Menstrual Health and Hygiene- Study of Knowledge Attitudes and Practices of Obgyns on Usage of Menstrual Cups

Hema Divakar¹, Rita Singh², Poorni Narayanan³, Divakar G.V.⁴, Raksha Suvarna⁵

¹Medical Director and Senior Consultant, Department of Obstetrics and Gynaecology, Divakars Speciality Hospital, Bengaluru, Karnataka. ²Associate Consultant, Department of Obstetrics and Gynaecology, Divakars Speciality Hospital, Bengaluru, Karnataka. ³Associate Consultant, Department of Obstetrics and Gynaecology, Divakars Speciality Hospital, Bengaluru, Karnataka. ⁴Managing Director and Ophthalmologist, Divakars Speciality Hospital, Bengaluru, Karnataka. ⁵Research Coordinator, Artist, Asian Research and Training Institute of Skill Transfer, Bengaluru, Karnataka.

ABSTRACT

BACKGROUND

Meagre data exists as to whether health care professionals consider and advocate menstrual cups as a safe and feasible alternative to the generally used methods of menstruation management. The attitudes and practice among girls and women with respect to usage of menstrual cups is also not known. Therefore, we conducted a cross-sectional survey to understand the knowledge, attitudes and practices of menstrual cup and its recommended usage from the health care providers dealing with young girls and women.

METHODS

A cross-sectional survey was conducted among 163 obstetricians and gynaecologists in the public and private practice in Bangalore, India.

RESULTS

93% of the health care providers think that menstrual cups are more environment friendly than sanitary pads. We found that only 59% think that they are the way forward for better menstrual hygiene management. Only 57% of the health care providers actually advised young girls on the usage of menstrual cups. Though fifty percent of the health care providers think that it is appropriate to advice menstrual cups to young girls, only 35% pro-actively advocate menstrual cups to young girls irrespective of their sexual activity. Most of the users had the internet and peer group as their source of information, rather than the healthcare providers.

CONCLUSIONS

These results call for better awareness amongst healthcare providers on advocacy of eco-friendly measures to promote menstrual health and hygiene.

KEYWORDS

Menstrual Health, Hygiene, Menstrual Cup, Survey, Young Girl, Women

Corresponding Author: Dr. Hema Divakar, Hema Divakars Speciality Hospital, No. 220, 9th Main Road, JP Nagar, 2nd Phase, Bengaluru-560078, Karnataka. E-mail: drhemadivakar@gmail.com

DOI: 10.18410/jebmh/2020/80

Financial or Other Competing Interests: None.

How to Cite This Article:

Divakar H, Singh R, Narayanan P, et al. Menstrual health and hygiene- study of knowledge attitudes and practices of obgyns on usage of menstrual cups. J. Evid. Based Med. Healthc. 2020; 7(8), 372-376. DOI: 10.18410/jebmh/2020/80

Submission 28-01-2020, Peer Review 01-02-2020, Acceptance 12-02-2020, Published 24-02-2020.



BACKGROUND

Menstrual health and hygiene are an integral component of an adolescent girl's life, to ensure that they lead healthy and productive lives. A systematic review and meta-analysis in 2016 advocated for strengthening of menstrual health and hygiene management (MHM) programmes in India, including education on awareness, access to hygienic absorbents and disposal of MHM items.¹ The National Family Health survey (NFHS) 2015-16 survey found that 62% of young women in India of 15-24 years age group still use cloth for menstrual protection and between 43% and 88% of girls wash and reuse cotton cloths rather than use of disposable pads.^{2,3} However reusable material may not be well sanitized because cleaning is often done with unclean water, and restrictions force drying indoors, away from sunlight and open air.³ There was a wide variation among states and rural (48%) Vs Urban (78%) status on their usage of hygienic and unhygienic methods of menstrual protection by young girls. Hygienic methods of menstrual protection are locally prepared napkins, sanitary napkins and tampons. Education and wealth were found to be associated with the use of hygienic method of menstrual protection.⁴

A systematic review of the health and social effects of MHM found gap in the evidence for high quality randomised intervention studies for better understanding the effect improving MHM may have on girl's attendance at school.⁵ Taking cue from these factors, various government and nongovernment organizations promote MHM programs through health awareness schemes and free/subsidised distribution of sanitary pads. However, the quantity and quality of pads handed out in most programs is inadequate and substandard according to a survey done by Bhoomi College in Bangalore, India, which reached out to 700 girls in 15 villages in a rural municipality in Tamil Nadu.⁶ The reusable technologies such as menstrual cups offer another affordable and environment friendly alternative to MHM. They are much less expensive over the lifetime of their use, but are characterised by barriers to adoption, including a higher initial cost of purchase, learning costs, and psychological barriers to insertion.

