TEENAGE PREGNANCY: COMPLEXITIES AND CHALLENGES

Dangal G*

* Kathmandu Model Hospital, Exhibition Road, Kathmandu, Nepal.

ABSTRACT

Teenage pregnancy is a common public health problem worldwide. It is a problem that affects nearly every society- developed and developing alike. There is a growing awareness that early child bearing has multiple consequences in terms of maternal health, child health and over all well-being of society. Although prevention of unwanted teenage pregnancy should be the primary goal the modern society, many adolescents continue to become pregnant. The purpose of this article is to review current trends and issues on adolescent pregnancy to update the practitioners. The readers are provided with more recent data on adolescent sexuality, contraceptive use, and childbearing as well as suggestions for addressing the challenges of teenage pregnancy.

Key Words: Adolescent; Adolescent Pregnancy; Contraception; Sex education; Teenage.

INTRODUCTION

Adolescence is defined as the stage of life during which individuals reach sexual maturity; it is the period of transition from puberty to maturity.[1] The age group 10-19 identifies the period of adolescence.[2] But for the purpose of this paper, adolescents refer to the age group 15-19, as data on reproductive health are most commonly available for this age group. Adolescence is a distinct and important biological and social stage of development. This is a period of transition from childhood to adulthood. Pregnancy in a girl aged between 10-19 years is adolescent or teenage pregnancy. Adolescent pregnancy continues to be a complex and challenging issue for families, health workers, educators, societies and governments, and adolescents themselves.[3,4] One of the important factors for the rapid population growth in the world is adolescent childbearing.[5,6]

Teen age constitutes a high risk group requiring high priority services. United Nations also remarks that early child bearing is a high health risk for both mother and child.[7] Adolescent childbearing is heavily concentrated among poor and low-income teenagers, most of whom are unmarried. Teenage mothers seem to be at higher maternal and perinatal risks. Teenage pregnancies should be discouraged not only for this but also for limitation of fertility and other social reasons.

Address for correspondence :
Dr. Ganesh Dangal
Kathmandu Model Hospital, Exhibition Road, Kathmandu, Nepal
Email: gareshma@hotmail.com

Received Date : *17th Jun, 2005*
Accepted Date : *15th Apr, 2006*

Incidence

Although there is decline in the teen birth rates in the West, teen pregnancy remains a significant problem worldwide. Adolescent childbearing is an aged old problem even in developing countries. Only in the later part of the 20th century, knowledge on its consequences emerged as an issue of public health concern.[8] A significant and considerable number of women get married and bear child in their teenage in Nepal but they are not equally distributed across urban and rural areas and exact data are not available. Adolescents comprise of 23% of 23 millions of Nepalese population.[9] The median age at first marriage for ever married women in Nepal (age 15-49) is 16.6 years, which indicates that majority of newly married couples are adolescents.[10]

A study of Nepal singled out ethnicity as the single most important factor in the determination of the timing of marriage and of the first birth, much more important than education, religion, urban/rural childhood residence and ecological region. Women's mean age at marriage varied from 13.5 among the Brahmins to 17.8 among the Tamangs, while the difference among the literates and illiterates was very small (15.4 and 15.2 respectively), as well as that for the ecological region (14.8 for the terai to 15.7 for the mountains).[11] Other studies for other parts of Asia have reported similar findings.[12,13]

In the US more than 40 percent of women become pregnant before they reach 20 years of age.[14] The US has the highest adolescent birth rate of all developed countries, despite sexual activity rates that are similar or higher among Western European teenagers than rates observed for teenagers in the United States.[15,16,17,18] The reasons for this contrast are unclear, but European teenagers may have greater access to and acceptance of contraception. Beginning in early childhood, young people are bombarded with sexual messages. At the same time, puritanical attitudes restrict the availability of resources and frank discussions about sex. In countries with straightforward attitudes about sex, teens get more consistent messages, clearer information and greater access to and acceptance of contraception and abortion.

