

Reproductive Health Issues and Use of Family Planning Methods among Married Adolescent Mothers

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ABSTRACT:

Introduction: Adolescent pregnancy is a major public health concern in low- and middle-income countries. Nepal ranks among the twenty countries with the highest child marriage rates in the world. Adolescent mothers are at higher risk for poorer maternal and neonatal outcomes. This study intended to find the reproductive health issues and use of family planning methods among married adolescent mothers at a tertiary care center in a western part of Nepal. **Methods:** This was a cross-sectional study conducted among adolescent mothers who attended the family planning counselling session at Community Medicine Out-patient Department at a tertiary care center. Pre-tested semi-structured questionnaire was used for data collection and variables were entered in SPSS™ version 16. Descriptive statistics were presented in terms of mean and percentage. **Results:** Among 235 adolescent mothers, the mean age of adolescent mothers was 18.02 years (SD = 1.13). Almost 93.2% had not used any kind of contraceptive methods previously. Limited knowledge, uncomfortable talking about contraception and spousal denial were common reasons for not using contraception. Obstetric related complications were observed in 13.6% and one in ten neonates required neonatal intensive care unit admission during the study period. After the counselling session, six out of ten expressed current choice of long acting reversible contraceptives method in which Jadelle implant was preferred. **Conclusion:** Our study among the adolescent mothers showed that use of family planning methods before pregnancy had been very low. Policies need to focus on meeting the unmet need for family planning among married adolescent girls.

Keywords: Adolescent mothers, Family planning methods, Reproductive health

INTRODUCTION:

Pregnancy in adolescents is a global health problem. Globally, about 15 million adolescent pregnancies occur every year and accounts for 11% of total births.[1] The current adolescent birth rates per 1000 women (15-19 years) in Nepal is 88[2] and Nepal ranks among the twenty countries

with the highest child marriage rates in the world. [3] The societal pressure to give birth soon after marriage, knowledge gaps regarding contraceptive use and limited autonomy put the newly married adolescent girls at risky pregnancy.[4] Maternal and neonatal health outcomes are adverse in adolescent pregnancies when compared to pregnancy after 20 years of age. In addition, repeated pregnancies during adolescence risk for poorer maternal health, and socio-economic outcomes. Pregnancy related complications and childbirth are major causes of mortality in 15-19-year girls worldwide.[5]

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According to the report from the World Bank, contraception use among married adolescent girls is only 14% in Nepal. Increase in demand for contraceptive use among adolescents will help in delaying first births as well as healthy birth spacing can lead to healthy and productive life.[6] Although policies are being implemented to end child marriage, addressing the adolescent's reproductive health issues and meeting the need for family planning is equally important. The present study aimed to explore the reproductive health issues and use of family planning methods among adolescent mothers attending a tertiary care family planning unit in a western part of Nepal.

METHODS:

This cross-sectional study was conducted at Lumbini Medical College and Teaching Hospital (LMCTH), Palpa, Nepal over a period of six months from 1st January to 30th June, 2020. A questionnaire-based survey was carried out among adolescent mothers (10-19 years) who attended the out-patient department (OPD) of family planning counselling unit. This study was approved by Institutional Review Committee of LMCTH (IRC-LMC/07-J/019).

Sample size was calculated using the following formula:

Sample size (n) = Z^2pq/d^2 , where prevalence (p) = 0.17 [2], Z = 1.96, Standard normal variate for 95% confidence level,

$$q = 1 - p = 1 - 0.17 = 0.83$$

$$d = 0.05.$$

The minimum sample size calculated was 217.

The participants were enrolled through a consecutive sampling technique. At the end of the counselling session participants were asked if they wanted to participate in the survey. Informed consent was obtained for all the participants who wanted to participate in the study from their legal guardians. The study excluded unmarried adolescents, those with known mental health problems and those who refused to participate. Data was collected through interviews using semi-structured questionnaires.