Data is meagre on usage and advocacy of menstrual cups in India. Two menstrual hygiene technologies, one with low barriers to adoption (disposable sanitary pads) and one with higher adoption barriers (reusable menstrual cups) were distributed free of charge to 960 women across 60 rural villages in the state of Bihar, India to find reasonable success (30%) with introducing menstrual cup.⁷ In the continuum of care provided to adolescents, it is important to know to what extent health care professionals play a role. A 2014 study in Maharashtra, India, called out to parents, adolescent care providers, and policy makers in developing countries for advocating comprehensive sexuality education and resources to promote menstrual health and hygiene.8 Additionally, there is a need for health care providers and educators to provide accurate information on menstrual cups to girls and women.9 It is with this background that we conducted a cross-sectional survey among the health care providers to understand their knowledge, attitude and practice on menstrual cup usage to young girls and women

The objective of this study was to gather information about the knowledge, attitudes and perceptions of obstetricians and gynaecologists towards their practice and advocacy of menstrual cup usage in young girls and women.

METHODS

This was a cross sectional questionnaire-based study, which was conducted over a period of three months (from 2nd October 2019 to December 31st 2019) A questionnaire was designed in consultation with the obstetricians and gynaecologists of ARTIST (Asian Research and Training Institute for Skill Transfer), the academic wing of the Divakar's Speciality Hospital, Bengaluru in Karnataka, India.

Survey Questionnaire Design

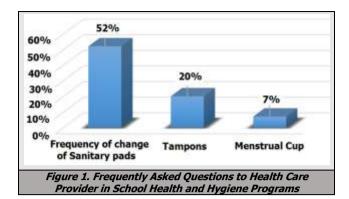
The guestionnaire consisted of 20 guestions regarding menstrual health & hygiene, advocacy of cups, contraception, cervical cancer/vaccine during campaigns/consultations, feedback from young girls using menstrual cups, usage of digital platform to seek information on menstrual cups and also was used to assess the knowledge, attitude and practice of the health care provider. The questionnaire was administered in a cross-sectional survey to 163 obstetricians and gynaecologists both in the public and private practice. They were contacted through email using google survey forms and also In-person forms (filled in at meetings and conferences). Data were entered, cleaned and analysed using Microsoft Excel 2016.

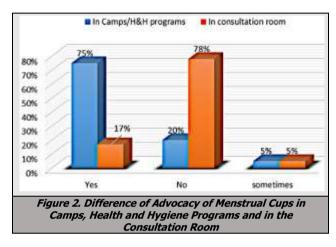
RESULTS

The questionnaire was distributed to 163 Obstetricians and gynaecologists. Non-response rate was 1.2-4.3% across the questions. Data are presented as number, percentages and graphs. 92% of health care providers had previously talked about, health, hygiene, sanitary pads, contraception, cervical cancer/vaccine during campaigns/consultations, but not included menstrual cups as an alternative menstrual management option. Experience of health care providers at health and hygiene programs which was conducted in schools, where all girls and women were aware about the usage of sanitary pads and 20% of girls and women asked questions on tampons and only 7% asked on menstrual cups and 52% of them asked questions related to frequency of change of sanitary pads. 75% of health care providers who talk about the menstrual cups in health and hygiene programs of which, only 17% talk in their consultation room. 93% think that menstrual cups are more environment friendly than sanitary pads. 59% think that menstrual cups are way forward for moving from pads to cups. Though 51% healthcare provider think that it is appropriate to advice menstrual cups to young girls, only 35% of doctors have

Jebmh.com

proactively presented the option of menstrual cups and advised young girls on how to use menstrual cups.





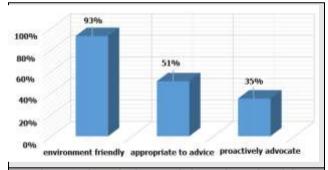
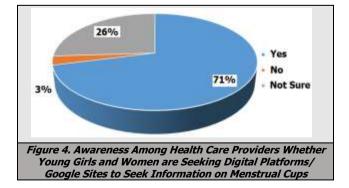


Figure 3. The Attitude, Knowledge and Practice of the Health Care Provider Towards Menstrual Cup Usage



41% of young girls themselves approach the healthcare provider about the usage of menstrual cups, 71% of them have gathered information from internet and peer groups. 94% of consultant encouraged girls and women who are already using menstrual cups and 96% of girls and women

are comfortable using menstrual cups. All girls and women think its ease to use, cost effective method, environment friendly.