An overview of teenage pregnancy rates in different region is given below in the box-1.

Box-1: Rate of births per 1000 females aged 15-19 years.[19]

Africa	:	143/1000
Middle East	:	56/1000
South- East Asia	:	56/1000
Latin America	:	78/1000
Europe	:	25/1000
North America	:	42/1000

Source: WHO (2004), department of child and adolescent health and development. Orientation program on adolescent health for health-care providers.

The average age of first intercourse in the West has decreased to age 17 years for girls and 16 years for boys.[20] Approximately one fourth of youths in the US report first intercourse by 15 years of age.[21,22] Younger teenagers are especially vulnerable to rape/incest or other non-voluntary sexual abuse. Fifty percent of adolescent pregnancies occur within the first 6 months of initial sexual intercourse.[21] Sexually active teenagers are more likely than any other age group to be nonusers of contraception--one in five currently uses no method of contraception.[23] A sexually active teenager who does not use contraception has a 90% chance of pregnancy within one year.[24]

Causes and Risk Factors

Although it is not inevitable, some life circumstances place girls at higher risk of becoming teen mothers. Poverty is correlated significantly with adolescent pregnancy. Growing up in a single parent household, having a mother who was an adolescent mother, or having a sister who has become pregnant are critical life events for becoming teen mother. In developing countries, early age at marriage is the main reason for early pregnancy. These countries are characterized by low age at marriage, poverty, low value and self-esteem of girls, low level of education and low level of contraceptive use, early childbearing, sexual abuse and assault.

There are several predictors of sexual intercourse during the early adolescent years, including early pubertal development, a history of sexual abuse, poverty, the lack of attentive and nurturing parents, cultural and family patterns of early sexual experience, a lack of school or career goals, and poor school performance or dropping out of school.[3,4,21,22,25] Educational failure, poverty, unemployment and low self-esteem are understood to be negative outcomes of early childbearing. These circumstances also contribute to the likelihood of teen pregnancy. Potential risk factors for a teenage girl to have early sexual behavior and / or become pregnant include: early dating and risky sexual behaviors (e.g., multiple partners, poor contraceptive use); early use of alcohol and/or other substance use; dropping out of school and/ or low academic achievement; lack of a supportive environment; lack of involvement in school, family, or community activities and/or poor quality family relationships; perceiving little or no opportunities for success and/ or negative outlook on the future; living in a community where early childbearing is common and viewed as the norm rather than as a cause for concern; growing up under impoverished conditions and poverty; having been a victim of sexual abuse or non-voluntary sexual experiences; or having a mother who was aged 19 or younger when she first gave birth.

Factors associated with a delay in the initiation of sexual intercourse include living with both parents in a stable family environment, regular attendance at places of worship, and increased family income.[21,22,25] Factors associated with increased consistent contraceptive use among sexually active youth include academic success in school, anticipation of a satisfying future, and being involved in a stable relationship with a sexual partner.[26] Adolescents who choose to be sexually active are frequently limited in their contraceptive options by peer, parental, financial, cultural, and political influences.

Suggested reasons for increasing teenage sexual activity without effective contraceptives follow

- Adolescents become sexually mature and fertile approximately 4 to 5 years before they reach emotional maturity.
- Adolescents today are growing up in a culture in which peers, TV and motion pictures, music, and magazines often transmit either covert or overt messages that unmarried sexual relationships are common, accepted, and at times expected, behaviors.
- Education about responsible sexual behavior and specific, clear information about the consequences of sexual intercourse are frequently not offered in the home, at school, or in other community settings. Therefore, much of the 'sex education' that adolescents receive filters through misinformed or uninformed peers.

