

Original Investigation

Awareness and Attitude of Teenage Girls Towards Adolescent Pregnancy: A Quantitative Study

Alisha Gurung¹ | Pooja Bhandari^{2*} | Santosh Kumar Gurung³

1 Manipal Teaching Hospital, Pokhara

2 School of Health and Allied Sciences, Pokhara University, Nepal

3 School of Business, Pokhara University, Nepal

ARTICLE INFO

Article history:

Received: 25 October 2023

Revised: 19 November 2023

Accepted: 20 December 2023

*Correspondence:

Pooja Bhandari, School of Health and Allied Sciences, Pokhara University, Nepal,

E-mail:

poojabhandari061@gmail.com

Citation:

Gurung A, Bhandari P, Gurung SK. Awareness and Attitude of Teenage Girls Towards Adolescent Pregnancy: A Quantitative Study. *MedS. J. Med. Sci.* 2023;3(6):63-72

ABSTRACT

INTRODUCTION: Adolescent pregnancy poses serious challenges to public health, especially in developing nations. However, despite the significant adverse outcomes associated with early pregnancy, there exists a dearth of studies investigating the extent of knowledge and perspective of adolescent pregnancy among teenage girls. Therefore, this study aimed to assess the awareness and attitude of teenage girl students about adolescent pregnancy. **MATERIALS AND METHODS:** A cross-sectional descriptive study design was employed using simple random sampling of 145 adolescent girls in a public school located in Pokhara, Nepal. Data were collected using a self-administered questionnaire consisting of socio-demographic information, level of awareness and attitudes towards adolescent pregnancy. Descriptive and inferential analysis were conducted using SPSS version 21.0. **RESULTS:** More than half, 81 (55.9%), showed a moderate level of knowledge about adolescent pregnancy. Similarly, a statistically significant relationship was revealed between the level of awareness and socio-demographic variables, including ethnicity ($p = 0.003$), and family income ($p = 0.006$). Likewise, the results indicated that a significant proportion of the participants 117(80.7%) had favourable attitudes towards adolescent pregnancy. In addition, statistical significance was demonstrated in the relationship between religion ($p = 0.005$), ethnicity ($p = 0.007$), and grade level ($p = 0.001$) and the level of attitude towards adolescent pregnancy. **CONCLUSION:** The study posits that the majority of adolescents had a favourable attitude towards adolescent pregnancy. However, there is still a misconception in their overall knowledge and attitude towards adolescent pregnancy. The study, therefore, emphasized the need to implement awareness programs on adolescent pregnancy within educational institutions and the broader society.

Keywords: Adolescent pregnancy, attitude, awareness, teenage girls



This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

<https://doi.org/10.3126/mjmmms.v3i6.66610>

INTRODUCTION

Pregnancy among girls aged 10 to 19 is globally a major public health problem, particularly widespread in developing countries [1-3]. Every year, approximately 12 million of nearly 21 million girls aged 15-19 who become pregnant give birth in developing countries [4]. The prevalence of early marriage, poverty, societal norms, limited access to education, inadequate sexual and reproductive health awareness and limited healthcare accessibility contribute to increased adolescent pregnancy rates in developing countries, particularly South Asia [5- 7]. Nearly 60% of the women in this region marry before the age of 18, and 25% marry before the age of 15 [8]. More precisely, in South Asia, the countries with the highest documented rates of adolescent pregnancies are Bangladesh (35%), Nepal (21%), and India (21%) [9].

Prior studies [4, 10-13] have demonstrated that adolescent pregnancy contributes to several health and social consequences. Health consequences include low birth weight and premature birth [10], pregnancy-related stress, anxiety and depression [11], and unsafe abortion [4]. Social consequences include unstable marital life, increased dependency on family and neighbours [12] financial burden, low socio-economic status, poverty, social stigma

and isolation [13], lower educational attainment, and reduced career prospects [14,15]. In addition, earlier studies [16-20] have reported negative attitudes and low levels of knowledge about adolescent pregnancy. These results can be ascribed to the fact that teenage girls have limited access to education and a lack of awareness about sexual and reproductive health [5-7] contributing to higher rates of adolescent pregnancies accompanied by severe health complexities leading to higher maternal and infant mortality rates [21-23].

In Nepal, early marriage is still a common practice with limited access to sexual and reproductive education and awareness and healthcare inaccessibility [15], making pregnancy and childbirth among Nepalese adolescents the second highest in South Asia [24]. Despite having a considerable number of studies [6,7,9,10,25,26] on teenage pregnancy and its associated factors in Nepal, limited scholarly attention has been given to examining attitudes and awareness about adolescent pregnancy in Nepal [27-29]. Therefore, to fill this gap, the present study aims to determine the level of awareness and attitude of teenage girls about adolescent pregnancy. The motivation behind this research lies in exploring the levels of awareness,

knowledge, and attitudes of teenage girls students about adolescent pregnancy. By delving into these nuanced perceptions, the study seeks to contribute substantively to the ongoing discourse on adolescent reproductive health and inform targeted interventions tailored to the specific needs of Nepalese teenage girls.

MATERIALS AND METHODS

Study design and setting

A descriptive cross-sectional study design was adopted to assess the awareness and attitude of teenage girl students about adolescent pregnancy. The study was conducted among adolescent female students at Amarsingh Secondary School, Pokhara, Nepal. This school was selected purposively because it is a public school accessible to a large number of students from diverse socio-economic and cultural backgrounds. The study was conducted during the period of August to September 2023.