2. FAQ on Tampons Nev 3. FAQ on Menstrual cups Nev 4. Questions related to frequency of change of sanitary pads Nev 5. Did Obgyn's talk about menstrual cups in camps/health & hygiene programs Only v 6. Did Obgyn's talk about menstrual cups are more environment friendly than sanitary pads? So 7. Do consultant think that menstrual cups are more environment friendly than sanitary pads? So 9. Do consultant think that menstrual cups are way forward for moving from pads to cups Do consultant think that it is appropriate to advice menstrual cups 10. Do consultant think that it is appropriate to advice menstrual cups to young girls Do consultant pro-actively advocate menstrual activity 11. cups to young girls irrespective of their sexual activity Did you face any resistance from 12. Do young girls and women seek digital Di young girls and women seek digital 13. platform/google sites to seek information on menstrual cups. N 14. Did you advise young girls on how to use menstrual cups Encourd dis 15. Mew did the consultant respond to the queries on Encourd dis Satisfacto 16. What was the feedback from the girls and women already using? Not satisfacto		
OBGYN On Analysis From Health And Hygiene Program 1. Girls awareness about the sanitary pad 2. FAQ on Tampons 3. FAQ on Menstrual cups 4. Questions related to frequency of change of sanitary pads 5. Did Obgyn's talk about menstrual cups in camps/health & hygiene programs 6. Did Obgyn's talk about menstrual cups in consultation room 7. Do consultant think that menstrual cups are more environment friendly than sanitary pads? 8. Do consultant think that menstrual cups are way forward for moving from pads to cups 9. Do young girls approach consultant for advice on using menstrual cups 10. Do consultant think that it is appropriate to advice menstrual cups to young girls 10. Do consultant pro-actively advocate menstrual 11. cups to young girls and women seek digital 12. Did you ace any resistance from menstrual cups. 13. platform/google sites to seek information on menstrual cups. 14. Did you advise young girls on how to use menstrual cups 15. Medid the consultant respond to the queries on Encourage in menstrual cups from girls and women already using? 16. What was the feedback from the girls and women already using?		
1. Girls awareness about the sanitary pad 2. FAQ on Tampons Next 3. FAQ on Menstrual cups Next 4. Questions related to frequency of change of sanitary pads Next 5. Did Obgyn's talk about menstrual cups in camps/health & hygiene programs Only w 6. Did Obgyn's talk about menstrual cups are more environment friendly than sanitary pads? Soil 7. Do consultant think that menstrual cups are more environment friendly than sanitary pads? Do consultant think that menstrual cups are way forward for moving from pads to cups 9. Do young girls approach consultant for advice on using menstrual cups Do consultant think that it is appropriate to advice menstrual cups to young girls 10. Do consultant pro-actively advocate menstrual cups to young girls Do consultant pro-actively advocate menstrual cups to young girls mespective of their sexual activity 11. cups to young girls and women seek digital Did you advise young girls on how to use menstrual cups. 13. platform/google sites to seek information on menstrual cups from girls and women already using? Next 14. Did you advise young girls on how to use menstrual cups from girls and women already using? Satisfacto 15. Mext was the feedback from the girls and women already using? Enco		
2. FAQ on Tampons Nev 3. FAQ on Menstrual cups Nev 4. Questions related to frequency of change of sanitary pads Nev 5. Did Obgyn's talk about menstrual cups in camps/health & hygiene programs Only v 6. Did Obgyn's talk about menstrual cups are more environment friendly than sanitary pads? So 7. Do consultant think that menstrual cups are more environment friendly than sanitary pads? So 9. Do consultant think that menstrual cups are way forward for moving from pads to cups Do consultant think that it is appropriate to advice menstrual cups to young girls approach consultant for advice on using menstrual cups Do consultant pro-actively advocate menstrual 10. Do consultant pro-actively advocate menstrual cups to young girls Do consultant pro-actively advocate menstrual 11. cups to young girls and women seek digital Did you face any resistance from community/family of young girls while talking on menstrual cups. N 12. Did you advise young girls on how to use menstrual cups. N 14. Did you advise young girls on how to use menstrual cups from girls and women already using? Satisfacto 15. Met was the feedback from the girls and women already using? Satisfacto	Yes-	
2. FAQ on Tampons New 3. FAQ on Menstrual cups New 4. Questions related to frequency of change of sanitary pads New 5. Did Obgyn's talk about menstrual cups in camps/health & hygiene programs Only v 6. Did Obgyn's talk about menstrual cups are more environment friendly than sanitary pads? New 7. Do consultant think that menstrual cups are more environment friendly than sanitary pads? So 9. Do consultant think that menstrual cups are way forward for moving from pads to cups Do consultant think that it is appropriate to advice menstrual cups to young girls approach consultant for advice on using menstrual cups Do consultant pro-actively advocate menstrual 10. Do consultant pro-actively advocate menstrual cups to young girls while talking on menstrual cups, health & hygiene, contraception, cervical cancer/vaccine New 12. Do young girls and women seek digital Did you advise young girls on how to use menstrual cups. N 13. platform/google sites to seek information on menstrual cups from girls on how to use menstrual cups. N N 14. Did you advise young girls and women already using? Satisfacto 15. Met was the feedback from the girls and women already using? Encourage	No-	
