A cross-sectional study was conducted among 213 students of grade eight, nine and ten: 8 Dec, 2020 - 25 Mar, 2021. Adolescents being a vulnerable population undergo different changes during adolescence in which sexual and reproductive growth and development is one of them. Parents are expected to socialize with their adolescents through sexual and reproductive health communication to prevent risky sexual behaviors. This study aimed to assess adolescents and parent communication on sexual and reproductive health issues.

METHODS
A cross-sectional study was conducted among 213 students of grade eight, nine and ten from two schools of Sankhu, Nepal. Structured modified questionnaire was used to assess adolescent and parent communication on sexual and reproductive health by using self-administered technique.

RESULTS
Among 213 adolescents, 9.1%, 3.8%, 2.8% discussed a lot about topics of sexual and reproductive health such as menstruation, pubertal changes and birth control respectively while relationship with opposite sex, abortion and sexually transmitted infections were never discussed by 80.8%, 70.4% 59.6% of the adolescents respectively. Communication on different topics were low among majority of the adolescents (55.9%) and were significantly associated with gender and adolescents’ felt closer parent (p=<0.05). Quality of communication was high among more than half of the adolescents (51.2%) and was significantly associated with age, gender and their felt approachable parent for sexual and reproductive health communication (p=<0.05).

CONCLUSIONS
Though the quality of communication regarding sexual and reproductive health was found to be high, communication on sexual and reproductive health issues were infrequent and critical elements like relationship with opposite sex, sexually transmitted infections, abortion and fertilization were avoided.

INTRODUCTION
Families, as a primary socializing agent and live models for their children need to play an important role in shaping the sexual life of their offsprings but only if parents were open, skilled and comfortable in having those discussions. Talking with adolescents about sex related topic including abstinence, improved contraception, ways to prevent HIV and other sexually transmitted infection is a positive parenting practice. Parents typically have an opportunity to communicate with their children daily, so they are considered a critical formative role player in their children's development as adolescence is a period during which neuro-cognitive and pubertal maturation interact with the social determinants of health, creating a highly dynamic profile of health as individual transit from childhood to adulthood during which various physiological, social and psychological growth and development takes place. Socio-cultural norms and taboos attached to gender and sexuality, and lack of proper knowledge makes open discussions about sexual and reproductive health topics difficult among adolescent. These factors create a culture of silence in asking, obtaining information, discussing and expressing their worries about sexual and reproductive health. Parents often do not talk to their children because they feel confused, ill-informed or embarrassed about these topics. Parents have a significant potential to reduce sexual risk behaviors and promote healthy adolescent sexual development. Therefore, parent conversation with teens about sex and relationships can play a critical role in improving teenage reproductive health by reducing teen’s risky sexual behavior. Thus, the objective of this study was to assess the adolescents - parent communication on sexual and reproductive health among school going adolescents.
2020 to 16th November 2020. Ethical approval was taken from the concerned authority that is from Institutional Review Committee of Kathmandu Medical College (Ref: 0710202003) ascent and informed consent were taken from each respondent before collecting data. Data were collected through online survey (Google form). The form was sent through email, viber and messenger. Pretesting of the instrument was established in 10% of the total sample size (22 students of grade eight, nine and ten) of similar school. Adequacy and accuracy of the content was established by asking opinion from subject expert and by reviewing the literature. Cronbach’s alpha was assessed to measure the reliability of tools. The reliability of tool which measured the communication on eight specific sexual and reproductive health topics and parent-adolescent communication scale was 0.706 and 0.734 respectively. A self-structured questionnaire was administered which were in English and Nepali language.

The data collection tool consisted of three parts, part I included Socio- demographic characteristics in which the respondents completed a questionnaire, which was designed to collect information on the adolescents’ personal details (age, sex, religion, grade, living arrangement), family status (parents marital status, main upbringing parent, closer-feeling parent, parent approachable for sexual and reproductive health issues communication).