The questionnaire used as the study tool in the present study was developed in Nepali language in the department of Community Medicine after

reviewing the published literature relevant to this study. The review and validation of questionnaire were done by a panel of experts from Department of Community Medicine and Department of Obstetrics and Gynaecology of LMCTH. The questionnaire was pre-tested on adolescent mothers attending the family planning service comprising 10% of the sample size and they were not included in the present study proper. The questionnaire included demographic variables (current age, age at marriage, residence, ethnicity, education, occupation, continuity of education after marriage), husband's information (current age, age at marriage, education, occupation), type of marriage, use of family planning methods after marriage and preference of family planning methods after delivery, reproductive health issues like parity, unintended pregnancy, antenatal care visits, mode of delivery, maternal and neonatal complications.

Each of the interview session lasted for 10-15 minutes. The participants were interviewed by the principal author and a nurse working in the Community Medicine OPD.

The family planning counselling unit of Community Medicine Department of LMCTH provides counselling to all the adolescent mothers using GATHER (Greet, Ask, Tell, Help, Explain, and Return) technique. GATHER is a client-centred counselling approach. This technique consists of six components; Greet the client to build the rapport between counsellor and client; Ask the client about the needs of family planning; Tell the client about family planning methods suitable for her; Help the client with her decision for using family planning methods; Explain her about ways of using the methods; and Return for follow-up.[7] The information about appropriate contraceptive methods, their advantages, disadvantages and adverse effects were explained during the sessions. Every participant was allowed to choose the family planning methods of their choice. No any financial benefit was given to the participant. All the family planning methods were available at the department as per supply from Government of Nepal. If the adolescent mother chose any of the method, the service was given soon after.

The data thus collected was entered and analysed in Statistical Package for Social Sciences (SPSS™) version 16. Continuous data were presented

as mean and standard deviation; categorical data were presented as frequency and percentages.

RESULTS:

During the study period, 1234 clients attended the family planning counselling session, out of which 289 (23.41%) were adolescent mothers. Among them 235 adolescent mothers gave consent to participate in the study. The mean age of adolescent mothers was 18.02 years (SD = 1.13),

Table 1. Demographic characteristics of the study participants (N = 235).

Variables	Attributes	N (%)
Age	≤ 17 years	59 (25.1)
	18 – 19 years	176 (74.9)
Mean age	18.2 ± 1.13 years (Range 15-19 years)	
Ethnicity	Dalit	63 (26.8)
	Janajati	129 (54.9)
	Madhesi	2 (0.9)
	Muslim	2 (0.9)
	Brahmin/ Chettri	39 (16.5)
Address	Rural	200 (85.1)
	Urban	35 (14.9)
Age at marriage	≤17 years	164 (69.8)
	18 – 19 years	71 (30.2)
Mean age at marriage	16.69 ± 1.21 years (Range 14 - 19 years)	
Education level	Primary and below	34 (13.5)
	Lower secondary	79 (33.6)
	Secondary	93 (39.6)
	Higher secondary and above	29 (12.3)
Mean years of schooling	8.28 ± 2.31 years	
Occupation	Homemaker	224 (95.3)
	Employed	11 (4.7)
Type of marriage	Arranged	73 (31.1)
	Love	72 (30.6)
	Ran away	90 (38.3)
	Continuation of school after marriage	41 (17.4)
Desired to continue school after delivery	Yes	24 (10.2)
	No	211 (89.8)

the mean age at marriage was 16.69 years (SD = 1.21) and the mean years of schooling was 8.28 years (SD = 2.31). More than half of the adolescent mothers were from *Janajati* ethnicity. Out of total, 224 (95.3%) of the participants were homemakers. Almost 38.3% (90) of them had run away with their partners to marry. Only 41 (17.4%) of the participants continued school after marriage and only 24 (10.2%) adolescent mothers were willing to continue school after delivery (Table 1).

The husband's mean age at marriage was 21.51 years (SD = 2.8) with range of 14-31 years. Almost 40% of the spouses had secondary level education and 28.9% of them were employed abroad and 40 (17.0%) were unemployed (Table 2).

Table 2. Demographic characteristics of spouse (N = 235).

