

# [Adolescent is an important stage of life for establishing health](https://assignbuster.com/adolescent-is-an-important-stage-of-life-for-establishing-health/)

## INTRODUCTION

Adolescent are not monsters, they are just people trying to learn how to make it among the adults in the world, who are probably not so sure themselves. India is the second most popular country with total population of 1081million comprising nearly 30% of the total population, among which adolescents (10-18years) form a population of 22. 5% (WHO, 2001 census).

Adolescent is an important stage of life for establishing health behaviour, attitudes and life style. It is a period characterised by rapid physical growth, sexual, psychological, sexual and physiological growth. Health behaviour is one indicator of health of younger people that may serve both as a measure of health over time as well a target for health policy and pregnancy and prone to risk behaviour like aggression, victimization, depression, suicidal ideation, substance abuse and sexual behaviour (Grabber, 2004).

Researchers have revealed that a woman sexual development starts as early as 13 years, but her physique is not well developed to bear strains during pregnancy there is relatively high risk for the teenage mothers between 15-18years of age (Discovery academy, 2010)

Adolescents are considered to be healthy since mortality in this age group is relatively low. Infact, the adolescent girls can do have a range of health problems like anaemia, increasing premarital sex, prostitution, reproductive tract infections, school drop out, poor nutrition, early child bearing and reproductive complications. etc (WHO, 2006).

Today all over the world, teenage pregnancy is, emerging as a serious problem, approximately 15 million pregnancies occur every year among young women aged 15-19 years. They are more common in the developing country like India. Though 50% of girls get married by 18 years, 19% of total fertility rate (15-19 years) is adolescent pregnancy, 27% of them have unmet need of contraception, and 4. 7% of them were using modern method of contraception (WHO, 2006).

Teenage pregnancy is defined as getting pregnant below 18 years. Young adolescents (12-14 years old) are more likely to have unplanned sexual intercourse and are more likely to be concerned in to sex. Most teenagers do not plan to get pregnant, but many do. Often teenagers do not receive timely prenatal care and they have a higher risk of pregnancy like high blood pressure and its complication, premature birth and low birth weight (Health Orates, 2008).

Early marriage and early pregnancy are accepted cultural norms of our society. The outcome of teenage pregnancy is affected due to illiteracy, poor socio economic condition, inadequate prenatal care. Most of the adolescent girls don’t have adequate knowledge about puberty, teenage pregnancy and other reproductive health. Negative perception which they gather from other sources often contributes to STDs and HIV infections (Chahande, 2002).

## High rate of mortality and morbidity has always been associated with pregnancy and child birth in pubertal and adolescent girls, and also a dramatic rise in the number of pregnancy, abortions, and sexually transmitted diseases. Thus it is increasingly recognized that good reproductive health really begins in adolescents. Reproductive health is influenced by many factors such as education, nutrition, sexual roles, sexual status, cultural practices and socio economic development (K. Park, 2009).

## A cross sectional observational study was conducted on prevalence of child marriage before 18 years of age among the young adult women in India. Data from National Family Health Survey-3 were limited to the sample of Indian women aged 20 years. The results showed that 44. 5% of women aged 20 years were married before 18 years, 22. 6% of women were married before the age of 16 years and 2. 6% women of were married before the age of 13 years (Raja, Saggurti N, 2008)

A cross sectional study on Reproductive pattern, perinatal mortality, and sex preference was conducted in rural Tamil nadu in India. In this study 30 village areas were randomly selected and served by health sub centres. The participants were 1321 adolescent women. The Result showed that 41% of the subjects (535) were primiparous, 7 subjects (0. 5%) were grand multiparous. The, the neonatal mortality rate was 35. 3/1000, the perinatal mortality rate was 42. 0/1000 and the stillbirth rate was 13. 5/1000 births (Birgitte Bruun Nielsen, 2000).

## NEED FOR THE STUDY

Globally teenage pregnancy accounts for 16 million in the age group of 15-19years, in which 10% is teenage pregnancy, one -third is abortion, 14% of them miscarry and 52% will bear children. In developing countries accounts for 95% of teenage pregnancies, the highest teen birth rates has been recorded in Mississippi, with of 68. 4%, Mexico with 64%, Texas with 63%, the lowest rates are recorded in countries with in northeast 18. 7%, Vermont with 20, 8% (WHO, 2009).

