

Study of women's reproductive health knowledge, awareness, and attitudes in Borgaon Village, Wardha, India

Abstract:

Background: Reproductive health is defined as a state of complete physical, psychological, and social contentment, free of sickness, as well as the functions and activities of the reproductive system. As many women in India are unaware of the sexual health and its comorbidities they end up falling in serious illness leading to various life threatening diseases. **Aim:** The aim was to study about knowledge, awareness and attitude towards reproductive health of women in Borgaon Village of Wardha, India.

Methodology: This is a descriptive cross-sectional study conducted at Borgaon village of Wardha district Maharashtra India. Total 100 women aged 20 to 45 were selected by simple random sampling method was enrolled in study after verbal consent. Women were contacted and interviewed with a semi structured questionnaire. The study was conducted in 6 months duration with the help of questionnaire. **Result:** As per the statistics, 78 percent women use sanitary pads though 55 percent women were still using napkins & cottons due to lack of awareness, shyness & low economic condition. 82 percent women were aware about contraception but still 59 percent women preferred to use it, because they were worried about its side effects. It was found that, when women came across any gynecological problem only 67 percent of them had quick approach to doctor. 76 percent women thought about the need of learning reproductive knowledge. **Conclusion:** It was concluded that we still need to aware the society about reproductive health of women because whole society should be well known about the measures to be taken and how to act wisely to deal with a woman suffering from any illness regarding reproductive health.

Keywords: Knowledge, Women, Reproductive health, Awareness, Attitude

Introduction:

Reproductive health is defined as a state of complete physical, psychological, and social contentment, free of sickness, as well as the functions and activities of the reproductive system. Sexual and reproductive health care, which includes HIV/AIDS, includes the prevention and treatment of sexually transmitted diseases (STDs). The reproductive health care system aids in the right diagnosis, treatment, and management of illness urgent conditions.

According to the World Health Organization (2017), period after childhood and before adulthood is known as adolescence. Human growth and development occur around 10 to 19 years of age. The adolescence is further classified into three phases that are early 10 to 13 years of age, mid 14 to 15 years of age & late i.e. 14 to 19 years of age. Somatic and mental development of girl for safe motherhood is nothing but the period of adolescence. Overall adolescent health is covered under reproductive health. [1]

From past few years it is noticed that the effect of occupational exposure on women's reproductive health is great. Earlier studies only focused on health of fetus instead of reproductive health of women. But now, it is found that reproductive toxins lead to hormonal imbalance resulting in disturbed menstrual cycle, ovulation and fertility rate of

women. So, the attention is shifted towards occupational health hazards among pregnant women and fetus. [2]

Stress is one of the major issues in the society and it is always found that women are highly exposed to mental, physical as well as physiological stress. Mental i.e. psychological stress has great impact on reproductive health of women. Because stress produces the generation of ROS means Reactive Oxygen Species and leads to oxidative stress (OS). This oxidative stress affects health of ovary, quality of oocytes and ultimately results in disorders of reproductive health of women. Shatavari i.e. *Asparagus racemosus* is widely prescribed ayurvedic medication to tackle stress induced reproductive health disorders. Shatavari is known as rasayana drug and also counts in major health tonics. [3]

Menstruation is the unique concept in women. Beginning of menstruation is noticeable changes occur in girl during her adolescent years. Still menstruation is considered as something dirty and unclean in our society. Ultimately respond towards menstruation is depends upon the knowledge and the awareness of the people. Though the menstruation is purely a natural process some misconceptions leads to adverse health outcomes. During menstruation maintaining hygiene is very important factor because it results into reproductive tract infection (RTI). Now a days many women are suffering from various types of RTI and its complications. Also, many pregnant mothers transmitted it to their offspring due to lack of knowledge. [4]

Socio economic status and education both are very crucial factors to determine women's health. Rather focusing only on disease, it is very important to reported and realized these factors which influences reproductive health consequences and women's health seeking behavior at community level. [5]

Menstruating girls feels shame, fear and confusion in school due to gender discriminatory nature of teachers, so they are unable to handle the protection, dignity and privacy of their menstruation. Due to lack of sufficient information, lack of social support, shortage of facilities for water & waste disposal girls is facing many challenges during their menstruation. Columbia University and United Nations Children's Fund (UNICEF) organized the "Menstrual Hygiene Management in Ten" in New York in October 2014 for 10 years to overcoming barriers facing by school going girls. [6]

Nearly any one is conscious of the extremely bad reproductive health situation in women. The needs for reproductive health care are broad. Nevertheless, development of reproductive health care is not a trouble-free objective in society. Perspective which is widely accepted and socially integrated is very important for any inculcative initiative in the reproductive health care zone. The perspective should have a better way of understanding the current place of women in society and what they really deserve and desire. [7]

Physiological fact which is naturally occur in adolescent girl and premenopausal women is called as menstruation. Sanitary products used by women and adolescent girls to collect the blood during menstruation which can be changed in privacy according to need is nothing but menstrual hygiene management. It also includes washing the body with help of water & soap, and proper disposal menstrual management material. [8]

School going girls age between 16 to 20 years from south Africa are found to affected with sexually transmitted diseases, HIV and teenage pregnancy. Study shows that women suffering from HIV are four times that of men of same age. Not seeking proper care let them

untreated which ultimately lead to pelvic inflammatory diseases i.e. PID and high risk of ectopic pregnancy. Early pregnancy hampers their schooling, proper employment and earning sources.

