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HEALTHY MENSTRUATION – BASE TO REPRODUCTIVE HEALTH

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ABSTRACT

India is one of the developing countries and is highly influenced by the Western lifestyle, which has greatly affected the reproductive health of both male and female. Ayurveda considered as "Ayushaha Punyatamo Veda" describes 3 supporting pillars for healthy living known as the "Trayopastambha". The 3 pillars include Ahara (Dietary regimens), Nidra (Sleep) and Brahmacharya- Jnanayukta Acharana (the righteous deeds). The intention of writing this article is to throw a light on the fact that the menstrual health is the key to prevent the major reproductive disorders including infertility. A survey study was conducted to establish the relationship between Trayopastambha (3 pillars of healthy living) and menstrual health. The data was found to prove that the impaired lifestyle impacts menstrual health. Hence, the role of customized lifestyle which a female can adopt in preventing various female reproductive system disorders are discussed in the article.

Keywords: Ayurveda, Health, Infertility, Lifestyle, Menstrual cycle.

INTRODUCTION

Women is given utmost importance since ancient times, and she is compared to Prakruti (Mother Nature) as she is the creator of life. So, Janani (Woman) should be healthy to give birth to a healthy progeny and build a healthy society. The journey of a Chaturvimshati Purusha (living soul) can be understood in four stages- Brahmacharyaashrama, Grihasthaashrama, Vanaprasthaashrama and Sanyasthaashrama. Womanhood is a responsible journey in all these stages of life. To maintain good reproductive health, Trayopastambha (3 pillars of healthy living) followed during Brahmacharyaashrama and Grihasthashrama plays a vital role. Woman during her reproductive age comes across various biological and physical situations. So, the Trayopastambha (3 pillars of healthy living) to be followed by her at different stages of her reproductive age will take its modification. Hence, this article also highlights the need to build a customized protocol for a woman for maintaining a good menstrual health and thus meet the primary aim of Ayurveda i.e., "Swasthasya Swasthya Rakshanam" (Sustaining the health of the healthy). **AIMS AND OBJECTIVES:**

- 1. To establish the need of *Trayopastambha* in achieving the menstrual health and thus prevent various disorders of female reproductive system.
- 2. To build a customized *Trayopastambha* protocol for a woman, to follow at her various stages of life to maintain the reproductive health.

MATERIALS AND METHODS: STUDY DESIGN:

It was a qualitative cross-sectional exploratory survey study to investigate and explore if there was any impact of lifestyle on menstrual health seeking inputs from respondents with open end questions focused on how the subjects experienced certain aspects of the menstrual flow. Sampling frame was females belonging to reproductive age group and the sample selection involved nonprobability sampling technique, i.e., Snowball sampling. Open-end questionnaires were framed and administered through website in the form of google form and the questions framed were placed under 5 categories viz., preliminary data, menstrual health and hygiene, dietary regimen, sleep pattern and social wellbeing. Questionnaire which was used to collect the survey response is given below.

Preliminary data		Menstr	Menstrual health and hygiene		Dietary regimen	
* /	Age	*	Age of menarche	*	Nature of diet	
* I	Height	*	Whether the knowledge of menstruation received	*	No. of times of food in-	
* 1	Weight		before menarche		take	
*]	Body mass index	*	Any dietary or psychological preparation re-	*	Any habit of skipping	
* I	Marital status		ceived before menarche.		breakfast/lunch/	
*]	Housing	*	Are you diagnosed with any menstrual problems?		dinner	
* (Occupation	*	Number of days of flow	*	Intake of junk food/	
* 1	Night shifts in	*	Duration between 2 menstrual cycles		chocolates/ ice-creams	
v	work	*	Number of pads required during each menstrual	*	Milk in diet	
* 9	Stress in work or		cycle.	*	Ghee in diet	
5	studies	*	Frequency of changing pads per day			
		*	Colour of menstrual flow			
		*	Whether Menstrual flow stains the cloth			
		*	Whether the stain remains after washing the cloth			
		*	Foul smell during the flow			
		*	Mood changes during or before the onset of men- strual periods			
		*	Presence of pain during the flow or ever few days			

 Table no. 1 - Questions framed under each category.