In India 42. 9% girls are in age group of 15-17 years and 14% girls in age group of 17-19 years and 3/10 girls get pregnant before 20 years, 1/6 girls are born to teen mothers and 47% of Indian women aged 20-24 married before legal age of 18, and 56% are in rural areas. The total fertility rate was 6. 2-6. 7 (WHO, 2000).

The recent studies revealed that teenagers become sexually active in early puberty and they face challenges of onset of menstruation compared to urban areas. 40% of teen girls aged 15-19 years had sex at least once and prefer the rhythm method of birth control. The incidence of teenage pregnancy was 63% and prevalence rate was 28 and 32 per 1000 in rural and urban areas of Tamilnadu. In Coimbatore, 15. 2% of adolescent girls and 0. 7% of adolescent boys are getting married early (WHO, 2005).

A report by save the children found that, annually thirteen million children are born to women under age of 20 years in world wide. More than 90 of these births occur to women living in developing countries. The higher rate of teenage pregnancy in the world with 143/ 1000 girls in age group of 15-19 years is in sub-Saharans Africa and the Fertility rate in south Asia range from 71to 119 birth/1000 women aged between 15-19 years (Health and demographic survey, 2010).

A descriptive and comparative study on knowledge, attitude and behaviour related to sex among teenage girls between nursing and non nursing college students was conducted in Taiwan. A total of 792 students were recruited from one nursing school compared to non nursing students. The nursing students had more knowledge on sex related issues. They also found that the close an intimate relationship was, the more liberal sexual activities tended to be. The participant was prone to accept premarital sex, and cared less about the virginity of future spouses, 60% students perceived that having a child before marriage was unacceptable, about 23% of participants had intercourse experience, while only 30% girls surveyed to have used contraception every time they had sexual intercourse. 11 students reported being pregnancy, but none chose to take their pregnancy to term. The finding of this study showed that nursing education may have a positive influence on the sexual knowledge, attitude and behaviour with regard to participating in safer sex among teenage girls (Tseng YH, 2009).

The investigator while conducting health awareness programme, found that most of the adolescent girls got married at the age of 13 years, and they had poor hygiene, and low birth weight babies. The girls were not aware about puberty teenage pregnancy and other aspects of reproductive health. So the investigator felt the need to create awareness about teenage pregnancy. This study will help to assess the knowledge and attitude of adolescent girls towards selected aspects of reproductive health and prevent the complications.

## STATEMENT OF THE PROBLEM

## A Study To Assess The Effectiveness Of Structured Teaching Programme On Knowledge And Attitude Of Adolescent Girls On Teenage Pregnancy At Thottipalayam, Coimbatore.

## OBJECTIVES:

To assess the knowledge and attitude of adolescent girls on teenage pregnancy.

To administer structured teaching programme on teenage pregnancy among adolescent girls.

To reassess the knowledge and attitude of adolescent girls on teenage pregnancy.

To associate the findings with the selected demographic variables

## OPERATIONAL DEFINITIONS

## Effectiveness:

It refers to the extent to which the structured teaching programme on teenage pregnancy has achieved the desired effect in improving the knowledge and change in attitude of adolescent girls.

## Structured teaching programme

It refers to systematically planned teaching programme, designed to provide information on teenage pregnancy to adolescent girls.

## Knowledge

It refers to the information gained by adolescent girls on teenage pregnancy.

## Attitude

It refers to the expressed belief and feeling of adolescent girls on teenage pregnancy.

## Teenage pregnancy

It is defined as teenaged or under aged girl usually in the age group between 13-18 years getting pregnant.

## Adolescent girls

It refers to both married and unmarried adolescent girls in age group between 13-18 years.

## ASSUMPTIONS

Adolescent girls will have lack of knowledge on teenage pregnancy.

Adolescent girls need education regarding teenage pregnancy.

Structured teaching programme on teenage pregnancy will help the adolescents to improve their knowledge and will help them to develop a positive attitude.

Knowledge and attitude have strong influence on adaptation of healthy behaviour.

## HYPOTHESIS

There is a significant difference between pre test and post test scores on knowledge and attitude of adolescent girls on teenage pregnancy after structured teaching programme.

## LIMITATIONS:

The study is limited to

Adolescent girls who are willing to participate.

Adolescent girls who are available at the time of data collection.