Participants, sample size and sampling technique

The participants comprised female adolescent students of classes 9 and 10 at Amarsingh Secondary School, Pokhara, Nepal. Initially, the sample size was determined using a standard statistical formula [30] considering prevalence percentage (58%) from a previous study [28], confidence level (95%) and 5% margin of error. This computation yielded a sample size of 374. However, considering the finite population correction formula [30], due to the total number of students in grades 9 and 10 (235), the adjusted sample size was 145. A purposive sampling was used to select the school, while the number of samples was determined using probability proportional to size sampling. The required number of samples was chosen from both grades using a simple random sampling method. The study included only female adolescent students in grades 9 and 10 who consented to participate and complete the questionnaire.

Data collection procedure and study variables

Data was collected using a self-administered structured questionnaire. The questionnaire consisted of three major parts. Part I included 15 questions related to demographic profile of the study participants, such as age, marital status, religion, ethnic group, type of family, residence, grade, education level of parents, occupation of parents, family income per month and information about teenage pregnancy and sources. Part II consisted of questions related to adolescent students' awareness about teenage pregnancy. It comprised of 8 Multiple Choice questions (MCQs) and 6 Multiple response questions (MRQs). 1 was assigned for each right response, while 0 was given for each wrong response. The maximum score was 34. The level of awareness was measured by adopting the following scoring level: inadequate level of awareness (< 50%), moderate level of awareness (50 – 75 %), and adequate level of awareness (> 75%). Part III covered questions related to adolescent students' attitudes towards teenage pregnancy. There were 18 statements consisting of 9 negative and 9 positive statements. For a positive statement, marking was done on a 5,4,3,2,1 basis, and for a negative statement, marking was done by 1,2,3,4,5. The highest score for a statement was 5, and the lowest was 1. The total score for attitude statements was 90. The following scoring range was considered for measuring levels of attitudes. Unfavourable attitude (< 50%) Neutral attitude (50 – 75%) Favorable attitude (> 75%). The reliability of the

instrument was assessed using Karl Pearson's correlation coefficient test through the split-half technique. A pre-test of the instrument was carried out among 10% of the entire sample size at Shree Ram Jyoti Secondary School in Pokhara-26. The data collected during this pre-test phase is not included in the study.

Statistical analysis and data management

The collected data was coded and entered into EpiData V.3.1 and imported to SPSS V.26 for further analysis. Descriptive statistics, such as mean, frequency, and percentage, were used and tabulated. The bivariate analysis was used to investigate the relationship between demographic characteristics, attitudes and awareness about adolescent pregnancy. To examine the relationship between the dependent and independent variables, the chi-square test was utilized. A p-value of less than 0.05 was considered significant.

Ethical consideration

Ethical approval was obtained from the Institutional Review Committee (IRC) of Pokhara University (Ref. No. 191-079/080) adhering to ethical standards. The privacy and anonymity of participants were preserved without requesting personal identifiers. Data collection was conducted in person after explaining the study's objectives. Participants had the freedom to continue or withdraw from the survey at any stage. Prior to data collection, written informed consent was obtained from participants, detailing their involvement and the potential publication of study results. Additionally, for respondents under the age of 18, written informed consent was obtained from guardians.

RESULTS

Table 1 presents the demographic characteristics of female adolescent students. Most participants (92.4%) were aged between 13-15 years, and only 7.6% fell between the age group of 16-18, with an average of 14.42 years. The ethnic composition shows a dominance of Brahmins (44.1%) with Hinduism as the primary religion (91.7%). The distribution across grades 9(48.3%) and 10 (51.7%) is relatively even, and The distribution across grades 9(48.3%) and 10 (51.7%) is relatively even, and all the students come from urban areas (100.0%). In terms of family structures, all the students are unmarried (100.0%) and live in family setups (99.3%), primarily within nuclear families (83.4%). Education levels varied among fathers (37.2%) and mothers (28.3%) of the study participants, with a majority achieving secondary education or higher. Similarly, regarding the occupations and monthly family income of participants' parents, fathers were predominantly involved in business (29.7%) followed by government service (20.0%), and foreign employment (16.6%) whereas, mothers' primary roles were as homemakers (44.1%) followed by business (22.1%), and government service (14.5%). In terms of monthly family income, the majority (44.8%) earned between Rs50,000 - Rs1,00,000, while 42.1% had an income below Rs 50,000. A very small fraction (1.4%) reported a monthly income exceeding Rs1,50,000.