Part II was taken with reference to The Weighted Topics Measure of Family Sexual Communication. This scale consisting of eight items was used to assess quickly and objectively the amount of communication about sexual and reproductive health issues that had occurred between parents and adolescents’ children. The instrument asked respondents to indicate on a Likert scale of 0 to 4, with 0 indicating never, 1 indicating seldom, 2 indicating sometimes, 3 indicating often and 4 indicating a lot, the extent to which eight specific sexual and reproductive health topics that were discussed with their parents. Scores were computed by summing all items, and could range from 0 to 24, with a median score of 6 (SD = 5.636; Mean = 6.99) indicating, higher the score, greater amount of communication.

The part III included the Parent-Adolescent Communication Scale. Respondents used a five-point Likert scale (ranging from Strongly disagree = 1 to Strongly agree = 5) to indicate the extent of their agreement with the items. Scores could range from 16 to 80 and the scores for items were reversed in value, with a high score indicating low quality of communication and a low score indicating a high quality of communication. Data were checked for its completeness and accuracy coded on data sheet, analyzed, and categorized on the basis of research objective. Descriptive and inferential statistics were used to analyze the data by SPSS version 23.

RESULTS

Table 1: Socio-demographic characteristics of students (n=213)

| Characteristics          | Frequency (%) |
|--------------------------|---------------|
| Age (in completed years) |               |
| 12 to 14                 | 102 (47.9)    |
| 15 to 18                 | 111 (52.1)    |
| Mean ±SD = 14.62±1.042 years |
| Gender                   |               |
| Male                     | 109 (51.2)    |
| Female                   | 104 (48.8)    |
| Grade                    |               |
| Grade 8                  | 69 (32.4)     |
| Grade 9                  | 77 (36.2)     |
| Grade 10                 | 67 (31.5)     |
| Religion                 |               |
| Hindu                    | 173 (81.2)    |
| Buddhist                 | 33 (15.5)     |
| Christian                | 6 (2.8)       |
| Muslim                   | 1 (0.5)       |
| Living arrangement       |               |
| With both parent         | 204 (95.8)    |
| With one parent          | 8 (3.8)       |
| With brother/sister      | 1 (0.4)       |
| Type of School           |               |
| Private                  | 131 (61.5)    |
| Government               | 82 (38.5)     |
| Marital status of parents|               |
| Married                  | 205 (96.2)    |
| Divorced                 | 8 (3.8)       |
| Educational status of mother |         |
| No formal education      | 51 (23.9)     |
| Primary                  | 71 (33.3)     |
| Secondary                | 68 (32.0)     |
| Higher Secondary and above | 23 (10.8) |
| Educational status of father |            |
| No formal education      | 24 (11.3)     |
| Primary                  | 52 (24.4)     |
| Secondary                | 95 (44.6)     |
| Higher Secondary and above | 42 (19.7) |
| Occupational status of mother |        |
| Homemaker                | 127 (59.6)    |
| Agriculture              | 50 (23.5)     |
| Business                 | 29 (13.6)     |
| Service                  | 7 (3.3)       |
| Occupational status of father |  |
| Agriculture              | 76 (35.7)     |
| Service                  | 76 (35.7)     |
| Business                 | 51 (23.9)     |
| Labor                    | 10 (4.7)      |

More than half of the participants (61.5%) were from private school and among grade eight, nine and ten, 36.2% were from grade nine. Most of the students (81.2%) followed Hindu reli-
tion and majority (95.7%) were living with both the parents. Most of the parents’ (96.2%) marital status was married. About one third of mothers (33.3%) were educated up to primary level, whereas 44.6% of fathers were educated up to secondary level. More than half of the mothers were homemaker by occupation (59.6%) and 35.7% of fathers were engaged in agriculture and service.

Table 2 reveals that most of the students (81.2%) perceived that both mother and father were responsible for their upbringing, but majority of them (60.1%) considered mother as more approachable for sexual and reproductive health communication.