3. FAQ on Menstrual cups Next 4. Questions related to frequency of change of sanitary pads Next 5. Did Obgyn's talk about menstrual cups in camps/health & hygiene programs Only w 6. Did Obgyn's talk about menstrual cups are more environment friendly than sanitary pads? Sol 7. Do consultant think that menstrual cups are more environment friendly than sanitary pads? Sol 9. Do consultant think that menstrual cups are way forward for moving from pads to cups Do consultant think that it is appropriate to advice menstrual cups to young girls approach consultant for advice on using menstrual cups Do consultant think that it is appropriate to advice menstrual cups to young girls bo consultant pro-actively advocate menstrual cups to young girls menstrual cups. Do consultant pro-actively advocate menstrual for advice on menstrual cups to young girls may be their sexual activity 10. Did you face any resistance from community/family of young girls while talking on menstrual cups. N 12. Do young girls and women seek digital platform/google sites to seek information on menstrual cups. N 13. platform/google sites to seek information on menstrual cups from girls on how to use menstrual cups. N 14. Did you advise young girls on how to use menstrual cups from girls and women already using? Encorady dis 15. Med the consultant r	Asked- ver asked-	
4. Questions related to frequency of change of sanitary pads New 5. Did Obgyn's talk about menstrual cups in camps/health & hygiene programs Only w 6. Did Obgyn's talk about menstrual cups in consultation room So 7. Do consultant think that menstrual cups are more environment friendly than sanitary pads? So 8. Do consultant think that menstrual cups are way forward for moving from pads to cups Do consultant think that menstrual cups are way forward for moving from pads to cups 9. Do young girls approach consultant for advice on using menstrual cups Do consultant think that it is appropriate to advice menstrual cups to young girls 10. Do consultant pro-actively advocate menstrual cups to young girls Do consultant pro-actively advocate menstrual activity 11. cups to young girls and women seek digital Did you face any resistance from menstrual cups. N 12. Did you advise young girls on how to use menstrual cups. N N 13. platform/google sites to seek information on menstrual cups N N 14. Did you advise young girls on how to use menstrual cups from girls and women already using? Satisfacto 15. Mendut the consultant respond to the queries on Encourage from menstrual cups from girls and women already Encourage? <td>Asked-</td>	Asked-	
4. sanitary pads New 5. Did Obgyn's talk about menstrual cups in camps/health & hygiene programs Only w 6. Did Obgyn's talk about menstrual cups in consultation room Soi 7. Do consultant think that menstrual cups are more environment friendly than sanitary pads? Soi 8. Do consultant think that menstrual cups are way forward for moving from pads to cups Do young girls approach consultant for advice on using menstrual cups to young girls Do consultant think that it is appropriate to advice menstrual cups to young girls 10. Do consultant pro-actively advocate menstrual cups to young girls incespective of their sexual activity Did you face any resistance from 11. cups to young girls and women seek digital Do young girls and women seek digital 13. platform/google sites to seek information on menstrual cups. N 14. Did you advise young girls on how to use menstrual cups from girls and women already using? Not satisfactor 16. What was the feedback from the girls and women server and women using menstrual cups? Not satisfactor	ver asked-	
5. camps/health & hygiene programs Only v 6. Did Obgyn's talk about menstrual cups in consultation room Soi 7. Do consultant think that menstrual cups are more environment friendly than sanitary pads? Soi 8. Do consultant think that menstrual cups are way forward for moving from pads to cups Do young girls approach consultant for advice on using menstrual cups are way forward for moving from pads to cups 9. Do young girls approach consultant for advice on using menstrual cups Do consultant think that it is appropriate to advice menstrual cups to young girls by oung girls 10. Do consultant pro-actively advocate menstrual cups to young girls while talking on menstrual cups, health & hygiene, contraception, cervical cancer/vaccine 11. cups to young girls and women seek digital 12. Did you advise young girls on how to use menstrual cups. 13. platform/google sites to seek information on menstrual cups. 14. Did you advise young girls on how to use menstrual cups 15. Mendut the consultant respond to the queries on menstrual cups from girls and women already using? 16. What was the feedback from the girls and women using menstrual cups? Not sat dis	Asked- ver asked-	
b. consultation room So 7. Do consultant think that menstrual cups are more environment friendly than sanitary pads? 1 8. Do consultant think that menstrual cups are way forward for moving from pads to cups 9 9. Do young girls approach consultant for advice on using menstrual cups 10 10. Do consultant think that it is appropriate to advice menstrual cups to young girls 10 10. Do consultant pro-actively advocate menstrual cups to young girls irrespective of their sexual activity 11 11. cups to young girls and women seek digital 11 12. Do young girls and women seek digital 13. 13. platform/google sites to seek information on menstrual cups. N 14. Did you advise young girls on how to use menstrual cups from girls and women already using? Encourage from girls and women already active advocate menstrual cups. 16. What was the feedback from the girls and women server advocate menstrual cups? Not sat dis	Yes- No- when asked-	