Sleep Pattern	beforeAreas of pain noted if any.	Social wellbeing	
 Number of hours of sleep Binge watching in night which delays the time of sleep. Quality of sleep Presence of day sleep 	 Areas of pain noted if any. Whether any menstrual irregularities noted after covid-19 	 Social health Keeps good relationship in college/workplace/ with family always Occasionally annoyed with untoward situation Occasionally depressed with untoward situation Both 2 and 3 	

OBSERVATIONS AND RESULTS:

In the survey conducted, 104 responses were recorded. The participants were in between the age groups of 20-34yrs. There were 85 unmarried and 19 married participants. Among them, 42 were hostilities and 16 participants were staying as paying guest. 74 participants involved in the survey were students, 27 participants were working women and 3 were housemakers. Among 27 working woman, 15 participants had night shifts as a part of their work and 78 participants responded positive for the question on stress in work or studies. The data obtained throws a light on the areas where one can adopt changes to achieve menstrual health to build a healthy society and the important analysis made on the data are given below.

Body mass index and menstrual health

The body mass index of the participants ranged between 16kg/m² to 34 kg/m². Among 104 participants 12 were underweight, 16 were overweight and 6 were obese with class 1 obesity. Also, 22 unmarried and 4 married participants mentioned the menstrual disturbances. The data suggested that 13 had PCOD, 4 had dysmenorrhea, 3 participants had PCOS, 1 had Hypothyroidism with PCOD, 1 was diagnosed with Pelvic congestion, 1 participant reported irregularity in menstrual cycles and another 1 participant reported bleeding twice a month. And when the data was further analysed, it showed that among 13 PCOD participants, 5 belonged to obesity class 1, among 4 dysmenorrhea participants 2 were underweight, 1 among 3 PCOS participant and 1 pelvic congestion participant belonged to overweight category. From the

compiled data it is very clear that the body mass index has an impact on the menstrual health.

Menstrual flow and health

Among 104 responses, 6 participants had impaired flow among which 1 participant had menstrual flow for around 10-15 days and 5 participants had a flow for only 2 days. Further analysis showed that the participant with 10-15 days of flow was obese with class 1 obesity and was diagnosed with PCOD and needs only one pad per day during the flow. Among 5 participants with 2 days of menstrual flow 1 participant was diagnosed with PCOS, one was underweighted, one was overweight, one was obese with class 1 obesity, and one had dysmenorrhea. Among them, 4 participants had cycles in < 28 days and 2 among them needed only one pad per day and 3 requires 2 pads per day during the menstrual flow. 23 participants observed blackish red coloured menstrual flow. 46 participants mentioned that the flow stains the cloth and 20 among them responded positive for stain remains even after the wash. 21participants mentioned foul smell during flow. 84 participants mentioned pain before and during menstruation. Areas of pain were also noted and 46 had lower back pain, 44 had lower abdomen and thigh pain, 36 had only lower abdomen pain, 20 had breast pain, 14 had headache and 12 had pain in all the above-mentioned parts. Further analysis of the data also showed that among 20 participants who responded positive for 'stain remains even after washing' - 3 had dysmenorrhea, 2 had PCOD, 3 participants had flow for 2 days and 1participant had flow for 10-15 days. All these data indicates that the menstrual health is impaired and suggests that it is high time to concentrate on measures to achieve menstrual health.

Diet and menstrual health

In the survey there were 62 participants following mixed diet and 42 were vegetarians. 17 participants in the study mentioned number of food intake as 4 times per day and 1 participant mentioned more than 4 times of food intake per day. 10 participants had a habit of skipping breakfast/lunch/dinner every day and 7 participants used to skip for >4 times a week. 3 participants mentioned habit of intake of junk food, chocolates and ice-creams every day and 7 participants had habit of taking them for> 4 times a week. 13 participants involved in the study never took milk and 5 participants never took ghee in their diet, 22 participants occasionally took milk, and 39 participants took ghee occasionally in their diet. To establish whether any impact of impaired diet on menstrual health, the data was further analysed. In the survey study 24 participants had reported menstrual irregularities and their diet was analysed. Interestingly the analysis suggests that among the participants with PCOS and PCOD, 6 participants had a habit of skipping breakfast every day, 2 of them had habit of taking junk food/ chocolates/ ice-creams every day, 6 never took milk, 2 never took ghee in their diet, whereas 5 took milk occasionally and 8 occasionally took ghee. Among the participants with Dysmenorrhea, 1 participant had habit of taking food for more than 4 times a day, 1 participant never took milk, and 2 participants occasionally took ghee. Among the participants with impaired menstrual flow, 2 had habit of taking junk food/ chocolates/ ice-creams every day and 4 had habit of taking them for >4 times/week. In the survey there was one participant who was diagnosed with pelvic congestion and her diet suggested that she used to take milk and ghee occasionally in her diet. All these data shows that there is an impact of diet over the menstrual health.