Table 2 provides insights into the awareness levels regarding adolescent pregnancy among 145 participants. The majority correctly identified teenage pregnancy as "early age at marriage" (59.3%) and "immature decision of teenagers" (80.0%) as causes. Participants demonstrated good awareness of preventive measures

Demographic characteristics		Number (%)
Age (Years)		
13-15		134(92.4)
16-18		11(7.6)
Mean: 14.42 0.86		
Marital status		
Single		145(100.0)
Married		0(0.0)
Religion		
Hinduism		133(91.7)
Buddhism		6(4.1)
Muslim		1(0.7)
Christianity		4(2.8)
Kirant		1(0.7)
Ethnicity		
Brahmin		64(44.1)
Chhetri		25(17.2)
Janajati		32(22.1)
Dalit		19(13.1)
Others		5(3.5)
Residence		
Urban		145(100.0)
Rural		0(0.0)
Family type		
Nuclear		121(83.4)
Joint		23(15.9)
Extended		1(0.7)
Living arrangement		
With family		144(99.3)
Single(at rent)		1(0.7)
Grade level		
Grade 9		70(48.3)
Grade 10		75(51.7)
Education level of father		
Illiterate		1(0.7)
Can read and write		16(11.0)
Primary		13(9.0)
Secondary		54(37.2)
Higher secondary		35(24.1)
University		26(17.9)
Education level of mother		
Illiterate		3(2.1)
Can read and write		22(15.2)
Primary		21(14.5)
Secondary		41(28.3)
Higher secondary		41(28.3)
University		17(11.7)

Father's occupation	
Government service	29(20.0)
Non-government service	20(13.8)
Business	43(29.7)
Agriculture	7(4.8)
Daily wages	18(12.4)
Foreign employment	24(16.6)
Others	4(2.8)
Mother's Occupation	
Government service	21(14.5)
Non-government service	15(10.3)
Business	32(22.1)
Agriculture	5(3.4)
Daily wages	4(2.8)
Foreign employment	3(2.1)
Homemaker	64(44.1)
Others	1(0.7)
Family income per month (in Nepali rupees)	
< Rs 50,000	61(42.1)
Rs50,000 -Rs1,00,000	65(44.8)
Rs1,00,000 - Rs1,50,000	17(11.7)
>Rs1,50,000	2(1.4)

such as "conducting awareness programs" (80.7%) and "appropriate use of family planning methods" (42.8%). However, misconceptions were evident in responses related to "contraceptive choices that protect against STIs" (incorrectly answered by 55.9%) and "timing for taking emergency contraception" (incorrectly answered by 64.8%). Overall, while participants displayed good awareness on several aspects, there were areas requiring further education and clarification regarding contraceptive choices and emergency contraception.

Table 3 illustrates the distribution of awareness levels among participants regarding adolescent pregnancy. A significant portion (42.1%) exhibited inadequate awareness (<50%), while a larger proportion (55.9%) demonstrated moderate awareness (50-75%). Only a small percentage (2.1%) showcased adequate awareness (>75%) regarding adolescent pregnancy. This suggests that a majority of the participants possessed a moderate level of awareness, with a notable segment showing insufficient knowledge of adolescent pregnancy.

Table 4 analyzes the relationship between the level of awareness and various demographic variables concerning adolescent pregnancy. The results demonstrated a significant relationship between ethnicity (Brahmin and Others) and awareness level ($p=0.003^{**}$). Similarly, a statistically significant relationship was revealed between income levels ($\leq 50,000$ and $>50,000$) and awareness ($p=0.006^{**}$). Moreover, no statistically significant relationships were confirmed between age, religion, family type, grade level, parent's education and occupation, and awareness levels.

Table 5 reflects participants' attitudes toward adolescent pregnancy. Most participants (67.6%) agreed that teenage pregnancy could harm both the mother and baby, impacting the girl's education (51.7%) and emotional well-being (57.2%), indicating awareness of negative

Table 2 Awareness regarding adolescent pregnancy (n = 145)	
Questions	Number (%)
Teenage Pregnancy also known as	
Correct answer	98(67.6)
Incorrect answer	47(32.4)
Meaning of teenage pregnancy	
Correct answer	144(99.3)
Incorrect answer	1(0.7)
Appropriate age for pregnancy	
Correct answer	135(93.1)
Incorrect answer	10(6.9)
Causes of teenage pregnancy*	
Early age at marriage	86(59.3)
Illiteracy	63(43.4)
Immature decision of teenagers	116(80.0)
Cultural influence	19(13.1)
Exposure to violence	24(15.6)
Factors that increase the risk of teenage pregnancy*	
Economic status of family	31(24.4)
Lack of knowledge of family planning methods	112(77.2)
Peer relations and pressure	75(51.7)
Less strictness from guardians	69(47.6)
Teenage pregnancy as high-risk pregnancy	
Correct answer	98(67.6)
Incorrect answer	47(32.4)
Consequences of teenage pregnancy on mother*	
Maternal death	96(66.2)
Abortion	66(45.5)
Obstructed/difficult labour	76(52.4)
Anemia	21(14.5)
Pregnant teenager has greater risk	
Correct answer	97(66.9)
Incorrect answer	48(33.3)
Consequences of teenage pregnancy on baby*	
Still birth	11(7.6)
low birth weight	65(44.8)
Preterm delivery	36(24.8)
poor health condition	128(88.3)
Prevention of teenage pregnancy*	
Increasing literacy rate	64(44.1)
Delaying age at marriage	40(27.6)
Appropriate use of family planning methods	62(42.8)
Conducting awareness program regarding teenage pregnancy	117(80.7)
Making strong policies regarding early marriage	87(60.0)
Contraceptive choices for preventing pregnancy*	

Depo-Provera	22(15.2)
Norplant	20(13.8)
Condoms	135(93.1)
Oral contraceptive pills (OCP)	64(44.1)
Contraceptive choices that protect against sexually transmitted infections (STIs)	
Correct answer	64(44.1)
Incorrect answer	81(55.9)
Timing for taking emergency contraception (Levonelle)	
Correct answer	51(35.2)
Incorrect answer	94(64.8)
Action after finding pregnancy	
Correct answer	140(96.6)
Incorrect answer	5(3.4)

*Multiple response

impacts of adolescent pregnancy. The majority of the participants recognized the potential negative outcomes like increased illegal abortions (51.7%), higher chances of becoming pregnant if contraceptives are not used (53.1%), emotional problems (57.2%), reflecting on awareness of consequences. A considerable number supported sexual education in schools (81.4%) and stricter age protocols for marriage (70.3%) demonstrating their knowledge of preventive measures. Similarly, three-quarters of the respondents (76.6%) strongly disagree with the statement that the adolescent period is an appropriate age for pregnancy and childbirth depicting awareness.