In the last few years, it is found that incorrect social and behavioral factors lead to dangerous reproductive health outcomes. Due to lack of parental care and low economic condition young women are suffering from many reproductive health issues. Relationship play important role in maintaining proper reproductive health. Problems such as HIV positive partner, difference in age among sexual partners i.e. with a male partner who is older, multiple partners are more prone to disorders of reproductive system. [9]

Intimated partner violence affects mental as well as physical health of women leads to multiple abortions, accidental pregnancy and reduce sexual autonomy. Intimated partners violence leads victim to impaired lifestyle. Anxiety and depression are found to be very common in women suffering from intimated partner violence. There is great impact of violence on pregnant women. There may be risk of neonatal death, pre-term delivery, low birth weight of infants as well as affected breast feeding. Gynecologists noticed that patients are not easily disclosing intimated partner violence and avoid to take treatment for the same. Educating and empowering women can help them to overcome violence. Improving their social and economic status is needful. There is need to protect women from intimated partner violence. [10]

Girls and women having low income are less aware about hygienic practices & lack of suitable materials use for menstrual hygiene management. Menstruation is usually surrounded by shame, silence as well as social prohibition. In religious countries it is found that normal activities and freedom is restricted due to menstruation. Such as, cooking food, performing religious rituals, interacting with people, drinking milk, etc limitations found in many cultures. [11]

Assessment of the awareness regarding reproductive health among women in the rural population and to study their attitudes towards reproductive health is the main motto of the study. Because in India, there is insufficiency of such type of studies, mainly in rural areas. Organizing health education programs and providing health care facilities will improve their reproductive health. We can help women by providing them with educationists, policy makers and health care workers.

Objectives:

1. To analyse the knowledge of women about reproductive health.
2. To assess the awareness of women about reproductive health.
3. To know the attitude of women about reproductive health.

Materials and Methods:

Study design:

Descriptive Cross-sectional study was undertaken in the community. Based on a well-structured questionnaire, personal interviews with women aged 20 to 45 were conducted.

Personal interviews were conducted in the Wardha District's Borgaon Village. Questionnaires administered by an interviewer were used to assess socio-demographic characteristics, knowledge, and awareness of reproductive health in women. Before data collection attempt, verbal consent was taken from the study participants

Study setting:

Study was conducted in Borgaon Village of Wardha, India. As many patients were visiting OPD of AVBRH Sawangi Meghe with reproductive complaints and the village is adapted by our institute we found it right to choose Borgaon as a place of study.

Sample Size:

100

Study Type:

Cross sectional Observational study

Duration of Study:

6 months (07/05/2020 to 07/11/2020)

Inclusion Criteria:

Women between the ages of 20 years and 45 years are included.

Exclusion Criteria:

Women below the age of 20 years and over the age of 45 years are exempt.
Women those who didn't give consent for questionnaire

Ethics&dissemination:

Ethics approval was obtained from Institutional Ethics Committee, Mahatma Gandhi Ayurveda College, Hospital & Research Centre, Salod (H), Wardha 442001. (Ref. No. MGACHRC/IEC/2020/13, dated 06/05/2020)

Strength and Limitation:

Its cost effective and the participants are more willing to participate in the study and it is limited to age group of 20 -45 years of age women. The study is limited to residents of village Borgaon Wardha district.

Observations&Results

Observation is noted and presented in the form of charts. During the survey, 100 women aged 20 to 45 years were interviewed, and their responses were collected. Table 1: age of the respondents

Age of respondents	Percentage of respondents
20 – 25	30

26 – 30	31
31 – 35	14
36 – 40	15
41 – 45	10

Table 2: Religion of the respondents

Religion	Percentage of respondents
Hindu	65
Muslim	13
Buddhist	22

Table 3: age of menarche of the respondents

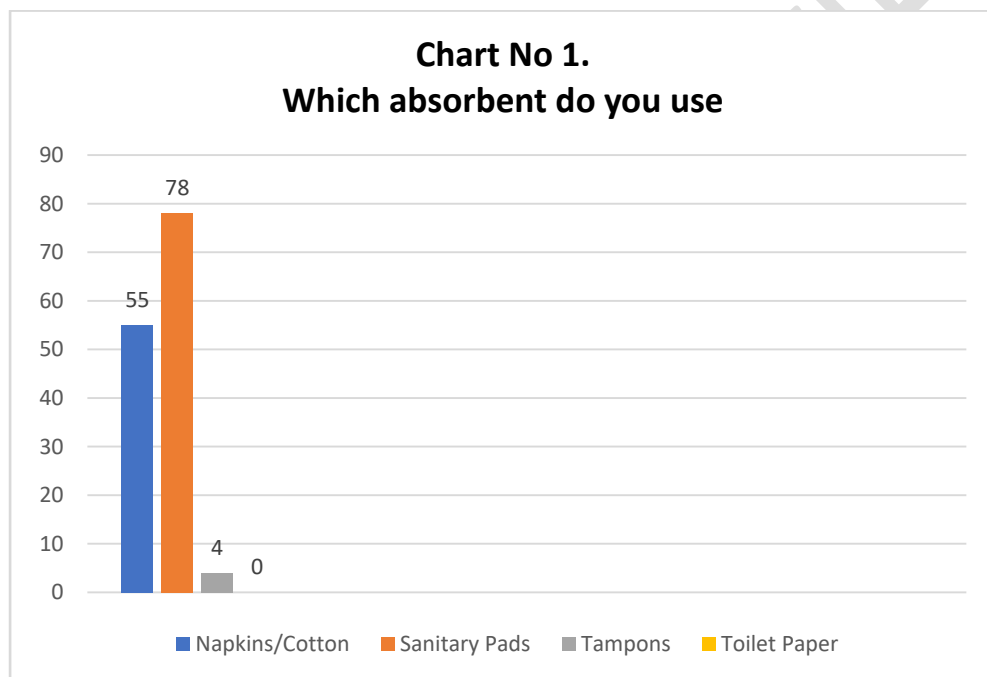
Age of menarche	Percentage of respondents
Before 12	9
12-15	61
16-19	30
Above 20	0