Sleep patterns and menstrual health

In the survey study, 19 participants reported <6hrs of sleep. 37 participants mentioned that binge watching delayed their time of sleep. 17 participants had difficulty to initiate the sleep and 6 participants men-

tioned awakening in between the sleep followed by difficulty to initiate sleep. Further analysis of the data suggested that 9 participants with menstrual disturbances had impaired sleep patterns. Among them 1 participant with PCOD and 1 participant with dysmenorrhea had sleep <6 hrs. Another participant with PCOD revealed that binge watching delayed her time of sleep and she gets sleep only for <6 hrs. 2 PCOD participants had delay in time of sleep due to binge watching and had sleep for <6 hrs with difficulty to initiate sleep. 1 PCOS participant had sleep for <6 hrs with difficulty to initiate sleep. 3 participants with PCOD had sleep for < 6 hrs with a need to awake in between the sleep followed by difficulty to initiate sleep and among them 2 participants mentioned that binge watching delays their time of sleep.

Social wellbeing and menstrual health

To analyse the mental strength of the participants, question was framed to know the response of participants to untoward circumstances in the college/ workplace/ family. 18 participants reported that they get annoyed with untoward circumstances, 16 participants get depressed with the untoward circumstances and 27 participants reported that they get both annoyed and depressed with the untoward circumstances in the college/ workplace/ family. This data suggests that the mental health is impaired as 61 participants involved in the study had difficulty to face the untoward circumstances in the college/ workplace/ family. It also throws a light on the need to stay calm and positive to both positive and negative situations of life to achieve the positive health.

DISCUSSION

1. Why menstrual health a base for reproductive health?

Both male and female should be healthy to attain a healthy progeny. The social construction at present, is such that the woman empowerment is encouraged, and we find women working in various sectors today. This has led to change in lifestyle of a women. Hence, we need to concentrate on them. Also, in order to attain the *Veeryavanta Suta* (healthy progeny) there should be *Shudhi* in *Garbhashaya*, *Marga*, *Rak*-

ta, Shukra, Anila (Pittadi Anavrita) and Hridava.⁽¹⁾ If we carefully observe this, more of these factors concentrate on Stree Kshetra (female reproductive system) i.e., structural and functional normalcy of the female reproductive system along with her emotional and mental health is a must to attain a healthy progeny. And it is only when the structural, functional, emotional and mental health is achieved and maintained the menstrual cycles happen timely with ease. Thus, it proves that the health of the female is more important for the Garbha Palana - Poshana (growth and development of foetus) and is directly implied on the menstrual health. Hence, the Trayopastambha to be followed by a woman during her reproductive age to maintain the menstrual health and thus achieve the reproductive health is addressed and highlighted in this article.

2. Need of preparation before menarche - first step towards reproductive health

The survey suggested that around 28 participants had no knowledge regarding menstruation before the menarche and 74 participants had received the knowledge from their family. 86 participants mentioned that there was no dietary and psychological preparation received before menarche. All these data suggest that there is a need to prepare a girl child for the physical and psychological changes during the age. Ahara (dietary regimen) is the most important pillar during the age of menarche, as the diet followed during this period plays a crucial role in deciding the Bala (strength) of the Garbhashaya (reproductive system). "Vatsarat Dwadasham Yaati"⁽²⁾ mentioned in Shareerasthana of Ashtanga Hridaya indicates that the age of menarche is 12yrs. This is the age where the Paripakwata of the Dhatu's (growth and development of physical body) is noted. Also, we know that Artava is the Upadhatu of Rasadhatu⁽³⁾. Hence the food regimens taken by a girl child at that age should be of Santarpana (nutritive) in nature with Snehapradhanyata in the diet. This will not only maintain the quality of Rasadhatu but also helps in the production of healthy Stree Bheeja. Acharya Sushruta mentioned "Ritu-Kshetra-Ambu-Beejanaam Samagryat Ankuro Yatha"⁽⁴⁾ i.e., Ritu,