However, a significant number of participants showed misconceptions about adolescent pregnancy. For example, one-third of the respondents (35.9%) disagree that teenage pregnancy is good only if it occurs within a marriage. One-third of the respondents (37.2%) disagree that an intentional and planned teenage pregnancy is good to continue. One-third of the respondents (36.6%) strongly agree that teenage pregnancy always leads to complications. Three-quarter of the respondents (70.3%) strongly disagree that it is only a girl's responsibility to prevent teenage pregnancy. Almost half of the respondents (49.7%) strongly disagree that teenage pregnancy has more positive consequences. (28.3%) agreed that teenage pregnancy have a few negative impacts. Less than half of the respondents (44.1%) disagree that teenage pregnancy always leads to the birth of a healthy baby. Less than half of the respondents (46.2%) strongly agree that early pregnancy is often seen as a blessing because it is proof of young women's fertility.

Table 6 indicates the distribution of respondents based on their levels of attitude toward adolescent pregnancy.

Table 3 Level of awareness regarding adolescent pregnancy (n = 145)	
Levels of Awareness	Number (%)
Inadequate awareness (<50%)	61(42.1)
Moderate awareness (50-75%)	81(55.9)
Adequate awareness (>75%)	3(2.1)

Mean±S.D: 17.40±4.13; Minimum score: 10; Maximum score: 31; Total score: 34

Table 4 | Relationship between level of awareness and selected demographic variables (n = 145)

Variables	Total score		Chi-square value	p-value
	Median <17	Median >17		
Age (Years)			0.000	0.997
13-15	73(54.5%)	61(45.5%)		
16-18	6(54.5%)	5(45.5%)		
Mean:14.42±0.86				
Religion			0.078	0.780
Hinduism	72(54.1%)	61(45.9%)		
Others	7(58.3%)	5(41.7%)		
Ethnicity			8.872	0.003**
Brahmin	26(40.6%)	38(59.4%)		
Others	53(65.4%)	28(59.4%)		
Family type			0.233	0.629
Nuclear	67(55.4%)	54(44.6%)		
Others	12(50.5%)	12(50.5%)		
Grade level			0.002	0.963
Grade 9	38(54.3%)	32(45.7%)		
Grade 10	41(54.7%)	34(45.3%)		
Education level of father			0.697	0.404
Secondary	27(50.0%)	27(50.0%)		
Others	52(57.1%)	39(42.9%)		
Education level of mother			0.379	0.538
Secondary	24(58.5%)	17(39.5%)		
Others	55(52.95%)	49(48.0%)		
Father's occupation			0.882	0.348
Business	26(60.5%)	17(41.5%)		
Others	53(52.0%)	49(48.0%)		
Mother's occupation			0.002	0.965
Homemaker	35(54.7%)	29(45.3%)		
Others	44(54.3%)	37(45.7%)		
Family income			7.438	0.006**
≤50,000	58(63.0%)	34(37.0%)		
>50,000	21(39.6%)	32(60.4%)		

*P-value significant at <0.05; Statistically significant***

A significant majority of respondents (80.7%) displayed a favourable attitude (>75%) toward adolescent pregnancy, whereas a smaller portion (19.3%) exhibited a neutral attitude (50-75%). This suggests that the majority of respondents held a positive or supportive stance toward adolescent pregnancy.

The data presented in Table 7 illustrates the association between respondents' level of attitude towards adolescent pregnancy and various demographic variables. The results revealed that demographic factors such as religion ($p = 0.005$), ethnicity ($p = 0.007$), and grade level ($p = 0.000$) have a statistically significant relationship with attitude level towards adolescent pregnancy.

DISCUSSION

The study assessed the awareness and attitude of adolescent pregnancy among teenage girls. From the demographics, it was evident that a large majority of the participants were aged between 13-15 years, with a significant presence of Brahmin and Hindus, all residing in urban areas. The participants were unmarried and belonged to nuclear families. Fathers were mainly engaged in business, while mothers assumed homemaking roles. A majority of participants reported a household income bracket of Rs50,000 - Rs1,00,000. Interestingly, all participants exhibited awareness of adolescent pregnancy,

Table 5 | Participant's attitude towards adolescent pregnancy (n = 145)

