

## Original Research Article

# Adolescent mothers: determinants and dimensions

Amoghashree\*, Pradeep T. S., Praveen Kulkarni, M. R. Narayana Murthy

Department of Community Medicine, JSS Medical College Mysuru, Karnataka, India

**Received:** 22 January 2017

**Accepted:** 01 March 2017

**\*Correspondence:**

Dr. Amoghashree,

E-mail: amogha.gowda@gmail.com

**Copyright:** © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

### ABSTRACT

**Background:** Adolescent pregnancies are more likely seen in poor, uneducated and rural communities. Pregnancy in adolescence is raising problem of all nations including India. There is lot of social pressure among these girls to marry at this tender age and after marriage face the next task of pregnancy which means to have children. The study was conducted with the objective to estimate magnitude of teenage pregnancy in rural community, to assess the socio-cultural dimensions determining teenage pregnancies and to assess the perception of teenage mothers on their social status.

**Methods:** Pre tested and semi structured questionnaire through interview technique. Adolescent girls aged 10-19 years who were already mothers or pregnant at the time of the survey and women aged 20 -24 years married before the age of 18 years were included in survey. Descriptive statistics like percentage, mean and standard deviation were applied.

**Results:** 54(37.8%) of study participants belonged to the age group of 16-20 years, 52(36.3%) of study participants belonged to Class V according to modified B.G. Prasad socioeconomic status, 81(56.6%) of study participants were married by the age of 16yrs, 93(65.1%) study participants knew one or other family planning methods, Educating about the hazards of adolescent pregnancy in the community, traditional practices can be changed and thereby decreasing early marriages and by this means early pregnancies.

**Conclusions:** There is a need of more B.C.C. activities to increase the age of marriage even though which is legalized at age of 18 years but to follow the same and by thus avoiding this easily avoidable health burden and by educating about the hazards of adolescent pregnancy in the community, traditional practices can be changed and thereby decreasing early marriages and by this means early pregnancies.

**Keywords:** Adolescent pregnancy, Complications, Socio cultural dimensions

### INTRODUCTION

WHO identifies adolescence as the period in human growth and development that occurs after childhood and before adulthood, from ages 10 to 19 years. There are many biological processes in this stage driving the growth and development in a very rapid phase next to infancy, where puberty marks the passage from childhood to adolescence. Not only nature and quality of life of young people, but also country's future including social and economic development, depend largely on how successfully this age group can cross this tricky phase of

life. Even though most are healthy, but there is still significant death, illness and diseases among adolescents. Adolescent pregnancies being one major issue among them. Adolescent pregnancies are more likely seen in poor, uneducated and rural communities. Pregnancy in adolescence is raising problem of all nations including India. There is lot of social pressure among these girls to marry at this tender age and after marriage face the next task of pregnancy which means to have children. Once they become pregnant these girls have to drop out of school when in later life they have fewer opportunities to earn for lively hood. Adolescence body is still not

completely matured for this complicated journey of pregnancy. Complications during pregnancy and childbirth are the second cause of death for 15-19 year old girls globally. According to WHO more than 30% of girls in low and middle income countries marry before they are 18 years. Most of the girls do not know how to avoid getting pregnant due to many reasons like sex education is lacking in high school syllabus of many countries; inhibition or ashamed to seek contraception services; Contraceptives may be too expensive or not widely available and when contraceptives are widely available, sexually active adolescent girls are less likely to use them as they lack motivation.<sup>1</sup>

India is facing lot of health related issues whether it might be increasing burden of non-communicable diseases or resurgence of communicable diseases. Unintended pregnancy poses a major challenge to the reproductive health of young adults in developing countries like India. Teenage girls are physically and psychologically immature for reproduction. Several medical complications like preterm birth, poor maternal weight gain, pregnancy-induced hypertension, anemia, and sexually transmitted diseases are strongly associated with teenage pregnancy and it also adversely affects the status of women.<sup>2</sup>

Adolescent pregnancy is associated with higher risks of adverse pregnancy outcomes like eclampsia, puerperal endometritis, systemic infections, low birthweight, preterm delivery and severe neonatal conditions.<sup>4</sup> Among this maternal morbidity and mortality is also most important health issues which is being addressed at various levels. MMR of India is 167 and of Karnataka is 133(2011-2013).<sup>5</sup> Early marriage and early pregnancy are culturally accepted norm in Indian context which is also well established factor related to mother and child related problems.<sup>3</sup> With this above context the study was planned to factors affecting teenage pregnancy as well as their perception on social status in Suttur village of Mysuru district with the objectives, to estimate magnitude of teenage pregnancy in rural community, to assess the socio-cultural dimensions determining teenage pregnancies and to assess the perception of teenage mothers on their social status.