Consequences of Teenage Pregnancy

Adolescent pregnancy is associated with higher rates of morbidity and mortality for both the mother and infant. An increase in maternal mortality and low birth weight, are the major adverse outcomes of adolescent pregnancies. Teenage mothers are at greater risk of socioeconomic disadvantage throughout their lives than those who delay childbearing until their twenties. The younger the mother, the greater the likelihood that she and her baby will experience health complications. The health consequences of adolescent childbearing for mother and child are the problem recognized universally.[27,28] In addition to health risks, teenage pregnancy hampers further education of female adolescents and consequently earning capacity and overall well being.[29] Also it usually terminates a girl's educational career, threatening her future economic prospects, earning capacity and overall well being. Pregnant adolescents younger than 17 years have a higher incidence of medical complications involving mother and child than do adult women, although there are emerging data that these risks may be greatest for the youngest teenagers.[30,31]

The vulnerability of adolescent female heightens due to biological and social reasons and they are more prone not only to pregnancy and child bearing but also to diseases and conditions specially STI, substance abuse and accidents.8 Pregnancy of a still growing girl means an increase in nutritional requirement, not only for the growth of fetus but also for the mother herself,[32] which inevitably leads the teenage mother to the jaws of malnutrition and she has to suffer from various pregnancy complications like obstructed labor with its sequelae like vesicovaginal fistula

(VVF) and uterine prolapse, retardation of fetal growth, premature, birth etc. Significant incidence of prolonged/ obstructed labor and hypotonic uterine contractions in adolescent pregnancies have been reported by Pachauri and Jamshedji.[33] This may lead to VVF and uterine prolapse later on.

Recourse to abortion including unsafe abortion, leads to high risk of maternal morbidity and mortality. The abortion rate was much higher for older teens, even though pregnant 15 to 17 year olds were more likely than pregnant 18 to 19 year olds to have an abortion. The higher abortion rate at ages 18 to 19 reflects the higher number of pregnancies among older teens. Since 1974, it has been estimated that fewer than 10% of teenage pregnancies have ended in fetal loss However, fetal loss especially abortion is underreported.[34] There is also an increased risk of molar pregnancy especially complete mole in the under-16-year age group and there is a significant increase in ectopic pregnancy in the teenage pregnancy.[35]

The maternal death rate for mothers age 15 or younger is significantly greater than that of women in their 20s. The mortality rate for the mother, although low, is twice that for adult pregnant women.[4,22,30] Pregnancy-related deaths are the leading cause of mortality for 15-19 years old girls (married and unmarried) worldwide. The risk of maternal death is about three times higher in late adolescent (15-19) girls; and those less than 15 years old are 5 times as likely to die as women in their twenties. They also have a higher propensity to experience adverse outcomes such as higher fetal wastage (miscarriage and / or still births).[36]

Prior spontaneous abortions and higher stillbirth rates have been reported in different studies.[33,37] Maternal mortality has been reported to be higher in adolescent pregnancies with 380 to 645/100,000 live births for girls between 15-19 years while it is 250-342 / 100,000 live births for women aged 20-34 years.[38] The question is whether teenagers are inherently a high-risk group due to biological factors or whether social factors including prenatal care or both are important determinants of poor pregnancy outcome in this group.[33]

According to an Indian data, among mothers less than 20 years, only 7% receive antenatal care from a health worker or professional and 41.6% are assisted at delivery by a skilled birth attendant.[39] Over two-thirds of deliveries occur outside the health care institutions. One in six births to adolescents is mistimed or unwanted.[40] A large proportion of these births can be avoided if adequate information on contraception and access to health services are available to adolescents. Approximately 1 million teenagers become pregnant in the United States each year; most of these pregnancies are among older teenagers, ie, those 18 or 19 years old.[16] Approximately 51% of teenage pregnancies end in live births, 35% end in induced abortion, and 14% result in a miscarriage or stillbirth.[3,4,16,21,25]