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Teenage pregnancy may harm the mother as well as baby and should be avoided.	98(67.6%)	36(24.8%)	2(1.4%)	3(2.1%)	6(4.1%)
Teenage pregnancy leads to an increased number of illegal abortions.	59(40.7%)	75(51.7%)	6(4.1%)	1(0.7%)	4(2.8%)
A sexually active teen who doesn't use contraceptives has a higher chance of becoming pregnant.	77(53.1%)	57(39.3%)	8(5.5%)	3(2.1%)	0(0.0%)
Teenage pregnancy affects girl's education and income potential.	75(51.7%)	50(34.5%)	12(8.3%)	4(2.8%)	4(2.8%)
Most of the teenagers' girls develop emotional problems as a result of teenage pregnancy.	39(26.9%)	83(57.2%)	19(13.1%)	4(2.8%)	0(0.0%)
Daughters born to adolescent parents are more likely to become teen mother themselves.	12(8.3%)	24(16.6%)	57(39.3%)	30(20.7%)	22(15.2%)
Abstinence is the most effective way to prevent pregnancy and sexually transmitted diseases.	35(24.1%)	46(31.7%)	51(35.2%)	10(6.9%)	3(2.1%)
Government of Nepal should make an strict protocol of delaying age at marriage after 20 years of age.	102(70.3%)	41(28.3%)	1(0.7%)	0(0.0%)	1(0.7%)
Schools should include sexual education in the curriculum to prevent teenage pregnancy	118(81.4%)	24(16.6%)	0(0.0%)	1(0.7%)	2(1.4%)
Adolescent period is an appropriate age for pregnancy and childbirth.	7(4.8%)	7(4.8%)	2(1.4%)	18(12.4%)	111(76.6%)
Teenage pregnancy is good only if it occurs within a marriage.	0(0.0%)	7(4.8%)	36(24.8%)	52(35.9%)	50(34.5%)
An intentional and planned teenage pregnancy is good to continue.	3(2.1%)	8(5.5%)	36(24.8%)	54(37.2%)	44(30.3%)
Teenage pregnancy always leads to complications.	53(36.6%)	52(35.9%)	18(12.4%)	15(10.3%)	7(4.8%)
It is only a girl's responsibility to prevent teenage pregnancy	1(0.7%)	1(0.7%)	8(5.5%)	33(22.8%)	102(70.3%)
Teenage pregnancy has more positive consequences.	3(2.1%)	7(4.8%)	20(13.8%)	43(29.7%)	72(49.7%)
Teenage pregnancy has a few negative impacts.	16(11.0%)	41(28.3%)	25(17.2%)	30(20.7%)	33(22.8%)
Teenage pregnancy always leads to birth of healthy baby.	0(0.0%)	3(2.1%)	31(21.4%)	64(44.1%)	47(32.4%)
Early pregnancy is often seen as a blessing because it is proof of the young women's fertility.	5(3.4%)	5(3.4%)	17(11.7%)	51(35.2%)	67(46.2%)

with the majority relying on the Internet and social media as their primary information sources.

The present study found that a majority of respondents demonstrated moderate awareness regarding adolescent pregnancy, contrasting with a prior study in Jumla, Nepal [28]. The limited awareness among teenage girls could stem from factors such as education levels, cultural approval of

early marriage, residing in rural areas, and less stringent supervision by guardians [31]. Similarly, in the present study, the majority of the respondents reported immature decisions of teenagers as the major cause of adolescent pregnancy, aligning with the previous study conducted in Ghana [32] and Nepal [27].

In the current study, nearly all respondents defined teenage pregnancy as occurring between ages 13 and 19, aligning with a Nigerian study [33] sharing the same definition. However, the present study revealed a lack of knowledge of family planning methods, peer relations and pressure, and less strictness from guardians as significant factors influencing teenage pregnancy. This finding is supported by a recent study conducted in Nepal, which revealed that family planning methods [34], parental guidance [35], and peer and family pressure [36] significantly influence teenage pregnancy. Moreover, the findings of the current study indicated maternal death, obstructed labour, and

Level of Attitude	Number (%)
Neutral attitude (50-75%)	28(19.3%)
Favourable attitude (>75%)	117(80.7%)
Mean±S.D	72.24±5.19
Minimum score: 58; Maximum score: 92; Total score: 90	

Variables	Level of Attitude		Chi- square value	p-value
	Neutral	Favourable		
Age (Years)				0.691#
13-15	27(20.1%)	107(79.9%)		
16-18	1(9.1%)	10(90.9%)		
Mean:14.42±0.86				
Religion			7.908	0.005**
Hinduism	22(16.5%)	111(83.5%)		
Others	6(50.0%)	6(50.0%)		
Ethnicity			7.258	0.007**
Brahmin	6(9.4%)	58(90.6%)		
Others	22(27.2%)	59(72.8%)		
Family type			0.598	0.440
Nuclear	22(18.2%)	99(81.8%)		
Others	6(25.0%)	18(75.0%)		
Grade level			12.755	<0.0001**
Grade 9	22(31.4%)	48(68.6%)		
Grade 10	6(8.0%)	69(92.0%)		
Education level of father			0.468	0.494
Secondary	12(22.2%)	42(77.8%)		
Others	16(17.6%)	75(82.4%)		
Education level of mother			0.256	0.613
Secondary	9(22.0%)	32(78.0%)		
Others	19(18.3%)	85(81.7%)		
Father's occupation			1.126	0.289
Business	6(14.0%)	37(86.0%)		
Others	22(21.6%)	80(78.4%)		
Mother's occupation			0.074	0.786
Homemaker	13(20.3%)	51(79.7%)		
Others	15(18.5%)	66(81.5%)		
Family income			0.291	0.590
≤50,000	19(20.7%)	73(79.3%)		
>50,000	9(17.0%)	44(83.0%)		
Fisher's exact#; P-value significant at <0.05; Statistically significant**				