Table 4: Respondent's awareness regarding reproductive health

Sr. No.	Questions	Yes (In percentage)	No (In percentage)
1.	Do you know about burning sensation during urination?	81	19
2.	Do you know about abnormal vaginal discharge?	70	30
3.	Do you know about genital injury?	62	38
4.	Do you know about Abdo-pelvic pain?	63	37
5.	Do you know about itching in genitalia?	79	21

Table 5 :Menstrual history

SR. NO.	Questions	In percentage	In percentage
1.	Nature of pain	Painful 60	Painless 40
2.	Regularity	Regular 74	Irregular 26
3.	No. of days you are menstruating	<3 days 11	3- 5 days 63
		5-7 days 24	>7 days 2
4.	Does your menstruation hamper your daily activity?	Yes 54	No 46



As per the statistics, **Chart No 1.** Shows that 78 percent women were use sanitary pads though 55percent women were still used napkins & cottons due to lack of awareness, shyness & low economic condition& 4percent of women were using tampons. Not a single woman were known about toilet paper.

Chart No 2.
Reasons for using cloths

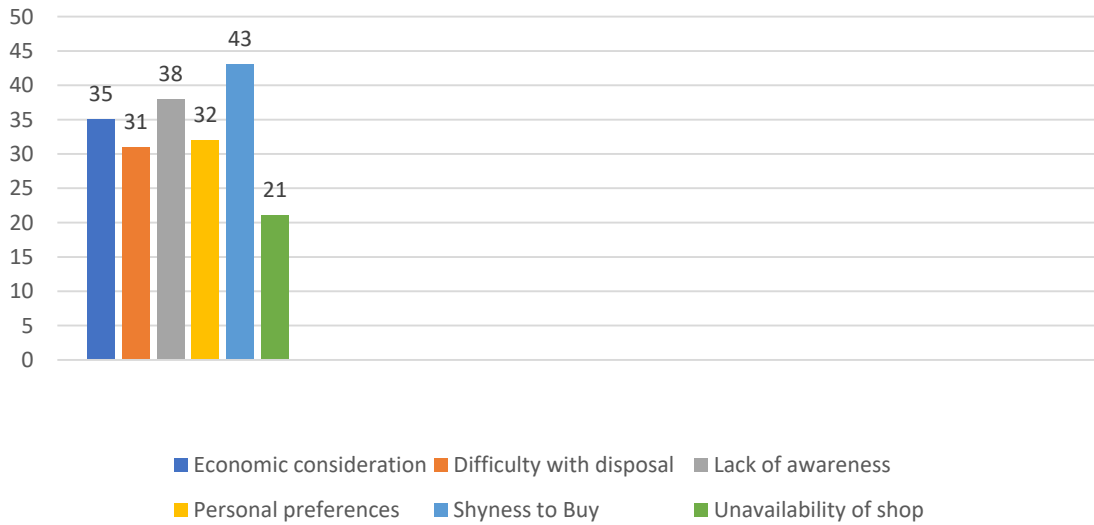


Chart No 2. Shows that 35percentof women were using cloths due to low economic condition. 31percent women were using it due to difficulty with disposal. It is found that due to lack of awareness 38percent of women were using cloths. 32percent of women were using cloths because of their personal preferences. 43percent of women were using cloths due to shyness to buy & 21percent of women were facing problems like unavailability of shop in their locality.

It is found that 83percent of women were responded that knowledge of contraception is necessary. 5percent of women thought that there is no need of contraceptive knowledge. 12percent of women responded may be.

Chart No 3.
Suitable contraceptives



Chart No 3. Shows that 73percent women were thought that male condom is suitable contraceptive. Only 24percent women were responded to female condom. 29percent women were thought that intrauterine devices are the best. 35percent of women go for oral contraceptive pills. 38percent women were preferred not to say.