Teenage mothers seem to be at higher risk of child bearing with high perinatal risk.[41] The children of teenage mothers are at greater risk of lower intellectual and academic achievement, health complications, social behavior problems and problems of self-control than are children of older mothers, primarily due to the effects of single parenthood, lower maternal education, and large family size. Teenage mothers have a higher incidence of low birth babies. These babies are usually associated with birth injuries, serious childhood illness and mental and physical disabilities. Birth weight is strongly associated with infant mortality; mortality went on decreasing with better birth weight.[42] Various studies have also shown that along with socio-economic conditions, malnutrition, hard physical work, age are considered as significant factors in giving birth to under weight baby. The incidence of low birth weight (<2500 g) is more than double the rate for adult pregnancies, and the neonatal death rate is almost three times higher.[20,43] Low birth weight and prematurity raise the probability of a number of adverse conditions, including infant death, blindness, deafness, mental retardation and cerebral palsy.

Adolescent pregnancy has been associated with other medical problems including poor maternal weight gain, pregnancy-induced hypertension, anemia, and sexually transmitted diseases. A combination of biological and social factors may contribute to poor outcomes in adolescents. The only biological factors that have been associated

consistently with negative pregnancy results are low pre-pregnancy weight and height, parity, and poor pregnancy weight gain.[44] Many social factors have been associated with poor birth outcomes, including poverty, unmarried status, low educational levels, drug use, and inadequate prenatal care.[45] Psychosocial problems implicated in adolescent pregnancy include school interruption, persistent poverty, limited vocational opportunities, separation from the child's father, divorce, and repeat pregnancy. Incidence of spontaneous abortion may not be higher in the teenagers but procured abortion (criminal or legal) in unmarried teenager is significantly high.

Incidence of nutritional anemia in pregnancy in developing countries is significantly high.[46,47,48] Incidence of STD including HIV/AIDS is also significant amongst teenaged unmarried pregnancies.[46,49,50,51] Every 14 seconds, a young person is infected with HIV/AIDS. In many settings, the number of new infections among young women is several times that for young men.[52] Married adolescents often face greater reproductive health risks than those not married. They often face familial and social expectations to begin childbearing right after marriage. Their access to contraceptives is often limited. And many face the risk of STIs or HIV infection from older husbands who may have multiple sexual partners, but negotiating condom use is not an option.[53] A study in the late 1990s found that contraceptive prevalence among sexually active, unmarried adolescents was more than 30 per cent in seven sub-Saharan African countries (Benin, Cameroon, Cape Verde, Kenya, Nigeria, South Africa and Zambia) and more than 60 per cent in six countries in Latin America and the Caribbean (Bolivia, Brazil, Colombia, Costa Rica, the Dominican Republic and Peru), in both cases much higher than among their married counterparts.[54] Condom use in particular was considerably higher among unmarried adolescents in these countries than among those who were married.[55]

It is a well known fact that the most important cause of perinatal loss in adolescent pregnancy is prematurity and low birth weight. Generally teenaged girls get easy normal delivery of shorter duration: however, incidences of lacerations of genital tract and postpartum hemorrhage run high. Caesarean section rate is generally low although this may be necessary for cephalopelvic disproportion below the age of 15 years.[33,37]

In majority of joint family in Nepal, births are always welcome events. Due to low level of education and lack of reproductive rights, adolescents have to experience pregnancy usually decided by mother-in-law and grandmother and this brings various complications during pregnancy and delivery. The public health implications of adolescent pregnancy are various. Early and adequate prenatal care is crucial for detecting pregnancy risks and assuring healthy birth outcome and a healthy mother. Teenage mothers are more likely to demonstrate behaviors such as smoking, alcohol use, or drug abuse; poor and inconsistent nutrition; or multiple sexual partners. This may place the infant at greater risk for inadequate growth, infection, or chemical dependence. The children of adolescent mothers do not fare as well as do children of adult mothers from a psychosocial perspective.[56,57] These children have an increased risk of developmental delay, academic difficulties, behavioral disorders, substance abuse, and becoming adolescent parents themselves. Adolescent fathers are similar to adolescent mothers; they are more likely than their peers who are not fathers to have poor academic performance, higher school drop-out rates, limited financial resources, and reduced income potential.[58,59,60]