abortion as leading consequences of teenage pregnancy on teenage mothers, which corroborates the prior studies [37]. Furthermore, poor health conditions, low birth weight, and preterm delivery were reported as the major consequences of teenage pregnancy on newborn babies, which also aligns with past studies [38,39]. In addition, participants also reported that teenage pregnancy can be prevented by conducting awareness programs, making strong policies regarding early marriage, increasing literacy, and appropriate use of family planning methods. This finding is consistent with the previous studies [40,41]. The participants in the current study also reported that condoms and oral contraceptive pills can prevent pregnancies, aligning with prior studies [42,43]. However, misconceptions were evident in responses related to contraceptive choices that protect against STIs and timing for taking emergency contraception, which also concurs with a recent study [44].

The findings of the present study revealed that there was a significant association between the level of awareness of the respondents regarding teenage pregnancy and demographic variables such as ethnicity and family income, mass media, books and peer/family. However, the study contradicts prior studies [28,45], concluding the significant relationship between the level of awareness of the respondents on teenage pregnancy and the education level of respondents.

In the present study, the majority of the respondents had a favourable attitude regarding teenage pregnancy. For example, most participants agreed that teenage pregnancy could harm both the mother and baby, impacting the girl's education and emotional well-being, indicating awareness of negative impacts of adolescent pregnancy.

The majority of the participants recognized the potential negative outcomes like increased illegal abortions, higher chances of becoming pregnant if contraceptives are not used, emotional problems, reflecting on awareness of consequences. Similarly, the study participants strongly disagreed with the statement that the adolescent period is an appropriate age for pregnancy and childbirth depicting awareness. This finding substantiates the recent study conducted in Iran [16] and Poland [20]. However, participants had a neutral attitude regarding teenage pregnancy, indicating teenage girl's misconceptions and uncertainty about adolescent pregnancy. Likewise, the respondents strongly agreed that teenage pregnancy always leads to complications. The study participants also agreed that teenage pregnancy has negative impacts. These results are in line with prior studies [17,18].

CONCLUSION

The study revealed a surprising gap between awareness and informed attitudes about teenage pregnancy. While most participants knew the basics, many held misconceptions about contraception and the risks involved. This highlights the need for educational programs that go beyond basic awareness. These programs should address cultural beliefs that might influence attitudes and provide teenagers with accurate information about contraception and the potential consequences of teenage pregnancy. This comprehensive approach can empower young people to make informed decisions about their sexual health.

ADDITIONAL INFORMATION AND DECLARATIONS

Acknowledgements: The authors are grateful for the cooperation of the students from grades 9 and 10 at Shree Amarsingh Secondary School in Pokhara, whose participation was invaluable in this research.

Competing Interests: The authors declare no conflicting interests to disclose.

Funding: No funding was received for this research.

Author Contributions: Concept and design: A.G., P.B., Statistical analysis: S.K.G, A.G., Writing of the manuscript: S.K.G., P.B., Data collection: A.G., Revision and editing: S.K.G., P.B., and A.G., All authors have contributed equally for the concept and design, statistical analysis, writing of the manuscript, data collection, revision and editing. All authors have read and agreed with the contents of the final manuscript towards publication.

Data Availability: Data will be available upon request to corresponding authors after valid reason.

References

1. Malunga G, Sangong S, Saah FI, Bain LE. Prevalence and factors associated with adolescent pregnancies in Zambia: a systematic review from 2000–2022. *Archives of Public Health*. 2023; 81: 1- 15. <https://doi.org/10.1186/s13690-023-01045-y>
2. Dutta K, Naskar S, Das DK, Banerjee N. Exploring challenges of teenage pregnancy and motherhood from beneficiaries and providers' perspectives: A qualitative study in a rural area of Purba Bardhaman District, West Bengal. *J Family Med Prim Care*. 2022; 11(11):7272-79. <https://doi.org/10.4103/jfmpc.jfmpc.689.22>
3. Alukagberie ME, Elmusharaf K, Ibrahim N, Poix S. Factors associated with adolescent pregnancy and public health interventions to address in Nigeria: a scoping review. *Reproductive Health*. 2023; 20(95): 1-24. <https://doi.org/10.1186/s12978-023-01629-5>
4. World Health Organization. Adolescent pregnancy. 2020. Available from: <https://www.who.int/news-room/fact-sheets/detail/adolescent-pregnancy> Accessed on 6 Nov 2023
5. Adhikari R: Early marriage and childbearing: risks and consequences. Geneva: World Health Organization; 2003. http://apps.who.int/reproductivehealth/publications/towards_adulthood/7.pdf Accessed on 6 Nov 2023
6. Poudel S, Upadhaya N, Khatri RB, Ghimire PR. Trends and factors associated with pregnancies among adolescent women in Nepal: Pooled analysis of Nepal Demographic and Health Surveys (2006, 2011 and 2016). *PLoS One*. 2018;13(8): e0202107. <https://doi.org/10.1371/journal.pone.0202107>
7. Shrestha S. Socio-cultural factors influencing adolescent pregnancy in rural Nepal. *International Journal of Adolescent Medicine and Health*. 2002;14(2):101-9. doi:101–109. <https://doi.org/10.1515/ijamh.2002.14.2.101>
8. Mehra S, Agrawal D: Adolescent health determinants for pregnancy and child health outcomes among the urban poor. *Indian Pediatrics*. 2004, 41:137-45.

