuse are more likely to engage in future drug use and sex work. How prevalent is HIV in Asia It varies from countries with low prevalence (Mongolia) to countries with high prevalence (Cambodia and Thailand). Infected men probably outnumber infected women by a factor of 3 to 1 or more, and gender inequality and the frequent practice of men visiting sex workers have strongly influenced the spread of HIV. Thailand has an estimated three-quarters of a million people living with HIV (AIDSCAP et al., 1996). Evidence from India suggests rapid, extensive and uncontrolled spread of HIV in many parts of the country; in Bombay, prevalence went from 2-3% in STD clinic attendees before 1990 to 36% in 1994 (Mann & Tarantola, 1996). Countries

such as Bangladesh, Indonesia, Nepal, Vietnam and Sri Lanka show high levels of STDs, implying a strong possibility for extensive HIV spread (AIDSCAP et al., 1996). It has been the experience with the HIV/AIDS pandemic that change, whether behavioral or attitudinal, is difficult and occurs only in small steps. In a context where people's needs are overwhelming in every field, continued monitoring of where HIV develops may help identify people and groups that are particularly vulnerable not only to the virus, but to other health issues and social problems as well (Hannum, 1997).

Health Risk of Adolescent Childbearing

A major concern about teenage pregnancy is its impact on the overall health and well-being of the mother and the child. Women of reproductive age, under 18 years of age are considered at high risk for pregnancy related illness and death. Although their bodies may be mature enough to become pregnant, some adolescents are not sufficiently physically developed to have a safe pregnancy and delivery. The dynamic period of growth associated with poor intakes of all nutrients and vitamins due to improper dietary habits put adolescent girl at high risk for anemia and nutritional deficiency. The added burden of pregnancy may not only be psychologically traumatic, but also deprive her of nutrition. Nutritional deprivation, increased demand for her own growth, excessive menstrual losses and superadded pregnancy, all conspire to aggravate anemia, and its ill effects (Bhatia & Chandra, 1993). Because adolescent mothers belong to a lower socio-economic class they usually suffer from chronic nutritional deprivation once they become pregnant. As found in a couple of studies from the developing countries weight gain during pregnancy was much lower for adolescents when compared to adult women (National Academy Press, 1990).

Adolescents often report their pregnancies later than adult women. These behaviors are associated with less psychological maturity and fewer coping mechanisms. Furthermore, these high risk adolescents behaviors have resulted in delayed maternal health services until the very last stage of pregnancy. In some instances attitude and behavior of the service providers may discourage adolescent girls to seek antenatal and postnatal care which is vital to their

reproductive health and the health of new born (Williams et al., 1994; De Silva, 1997b). A major problem arises from children having children. A young adolescent mother, barely out of childhood herself and certainly not an adult, may not have the parenting skills needed to bring up a physically and mentally healthy child.

Studies in several countries have shown that the risk of death during childbirth is higher among adolescents than among older women (Chen et al., 1974; Khan et al., 1986; Koenig et al., 1988; Bhatia, 1993). For instance, aged 10-14 in rural Bangladesh were found to have rates of 1170 maternal deaths per 100,000 live births compared with 740 for the aged 15-19, and 489 for those aged 20-34 (Chen et al., 1974). An estimated one-third to one-half of these adolescent maternal deaths are due to infection, especially if safe abortion services are not available (Gardner, 1995).

Maternal morbidity rates have also been especially high for the youngest adolescent. Pregnant adolescents are more likely to suffer eclampsia and obstructed labor than women who become pregnant in their early twenties (Senanayake, 1990). Since in early adolescent years her pelvis has not reached its full adult size and thus obstructed labor is far more likely to occur (Moerman, 1982). Babies born to young adolescent mothers also face more health risks, including premature delivery, low birth weight and perinatal mortality, than the babies of older women (Harison, 1985). For instance, IIPS (1995) found that in India 10% of all adolescent pregnancies end in miscarriage or still birth compared to 7% among older women. Increased risks to the infant are clearly associated with low maternal age; in countries such as Bangladesh, Malaysia, Pakistan and Thailand the risk of infant mortality is at least 50% greater for teenage mother than for mother aged 20-29 (United Nations, 1989b).