7. environment friendly than sanitary pads? 8. Do consultant think that menstrual cups are way forward for moving from pads to cups 9. Do young girls approach consultant for advice on using menstrual cups 10. Do consultant think that it is appropriate to advice menstrual cups to young girls 10. Do consultant pro-actively advocate menstrual 11. cups to young girls irrespective of their sexual activity 12. Did you face any resistance from community/family of young girls while talking on menstrual cups. health & hygiene, contraception, cervical cancer/vaccine 13. platform/google sites to seek information on menstrual cups. 14. Did you advise young girls on how to use menstrual cups from girls and women already using? 15. Menstrual cups from girls and women already using? 16. What was the feedback from the girls and women service and women using menstrual cups?	Yes- No- metimes-	
8. forward for moving from pads to cups 9. Do young girls approach consultant for advice on using menstrual cups 10. Do consultant think that it is appropriate to advice menstrual cups to young girls 10. Do consultant pro-actively advocate menstrual 11. cups to young girls irrespective of their sexual activity 12. Did you face any resistance from community/family of young girls while talking on menstrual cups, health & hygiene, contraception, cervical cancer/vaccine 13. platform/google sites to seek information on menstrual cups. 14. Did you advise young girls on how to use menstrual cups from girls and women already using? 15. How did the consultant respond to the queries on encourage form girls and women already using? 16. What was the feedback from the girls and women servical cups?	Yes- No- Maybe-	
9. Do young girls approach consultant for advice on using menstrual cups 10. Do consultant think that it is appropriate to advice menstrual cups to young girls 11. Do consultant pro-actively advocate menstrual 11. cups to young girls irrespective of their sexual activity Did you face any resistance from community/family of young girls while talking on menstrual cups, health & hygiene, contraception, cervical cancer/vaccine Do young girls and women seek digital 13. platform/google sites to seek information on menstrual cups. 14. Did you advise young girls on how to use menstrual cups from girls and women already using? 15. menstrual cups from girls and women already using? 16. What was the feedback from the girls and women using menstrual cups?	Yes- No-	
10. Do consultant think that it is appropriate to advice menstrual cups to young girls Do consultant pro-actively advocate menstrual 11. cups to young girls irrespective of their sexual activity Did you face any resistance from community/family of young girls while talking on menstrual cups, health & hygiene, contraception, cervical cancer/vaccine Do young girls and women seek digital 13. platform/google sites to seek information on menstrual cups. N14. Did you advise young girls on how to use menstrual cups How did the consultant respond to the queries on Encourage 15. Encourage? Gaussian Gaussian women already using? 16. What was the feedback from the girls and women using menstrual cups? Not sat dis	Yes- No-	
Do consultant pro-actively advocate menstrual 11. cups to young girls irrespective of their sexual activity Did you face any resistance from community/family of young girls while talking on menstrual cups, health & hygiene, contraception, cervical cancer/vaccine 12. Do young girls and women seek digital 13. platform/google sites to seek information on menstrual cups. 14. Did you advise young girls on how to use menstrual cups 15. menstrual cups from girls and women already using? 16. What was the feedback from the girls and women using menstrual cups?	Yes-	
Did you face any resistance from 12. community/family of young girls while talking on menstrual cups, health & hygiene, contraception, cervical cancer/vaccine Do young girls and women seek digital 13. platform/google sites to seek information on menstrual cups. 14. Did you advise young girls on how to use menstrual cups 15. Menstrual cups from girls and women already using? 16. What was the feedback from the girls and women using menstrual cups?	No- Yes- No-	
13. platform/google sites to seek information on menstrual cups. N 14. Did you advise young girls on how to use menstrual cups N 14. Did you advise young girls on how to use menstrual cups N 15. How did the consultant respond to the queries on Encourag to menstrual cups from girls and women already using? Encourage dis Satisfactor 16. What was the feedback from the girls and women using menstrual cups? Not sat dis Satisfactor	Yes- No-	
14. menstrual cups How did the consultant respond to the queries on Encourag 15. menstrual cups from girls and women already Encoursing? 16. What was the feedback from the girls and women using menstrual cups? 16. What was the feedback from the girls and dis dis	Yes- No- lot sure-	
How did the consultant respond to the queries on Encourage 15. menstrual cups from girls and women already using? Encourage 16. What was the feedback from the girls and women using menstrual cups? Not sat dis Satisfacto	Yes- No- Maybe-	
16. What was the feedback from the girls and women using menstrual cups? Not sat dis		
	ory, will continue to use- tisfactory, will continue-	
17. Did girls and women already use menstrual cups had any side effects	Yes- No-	
18. Feedback on menstrual cup-Ease of use	Yes- No-	
19. Cost effective method	Yes- No-	
20. Environment friendly	Yes- No-	