9. Acharya DR, Bhattarai R, Poobalan A, Van TE, Chapman G: Factors associated with teenage pregnancy in South Asia: a systematic review. *Health Science Journal*. 2010, 4:1-13.
10. Dangal G. Teenage pregnancy: complexities and challenges. *Journal of Nepal Medical Association*. 2006; 45(162):262-72.
11. 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. *An International Journal of Obstetrics & Gynaecology*. 2014; 121(1): 40-48. <https://doi.org/10.1111/1471-0528.12630>
12. Bissell M: Socio-economic outcomes of teen pregnancy and parenthood: a review of the literature. *Canadian Journal of Human Sexuality*. 2000; 9:191-204.
13. United Nations Population Fund: Giving girls today and tomorrow: breaking the circle of adolescent pregnancy. New York: UNFPA; 2007.
14. Sayem AM, Nury ATM. Factors associated with teenage marital pregnancy among Bangladeshi women. *Reproductive health*. 2011; 8 (16). 1-6. <https://doi.org/10.1186/1742-4755-8-16>
15. United Nations Population Fund. Adolescent pregnancy. <http://www.unfpa.org/adolescent-pregnancy#> Accessed 7 Dec 2023
16. Naghizadeh S, Mirghafourvand, M. Knowledge and attitudes of adolescent girls and their mothers about early pregnancy: a cross-sectional study. *BMC Pregnancy Childbirth*. 2022; 22 (205): 1-10. <https://doi.org/10.1186/s12884-022-04551-z>
17. Maly C, McClendon KA, Baumgartner JN, Nakyanjo N, Ddaaki WG, Serwadda D, et al. Perceptions of Adolescent Pregnancy Among Teenage Girls in Rakai, Uganda. *Global Qualitative Nursing Research*. 2017; 10(4):2333393617720555. <https://doi.org/10.1177/2333393617720555>
18. Panda A, Parida J, Jena S, Pradhan A, Pati S, et al. Perception, practices, and understanding related to teenage pregnancy among the adolescent girls in India: a scoping review. *Reproductive Health*. 2023; 20(93): 1-16. <https://doi.org/10.1186/s12978-023-01634-8>
19. Osaikhuwuomwan JA, Osemwenkha AP. Adolescents' perspective regarding adolescent pregnancy, sexuality and contraception. *Asian Pacific Journal of Reproduction*. 2013. 2(1): 58-62. [https://doi.org/10.1016/S2305-0500\(13\)60118-9](https://doi.org/10.1016/S2305-0500(13)60118-9)
20. Balanda-Baldyga A, Pilewska-Kozak AB, Lepecka-Klusek C, Stadnicka G, Dobrowolska B. Attitude of teenage mothers towards pregnancy and childbirth. *International Journal of Environmental Research and Public Health*. 2020; 17(4): 1411. <https://doi.org/10.3390/ijerph17041411>
21. WHO: Facts and figures from the World Health Report 2005. Geneva: World Health Organization. 2005 https://www.who.int/whr/2005/media_centre/facts_en.pdf Accessed on 6 Nov 2023
22. Population Reference Bureau: The World's youth. Washington DC: Population Reference Bureau. 2000. http://www.prb.org/pdf/WorldsYouth_Eng.pdf Accessed on 6 Nov 2023
23. Centers for Disease Control and Prevention: Sexual and reproductive health of person aged 10-24 years-United States, 2002-2007 Morbidity and Mortality Weekly Report. Department of Health and Human Services. 2009. <http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5806a1.htm> Accessed on 6 Nov 2023.
24. Ministry of Health and Population (MOHP) [Nepal], New ERA, and ICF International Inc. 2017. Nepal Demographic and Health Survey 2016. Kathmandu, Nepal: Ministry of Health and Population, New ERA, and ICF International, Calverton, Maryland.
25. Sharma AK, Verma K, Khatri S, Kannan AT. Determinants of pregnancy in adolescents in Nepal. *Indian J Pediatr*. 2002;69(1):19-22. <https://doi.org/10.1007/BF02723769>
26. Shrestha DB, Budhathoki P, Shrestha O, Karki S, Thapa N, Dangal G, et al. Teenage Pregnancy and Associated Risk Factors and Outcome in Nepal From 2000-2020: A Systematic Review and Meta-analysis. *Kathmandu University Medical Journal*. 2022; 20(2): 225-33. <https://doi.org/10.3126/kumj.v20i2.51406>
27. Nepal S, Atreya A, Kanchhan T. Teenage Pregnancies in Nepal - The Problem Status and Socio-Legal Concerns. *Journal of Nepal Medical Association*. 2018;56(211):678-82.
28. Shrestha S, Shrestha S, Lama M, Ojha S, Thapa S. Awareness and Attitude Regarding Teenage Pregnancy among Adolescent Girls of Chandannath Municipality, Jumla. *Nepal Journal of Obstetrics and Gynecology*. 2021;16(33):74-78. <https://doi.org/10.3126/njog.v16i2.42106>
29. Shrestha RL, Khadka L. Knowledge regarding teenage pregnancy among adolescent girls of secondary school of Sindhuli. *Nepal Medical College Journal*. 2022; 24(3): 257-61. <https://doi.org/10.3126/nmcj.v24i3.48621>
30. Cochran WG. Sampling Techniques. 3rd ed. New York: John Wiley & Sons; 1977.
31. Chalise S, Bajracharya S. Contributing factors of teenage pregnancy among pregnant teenagers at selected hospitals of Dhaulagiri Zone. *Journal of Chitwan Medical College*. 2016;6(3):8-13.
32. Engelbert BL, Zweekhorst MBM, Amoakoh-Coleman M, Muftugil-Yalcin S, Omolade AI, Becquet R, de Cock Buning T. To keep or not to keep? Decision making in adolescent pregnancies in Jamestown, Ghana. *PLoS One*. 2019;14(9): e0221789. <https://doi.org/10.1371/journal.pone.0221789>
33. Adejumo O, Ogunbiyi P, Adejumo E, Ngwu R. Perception of In-school teenagers on teenage pregnancy. *Nigerian Journal of Clinical Medicine*. 2013;5 (1): 1-14. <https://doi.org/10.4314/njcm.v5i1.1>
34. Thapa P, Thapa P, Shrestha DB, Budhathoki P, Karki B, Mahat B. Teenage pregnancy and the sociodemographic attributes as a major contributor: Findings from an urban referral center in Nepal. *World Journal of Obstetrics and Gynecology*. 2021; 10(2): 16-25. <https://doi.org/10.5317/wjog.v10.i2.16>
35. Bonell C, Allen E, Strange V, Oakley A, Copas A, Johnson A, Stephenson J. Influence of family type and parenting behaviours on teenage sexual behaviour and conceptions. *J Epidemiol Community Health*. 2006;60(6):502-6. <https://doi.org/10.1136/jech.2005.042838>
36. Dixit A, Bhan N, Benmarhnia T, Reed E, Kiene SM, Silverman J, et al. The association between early in marriage fertility pressure from in-laws' and family planning behaviors, among married adolescent girls in Bihar and Uttar Pradesh, India. *Reproductive Health*. 2021; 18(60): 1-9. <https://doi.org/10.1186/s12978-021-01116-9>
37. Maheshwari MV, Khalid N, Patel PD, Alghareeb R, Hussain A. Maternal and Neonatal Outcomes of Adolescent Pregnancy: A Narrative