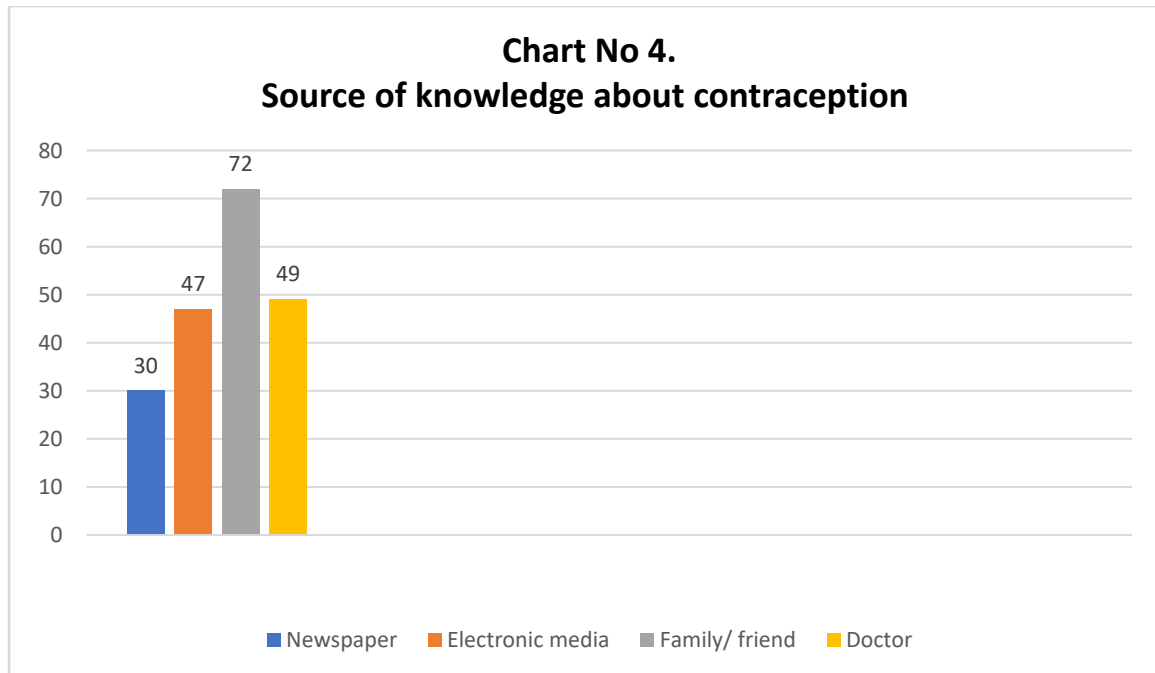


Chart No 4. Shows that 30percent women got knowledge of contraception from newspaper. According to 47percent women electronics media were good source. It is found that women from village got their maximum knowledge from family & friends. 49percent of women responded that their source of knowledge were doctors.

It is observed that 59percent of women were preferred to use contraception. 25percent of women were not preferred to use contraception. 16percent of women responded may be.

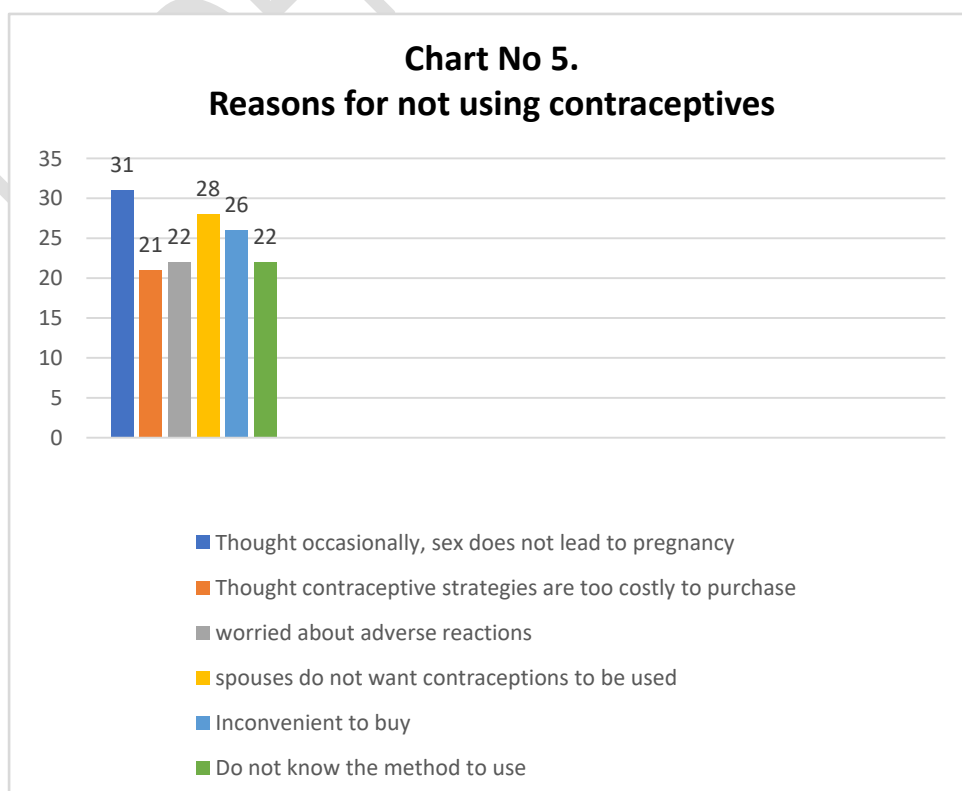


Chart No 5. Shows that 31percent of women were thought that occasionally, sex does not lead to pregnancy. 21percent of women were thought that contraceptive strategies are too costly to purchase. 22percent of women were worried about adverse reactions. 28percent women responded that their spouses do not want contraception to be used. 26percent of women were responded that contraceptives are inconvenient to buy. 22percent of women don't even knew the method to use the contraceptives.