Adolescent girls who have attained menarche

Adolescent girls at the age between 13-18 years.

## PROJECTED OUTCOMES

This study will help the adolescent girls to get adequate knowledge and gain awareness on teenage pregnancy.

It will help the adolescent girls to share information with colleagues and surrounding people.

## CONCEPTUAL FRAMEWORK

A conceptual framework deals with abstraction, which is assembled by nature of their relevance to a common theme. It is a global idea about the concept in relation to a specific discipline . It describes the mental image of a phenomenon and integrate them into a meaningful configuration. It’s a visual diagram by which the researcher explains the specific area of interest (Christenson J. Paula, 2000).

One of the important purposes of conceptual framework is to communicate clearly the interrelationship of various concepts . It guides an investigator to know what data needs to be collected and gives direction to the entire research process (Kertinger K. N, 1999).

This study was aimed at assess the effectiveness of structured teaching programme on knowledge and attitude of adolescent girls on teenage pregnancy.

The investigator adopted “ Pender’s Health Promotion Model” (1984). The study seeks to increase an individuals level of wellbeing . The model focuses on aspects of individuals cognitive perceptual factors , perceived health status, health promoting services and perceived benefits of health promotion. The model also identified factors that influence health promotion activities.

In this modified mode, the community nurse interacts to assess the level of knowledge and attitude on teenage pregnancy among adolescent girls who are influenced by the demographic variables.

## This model focuses on the following areas:

Cognitive perceptual factors

Perceived health status

Health promoting services

Perceived benefits of health promotion

Barrier to health promoting behaviour

## 1. Cognitive perceptual factors

The investigator assessed the knowledge and attitude of teenage pregnancy among adolescent girls by using structured questionnaire and rating scale.

## 2. Perceived health status

The adolescent boys have adequate knowledge and positive attitude regarding teenage pregnancy or the adolescent girls have inadequate knowledge and negative attitude regarding teenage pregnancy.

## 3. Health promoting services

Structured teaching programme of teenage pregnancy is given as health promoting service to the adolescent girls irrespective of their knowledge and attitude.

## 4. Perceived benefits of health promotion

Health promoting behaviour is the desired behavioural outcome and is the end point of Health promotion model.

In this study the health promoting behaviour developed by structured teaching program will result in improved health and better quality of life among adolescent girls.

## 5. Barrier to health promoting behaviour

In this study if the adolescent girls have inadequate knowledge and negative attitude on teenage pregnancy, reassessment of adolescent girls knowledge and attitude was done. But it is not included in this study.

force, 37. 5% indicated it was with consent 57% have mentioned it was with out their knowledge (Lakshman Dissanagalee, 2008)

A cross sectional study on youth risk behaviour surveillance was conducted in the United States. Health risk behaviour contributed to be the leading cause of morbidity and mortality among youth and an adult, which is often, are established during childhood period and extends to adulthood. These problems were interrelated and preventable. The youth risk behaviours surveillance system monitors 6 categories of priority health risk behaviour among youth and young adults. They are intentional injuries, violence, tobacco use, alcohol and drug use, sexual behaviour, physical inactivity and prevalence of obesity and asthma. A 20 local survey was conducted by CDC (centre of disease control) and state and local school based YRBS education in 42 states. It was found that among those who drinking alcohol of which 34. 2% were currently sexually active and 38. 9% did not used condom (Eaton, DK, 2010).

A cross sectional study was conducted on the characteristic of pregnancy among teenage girls at Nagpur in India. The participants were 462 postnatal women, less than 20 years old for a period of 1 month from

1st October 1999 to 30th June, 2000 at government hospital in experimental group . The control group included 500 primiparous women at the age group between 20-29 years at government hospital during the same period. The data was collected using the interview technique. The results showed that 97. 8% were at the age group of 18-19 years and in the control group were at the age group of 20-22 years, 65. 3% women and 62. 6% women belonged to Hindu religion from the experimental and control group respectively, 8. 6% women and 7. 0% women were illiterate from the experimental and control group respectively, 53. 2% women and 75. 2% women were house wives from the experimental and control group respectively . In the experimental group the women’s age at marriage was 16. 7 years and in the control group it was 18. 65 years