Variables	Attributes	N (%)
Spouse's age at marriage	< 20 years	56 (23.8)
	≥ 20 years	179 (76.2)
Spouse's mean age at marriage	21.51±2.8 years (Range 14-31 Years)	
Spouse's education	Primary and below	35 (14.9)
	Lower secondary	74 (31.5)
	Secondary	94 (40.0)
	Higher secondary and above	32 (13.6)
Mean years of schooling	8.45 ± 2.34 years	
Spouse's occupation	Foreign employment	70 (29.8)
	Technical job	54 (23.0)
	Labourer	36 (15.3)
	Shopkeeper/service	35 (14.9)
	Unemployed	40 (17.0)

Around three fourth (74%) of the recent past pregnancies were not intended. The median ANC visits was 4 where 79.2% of the adolescent mothers had completed their fourth ante-natal care (ANC) visit. Most of the participants had taken iron and calcium supplements (n= 216, 91.9%) and 220 (93.6%) adolescent mothers were immunized with Td (Tetanus diphtheria toxoid) during pregnancy. Many of the adolescent mothers did not have obstetric complications (n= 203, 86.4%). More than two third had normal delivery and 94% (n=221) delivered full term babies. Among the adolescent

mothers 34 (14.5%) had low birth weight (LBW) babies and seven (2.9%) were born dead. One in ten new born had complications at birth and needed Neonatal Intensive Care Unit (NICU) admission (Table 3).

Table 3. Reproductive health issues related to recent pregnancy (N = 235 unless specified otherwise).

Variables	Attributes	N (%)
Pregnancy intended	Yes	61 (26.0)
	No	174 (74.0)
No. of ANC visits	None	11 (4.6)
	1-3 visits	38 (16.2)
	≥4 visits	186 (79.2)
Antenatal supplements Iron and calcium	Yes	216 (91.9)
	No	19 (8.1)
Tetanus diphtheria injection (both doses)	Yes	220 (93.6)
	No	15 (6.4)
Obstetric complication	Present	32 (13.6)
	Absent	203 (86.4)
Complications observed*	Pregnancy Induced Hypertension	5 (15.6)
	Eclampsia	2 (6.3)
	Post-partum Haemorrhage	7 (21.9)
	Pre-labour Rupture of Membrane	5 (15.6)
	Prolonged labour	4 (12.5)
	IUFD**	5 (15.6)
	Oligohydraminous	3 (9.4)
	Retained placenta	1 (3.1)
	Gestational age at delivery	Term
	Pre-term	14 (6.0)
Mode of delivery	Vaginal delivery	181 (77.0)
	Caesarean delivery	54 (23.0)
Outcome of the delivery	Normal birth weight	194 (82.6)
	Low birth weight	34 (14.5)
	Born dead	7 (2.9)
Neonatal Intensive care admission	Yes	26 (11.1)
	No	209 (88.9)

*(N = 32) **IUFD: Intra Uterine Fetal Death

methods among adolescent mothers. Among the participants, 228 (97%) were primi-para and six out of 10 did not want to delay their first pregnancy. Almost 93.2% (n = 219) did not use any kind of contraceptive methods previously. Regarding the reason for not doing so, most of them (n= 94, 42.9%) stated that they had not known about using contraceptive methods. One fourth of them had not been comfortable talking about contraception and 17.8% of the participants had not been supported by their partners to use contraception.

Table 4. Use of family planning methods (N = 235 unless specified otherwise).

Variables	Attributes	N (%)
Parity	First	228 (97.0)
	Second	7 (3.0)
Wanted to delay 1 st pregnancy	Yes	93 (39.6)
	No	142 (60.4)
Previous abortion	Yes	8 (3.4)
	No	227 (96.6)
Contraceptive methods used	Condom	11 (4.7)
	Pills	4 (1.7)
	Depot-medroxy-progesterone acetate	1 (0.4)
	Never used	219 (93.2)
Reason for not using any contraceptive previously*	Didn't know	94 (42.9)
	Was not comfortable to discuss	55 (25.2)
	Spousal denial	39 (17.8)
	Others	31 (14.1)
Desired birth spacing	≥ 3 years	224 (95.3)
	< 3 years	11 (4.7)
Desire to use any contraceptive methods	Yes	187 (79.6)
	No	48 (20.4)
Contraceptive methods**	LARC***	112 (59.9)
	Non- LARC	75 (40.1)

*(N = 219), **(N = 187), ***LARC: Long Acting Reversible Contraceptive

Most of the adolescent mothers (n=224, 95.3%), after the counselling session, said that they wanted birth spacing for three years or more. Six out of ten, chose Long Acting Reversible Contraceptive (LARC) methods in which Jadelle implant was most preferred (Fig. 1).