It is noticed that 71percent of women were known about sexually transmitted disease. 19percent of women were don't know about sexually transmitted diseases. 10percent of women responded may be.

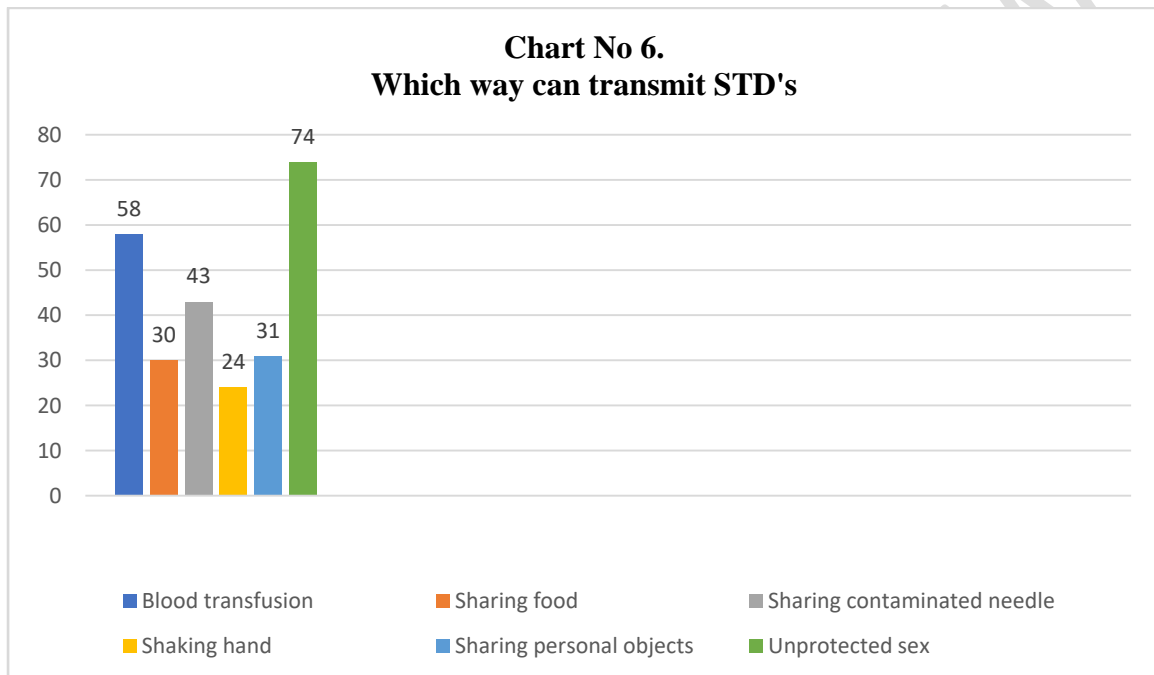


Chart No 6. Shows that 58percent of women thought that STD's can be spread through blood transfusion. 30 percent of women were thought sharing food can transmit STD's. 43percent of women responded to sharing contaminated needles. Shaking hand can transmit STD's were answer of 24percent of women. 31percent of women thought that sharing personal objects can be the reason behind STD's. 74percent of women responded to unprotected sex.

Chart No 7.
Do you think women need to learn reproductive knowledge

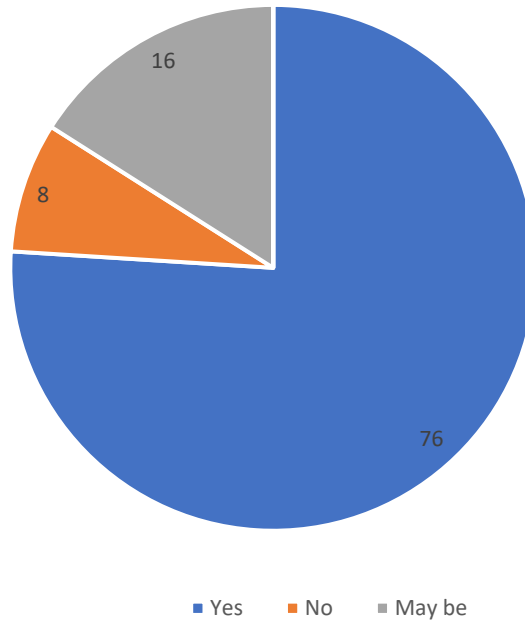


Chart No7. Shows 76percent women thought that there is need of learning reproductive knowledge. Still 8 percent of women thought that there is no need of learning reproductive knowledge. 16percent of women responded may be.