## METHODS

This community based cross sectional study was conducted in a rural area of Mysuru district for 6 months. Sample size was calculated according to the Study conducted by Banerjee et al, the reported prevalence of teenage pregnancy to be 24 % in rural setup.<sup>2</sup>

$p=24\%$ ,  $q=100-p=100-24 = 76$ ; Allowable error  $r = 8\%$

Sample size =  $4pq/r^2 = 4 \times 76 \times 24 / 64 = 114$

Round off sample size = 120

Keeping a non-responsive rate of 5%, i.e. 6, total sample size will be 126.

Adolescent girls aged 10-19 years who were already mothers or pregnant at the time of the survey and Women aged 20 -24 years married before the age of 18 years were included in survey. Snow ball sampling technique was used. Initially anganwadi worker was contacted and information about the first participant was obtained. From there on information about study participants were taken consecutively from the previous participants. Clearance for the study was taken from the Ethics Committee of the Institute. The data were collected using a pre tested, semi structured questionnaire through interview technique and was coded and entered into Microsoft excel Work sheet. This was analyzed using SPSS 22 version. Descriptive statistics like percentage, mean and standard deviation were applied.

## RESULTS

Among 143 subjects included in the study 54(37.8%) of study participants belonged to the age group of 16-20 years, 79 (55.2%) had reached high school education, 132 (92.3%) were homemakers, 47 (32.9%) of husbands of study participants were illiterates, 99(69.2%) of husbands of study participants were unskilled workers, 125 (87.4%) of fathers of study participants were illiterates, 111 (77.6%) of fathers of study participants were unskilled workers, 69 (48.3%) of study participants had less than 5 members in the family, 84 (58.7%) of study participants lived in three generation families and 54 (37.8%) of study participants belonged to birth order 1. Majority 52 (36.3%) of study participants belonged to Class V according to modified B.G. Prasad socio-economic status as shown in Table 1.

90 (62.9%) of study participants attained menarche by the age of  $13 \pm 1.3$  years, 81 (56.6%) of study participants were married by the age of 16yrs, 138 (96.5%) of them did not want to postpone pregnancy after marriage, 141 (98.6%) of study participants did not take any measures to postpone pregnancy after marriage, 103 (72.0%) of study participants were not aware about early pregnancy complications, 115 (80.4%) of study participants had taken <100 IFS tablets, 117 (81.8%) of study participants had pregnancy associated complications, 110(76.9%) were diagnosed anemic, among which 93(84.5%) had hemoglobin percentage in range of 9-11g%. Among 143 study participants currently 24 (16.8%) were pregnant as shown in Table 2.

55 (38.5%) study participants said fathers were alcoholic and 38 (26.6%) said husband were alcoholic which were common factors influencing early marriage and pregnancy respectively.

93 (65.1%) study participants knew one or other family planning methods where operation method (permanent sterilization) was known by majority as shown in Table 3.

76 (53.1%) of study participants perceived that there is no freedom in decision making in family, 69 (48.3%) of study participants were financially dependent, 10 (7%) of study participants had domestic violence and 20 (14%) of

study participants had verbal abuse, 105(73.4%) of study participants were not allowed to go to outside alone as shown in Table 4.

**Table 1: Socio-demographic profile of teenage mothers.**

Variables	Categories	Frequency(%)
<b>Age group</b>	16-20yrs	54(37.8)
	21-25yrs	89(62.2)
<b>Mothers Educational status</b>	Illiterates	11(7.7)
	Primary	2(1.4)
	Middle	32(22.4)
	High	79(55.2)
	PUC-Graduate	19(13.3)
<b>Mothers occupational status</b>	Home maker	132(92.3)
	Unskilled	8(5.6)
	Skilled	1(.7)
	Student	2(1.4)
<b>Husbands education</b>	Illiterate	47(32.9)
	Primary	5(3.5)
	Middle	30(21.0)
	High	45(31.5)
	PUC-Graduate	16(11.2)
<b>Husbands occupational status</b>	Unemployed	2(1.4)
	Unskilled	99(69.2)
	Semiskilled	15(10.5)
	Skilled	22(15.4)
	Semiprofessional	4(2.8)
	Professional	1(.7)
<b>Fathers educational status</b>	Illiterate	125(87.4)
	Primary	1(.7)
	Middle	10(7.0)
	High-Graduate	7(4.9)
<b>Fathers occupational status</b>	Unemployed	16(11.2)
	Unskilled	111(77.6)
	Semiskilled	11(7.7)
	Skilled	4(2.8)
	Semiprofessional	1(.7)
<b>Total family members</b>	<5	69(48.3)
	>5	74(51.7)
<b>Type of family</b>	Nuclear	46(32.2)
	Joint	13(9.1)
	Three generation	84(58.7)
<b>Birth order</b>	1-3	123(86.0)
	4-7	20(14)
<b>Socioeconomic status( modified B.G. Prasad classification)</b>	I	4(2.8)
	II	9(6.3)
	III	36(25.2)
	IV	42(29.4)
	V	52(36.3)