Table 4 illustrates the use of family planning

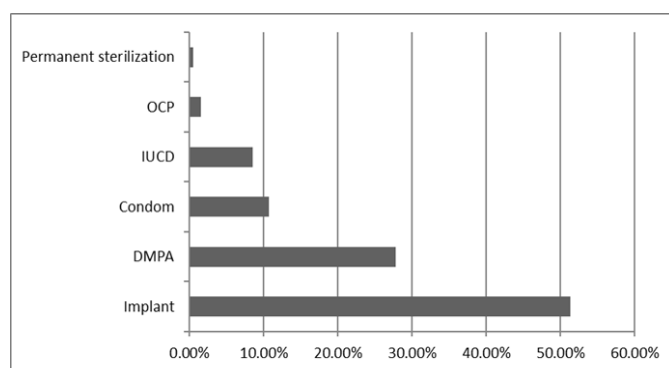


Fig. 1: Choice of contraceptive methods made by adolescent mothers (N=187). OCP: Oral contraceptive pills, IUCD: Intrauterine contraceptive device, DMPA: Depotmedroxyprogesterone acetate

DISCUSSION:

This study aimed to evaluate the reproductive health issues related to recent past pregnancy and contraception use in adolescent mothers. Our results showed that more than nine in ten adolescent married women had not used any modern family planning methods to delay their first pregnancy. However, most of them now wanted to use family planning methods and delay their next pregnancy. They preferred using Jadelle implant followed by Depot-medroxyprogesterone acetate (DMPA) over other methods. About one in four clients attending the family planning counselling session were adolescent mothers. The average age at marriage in the adolescent mothers was 16.69 years. Nepal Demographic Health Survey (NDHS) 2016 showed that average age at marriage is 17.9 years (among 25-49 years). On average, adolescent girls in the area of our study married five years earlier than men (16.69 years versus 21.54 years) compared to the NDHS 2016 where the difference was four years.[2] This may be due to the study in limited geographical area as compared to the national data. Child marriage is still common and girls in rural part of Nepal marry a year earlier than those from urban area.

More than half of the adolescent mothers in our study were from *Janajati* ethnic group. The study from Rupandehi showed that teenage pregnancy was common among Dalit but ethnicity had no direct contribution for pregnancy among adolescents.[8] At the initial stages of reproductive life, married adolescents are not aware of the need of contraception. Bearing a child shortly after marriage, preference of a male child, limited decision-making on reproductive issues within marriage are still prevalent in Nepalese society. So, the adolescent mothers are less likely to delay

their pregnancy or child-birth.[6] Sexual health and contraception are often regarded as a matter of privacy. Adolescents are reluctant to discuss things related to reproductive health with family members, friends and even sexual partners. So, the stigma of getting recognised at local facility, age and gender of health care provider, negative attitudes towards the actual needs of adolescents, lack of privacy and confidentiality were some barriers faced by adolescents for seeking reproductive health care and contraception.[4,9] The contraceptive prevalence is low in adolescents and one of the reasons would be husband's employment at abroad and these girls need contraception infrequently.

Our results show that many of these adolescent mothers had middle school education and 38.3% had run away marriages with their partners. Their partners also had similar education level and mean age of 21.51 ± 2.8 years. The young couple, with low education level and immature enough to run away to get married are less likely to make rational decision on the use of contraception. The knowledge about consequences of early subsequent pregnancies is doubtful. Firstly, education tends to postpone child marriage. Even after marriage, education influences on their reproduction by increasing knowledge on reproductive health, socio-economic status, as well as autonomy on their reproductive rights.[10,11]

Family planning services are the part of essential health services. Government of Nepal has declared contraceptive free of cost to everyone. Adolescent and sexual reproductive health program has been implemented to all level of health care services. But the utilization of these services is as low as 24.7%.[12] Many women still are not aware of contraceptive methods despite the government spending a major budget on awareness through media. Alternative methods are required specially those targeting young married women. Government now needs to focus on policies regarding education and uptake of contraception, involving both the partners.[13]

The mothers in our study had good ANC and immunization coverage. The complications observed in the present study could have been checked by delaying the pregnancy or early intervention. Other studies also observed that the frequencies of developing complications for teen mothers was relatively higher when compared to adult mothers. [14,15] Unintended pregnancy was observed in

74% of adolescents. Most of them did not desire to continue education after childbirth. This shows that they have fallen into a vicious cycle involving low education, wrong decision regarding contraception, childbearing and rearing, and getting pregnant again.