While reproductive health issues are the major health concern of female adolescents, young girls and boys also face many other health problems which related to their overall well-being. These problems are, in most cases, largely due to poverty and circumstances triggered by their social behavior. Adolescents are in a major transitional stage in which they are likely to engage in risk-taking behavior as they separate from their family and eager to achieve independence through risky actions. Major reproductive health problems of adolescents exposed in the

Asian countries include, use of tobacco, alcohol and psychoactive substances. Young women in most countries of the region are much less likely than young men to drink and smoke, but the percentage who do is increasing; furthermore pregnant women who drink and/or smoke run the risk of harming their fetus (WHO , 1989a). Chronic drug users tend to be out of school, alienated from their families and likely to be a major social problem in near future in many countries. The drug users are also at high risk for contracting HIV through use of contaminated needles (WHO, 1989b). Finally accidents, violence and suicides also deserve special attention since they together contribute to a takes large proportion of adolescent suffering and death in many countries of the region (Harpham, 1994).

Conclusions and Policy Implications

Adolescence can be defined as the transitional period from childhood to adulthood and in most cultures it is now seen as a period of tremendous change. Authorities define adolescents as those between 10 to 19 years of age. Given this broad age range it is reasonable to expect that adolescent issues and problems differ markedly over this period. The adolescent period is characterized by relatively low mortality and morbidity and, as a consequence, their overall well-being has not been on the agenda for discussion, until recently, among the authorities in many of the Asia region countries. Why then have adolescent issues and problems received priority in this decade Presumably because of strong advocacy by governments, individuals, organizations, and international agencies in the Asian region. Interest in adolescent issues and problems have encompassed many disciplines and thus research on adolescence has flourished in the past decade. The extent and severity of the problems that adolescents encounter during this phase of their life, include many reproductive health issues.

One of the key social changes occurred in the Asian region is the increase of age at marriage for both males and females. The increase is attributed among other factors, to increased education and work opportunity for women and also to marriage squeeze. Changes in labor

markets, particularly increased opportunities for females to have paid employment, has remarkably enhanced their status in respective families and has provided clear alternative to early marriage. Higher education, employability, less peer pressure for early marriage, all contributed to more freedom for adolescents in the region, consequently traditional marriage market facilities started to decline. Significantly large proportion of marriages in the region, excluding South Asia, are now based on an individuals own selection. The rising age at marriage has contributed significantly to reducing the overall fertility rate, however, adolescent fertility rates did not decline as fast as rates among older women.

As a result of significant delays in age at marriage, the proportion of unmarried adolescents are on the rise in the region, therefore, the period during which premarital sex can take place is getting longer. At the same time, age of menarche is generally falling in the region, partly related to reduction in malnutrition and infection and to the change of culture. Thus the period of risk-taking behavior associated with adolescence has lengthened.

Modernization, decline of parental authority, and increased gender equality in education, has given rise to a culture that makes sexual activity more appealing and acceptable to adolescents, without putting much weight or responsibility on sexual activity. Despite the high level of sexual activity among adolescents research on sexual behavior and attitudes remains poorly explored and those findings that are available do not fully represent the wide age strata of adolescents.

In the region, countries like Thailand, report very high levels of sexual intercourse even among unmarried adolescents between the ages of 15-19. While in India corresponding rates are relatively lower but clearly on the rise. Gender differences in sexual behavior are evident in each country; relatively larger proportions of unmarried males than females report sexual intercourse. Prostitutes are the main source of sexual activity for many unmarried adolescent men. These encounters are usually the result of alcohol consumption and persuasion by friends. Often this sexual activity does not involve contraception protection. During the process of marriage contract many couples also seems to have engaged in premarital sexual activities. Presumably rates of pre-marital sex are on the rise. Even though age at marriage is increasing

age at intercourse is clearly declining, both among males and females in Asia. Social constraints on early sexual activity are easing, urbanization, higher female enrollment in education and entrance into the labor force, all exposed them for higher sexual activity and the ill effects of that behavior.