DISCUSSION

According to the panchayat authorities, on an average, the local body is generating menstrual waste of more than one lakh synthetic sanitary pads on a monthly basis. It has become a major threat to soil and water.¹⁰ Results from this survey showed that a resounding 93% of the health care providers think that menstrual cups are more environment friendly than sanitary pads, These findings are supported by a recent event in Mumbai where gynaecologists and doctors in Mumbai increased awareness about menstrual cups and the event organisers undertook steps to reduce the growing menstrual waste created by disposable pads.¹¹ In the study good however only 59% think that menstrual cups are way forward for moving from pads to cups, but only 17% of them had previously talked about menstrual cups, during health and hygiene, campaigns/or during their consultations.

As menstrual cups are an alternative to disposable sanitary products, even where water and sanitation facilities are poor. When reusable, menstrual cups are easy to clean and, therefore, more hygienic than cloth pads, and they require less water for cleansing.¹² Internal placement of cups avoids the odour and discomfort of an external pad. Reusable menstrual cups have an economic advantage.^{13,14,15,16} and users are satisfied. Further research is needed to explore what prevents healthcare providers from advocating menstrual cup usage, though their thinking is on the lines that the menstrual cups are the ultimate environment friendly solution to menstruation. In this survey, 41% of young girls themselves approach the healthcare provider about the usage of menstrual cups and only 57% of the health care providers actually advised young girls on the usage of menstrual cups. It would be worthwhile to explore what prohibited these heath care providers to fully utilize the influential position that they have in the community to create awareness on health issues. Whereas 56% of young girls and women already using the menstrual cups and not facing any resistance from the community. Understanding how uncertainty barriers can be overcome in economics,17 use of reusable menstrual products because of environmental concerns,18 the association between selfobjectification and attitudes toward an alternative menstrual product.¹⁹