Many of the adolescent mothers wanted birth interval for more than three years. Using LARC would delay in subsequent pregnancies. One of the barriers for adolescent contraception is delay in initiation of contraceptive methods. If not pregnant, all contraceptive methods should be started anytime, even on the day of visit.[16] This holds true for both newly married adolescent girls as well as adolescent mothers. Use of LARC especially Jadelle implants has shown good compliance, effectiveness and lower rate of second pregnancy when compared to the choice made for non-LARC.[17,18]

The present study is not without limitations. This study did not include the unmarried adolescent girls who are in need of contraception. The study was single centred and hospital based which may not represent the reproductive health issues and contraception use in the general population.

CONCLUSION:

Our study among the adolescent mothers in the remote area showed that the use of family planning methods before pregnancy had been very low. Most of the adolescent mothers left school after delivery. These findings indicate the need of effective policies to postpone child marriage and immediate child birth after marriage by enhancing the use of contraceptive devices by the married adolescent girl population. It is also expected to lower maternal and neonatal complications. We recommend that reproductive health needs of this vulnerable population be prioritized by all of the concerned stakeholders.

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REFERENCES:

1. Rosen JE. Position Paper on Mainstreaming Adolescent Pregnancy in Efforts to Make Pregnancy Safer. Department of Making Pregnancy Safer. Geneva: World Health Organization; 2010. Available from: <https://www.gfmer.ch/SRH-Course-2010/adolescent-sexual-reproductive-health/WHO-mainstreaming-adolescent-pregnancy-efforts-MPS-2010.html>
2. Nepal Demographic Health Survey 2016. Ministry of Health, Ramshah Path, Kathmandu; Nov 2017. Available from: <https://www.dhsprogram.com/pubs/pdf/fr336/fr336.pdf> (accessed 2 Sept 2020).
3. UNFPA. Marrying too Young: End Child Marriage. Available from: <https://www.unfpa.org/sites/default/files/pub-pdf/MarryingTooYoung.pdf> (accessed 2 Sept 2020).
4. Maharjan B, Rishal P, Svanemyr J. Factors influencing the use of reproductive health care services among married adolescent girls in Dang District, Nepal: a qualitative study. BMC Pregnancy Childbirth. 2019;19(1):152. DOI: <https://doi.org/10.1186/s12884-019-2298-3> PMID: [31053108](https://pubmed.ncbi.nlm.nih.gov/31053108/) PMCID: [PMC6500073](https://pubmed.ncbi.nlm.nih.gov/PMC6500073/).
5. WHO. Adolescent pregnancy. Factsheet in <https://www.who.int/news-room/fact-sheets/detail/adolescent-pregnancy> (accessed 8 Sept 2020).
6. Aguilar AM, Cortez R. Family Planning : The Hidden Need of Married Adolescents in Nepal. The World Bank; 2015. Available from: <https://openknowledge.worldbank.org/handle/10986/21464> (accessed 2 Sept 2020).
7. Rinehart W, Rudy S, Drennan M. GATHER guide to counseling. Popul Rep J. 1998;(48):1-31. PMID: [10096107](https://pubmed.ncbi.nlm.nih.gov/10096107/).
8. Devkota HR, Clarke A, Shrish S, Bhatta DN. Does women's caste make a significant contribution to adolescent pregnancy in Nepal? A study of Dalit and non-Dalit adolescents and young adults in Rupandehi district. BMC Womens Health. 2018;18(1):23. DOI: <https://doi.org/10.1186/s12905-018-0513-4> PMID: [29357853](https://pubmed.ncbi.nlm.nih.gov/29357853/) PMCID: [PMC5778648](https://pubmed.ncbi.nlm.nih.gov/PMC5778648/).
9. Regmi PR, van Teijlingen E, Simkhada P, Acharya DR. Barriers to sexual health services for young people in Nepal. J Health Popul