Table 3 presents the assessment of the 8 specific topics which revealed that menstruation was discussed a lot by 9.9%, followed by pubertal changes 3.8% and birth control 2.8%. Relationship with opposite sex, abortion, sexually transmitted infections and fertilization was never discussed with their parents by 80.8%, 70.4%, 59.6% and 49.3% respectively. Similarly, pregnancy was discussed sometimes by 25.8%, pubertal changes by 23.5% and birth control by 19.2%.

Table 2: Approachability for communication as perceived by adolescents (n=213)

| Characteristics              | Frequency (%) |
|------------------------------|---------------|
| Responsible for upbringing   |               |
| Both                         | 173 (81.2)    |
| Mother                       | 22 (10.3)     |
| Father                       | 18 (8.5)      |
| Closer                       |               |
| Both                         | 133 (62.4)    |
| Mother                       | 68 (31.9)     |
| Father                       | 12 (5.7)      |
|Approachable                  |               |
| Mother                       | 128 (60.1)    |
| Father                       | 78 (36.6)     |
| None                         | 7 (3.3)       |

Table 3: Adolescent – parent communication about different topics (n=213)

| Characteristics                        | Never n(%) | Seldom n(%) | Sometimes n(%) | Often n(%) | A lot n(%) |
|----------------------------------------|------------|-------------|----------------|------------|------------|
| Pregnancy                              | 94 (-44.10)| 56 (-26.30)| 55 (-25.80)    | 8 (-3.80)  | 0 (0%)     |
| Fertilization                          | 105 (-49.30)| 60 (-28.20)| 33 (-15.50)    | 14 (-6.60)| 1 (-0.50)  |
| Pubertal Changes                       | 72 (-33.80)| 63 (-29.60)| 50 (-23.50)    | 20 (-9.40)| 8 (-3.80)  |
| Menstruation                           | 67 (-31.50)| 58 (-27.20)| 38 (-17.80)    | 29 (-13.60)| 21 (-9.90) |
| STDs                                   | 127 (-59.60)| 38 (-17.80)| 36 (-16.90)    | 6 (-2.80)  | 6 (-2.80)  |
| Birth Control                          | 93 (-43.70)| 53 (-24.90)| 41 (-19.20)    | 20 (-9.40)| 6 (-2.80)  |
| Abortion                               | 150 (-70.40)| 35 (-16.40)| 17 (-8)        | 8 (-3.80)  | 3 (-1.40)  |
| Relationship with opposite sex         | 172 (-80.80)| 11 (-5.20)| 15 (-7)        | 10 (-4.70)| 5 (-2.30)  |

Table 4: Quality of adolescent – parent communication on sexual and reproductive health (n=213)