Chart No 8.
What is your first step when you come across any gynaecological problem

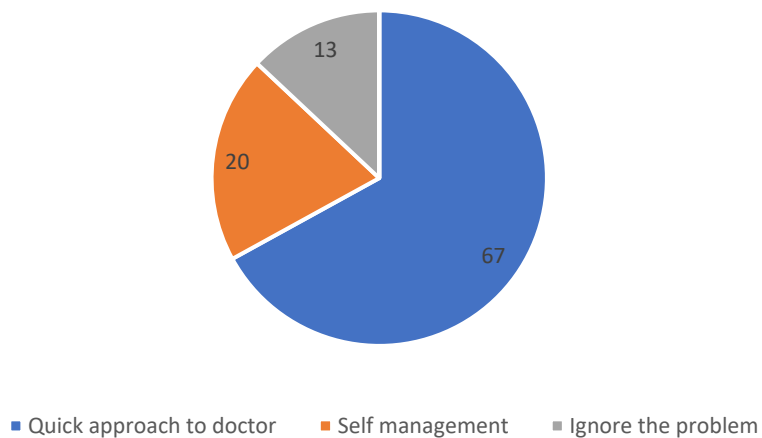


Chart No 8. Shows that when women came across any gynecological problem only 67percent of them had quick approach to doctor. 13 percent of women ignored the problem. 20percent of women were managed by themselves.

Discussion:

This study shows that menstruating women ranged in age from 12 to 19 years, whereas Hatwar, V.'s study revealed that the menstruating girls ranged in age from 12 to 16 years. [12]

In this study, it is found that 73percent women were thought that male condom is suitable contraceptive. Only 24percent women were responded to female condom. 29percent women were thought that intrauterine devices are the best. 35percent of women go for oral contraceptive pills. 38percent women were preferred not to say. An equivalent study done by Simbar, M. reveals that only 48percent of participants were using condoms. [13]

In this study it is stated that 76percent women thought that there is need of learning reproductive knowledge. Still 8 percent of women thought that there is no need of learning reproductive knowledge. 16percent of women responded may be. Study done by Simbar, M. shows that majority of study subjects believed that awareness of reproductive health is beneficial, but they thought that programmes were insufficient. [13]

In this study, it is reported that 78percent women were use sanitary pads though 55percent women were still used napkins & cottons due to lack of awareness, shyness & low economic condition & 4percent of women were using tampons. Not a single woman was known about toilet paper, similar study by Nagaraj showed that only 26.3percent of study subjects were using sanitary pads. This difference might be due to better awareness & availability of sanitary pads in their respective areas. [14]

This study shows that 30percent women got knowledge of contraception from newspaper. According to 47percent women electronics media were good source. It is found that women from village got their maximum knowledge from family & friends due to lack of exposure. 49percent of women responded that their source of knowledge were doctors. Similar study conducted by Abajobir observed that the source of knowledge was health practitioners for reproductive health. [15]

In this study 31percent of women were thought that occasionally, sex does not lead to pregnancy. 21percent of women were thought that contraceptive strategies are too costly to purchase. 22percent of women were worried about side effects. 28percent women responded that their spouses do not want contraception to be used. 26percent of women were responded that contraceptives are inconvenient to buy. 22percent of women don't even know the method to use the contraceptives. Similarly study conducted in east gojjam zone by abajobir, rural adolescents noticed that poor knowledge and peer pressure, husband opposition prevented participants from accessing contraceptive methods. [15]

According to Ayurveda, rasa dhatu i.e. plasma accounts the formation of raja i.e. menstrual blood and the main cause for the vitiation of rasa dhatu is mithyaahar i.e. unwholesome diet. Dieting is trending now a days, this also leads to nutritional deficiency & further

contributes in reproductive problems. Recent days, to make food look good and taste better, irrational combinations of food i.e. viruddhaahararemade. This leads to impotency i.e. shandhya as stated by Acharya Charaka. A decade ago Total fertility rate is 3.6 which declines to 2.9 in 2008, this clearly shows that effect of changed life style & diet habits. Ayurveda recommended good lifestyle practices for maintaining proper reproductive health such as performing yoga & pranayama which gives you peace of mind, panchkarma is an incredibly efficient way of balancing and rejuvenating all body tissues to operate optimally [16].

NOTE:

The study highlights the efficacy of "Ayurveda" which is an ancient tradition, used in some parts of India. This ancient concept should be carefully evaluated in the light of modern medical science and can be utilized partially if found suitable. At the heart of each of the above tables and charts mentioned above the continuously emerging reviews and discussions of this topic lies an increasing understanding of the importance of taking seriously the emotions, meanings, preferences, and lack of knowledge reported and experienced by women in various social demographic groups and at various places of local villages proved useful.

Conclusion:

Sexual health is as important as any other facet of health and should receive the same level of attention. It was concluded that we still need to aware the society about reproductive health of women because whole society should be well known about the measures to be taken and how to act wisely to deal with a woman suffering from any illness regarding reproductive health. Along with personal hygiene, proper disposal of absorbent used is also important. Each of the aforementioned areas offer steps in pathways for expanding the existing literature works and steps to improve sexual health of women.

Recommendations

Special health drives and awareness regarding sexual health should be started. Despite of sexual health as a vital sign for overall health and well being and should be regarded with importance similar to other aspects of health. Health education is an important factor in improving awareness and practices related to menstruation. Therefore, a properly planned health education needs to be provided to all adolescent girls and women by governmental and non-governmental organizations. In order to crack social inhibitors and empower young teenage girls with proper awareness, all women need to be informed about menstruation and menstrual hygiene practices. It is also essential to involve lady teachers in schools for sustained health awareness programs in schools.