## (A. R Jadhao, 2007)

A cross sectional observational study was conducted to assess the prevalence of child marriage on young adult women between 13- 20 years of age in India. Data from National Family Health Survey-3 were limited to the sample of Indian women aged 20 years (no= 22). The results showed that 44. 5% of women aged 20 years were married before 18 years, 22. 6% of women were married before the age of 16 years and 2. 6% of were married before age of 13 years (Raja, Saggurti N, 2008)

A cross sectional study on health profile of pregnant adolescents among selected tribal populations was conducted at Rajasthan in India. The study participants included adolescent girls in 2nd and 3rd trimester of pregnancy who were selected randomly from 15 tribal villages of Udaipur district. A total of 54 adolescent girls aged (13-19) years were included in present study of which 59% were found to be primigravidas, 30% were pregnant for 2nd time, 2 girls were pregnant for 3rd time. Majority were illiterate. A large number was found to be suffering from moderate to severe anaemia(n= 42) weighing very less than 42 kg , 2 of the pregnant girls were associated to be suffering from pellagra, and 1/3 of the girls had vitamin A deficiency (Sharma V, 1999).

A case control study was conducted to examine the socio cultural determinants of pregnancy among adolescents in Nepal . This study was selected to compare the education, economic status, family support system and freedom towards conception among teenagers and higher age group women. The study participants were adolescent girls (13-19) years and the older women (20-29 years) . The results showed that 70%adolescent pregnant women were compared with 70% of primigravida women. Teenage pregnant women who were less educated, had poor economic background were more likely to have accidental pregnancy due to love marriages (Sharma AK, 2002).

A study was conducted to compare the risk of teen-age pregnancy in a rural community under 20 years old, in the state Maharastra in India. The study sample included 5994 deliveries in the rural health district area of Sirur. Adolescent pregnancies amounted to 598 deliveries. The perinatal mortality rate was (238) under 18 years old was 67. 2%/ 100 live births. The neonatal mortality rate was 67. 4. Statistically significant differences were found in the rate of low birth weight infants, stillbirths, and late neonatal deaths among the babies delivered by the women aged less than 18 years compared to other women. The perinatal mortality rate was 7-16 times greater than associated risk factors, except anaemia. The neonatal mortality rate was 2. 5-18 times greater than associated risk factors, except anaemia and oedema. Late neonatal mortality rate was 2. 2 times higher among infants with mothers of under 18 years old (Pratinidhi A, 2000)

A population based case control study was conducted in Turkey to determine the degree of socio economic status as a risk factor for first birth at age 19 or younger in married women. The study group comprised of all married and pregnant women aged 15-19 yrs (adolescent pregnancies) attending primary care centres (144 subjects) and married women between 20 and 29 years, experiencing their first pregnancy (adult pregnancies) who were determined as the control group (144 subjects). A questionnaire was completed for each subject during face-to-face interviews. Analysis showed that adolescent pregnancy was more frequent in women from families with a low socioeconomic status, exposure to violence within the family prior to marriage, and among which families partially opposed or unopposed to adolescent marriage. Lower education level, lack of social security, living in a houses in which the number of persons per room was over 1, unemployed women and sisters with a history of adolescent pregnancy were also the contributing reasons ( Birsen gokce, 2001).

`A cross sectional study was done on social consequences and health problems among teenage pregnancy in rural Kathmandu valley in India. The study sample comprises of (15-19 years old) 180 subjects. This study was done for a duration of six month period among teenagers (10-19 years). The result showed that the preterm delivery was 50%, the prevalence of anaemia was 56. 66% in teenage pregnancy and the haemoglobin level (less than 7. 9 gm) was 55. 67%. . It was concluded that the contributory factors for teenage pregnancy were low socio economic condition, less awareness of family life education and early marriage (Kafle PP, 2010)

A retrospective study was done to determine the incidence and complication of teenage pregnancy at Chonburi, Thailand. In the experimental group the participants were primigravida women between the age group of 13-20 years(2, 490) at chonburi hospital from 1st January 2000-31st December 2009. In the control group they were between the age group of 20-25 years (3, 909) during the same period. The findings of the study showed that the experimental group had a lower gestational age during delivery than the control group(20% vs. 13. 9%), the experimental group had more inadequate antenatal care than the control group (19% vs. 12. 5%), anaemia was a significant between experimental and control group (17% vs. 1%), low birth weight infant mortality rate in experimental group was higher than the control group (Watcharaseranee N, 2006).