| Characteristics                           | Strongly Agree n(%) | Strongly Disagree n(%) | Disagree n(%) | Neutral n(%) | Agree n(%) | Strongly Disagree n(%) |
|-------------------------------------------|---------------------|------------------------|--------------|-------------|-----------|------------------------|
| I would feel embarrassed                 | 33 (-15.50)         | 43 (-20.20)            | 58 (-27.20)  | 69 (-32.40)| 10 (-4.70)| 43 (-20.20)            |
| Parents didn’t want to answer their questions | 40 (-18.80)         | 96 (-45.10)            | 34 (-16)     | 33 (-15.50)| 10 (-4.70)| 40 (-18.80)            |
| Parents would only lecture them           | 53 (-24.90)         | 107 (-50.20)           | 31 (-14.60)  | 19 (-8.90)  | 3 (-1.40) | 53 (-24.90)           |
| I felt that I knew what I needed to know. | 45 (-21.10)         | 68 (-31.90)            | 38 (-17.80)  | 40 (-18.80)| 22 (-10.30)| 45 (-21.10)           |
| Parents didn’t know enough                | 42 (-19.70)         | 87 (-40.80)            | 45 (-21.10)  | 28 (-13.10)| 11 (-5.20)| 42 (-19.70)           |
| Parents would not be honest               | 57 (-26.80)         | 91 (-42.70)            | 25 (-11.70)  | 34 (-16)   | 6 (-2.80) | 57 (-26.80)           |
| Parents were too old                      | 63 (-29.60)         | 94 (-44.10)            | 28 (-13.10)  | 20 (-9.40)  | 7 (-3.30) | 63 (-29.60)           |
| Parents would only be suspicious towards them | 55 (-25.9)          | 84 (-39.4)             | 28 (-13.1)   | 37 (-17.4) | 9 (-4.2)  | 55 (-25.9)            |
| Difficult to find convenient time and place | 26 (-12.0)          | 48 (-22.50)            | 49 (-23)     | 69 (-32.40)| 21 (-9.90)| 26 (-12.0)            |
| Parents were too busy to talk to communicate | 57 (-26.80)         | 89 (-41.80)            | 35 (-16.40)  | 29 (-13.60)| 3 (-1.40) | 57 (-26.80)           |
| Parents would ask too many personal questions | 39 (-18.30)         | 70 (-32.90)            | 49 (-23)     | 38 (-17.80)| 17 (-8.0) | 39 (-18.30)           |
| Parents didn’t want to hear them          | 50 (-23.5)          | 107 (-50.2)            | 28 (-13.1)   | 20 (-9.4)  | 8 (-3.8)  | 50 (-23.5)            |
| Parents and respondent would only argue   | 82 (-38.5)          | 86 (-40.4)             | 28 (-13.1)   | 10 (-4.7)  | 7 (-3.3)  | 82 (-38.5)            |
| Parents felt embarrassed to talk          | 40 (-18.8)          | 77 (-36.2)             | 53 (-24.9)   | 30 (-14.1) | 13 (-6.1) | 40 (-18.8)            |
| I would have difficult time being honest with my parents | 38 (-17.8)          | 56 (-26.3)             | 52 (-24.4)   | 52 (-24.4) | 15 (-7)  | 38 (-17.8)            |
| Parents would be angry with them          | 68 (-31.9)          | 79 (-37.1)             | 38 (-17.8)   | 23 (-10.8) | 5 (-2.3)  | 68 (-31.9)            |

Table 4 depicts the quality of communication where 15.5% strongly disagreed on feeling embarrassed for communication while they strongly agreed that their parents would feel embarrassed by 6.1%. About five percent strongly agreed that their parents didn’t know enough whereas they strongly agreed that they knew what they needed to know about sexual and reproductive health by 10.3%. However, they strongly disagreed that their parents would be suspicious towards them and ask personal questions to them by 25.8% and 18.3% respectively.
Table 5: Adolescent – parent sexual and reproductive health communication level (n=213)

| Characteristics                     | Low n(%)  | High n(%)  |
|-------------------------------------|-----------|------------|
| Communication on Different Topics    | 119 (-55.9%) | 94 (-44.1%) |
| Quality of Communication            | 104 (-48.8%) | 109 (-51.2%) |

Table 5 presents although the communication on different topics was found to be low in majority of respondents (55.9%), the quality of communication which was assessed using Parent/Adolescent Communication Scale was high among more than half of the adolescents by (51.2%).

Table 6: Association between selected socio-demographic variables and adolescent – parent communication level on sexual and reproductive health topics (n=213)