- Review. *Cureus*. 2022;14(6): e25921. <https://doi.org/10.7759/cureus.25921>
38. Marvin-Dowle K, Kilner K, Burley VJ, Soltani H. Impact of adolescent age on maternal and neonatal outcomes in the Born in Bradford cohort. *BMJ Open*. 2018;8(3): e016258. <https://doi.org/10.1136/bmjopen-2017-016258>
39. Gardner ME, Umer A, Rudisill T, Hendricks B, Lefeber C, John C, et al. Prenatal care and infant outcomes of teenage births: a Project WATCH study. *BMC Pregnancy and Childbirth*. 2023; 23(379): 1-11. <https://doi.org/10.1186/s12884-023-05662-x>
40. Feyissa GT, Tolu LB, Soboka M, Ezeh A. Effectiveness of interventions to reduce child marriage and teen pregnancy in sub-Saharan Africa: A systematic review of quantitative evidence. *Frontiers of Reproductive Health*. 2023;31(5):1105390. <https://doi.org/10.3389/frph.2023.1105390>
41. Ahinkorah BO, Kang M, Perry L, Brooks F. Knowledge and awareness of policies and programmes to reduce adolescent pregnancy in Ghana: a qualitative study among key stakeholders. *Reproductive Health*. 2023; 20(143): 1-14. <https://doi.org/10.1186/s12978-023-01672-2>
42. Tripp J, Viner R. Sexual health, contraception, and teenage pregnancy. *BMJ*. 2005; 330(7491):590-3. <https://doi.org/10.1136/bmj.330.7491.590>
43. Davtyan C. Evidence-based case review. Contraception for adolescents. *West J Med*. 2000;172(3):166-71. <https://doi.org/10.1136/ewjm.172.3.166>
44. Mbachu CO, Agu IC, Obayi C, Eze I, Ezumah N, Obinna O. Beliefs and misconceptions about contraception and condom use among adolescents in south-east Nigeria. *Reproductive Health*. 2021; 18(7): 1-8. <https://doi.org/10.1186/s12978-020-01062-y>
45. Bhandari SD. Awareness on consequences of teenage pregnancy among adolescent at Ampipal VDC, Gorkha. *Journal of Advanced Academic Research*. 2014; 1(1): 1-10. Available from: <https://www.nepjol.info/index.php/JAAR/article/view/13506/10913> Accessed 6 Nov 2023.

Publisher's Note

MJMMS remains neutral with regard to jurisdictional claims in published materials and institutional affiliations.



will help you at every step for the manuscript submitted to MJMMS.

- We accept pre-submission inquiries.
- We provide round the clock customer support
- Convenient online submission
- Plagiarism check
- Rigorous peer review
- Indexed in NepJOL and other indexing services
- Maximum visibility for your research
- Open access

Submit your manuscript at:

Website: www.medspirit.org
e-mail: editormjms@gmail.com