A nested case control community based study to compare the risk associated with pregnancy and its outcome among primigravida adolescent and adult pregnant women was conducted at Delhi in India. The participant consisted of 64 adolescent and 175 adult primigravida in a cohort of 343 antenatal women. The result showed that the mean age of conception in adolescent and adult was 18. 46 and 21. 69 years. Complications were more common among adolescents like abnormal presentation and prolonged labour. Pregnancy wastage was 17. 5% and 3. 5% among adolescents and adult respectively (AK Sharma, 2002).

A retrospective study was conducted on comparison of obstetric outcomes of pregnancy in older women and teenagers at Sangali in India. The participants are girls aged â‰¤19 years were compared with older women (19-35 years) in the same hospital. The study group 386 participants were compared with 3, 326 pregnancies of older women. The Results showed that teenage mothers were three times more at risk of developing anaemia (2. 83%), hypertension problem in pregnancy (2. 2%) and low birth weight babies (1. 8%), pre term babies (2. 97%) and 50% less likely to have normal weight babies (0. 5%). They also found that cultural practices, poor socio economic condition, lack of awareness of risk and low literacy rate are the main contributory factors (S. H. Mahavarkar, 2008).

## `A qualitative study was conducted on abstinence to assess the effectiveness of counseling training of health care providers among high-risk teenagers in the United States. Clinicians are enquired about adolescent pregnancy, HIV and STD prevention, which included abstinence by interview technique. The systematic content analysis was used to examine the effectiveness of counseling technique in different situations. The results showed that providing comprehensive counseling, and abstinence as a choice for teenagers, to reduce pregnancy among teenagers (Harper CC, 2010)

## SECTION B: Studies related to knowledge and attitude of teenage pregnancy

A retrospective study was conducted to identify the level of knowledge, behaviour and education needs of school adolescents on Sexual and reproductive health in northern Nigeria. The participants were 989 adolescents from 24 secondary schools. The result showed that 72% of females had experienced menstruation, 14% of females were sexually active, 15% of females knew about the ovulation cycle, 44% of females knew pregnancy could result from first coitus and 56% of females knew about contraception, and 84% gave an opinion that adolescents should be given sexual education . It concluded that there is a need for education for secondary school adolescent (Adekun LA, 2009)

A study was conducted on, knowledge, attitude and sexual behaviour of school adolescent girls in Transkei. A self-administered questionnaire was given to 1025 females from 21 secondary schools. Among the participants 75% of them were unmarried. The results showed that 74. 6% had already been sexually experience, while 21% did not. Both sexually experienced girls and sexually inexperienced girls were living with their parents. It was concluded that sexual development and onset of menarche were the possible risk factors for initiation of sexual activity among school adolescent girls, as one third of sexually experienced adolescent girls been pregnant . It was also found that the contraceptive use was low among adolescent girls (Buga GA, 1999)

## A study was conducted to assess the attitude of teenagers towards sexual behavior among teenagers in U. K. The participants were 1500 teenagers aged between 13-18 years. A questionnaire was given to them. The result showed that, twenty per cent of 13 years old teenagers reported that they had sexual intercourse with a partner, 78% of them reported some form of sexual contact with a partner, 23% of female subjects had experienced sexual intercourse, 38% of male subjects had experienced sexual intercourse, 10% of teens indicated they would be denied to use condom and 37% were concerned about seeing clumsy when using a condom. 23% of males and 9% of females said they would be willing to have sexual intercourse without use of a condom. (Queenmary, 2010)

## A cross sectional study was conducted on knowledge, attitude and behavior of adolescent girls towards STIs/HIV, safer sex and sexual education in South Delhi, India. A self-administered questionnaire was given to 251 adolescent girls. The results indicated that more than one- third of students had less knowledge about the symptoms of STIs other than HIV/AIDS. The attitude scale showed 30% of subjects considered that HIV/AIDS could be cured, 49% of subjects felt that condoms should not be available to youth, 41% were confused about whether the contraceptive pill could protect against HIV infection/AIDS and 32% of subjects said that it should be taken only by married women (Alexandra McManus, 2008).