There are multiple societal implications of teen pregnancy. Children born to single teenage mothers are more likely to drop out of school, to give birth out of wedlock, to divorce or separate, and to become dependent on welfare, compared to children with older parents. In addition to its personal impact on the lives of women and children, teen pregnancy results in huge public cost to the society.[46]

Symptoms of Pregnancy in Teenagers

They are similar to the symptoms in adult pregnancy and include missed period, fatigue, breast tenderness ,distention of abdomen, nausea/ vomiting, light-headedness or actual fainting. The adolescent may or may not admit to being involved sexually. There are usually weight changes. Examination may show increased abdominal girth, and the fundus may be palpable. Pelvic examination may reveal bluish or purple coloration of vaginal walls, bluish or

purple coloration and softening of the cervix, and softening and enlargement of the uterus. A pregnancy of urine and/or serum HCG is usually positive. An obstetric scan confirms accurate dates for pregnancy, it also tells about the wellbeing of the fetus.

Treatment of Adolescent Pregnancy

Various pregnancy options should be reviewed thoroughly and make them known and available to pregnant teens. Abortion is a potential option. Giving up infants for adoption after delivery is another option, but the majority of pregnant teens choose to continue their pregnancies and keep their infants. Comprehensive prenatal care from the outset ensures a healthier baby. Smoking, alcohol use, and drug abuse should be strongly discouraged in pregnant teens. Since pregnant teenager carries a high risk pregnancy, she must be cared in a hospital. Close antenatal checkups, advice on adequate diet, correction of anemia, early detection of pre-eclampsia, advice on more rest to avoid premature births, advice on appropriate exercise and adequate sleep, care of her emotional aspect and good intranatal and postnatal care are all important. There should be adequate provision of/ and access to effective contraceptive information and services for birth-spacing, following delivery to discourage adolescents from becoming pregnant again. Adequate nutrition must be assured through both education and the availability of community resources.

Women having a first child during adolescence are more likely to have an increased overall rate of childbearing and more total births. They are less likely to receive child support from biological fathers, less likely to complete their education or work, and less likely to establish independence and financial security adequate to provide for themselves and their children without outside resources. Appropriate and adequate counseling on all the mentioned aspects are very important. Pregnant teens and those who have recently given birth should be encouraged and helped to remain in school or reentering educational programs targeting skills that will enable them to provide for their child financially, emotionally, and with appropriate parenting. Treatment of the medical complication of teen pregnancy can be challenging but not much different than those of adult pregnancy.

Prevention of Adolescent Pregnancy

The aims for programs addressing teen pregnancy should be threefold: first, directed at delaying the initiation of sexual activities and early marriages; second, directed at preventing pregnancy for sexually active adolescents by the use of effective contraception; and third, directed at ensuring the well-being of adolescent parents, including the avoidance of further pregnancies. An approach for prevention of teen pregnancy will be to create awareness through abstinence education program, clinic-focused program to bring about behavioral changes in the teens. Early childbearing can be postponed by delaying early marriage and delaying the timing of the first birth through the effective use of family planning methods. In young women subsequent pregnancies should be discouraged as rapid repeat pregnancy in young mothers also increases perinatal risks. Prevention of marriage at teenage can only eliminate teenage pregnancy in developing countries where early marriage is a common practice. Adolescent sex education to prevent teenage pregnancy has recently gained importance for rise of STD's, premarital sex and pregnancy. This has become a concern of developed world as well. There is a school of thought that sex education increases sexual activity; but studies show that this is not the case. In fact, effective and successful sex education programs can decrease sexual activity and increase contraceptive use in sexually active youth. Sex education should not be a taboo but it should be catered to youth at schools as well. In Nepal this endeavor has been started and sex education is recently incorporated at schools. Family planning services, offered at no cost, teen friendly environments, provision of adolescent clinics and the Teen Awareness Programs by media on sexual abstinence and delaying sexual activity can be important steps in prevention programs.