| Characteristics                      | Total Communication | p-value  |
|--------------------------------------|---------------------|----------|
| Low n(%)                             | High n(%)           |          |
| Gender of respondent                 |                      |          |
| Male                                 | 71(65.1%)           | 38(34.9%)| 0.005*   |
| Female                               | 48(46.2%)           | 56(53.8%)|          |
| Living arrangement                   |                      |          |
| With both parent                     | 115(56.4%)          | 89(43.6%)| 1.000#   |
| With one parent                      | 3(37.5%)            | 5(62.5%) |          |
| With brother/sister                  | 1(100%)             | 0(0%)    |          |
| Marital status of parents            |                      |          |
| Married                              | 116(56.6%)          | 89(43.4%)| 0.306#   |
| Divorced                             | 3(37.5%)            | 5(62.5%) |          |
| Occupational status of father        |                      |          |
| Business                             | 27(52.9%)           | 24(47.1%)| 0.760#   |
| Agriculture                          | 43(56.6%)           | 33(43.4%)|          |
| Service                              | 45(59.2%)           | 31(40.8%)|          |
| Labor                                | 4(40%)              | 6(60%)   |          |
| Responsible for upbringing Closer    |                      |          |
| Mother                               | 27(39.7%)           | 41(60.3%)| 0.003*   |
| Father                               | 6(50%)              | 6(50%)   |          |
| Both                                 | 86(64.7%)           | 47(35.3%)|          |
| Approachable                         |                      |          |
| Mother                               | 66(51.6%)           | 62(48.4%)| 0.129#   |
| Father                               | 47(60.3%)           | 31(39.7%)|          |
| None                                 | 6(85.7%)            | 1(14.3%) |          |

Note: *=Chi-square significant at <0.05
# = Fisher Exact Test

DISCUSSION

This study was aimed to find out the adolescent-parent communication on sexual and reproductive health issues among school going adolescents. In this study, adolescent – parent communication was found to be at an overall lower level (55.9%) than that reported in other studies done in South Africa and America where 57% and 60% reported higher level of communication respectively.3,6 This could be due to the reduced exposure to sexual and reproductive health information and which might have subsequently reduced the opportunity to communicate with their parents. However, the quality of communication was lower than median value (<39) by 51.2% which was in contrast with the study done in Eastern Ethiopia where about one-third (30.91%) of the adolescents were identified as satisfactory communicators, 38.76% as poor communicators, and 30.34% as very poor communicators.7 The observed difference could be due to the fact that present study is more recent than the aforementioned study.

Although, both parents were considered closer and responsible for upbringing by 62.4% and 81.2% respectively, 60.1% considered mothers were more approachable for sexual and reproductive health communication than fathers. The former finding is in contrast with a study done in Cape Town where (63%) adolescents reported that they usually felt closer to their mother but the latter...
finding is almost similar with past studies done in Debre Markos Town which showed both male and female were more likely to discuss sexual and reproductive health issues with their mothers by 52%..

In the study, gender (p=0.005) and closer parent (p=0.003) had a significant association with adolescent – parent communication on sexual and reproductive health topics, also higher frequency of communication regarding sexual and reproductive health topics was found among female participants and those who considered mothers more closer to them which was in contrast to a study done in Awabel woreda where males had higher level of communication than females by 1.63 times. But, the finding was in line with that of E/Wolega (West Ethiopia), South Africa, Woldia Town.

The findings were comparable with the study done in Eastern Ethiopia. Likewise; approachability of communication had a significant association with the quality of adolescent – parent’s relationship.

Higher quality of communication was significantly associated with age of respondents (p=0.016), gender of respondents (p=0.000). The findings were comparable with the study done in Eastern Ethiopia. Likewise; approachability of communication had a significant association with the quality of adolescent – parent sexual and reproductive health communication. This is in concordance with a study done in California, Africa. This suggests that a better understanding of the content of communication is required to empower parents to deliver sexual and reproductive health knowledge and strategies need to be devised to encourage fathers’ involvement in adolescent – parent communication.

Promotion of service availability may be important to motivate adolescents to communicate with parents, contextual and age dependent communication barriers should be further identified particularly from parent side to provide necessary knowledge and training to promote adolescent – parent communication.

CONCLUSION

The findings of the study imply that adolescents were not communicating much with parents about sexual and reproductive health issues due to lack of knowledge, feeling embarrassed when the topic was brought up and inconvenience of time and place even though the quality of communication was high. Critical elements like relationship with opposite sex, sexually transmitted infections, abortion and fertilization were avoided.

ACKNOWLEDGEMENT

Authors would like to give sincere thanks to both schools and participants for cooperating during the time of data collection.

CONFLICT OF INTEREST: None

FINANCIAL DISCLOSURE: None