**Table 2: Distribution of participants according to marriage related events.**

Variables	Categories	Frequency(%)
Age at menarche	<13	90(62.9)
	>13	53(37.1)
Age at marriage	<16	81(56.6)
	>16	62(43.4)
Postpone pregnancy	Yes	5(3.5)
	No	138(96.5)
Any measures undertaken	Yes	2(1.4)
	No	141(98.6)
Aware of early pregnancy complications	Yes	40(28.0)
	No	103(72.0)
ANC visits	<4	74(51.7)
	>4	69(48.3)
IFA tablet taken	<100	115(80.4)
	>100	28(19.6)
Pregnancy complications	No complications	26(18.2)
	Anemia	110(76.9)
	Pre-eclampsia	3(2.1)
	Others(Hydromnios, GDM, CPD, LBW)	4(2.8)
Anemia (Hb%)	>11	27(18.9)
	9-11	93(84.5)
	7-9	15(13.6)
	<7	2(1.8)

**Table 3: Distribution of study participants according to their awareness of family planning methods.**

Factors	Frequency (%)
Not aware	50 (34.9)
Aware	93(65.1)
A) Condom	24(16.8)
B) OCP	39(27.3)
C) Injectable contraceptives	19(13.3)
D) Copper -T	22(15.4)
E) Operations	55(38.5)

**Table 4: Distribution of study participants according to freedom in daily activities.**

Variables	Categories	Frequency(%)
Decision making in the family	Yes	<b>67(46.9)</b>
	No	76(53.1)
Financial dependency	Yes	69(48.3)
	No	74(51.7)
Verbal abuse	Yes	20(14.0)
	No	123(86.0)
Domestic violence	Yes	10(7.0)
	No	133(93.0)
Allowed to go to places alone	Yes	38(26.6)
	No	105(73.4)

## DISCUSSION

The study was planned to know the factors affecting teenage pregnancy in rural area of Mysuru. 55.2% had reached high school education. The likelihood of teenage pregnancy and childbearing seemed to be associated with the level of educations noted by Shrestha.<sup>7</sup> 86% of study participants belong to higher birth order (less than 3) in the present study showing that traditional practices in family and community play a significant role, as is evident from this study that in many families, daughters of higher birth order were married early similar to study done by Menon.<sup>13</sup> In the present study, 48.3% of study participants had less than 5 members in the family and 58.7% of study participants lived in three generation families which means higher proportion of adolescent pregnant women were found to be part of an extended family. As mentioned in study done by Rashid, extended family structures and social norms can compel teenagers to give birth even before they are emotionally or physically mature.<sup>10</sup> Majority 52(36.3%) of study participants belonged to Class V according to modified socioeconomic status according to B.G.Prasad (June 2016). Incidence of teenage pregnancies is significantly higher in the lower social classes which are similar to study done by Shrestha.<sup>8</sup> Socio-economic factors, education are few of the factors that play vital role in accepting family planning methods.

56.6% of study participants were married by the age of

16 years even though legal age of marriage is 18 years according to The Prohibition of child marriage act.<sup>14</sup> More than 48.3 % of study participants had antenatal visits more than 4 in the present study. The NFHS-4 Karnataka fact sheet mentions rural mothers who had at least 4 antenatal care visits is as high as 70.9%.<sup>15</sup> Adolescent pregnancy is not free of complications.<sup>1</sup> In the present study 72.0% of study participants were not aware about early pregnancy complications and 81.8% of study participants had complications. The common complication was anemia which constituted 76.9% and among those who were anemic, 84.5% had hemoglobin percentage in range of 9-11g%. High prevalence were observed in studies done by Banerjee which showed 62.9% and Chahande *et al* reported 72.6% of teenage pregnant women to be anemic making it an emergency step to take immediate measure as anemia can be easily prevented stressing the importance if IFA supplementation especially during adolescence and also pregnancy.<sup>2,12</sup> Among 143 study participants currently 24 (16.8%) were pregnant, among which 4.1% belonged to 15-19 years however NFHS-4 Karnataka fact sheet mentions higher prevalence of around 9.1%.<sup>15</sup>