As menstrual cups can collect more blood than tampons or sanitary pads and have been adopted by women with menorrhagia.²⁰ and leakage was similar or less when using the menstrual cup than when using disposable pads and tampons.²¹ Canadian women found a menstrual cup was acceptable to 45% after 2 to 12 cycles of use.²² A recent report describes acceptability of a menstrual cup among adolescent school girls in Nepal.⁷ This study reports rapid adoption of cup use, with 60% using cups by 6 months and continuing use for the length of the study. A survey on adolescent girls aged 11-19 years in the Kailali District of Nepal found that the local customs and religious traditions and taboos concerning menstruation have added challenges to young girls to manage their period properly.²³ A 2017 study in Gujarat indicated potential demand for menstrual cups among some segments of girls and women. However, the researchers called for deeper research and exploration to understand acceptability across different contexts, especially given that taboos related to vaginal insertion and an uninformed linkage with virginity in several low and middle-income countries, persist.²⁴ It is also timely that a recent 2019 systematic review indicates that menstrual cups are a safe option for menstruation management and are being used internationally.25

In previous studies showed that the use of a menstrual cup there was no mechanical harm in the vagina and cervix during follow up when examined.^{26,27,28} Infection risk did not appear to increase with use of a menstrual cup, and compared with pads and tampons, some studies indicated a decreased infection risk.^{26,28,29} A study in Kenya that detected lower bacterial vaginosis in users of a menstrual cup than in those who used sanitary pads postulated that

the inert material of the menstrual cup might assist in maintaining a healthy vaginal pH and microbiome.²⁹ The reported risk of toxic shock syndrome with use of a menstrual cup seems low, with five cases identified.³⁰ Where menstrual cups offer the advantages of simple design, low cost, ease of use, and reusability and may help women in many different social and cultural settings manage their menses more easily. Where a "period" becomes no more than a simple inconvenience if there is an increasing global awareness of women's health issues and focused educational efforts will bring menstrual management out of the closet.²⁶ Healthcare providers should be encouraged to proactively advice menstrual cups

Despite of evidence of advantage of menstrual cups, health care provider lacks the convection and confidence to advise menstrual cups to girls and women. A recent 2018 report elicits the lack of education and awareness in the providers as well as consumers in our country as primary reasons for women not convincingly using menstrual cups.³¹ However, more than 70% of the doctors are aware that young girls and women are seeking digital platforms/google sites to seek information on menstrual cups. It is therefore important that when adolescent girls are accessing and using the Internet, especially for health information, the information, education and communication (IEC) material available on the digital media platforms should have a scientific basis. While the awareness creation by the medical community is reassuring it will be a slow process until every member in the community embrace knowledge on reproductive health as a powerful tool to manage menstrual health and hygiene.

CONCLUSIONS

Awareness amongst the healthcare providers on advocacy of eco-friendly measures to promote menstrual health and hygiene should be improved. It is all the more important that better researched educational advice be delivered to the consumers by the health care providers. The fact that the talk and thought does not result in active translation of product advocacy should be deep dived through qualitative research.

REFERENCES

- van Eijk AM, Sivakami M, Thakkar MB, et al. Menstrual hygiene management among adolescent girls in India: a systematic review and meta-analysis. BMJ Open 2016;6(3):e010290.
- [2] Dasgupta A, Sarkar M. Menstrual hygiene: how hygienic is the adolescent girl? Indian J Community Med 2008;33(2):77-80.
- [3] Narayan K, Srinivasa D, Pelto PJ, et al. Puberty rituals reproductive knowledge and health of adolescent schoolgirls in south India. Asia-Pacific Population Journal 2001;16(2):225-238.