REFERENCES:

1. Gaferi SM, Al-Harbi MF, Yakout SM, Soliman AT. Knowledge, attitude and practice related to reproductive health among female adolescents. Journal of Nursing Education and Practice. 2018;8(8):53-65. <https://doi.org/10.5430/jnep.v8n8p53>

2. Figà-Talamanca I. Occupational risk factors and reproductive health of women. *Occupational medicine*. 2006 Dec 1;56(8):521-31. <https://pubmed.ncbi.nlm.nih.gov/17151388/>
3. Pandey AK, Gupta A, Tiwari M, Prasad S, Pandey AN, Yadav PK, Sharma A, Sahu K, Asrafuzzaman S, Vengayil DT, Shrivastav TG. Impact of stress on female reproductive health disorders: Possible beneficial effects of shatavari (*Asparagus racemosus*). *Biomedicine & Pharmacotherapy*. 2018 Jul 1;103:46-9. <https://doi.org/10.12775/JEHS.2020.10.01.036>
4. Jr, B. F. P. ., & Federico R. Tewes. (2021). What attorneys should understand about Medicare set-aside allocations: How Medicare Set-Aside Allocation Is Going to Be Used to Accelerate Settlement Claims in Catastrophic Personal Injury Cases. *Clinical Medicine and Medical Research*, 2(1), 61-64. <https://doi.org/10.52845/CMMR/2021v1i1a1>
5. Dasgupta A, Sarkar M. Menstrual hygiene: how hygienic is the adolescent girl?. *Indian journal of community medicine: official publication of Indian Association of Preventive & Social Medicine*. 2008 Apr;33(2):77. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2784630/>
6. Van den Broek NR, White SA, Ntonya C, Ngwale M, Cullinan TR, Molyneux ME, Neilson JP. Reproductive health in rural Malawi: a population-based survey. *BJOG: an international journal of obstetrics and gynaecology*. 2003 Oct 1;110(10):902-8. Jogdand, K. and Yerpude, P., 2011.
7. Sommer M, Caruso BA, Sahin M, Calderon T, Cavill S, Mahon T, Phillips-Howard PA. A time for global action: addressing girls' menstrual hygiene management needs in schools. *PLoS medicine*. 2016 Feb 23;13(2):e1001962. <https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001962>
8. Daniel, V. ., & Daniel, K. (2020). Diabetic neuropathy: new perspectives on early diagnosis and treatments. *Journal of Current Diabetes Reports*, 1(1), 12–14. <https://doi.org/10.52845/JCDR/2020v1i1a3>
9. Jogdand K, Yerpude P. A community based study on menstrual hygiene among adolescent girls. *Indian Journal of Maternal and Child Health*. 2011 Jul 1;13(3):1-6. <https://www.ircwash.org/resources/community-based-study-menstrual-hygiene-among-adolescent-girls>
10. Dube S, Sharma K. Knowledge, attitude and practice regarding reproductive health among urban and rural girls: A comparative study. *Studies on Ethno-medicine*. 2012 Aug 1;6(2):85-94. https://www.researchgate.net/publication/289008843_Knowledge_Attitude_and_Practice_Regarding_Reproductive_Health_among_Urban_and_Rural_Girls_A_Comparative_Study
11. Galappaththi-Arachchige HN, Zulu SG, Kleppa E, Lillebo K, Qvigstad E, Ndhlovu P, Vennervald BJ, Gundersen SG, Kjetland EF, Taylor M. Reproductive health problems in rural South African young women: risk behaviour and risk factors. *Reproductive health*. 2018 Dec;15(1):1-0. <https://pubmed.ncbi.nlm.nih.gov/30111335/>
12. Sarkar NN. The impact of intimate partner violence on women's reproductive health and pregnancy outcome. *Journal of Obstetrics and Gynaecology*. 2008 Jan 1;28(3):266-71. <https://europepmc.org/article/MED/18569465>
13. Budhathoki SS, Bhattachan M, Castro-Sánchez E, Sagtani RA, Rayamajhi RB, Rai P, Sharma G. Menstrual hygiene management among women and adolescent girls in the