Poor nutritional status of many female adolescents in the region raise special concerns to their reproductive role. Incomplete skeletal growth may have serious consequences for childbearing. Even if a married adolescent is physically mature, she may lack the social and emotional maturity to cope with the experience of becoming a mother and the changes it will mean to her life. This situation with its potential problems may be compounded if the husband is also an adolescent (teen father).

For countries in the region, complications of pregnancy, delivery, and the puerperium are the main threats and causes of morbidity and mortality among the adolescents. Family planning can prevent or reduce the morbidity and mortality associated with adolescent pregnancies by enabling women to postpone childbearing. Antenatal care should ideally include high-risk screening for those who are at risk for future complications. Most unmarried pregnant young mothers avoid attending antenatal care until the last stage of pregnancy which may result in these adolescents being rejected by their family and community.

In many countries of the region there are few avenues to educate adolescents about possible consequences of sexual activity and when contraception is not available for them, there will be a greater demand for abortion. Adolescents are the least able group to gain access to safe induced abortions due to many barriers, including the behavior and attitudes of the adolescents themselves and the service providers. Consequently, adolescents use unsafe, illegal abortions, or carry their pregnancy to term for sale or adoption.

Both married and unmarried adolescents are vulnerable to being unprotected from pregnancy and sexually transmitted infection. Undiagnosed and untreated STDs continue to adulthood, thereby possibly damaging the eyesight and general health of any children they bear in the future. Large numbers of sexually active adolescent males and females suffer with STDs,

including HIV infection. In many areas HIV infection is increasing faster among young women than among young men. As the Asian epidemic grows in intensity, it is quickly becoming similar to that of Africa where transmission is overwhelmingly through heterosexual contacts.

Risk-taking behavior is heavily concentrated during adolescence, and when adolescents take one risk, they also tend to take other risks; alcohol or drug use often take place in combination with unsafe sexual activities. The average age at which young people begin to use these substances are falling and thus their subsequent morbidity and mortality are being influenced by the timing of these incidences.

Even though the situation of unmarried and married adolescents differ significantly, both groups are badly neglected when it comes to reproductive health services. It is difficult for most of them to obtain contraception, although for different reasons. They are usually excluded from most of family planning or reproductive health services as currently provided in the Asia-Pacific region. Services are typically targeted for adult married women usually ignoring men in all ages, except for very limited access to condoms and treatment of acute STDs. Any attempt to expand services to adolescents will need to encompass conscious strategies to overcome adults resistance and obtain their support.

International agencies and NGOs can play a key role in encouraging countries to adopt needed policies and programs that support adolescent reproductive health services. However, even if countries acknowledge the need for such services, presently there is little information on what constitutes appropriate policies and programs for adolescent reproductive health services. For this reason there is a need for further research in the region to fill the theoretical and knowledge gaps. These studies should use rigorous and appropriate study designs to collect the necessary information.

Countries may need to consider different strategies for improving adolescent reproductive health at different stages of their development. In general, legislative action has been effective

in influencing risk-taking behavior. Laws and public policy can be used to formulate programs that are intended to improve adolescents reproductive health status. Specifically, improving adolescents access to contraception and abortion services, raising minimum age at marriage and restricting access to tobacco and alcohol could have a significantly impact on adolescent health. Adolescence is a crucial development stage which reflects both childhood health status and sets the foundation for adult health status. For this reason, it particularly important to protect both adolescent boys and girls, against many reproductive health problems emerging in scatostrong manner in many nations of the Asian region.

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