Kshetra, Ambu and Beeja are the Garbha Sambhava Samagri's (requirements for attaining a healthy progeny). In the Dalhana Teeka on the same context, further clarified that Ritu as Rajaha Samaya (fertile period) and Kshetra as Garbhashaya (uterus). Ambu is Aharapakajo Vyapi Rasadhatu (nutritional requirements) and Beeja is Artava and Shukra (ovum and sperm) ⁽⁵⁾. This reference gives us a hint that, for a woman to be blessed with a healthy progeny, there is a need of qualitative Garbha Sambhava Samagri's and is possible by following the Trayopastambha, as it is the supporting pillar for heathy living. Hence, when the right knowledge about the importance of qualitative food along with physical and psychological preparation is provided to the girl child before the age of menarche, it will be the first step taken towards achieving reproductive health.

3. Customized *Trayopastambha* (3 pillars for healthy living) protocol during various phases of reproductive age in a female

During menarche: Sadhyo Snehaprayoga like Tila with Guda and preparations of Masha (black gram) provides Bala (strength) to the Saptadhatu, Garbhashaya and the Artavavaha Srotas which is the primary step in maintaining a healthy reproductive system. Regular practice of Abhyanga and Snehaprayoga in diet can maintain the Kalabala of Shareera, especially the Garbhashyagata Kala. It is necessary to follow Ushnam, Snigdham, Matra vataadi Ahara Sevana Vidhi with Snehapradanyata in the diet, not only during the age of menarche but also after each Artava Pravritti, (menstrual flow) as there is Kshaya in the Garbhashaya Kalabhaga after each Rajopravritti. Educating the girl child regarding the physical and psychological changes which can occur during this period, encouraging her to involve in Pranayama, Geetapatana or any religious prayers and insisting her to engage in Satvika Krivas will help her to attain Manasika Bala and maintain the Manasika Swasthya.

During *Pushpa Ikshana Kaala* (Menstrual phase): *Ritukala* is a *Dwadasha Kaala*, in which the first 3 days is the *Pushpa Ikshana Kaala* ⁽⁶⁾ and the *Trayopastambha* a woman has to follow during the men-

strual periods is mentioned in detail by both Acharya Vaghbatta and Sushruta. The Ahara should be "Kshaireya (predominant in milk)" and "Yavaka (should involve wheat preparations)". "Sthokamatra" and "Parne Sharave Haste" mentioned in classics indicate that the quantity of food taken should be minimum. The Ahara ingested during this period should also have the ability to do the "Koshtashodhana-Karshana (ability to encourage the menstrual flow)". (7) Acharya Vaghbatta mentioned "Teekshnoshna-Amla-Lavanaaani Cha Varjayet"⁽⁸⁾ i.e., to avoid potent- spicy-salty and sour food articles during the menstrual flow. Sushrutaacharya mentioned that the food should be "Havishya (rich with ghee)". ⁽⁹⁾ One can have food articles mixed with ghee or the food articles processed with milk during the same. Day sleep is an absolute contraindication during the period. In the context of Pushpa Ikshana Kaala, Brahmacharya (Righteous deeds) can be taken as both Shareerika and Manasika Niyamas a women should follow to achieve Atmana Hita. A woman should indulge in deeds which are Satvika to the Manas. "Mrijalankara Rahita" means that she is unfit for Shodhana during this period, and she should avoid Alankara (10). For Shayana, she should use cot made of Darbha⁽¹¹⁾. The Sheeta Guna of the Darbha will help her to counteract the increased body temperature during the menstrual flow. She should follow celibacy during the period. Acharya Vaghbatta mentioned that on the 4th day, Udwartana and Sheetajala Snana should be done followed by Anulepana of the body.⁽¹²⁾ If the woman is in her Grihasthashrama then, on the 4th day she should chant "Mangala Swastivachana" before "Bartaram Pashvet".⁽¹³⁾