Some of the key principles of teen pregnancy prevention are as follows

1. Parents, guardians and other members of society must play key roles in encouraging young adults to avoid early pregnancy and to stay in school.
2. The primary messages of prevention programs should be on abstinence and personal responsibility.

3. Adolescents must be given clear pathways to college or jobs that give them hope and a reason to stay in school and avoid pregnancy.
4. Public and private-sector partners including parents, schools, business houses , media, health care providers, and religious institutions must work together to develop comprehensive strategies for prevention of teen pregnancy.

Although no uniform sex education program has become effective for teenaged, abstinence education programs encourage postponing sexual involvement until marriage or until a person is mature and skilled enough to handle sexual activity in a responsible manner and able to manage a potential pregnancy.[61,62,63,64] Education programs should focus upon teaching adolescents about their bodies and normal functions as well as providing detailed information about contraceptives. Adolescent clinics should provide easier access to information, counseling by health care providers, and contraceptive services. These clinics can be school based as well. Peer counseling programs should involve older, well-known, and respected teens to facilitate discussions and encourage other teens to resist peer and social pressures to become sexually involved.

There is evidence that, in most developing countries, adolescent face difficulty in obtaining family planning methods due to lack of knowledge and also limited access to family planning services.[65] This matter suggests the need for more strong family planning program efforts specifically for newly married adolescent couples. Teenagers-both males and females-, who are sexually active, need easy access to contraceptives and confidential family planning services. Young women who are poor or low-income also need the same opportunities as their more advantaged peers to terminate a pregnancy if they decide that they are not capable of bearing and raising a child.

Multiple and varied studies, and programs have addressed the challenging issue of prevention of adolescent pregnancy.[14,21,30,61,66,67,68,69,70,71,72,73] Effective and successful programs include multiple approaches to the problem, such as abstinence promotion, contraception availability, sexuality education, school completion strategies, and job training. Primary prevention (first pregnancy) and secondary prevention (repeat pregnancy) programs are both needed, with a special focus to the adolescents who are at risk of becoming pregnant and innovative programs that include males.[61,62,63,64]

A successful prevention program will include the following strategies.[74] (Modified from American academy of pediatrics, Committee on Adolescence.)

1. Adolescents should be encouraged to postpone early sexual activity. Abstinence counseling and information on and access to pregnancy prevention/ termination, if they become sexually active, are an important.
2. Physicians should be sensitive to issues relating to adolescent sexuality and be prepared to obtain a developmentally appropriate sexual history on all adolescent patients.
3. It should be ensured that all adolescents who are sexually active have knowledge of and access to contraception.
4. Physicians should encourage and participate in community efforts to prevent first and subsequent adolescent pregnancies. These efforts should be directed to the specific needs of youth in that community.
5. Physicians should advocate for comprehensive medical and psychosocial support for all pregnant adolescents. Early and adequate prenatal care should be tailored to the medical, social, nutritional, and educational needs of the adolescents and should include child care training as well.
6. Adolescent mothers should not receive early postpartum discharge so that clinicians can ensure that the mother is capable of caring for her child- thus ensuring optimal health care and has resources available for assistance and appropriate support.
7. The adolescent mother's partner and father of her child should be included in teenage pregnancy and parenting programs with access to education and vocational training, parenting skills classes, and contraceptive education.
8. We should serve as resources for pregnant teenagers and their infants, the teenager's family, and the father of the baby to ensure that optimal health care is obtained and appropriate support is provided.

CONCLUSION

The global problem of adolescent pregnancy is common and has become a key public health concern for all. In order to reduce the rate of early child bearing; adolescents, their parents and community should be made more aware of the negative health, social and economic consequences of it. Such awareness could be created through social mobilization, information dissemination, sex education and communication campaigns. Each and every aspects of teenage pregnancy should ideally be dealt with carefully and sensibly to reduce the occurrence, complications and societal burden of this.

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