- aftermath of the earthquake in Nepal. *BMC women's health*. 2018 Dec;18(1):1-8. <https://doi.org/10.1186/s12905-018-0527-y>
14. Daniel, V., & Daniel, K. (2020). Perception of Nurses' Work in Psychiatric Clinic. *Clinical Medicine Insights*, 1(1), 27-33. <https://doi.org/10.52845/CMI/2020v1i1a5>
 15. Hatwar V, Chaple JN. Awareness and practices regarding menstrual hygiene among adolescent girls residing in the village of Rasulabad in Wardha district. *Journal of Indian System of Medicine*. 2020Jan 1;8(1):29. <https://www.joinsysmed.com/article.asp?issn=2320-4419;year=2020;volume=8;issue=1;spage=29;epage=34;aulast=Hatwar>
 16. Simbar M, Tehrani FR, Hashemi Z. Reproductive health knowledge, attitudes and practices of Iranian college students. *EMHJ-Eastern Mediterranean Health Journal*, 11 (5-6), 888-897, 2005. <https://doi.org/10.26719/2005.11.5-6.888>
 17. Nagaraj C, Konapur KS. Effect of health education on awareness and practices related to menstruation among rural adolescent school girls in Bengaluru, Karnataka. *International Journal of Preventive and Public Health Sciences*. 2016 Jan 30;2(1):18-21. <https://europepmc.org/article/PMC/PMC8611595>
 18. Abajobir AA, Seme A. Reproductive health knowledge and services utilization among rural adolescents in east Gojjam zone, Ethiopia: a community-based cross-sectional study. *BMC health services research*. 2014 Dec;14(1):1-1. <https://pubmed.ncbi.nlm.nih.gov/24678725/>
 19. Daniel, V., & Daniel, K. (2020). Exercises training program: It's Effect on Muscle strength and Activity of daily living among elderly people. *Nursing and Midwifery*, 1(01), 19-23. <https://doi.org/10.52845/NM/2020v1i1a5>
 20. Kale VS. Modern Life Style (Mithyachaara) Effect On Female Reproductive Health: An Ayurvedic Perspective.
 21. Kalambe, M., M. Jungari, A. Chaudhary, A. Kalambe, and D. Shrivastava. "Palm Coein Figo Classification System for Causes of Abnormal Uterine Bleeding (Aub) in Non Gravid Women of Reproductive Age Group in a Peri Urban Tertiary Care Hospital." *International Journal of Current Research and Review* 12, no. 15 (2020): 128–33. <https://doi.org/10.31782/IJCRR.2020.121523>.
 22. Patel, A.B., C.M. Bann, A.L. Garces, N.F. Krebs, A. Lokangaka, A. Tshetu, C.L. Bose, et al. "Development of the Global Network for Women's and Children's Health Research's Socioeconomic Status Index for Use in the Network's Sites in Low and Lower Middle-Income Countries." *Reproductive Health* 17 (2020). <https://doi.org/10.1186/s12978-020-01034-2>.
 23. Patel, A.B., E.M. Simmons, S.R. Rao, J. Moore, T.L. Nolen, R.L. Goldenberg, S.S. Goudar, et al. "Evaluating the Effect of Care around Labor and Delivery Practices on Early Neonatal Mortality in the Global Network's Maternal and Newborn Health Registry." *Reproductive Health* 17 (2020). <https://doi.org/10.1186/s12978-020-01010-w>.
 24. Pusdekar, Y.V., A.B. Patel, K.G. Kurhe, S.R. Bhargav, V. Thorsten, A. Garces, R.L. Goldenberg, et al. "Rates and Risk Factors for Preterm Birth and Low Birthweight in the Global Network Sites in Six Low- and Low Middle-Income Countries." *Reproductive Health* 17 (2020). <https://doi.org/10.1186/s12978-020-01029-z>.
 25. Bauserman, M., V.R. Thorsten, T.L. Nolen, J. Patterson, A. Lokangaka, A. Tshetu, A.B. Patel, et al. "Maternal Mortality in Six Low and Lower-Middle Income Countries from

- 2010 to 2018: Risk Factors and Trends.” *Reproductive Health* 17 (2020). <https://doi.org/10.1186/s12978-020-00990-z>.
26. Choudhary, A., M. Nakade, and D. Shrivastava. “Family Planning Knowledge, Attitude and Practice among Women of Reproductive Age from Rural Area of Central India.” *International Journal of Current Research and Review* 12, no. 14 Special Issue (2020): 2–7. <https://doi.org/10.31782/IJCRR.2020.0207>.
27. Damke, S., D. Chandi, and R. Fule. “Study of Bacterial Vaginosis among Women of Reproductive Age Using Contraceptive Methods in a Tertiary Care Hospital.” *Journal of Krishna Institute of Medical Sciences University* 9, no. 2 (2020): 22–27. <https://www.jkimsu.com/jkimsu-vol9-no2-april-june-2020.html>
28. Unnikrishnan, B., P. Rathi, R.M. Sequeira, K.K. Rao, S. Kamath, and K.K. Maria Alfam. “Awareness and Uptake of Maternal and Child Health Benefit Schemes Among the Women Attending a District Hospital in Coastal South India.” *Journal of Health Management* 22, no. 1 (2020): 14–24. <https://doi.org/10.1177/0972063420908371>.
29. Khatib, N., Q.S. Zahiruddin, A.M. Gaidhane, L. Waghmare, T. Srivatsava, R.C. Goyal, S.P. Zodpey, and S.R. Johrapurkar. “Predictors for Antenatal Services and Pregnancy Outcome in a Rural Area: A Prospective Study in Wardha District, India.” *Indian Journal of Medical Sciences* 63, no. 10 (2009): 436–44. <https://doi.org/10.4103/0019-5359.57643>.
30. Dakhode, S., A. Gaidhane, S. Choudhari, P. Muntode, V. Wagh, and Q.S. Zahiruddin. “Determinants for Accessing Emergency Obstetric Care Services at Peripheral Health Facilities in a Block of Wardha District, Maharashtra: A Qualitative Study.” *Journal of Datta Meghe Institute of Medical Sciences University* 15, no. 1 (2020): 1–6. https://doi.org/10.4103/jdmimsu.jdmimsu_209_19.