A cross sectional study was conducted on objective and perceived knowledge of oral contraceptive methods among adolescent mothers in Brazil. The participants are 278 teenage mothers (15-19 years) admitted in 4 maternity hospitals. The result showed that 98% adolescent mothers had low objective and perceived knowledge of oral contraceptive and multipara was the only indicator of increased objective and perceived knowledge on oral contraceptive. It is concluded that there is a need for a more interactive approach with adolescents concerning their level of objective and pregnancy and its consequences (Souse, 2009).

## SECTIONC: Studies related to structured teaching programme on teenage pregnancy

A randomized control study on the cost effectiveness of motivational intervention to reduce rapid repeated child bearing in high risk adolescent mothers was conducted in America. The participants were recruited from 5 urban clinics, 235 pregnant teenagers aged 18 years or younger who were at 24 or more weeks of gestation at recruitment were followed up for 27 months. Participants were randomly assigned to usual care (n= 68) or 1 of 2 home based intervention conducted by community outreach workers and computed assisted motivational intervention was conducted. A single component motivational intervention was conducted quarterly . The result showed that CAMI (computer assisted motivational intervention) significantly reduces repeated births (0. 47, 95%) than single component motivational intervention (Barnet B, 2010).

An individual/ cluster randomized controlled trails to assess the effectiveness of primary prevention intervention on unwanted pregnancy among adolescents was conducted at Calbar in Nigeria. This study is to evaluate intervention that aimed to increase knowledge, change the attitude relating to risk of unintended pregnancy, promote delay in initiation of sexual intercourse and encourage consistent use of birth control methods to reduce unwanted pregnancy in adolescents aged 10-19 years. The participants were 95, 662 adolescents (10-19 years) were included . The result showed that multiple intervention (education and contraception) lowered rate of unwanted pregnancy among adolescents and the evidence shows the effects of interventions on secondary complications (Oringaneje C, 2009).

A community based support study on effectiveness of teaching on early parenting approach with in a community based support services for adolescent mothers was conducted in Canada. The participants were pregnancy or parenting teen mothers between ages of 13-19 years. The intervention group received a brief support intervention and direct teaching of keys to care giving programme. In order to control for the lack of a visit, the comparison group received brief social support. The result shows that the participants in the intervention group showed a significantly greater difference than control group. This finding was likely due to the fact that only one participant scored as being at risk for depression and she was allocated to the intervention group (Jane E. Drummond, 2008).

A prospective study was conducted to evaluate the effectiveness of youth development programme in reducing teenage pregnancy, substance abuse and other outcomes in England. The participants were 2724 young people aged between 13-15 years are at risk of teenage pregnancy, substance misuse, or school exclusion or to be vulnerable and the study design was a Prospective matched comparison study. The intervention was Intensive, multi component youth development programme including sex and drugs education versus standard youth provision. The result showed that Young women in intervention group more commonly reported pregnancy than the comparison group (16% v 6%), early heterosexual experience (58% v 33%) than did those in the comparison group and the expectation of teenage parenthood is (34% v 24%) than the control group (Wiggins M, 2007).

A study was conducted on reducing Adolescent Pregnancy among unmarried adolescents through School and Community-Based Education in South Carolina. Intervention messages were targeted  at parents, teachers, ministers and representatives of churches, community leaders, and children enrolled in the public school system. The messages emphasized the development of decision-making and communication skills; self-esteem enhancement; understanding human reproductive anatomy, physiology, and contraception. The estimated rate of pregnancy abortions for females  aged between 14 to 17 years in the country western portion has declined remarkably since the intervention began, and the changes were statistically significant when compared with three socio demographically similar countries and also with the eastern portion of the country (Murray L, 1999) .

## A study was conducted to assess the effectiveness of teenage pregnancy prevention programme among adolescent girls in U. K. The participants were 100 adolescent girls taken for the study . The result showed that four of these five programmes directly or indirectly provided access to contraceptive services reducing the proportion of adolescents who initiated sexual activity by as much as 15 percentages. The programs were most successful when they targeted younger adolescents. Three of these four programs significantly increased the rates of contraceptive use by as much as 22 percentage among participants , provided access to contraceptive services and targeted adolescents who were younger and those who were not yet sexually experienced. These two programmes significantly decrease the proportion of adolescent pregnancy. It was concluded that there was a delay on sexual initiation, more training should be given in negotiation skills and decision-making, and teach on sexuality and contraception (Forrest JD, 2004).

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