During *Rituvyatita Kaala* (Luteal and Follicular phase): Acharya Vagbhatta mentioned "Masena Upachitam Raktam Dhamaneebhyam Ritau Punaha" ⁽¹⁴⁾ i.e., the Upachaya of Rakta happens in the Dhamani and the word "Masena" indicates that each day of the month is important in the Artava Pravritti. Hence the Trayopastambha followed each day has an influence on the Artava Pravritti of the succeeding month. Also, we know that for any disease pertaining to the Garbhashaya (uterus), Vata Vikriti (Vitiated Vata Dosha) is the main reason. Hence, all the Samanya Trayopastambha Niyamas mentioned in classics specifically like Nitya Abhyanga, Abhyantara Snehaprayoga, Raja - Tamo Vimukta Manas, avoiding the Ahara and Vihara which can vitiate Vata Dosha should be followed during the Rituvyatita Kaala. All of these will help women in preventing the Vata Vikriti and thus helps in the formation of qualitative Artava. Hence, can maintain both Shareerika and Manasika Arogya.

4. How to implement this knowledge?

The knowledge of healthy living should reach each and everyone. It is rightly said that family is the first school and mother is the first teacher for every child. The survey data also suggested that among 107 participants around 74 participants mentioned that the knowledge regarding the menstrual cycle before the menarche was received from the family. Hence, regular health education programs incorporating the importance of menstrual health and hygiene can be conducted for women at various levels like schools, anganawadis, villages and in all required areas including IT sectors. These programs should aim at providing education on healthy living practices and their importance in maintaining reproductive health. To make these sessions attractive, effective methods including cultural activities can be planned. Through these measures, woman can be educated about the right practices to maintain good menstrual health and thus achieve the reproductive health. Steps to meet the nutritional requirements of the girl child belonging to low socioeconomic status should also be taken care of by the government to help her grow healthy. Every health practitioner can also take a step in educating their patients whenever required in their OPD's regarding heathy living practices to maintain the menstrual health.

5. How working women can adopt the knowledge?

Implementation of the knowledge of healthy living in the present era especially, by the working women is a task. There are jobs like IT sector, health departments etc, where women should engage in night shifts. These are few unavoidable circumstances but even then, few modifications can be bought in the lifestyle. There should never be a compromise in the healthy diet and qualitative sleep in any of these unavoidable circumstances. If in the case sleep was compromised during nightshifts, for example - for 4 hours, then half of the compromised time i.e., 2 hours of sleep should be extended in the early morning before waking up to maintain a healthy mind. Mental health also should not be hampered due to tight work schedules and is important to keep the work stress away. Stress or work pressure can be avoided by incorporating practices of Yoga and Pranayama in the daily routine. Also, engaging oneself in visiting religious places and spending joyful productive time with family after work hours and during off days can make woman feel mentally stable and healthy. By bringing few of the modifications in the lifestyle, in such a way that both the health and work are equally balanced, one can maintain the menstrual health and thus achieve and maintain the reproductive health.

CONCLUSION

Woman is responsible not only in taking good care of her family but also in making each and every one of her family to follow the righteous path. She also plays an equal role in being influential to society, in making people follow a healthy living. It is only when a woman is healthy and knows about the healthy living principles, it can be taken forward through generations. So, if our aim is to educate the society regarding implementation of healthy living principles, then one should educate the women regarding the importance of Trayopastambha and its role in preventing diseases. Swaadhyayam (to learn), Adhyapanam (to teach) and Anushtanam (to implement) are the three principles one can adopt to bring this positive change. Let all follow these principles to educate and implement the healthy living practices and hence maintain the menstrual health and thus achieve the reproductive health.

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Scope for further study: The survey was a small attempt to establish the relationship between the changes in lifestyle and menstrual health and involved only a small sample size of 104 subjects. Hence, the data obtained through this survey needs further validation by conducting similar surveys on larger population to obtain conclusive results.

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