- Nutr. 2010;28(6):619-27. DOI: <https://doi.org/10.3329/jhpn.v28i6.6611> PMID: [21261208](https://pubmed.ncbi.nlm.nih.gov/21261208/) PMCID: [PMC2995031](https://pubmed.ncbi.nlm.nih.gov/PMC2995031/).
10. Pandey PL, Seale H, Razee H. Exploring the factors impacting on access and acceptance of sexual and reproductive health services provided by adolescent-friendly health services in Nepal. PLoS One. 2019;14(8):e0220855. DOI: <https://doi.org/10.1371/journal.pone.0220855> PMID: [31393927](https://pubmed.ncbi.nlm.nih.gov/31393927/) PMCID: [PMC6687105](https://pubmed.ncbi.nlm.nih.gov/PMC6687105/).
 11. WHO. Adolescent Pregnancy: Issues in Adolescent Health and Development. World Health Organization, Geneva; 2004. Available from: https://apps.who.int/iris/bitstream/handle/10665/42903/9241591455_eng.pdf (assessed 2 Sept 2020).
 12. Napit K, Shrestha KB, Magar SA, Paudel R, Thapa B, Dhakal BR, et al. Factors associated with utilization of adolescent-friendly services in Bhaktapur district, Nepal. J Health Popul Nutr. 2020;39(1):2. DOI: <https://doi.org/10.1186/s41043-020-0212-2> PMID: [32041664](https://pubmed.ncbi.nlm.nih.gov/32041664/) PMCID: [PMC7011236](https://pubmed.ncbi.nlm.nih.gov/PMC7011236/).
 13. Mahato PK, Sheppard ZA, van Teijlingen E, De Souza N. Factors associated with contraceptive use in rural Nepal: Gender and decision-making. Sex Reprod Healthc. 2020;24:100507. DOI: <https://doi.org/10.1016/j.srhc.2020.100507> PMID: [32200229](https://pubmed.ncbi.nlm.nih.gov/32200229/).
 14. Kumar A, Singh T, Basu S, Pandey S, Bhargava V. Outcome of teenage pregnancy. Indian J Pediatr. 2007;74(10):927-931. doi:10.1007/s12098-007-0171-2
 15. Rexhepi M, Besimi F, Rufati N, Alili A, Bajrami S, Ismaili H. Hospital-Based Study of Maternal, Perinatal and Neonatal Outcomes in Adolescent Pregnancy Compared to Adult Women Pregnancy. Open Access Maced J Med Sci. 2019;7(5):760-6. DOI: <https://doi.org/10.3889/oamjms.2019.210> PMID: [30962834](https://pubmed.ncbi.nlm.nih.gov/30962834/) PMCID: [PMC6447330](https://pubmed.ncbi.nlm.nih.gov/PMC6447330/).
 16. Committee on Adolescent Health Care. Committee Opinion No 699: Adolescent Pregnancy, Contraception, and Sexual Activity. Obstet Gynecol. 2017;129(5):e142-e149. DOI: <https://doi.org/10.1097/aog.0000000000002045> PMID: [28426620](https://pubmed.ncbi.nlm.nih.gov/28426620/).
 17. Rigsby DC, Macones GA, Driscoll DA. Risk factors for rapid repeat pregnancy among adolescent mothers: a review of the literature. J Pediatr Adolesc Gynecol. 1998;11(3):115-26. DOI: [https://doi.org/10.1016/s1083-3188\(98\)70130-5](https://doi.org/10.1016/s1083-3188(98)70130-5) PMID: [9704301](https://pubmed.ncbi.nlm.nih.gov/9704301/).
 18. Winner B, Peipert JF, Zhao Q, Buckel C, Madden T, Allsworth JE, et al. Effectiveness of long-acting reversible contraception. N Engl J Med. 2012;366(21):1998-2007. DOI: <https://doi.org/10.1056/nejmoa1110855> PMID: [22621627](https://pubmed.ncbi.nlm.nih.gov/22621627/).