Coming to awareness of contraceptive methods 65.1% study participants knew one or other family planning methods where operation method (permanent sterilization) was known by majority. Many studies have reported that the most teenage girls are aware of at least one contraception method. Different factors such as culture, low education, poverty and poor access among other numerous factors needs to be addressed encouraging the use of family planning methods.<sup>7,8</sup> In the present study only 65.1% study participants knew one or other family planning methods. According to study done by Srivastav *et al* and Langde *et al* revealed 71.22% and 72.4% females had awareness regarding any method of contraception and which is stressing the importance of Information Communication and Education activities regarding family planning at all sectors whether its educational or health or today's fast growing mass media.<sup>6,12</sup>

53.1% of study participants had no freedom in decision making in family, as low involvement of teenage girls in decision making also contributes to early pregnancy. 48.3% of study participants were financially dependent, 7% of study participants had domestic violence and 14% of study participants had verbal abuse, 73.4% of study participants were not allowed to go to places like hospital, market alone. Same findings were noted in study done by Ganarta teenage girls are also less likely to visit health service clinics without their husband's permission.<sup>9</sup>

## CONCLUSION

Among 143 study participants 37.8% belonged to the age group of 16-20 years, 72.0% were not aware about early pregnancy complications, 24(16.8%) were currently

pregnant among whom 4.1% belonged to the age group of 15-19 years.

There is a need of more B.C.C. activities to increase the age of marriage even though which is legalized at age of 18 years but to follow the same and by thus avoiding this easily avoidable health burden and by educating about the hazards of adolescent pregnancy in the community, traditional practices can be changed and thereby decreasing early marriages and by this means early pregnancies.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: The study was approved by the Institutional Ethics Committee*

## REFERENCES

1. WHO. Adolescent pregnancy. WHO. Available from: <http://www.who.int/mediacentre/factsheets/fs364/en/>. Accessed on 4 January 2017.
2. Banerjee B, Pandey GK, Dutt D, Sengupta B, Mondal M, Deb S. Teenage pregnancy: A socially inflicted health hazard. *Indian J Comm Med*. 2009;34(3):227.
3. Parasuramalu BG, Shakila N, Masthi RN. A study on teenage pregnant mothers attending primary health centers of Kempegowda Institute of Medical Sciences, Bangalore. *Indian J Public Health*. 2010;54:205-8.
4. Ganchimeg T, Ota E, Morisaki N, Laopaiboon M, Lumbiganon P, Zhang J, et al. Pregnancy and childbirth outcomes among adolescent mothers: a World Health Organization multicountry study. *BJOG. Int J Obstetrics Gynaecol*. 2014;121(1):40-8.
5. Maternal Mortality Ratio (MMR) (per 100000 live births). NITI Aayog (National Institution for Transforming India), Government of India. Available from: <http://niti.gov.in/content/maternal-mortality-ratio-mmr-100000-live-births>. Accessed on 4 January 2017.
6. Srivastav A, Khan M S, Chauhan C R. Knowledge, Attitude and Practices about Contraceptive among Married Reproductive Females. *International Journal of Scientific Study*. 2014;1(5):2-4.
7. Shrestha S. Socio-cultural factors influencing adolescent pregnancy in rural Nepal. *Int J Adolescent Medicine & Health*. 2002;14:101-9.
8. Sharma A, Verma K, Khatri S, Kannan A. Determinants of pregnancy in adolescents in Nepal. *Indian J Pediatrics*. 2002;69:19-22.
9. Ganatra B., Hirve S. Induced abortions among adolescent women in rural Maharashtra, India. *Reproductive Health Matters*. 2002;10:76-85 .
10. Rashid S. Emerging changes in reproductive behaviour among married adolescent girls in an urban slum in Dhaka, Bangladesh. *Reproductive Health Matters*. 2006;14:151-9.

11. Landge Jyoti A, Dehmubed A. Awareness and practice of family planning method among married women in an urban slum area of Mumbai, Maharashtra. *EJMPR*. 2016;3(2):294-7.
12. Chahande MS, Jadhao AR, Wadhva SK, Ughade S. Study Of Some Epidemiological Factors In Teenage Pregnancy Hospital Based Case Comparison Study. *Indian J Community Med*. 2002;27:3.
13. Menon AK, Kumar PN, Sagar MV. A descriptive study of the socio-demographic determinants influencing adolescent pregnancy in Shimoga Town, Karnataka. *Int J Med Sci Public Health*. 2014;3:552-5.
14. The Prohibition of Child Marriage Act, 2006. Available from: <https://indiankanoon.org/doc/790355/> Accessed on 9 January 2017.
15. KA\_FactSheet.pdf. Available from: [http://rchiips.org/nfhs/KA\\_FactSheet.pdf](http://rchiips.org/nfhs/KA_FactSheet.pdf). Accessed on 4 January 2017.

**Cite this article as:** Amoghashree, Pradeep.TS, Kulkarni P, Murthy MRN. Adolescent mothers: determinants and dimensions. *Int J Community Med Public Health* 2017;4:1104-9.