Jebmh.com

- [4] https://timesofindia.indiatimes.com/city/dehradun/62young-women-in-country-using-cloth-for-menstrualprotection-says-nfhs report/articleshow/62608932.cms. Accessed on Nov 7, 2019.
- [5] Sumpter C, Torondel B. A systematic review of the health and social effects of menstrual hygiene management. PLoS ONE 2013;8(4):e62004.
- [6] https://thelogicalindian.com/health/menstruation-inrural-india/. Accessed on Nov 7, 2019.
- [7] Hoffman V, Adelman S, Sebastian A. Learning by doing something else: experience with alternatives and adoption of a high barrier menstrual hygiene technology. Heart 2014.
- [8] Chothe V, Khubchandani J, Seabert D, et al. Students' perceptions and doubts about menstruation in developing countries: a case study from India. Health Promot Pract 2014;15(3):319-326.
- [9] Hemachandra DK, Manderson L. Menstrual problems and health seeking in Sri Lanka. Women Health 2009;49(5):405-21.
- [10] https://www.thehindu.com/news/national/kerala/muha mma-to-be-first-synthetic-pad-free-village-in-thecountry/article30422072.ece.
- [11] Doctors get together to increase awareness about menstrual cups. https://timesofindia.indiatimes.com/entertainment/eve nts/mumbai/doctors-get-together-to-increaseawareness-about-menstrualcups/articleshow/71519738.cms. Accessed 27 Nov 2019.
- [12] Oster E, Thornton R. Menstruation and education in Nepal. National Bureau of Economic Research Working Paper Series 14853, 2009.
- [13] Bharadwaj S, Patkar A. Menstrual hygiene and management in developing countries: taking stock. Mumbai: Junction Social 2004.
- [14] Wysocki S. New options in menstrual protection. A guide for nurse practitioners. Adv Nurse Pract 1997;5(11):51-54.
- [15] Stewart K, Powell M, Greer R. An alternative to conventional sanitary protection: would women use a menstrual cup? J Obstet Gynecol 2009;29(1):49-52.
- [16] van der Straten A, Sahin-Hodoglugil N, Mtetwa S, et al. Feasibility and acceptability of three cervical barriers among vulnerable youth: a pilot study in Zimbabwe. 4th IAS Conference on HIV Pathogenesis, Treatment, and Prevention; Sydney, Australia. 2007
- [17] Hoffmann V, Adelman S, Sebastian A. Learning by doing something else: experience with alternatives and adoption of a high-barrier menstrual hygiene technology. https: //docplayer.net/41533102-Learningby-doing-something-else-experience-with-alternativesand-adoption-of-a-high-barrier-menstrual-hygienetechnology.html. Accessed on June 20, 2019

- [18] Borowski A. Are American women turning to reusable and greener menstrual products due to health and environmental pollution concerns? Rochester Institute of Technology 2011. http: //scholarworks.rit.edu/theses/544/ Accessed: June 20, 2019
- [19] Grose RG, Grabe S. Sociocultural attitudes surrounding menstruation and alternative menstrual products: the explanatory role of self-objectification. Health Care Women Int 2014;35(6):677-694.
- [20] Parker J, Bushell RW, Behrman SJ. Hygienic control of menorrhagia: use of rubber menstrual cup. Int J Fertil 1964;9:619-621.
- [21] Howard C, Rose CL, Trouton K, et al. FLOW (finding lasting options for women): multicentre randomized controlled trial comparing tampons with menstrual cups. Can Fam Physician 2011;57(6):e208-e215.
- [22] United States pharmacopeia. Classification of plastics (Class VI) testing, USP XXII. 1990:1497-1500.
- [23] Hamal M, Susma KC. Hygiene, health problems and socio-cultural practices: what school girls do during menstruation? International Journal of Health Sciences and Research 2014;4(4):28-33.
- [24] Kakani CR, Bhatt JK. Study of adaptability and efficacy of menstrual cup in managing menstrual health and hygiene. Int J Reprod Contracept Obstet Gynecol 2017;6(7):3045-3053.
- [25] van Eijk AM, Zulaika G, Lenchner M, et al. Menstrual cup use, leakage, acceptability, safety, and availability: a systematic review and meta-analysis. Lancet Public Health 2019;4(8):e376-393.
- [26] North BB, Oldham MJ. Preclinical, clinical, and over-thecounter post marketing experience with a new vaginal cup: menstrual collection. J Womens Health (Larchmt) 2011;20(2):303-311.
- [27] Pena EF. Menstrual protection. Advantages of the menstrual cup. Obstet Gynecol 1962;19:684-687.
- [28] Karnaky KJ. Internal menstrual protection with the rubber menstrual cup. Obstet Gynecol 1962;19:688-691.
- [29] Phillips-Howard PA, Nyothach E, Ter Kuile FO, et al. Menstrual cups and sanitary pads to reduce school attrition, and sexually transmitted and reproductive tract infections: a cluster randomised controlled feasibility study in rural Western Kenya. BMJ Open 2016;6(11):e013229.
- [30] Schwartz B, Gaventa S, Broome CV, et al. Nonmenstrual toxic shock syndrome associated with barrier contraceptives: report of a case-control study. Rev Infect Dis 1989;11(Suppl 1):S43-S48.
- [31] https://doctor.ndtv.com/living-healthy/why-youshould-instantly-replace-your-sanitary-pads-andtampons-with-menstrual-cups-1767807. Accessed on Nov 7, 2019.