



SYNCHRONIZATION OF MENSTRUATION AMONG BLIND WOMEN

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**ABSTRACT**

The study was aimed to find out the details of second as well as regular menstruation of blind women and also if synchronization of menstruation was in existence. Results showed second and following menstruation were like in normal women. Synchronization existed among hostellers. A pheromone may be a responsible factor for this.

**KEYWORDS :** Blind women, Menstrual cycle, Menstrual synchronisation

**INTRODUCTION**

Studies were conducted by several authors to understand the influence of different types of stimuli on first menstruation and on following menstrual cycles. Menarcheal age (MA) is studied in detail in case of normal women of different communities in several countries during the last 50-70 years. MA differs from place to place in one country.<sup>2,17</sup> Difference in MA in rural and urban areas is present.<sup>34</sup> Onset of adolescent events are delayed because of under nutrition.<sup>20</sup> Premature born girls reach menarche 1 year earlier.<sup>18</sup> One factor, BMI is modifiable either to prevent early or late menarche.<sup>32</sup>

An interesting observation about MA is a secular trend reported from different countries.<sup>5,9,18,19,23,29,36,39,41</sup> Despite optimal improved living standard, changes in MA is seen in most countries.<sup>18,41</sup> There is evidence for arrest of secular trend in places like, UK, Sweden and Belgium.<sup>7</sup> Boslo continued secular trend till 1940.<sup>6</sup>

Influence of special senses on MA is being studied. MA is not different in deaf and dumb girls when compared to that of normal.<sup>15,28</sup> Whereas the light seemed to influence MA. In blind girls MA is advanced.<sup>14,29,31,35,38-40</sup> Similar changes are not seen by others.<sup>33</sup> Blind girls are under emotional stress, which is known as the one of the influencing factor for ovulation.<sup>8</sup>

Synchronization of menstruation is reported among normal women.<sup>12,16,24</sup> It is not known if similar changes are present among blind women. In this study, along with our attempts to understand the details of normal menstrual cycle among blind girls we also attempted to find out if synchronization of menstruation is in existence.

**MATERIALS AND METHODS**

The study was conducted after getting clearance from Institutional Ethical Committee. A total number of 110 blind girls of three blind schools located in the Province of Gujarat and Bombay, were participants of our study group. Their age varied from 15-24 years. The present study included a large number of blind girls of limited age group. As a control group from nearby educational institutions, 35 normal girls of same age group were included. Before initiating the study boys, if present in the class, were separated. Participants were informed that their identity would not be revealed.

A pilot study was conducted among 35 girls of the same age group were one printed questionnaire each was assigned to participants. After analysis of this study and on fruitful result

the present study was conducted. The participants were helped by female lecturers or workers of this study, to complete forms supplied to them. A question was on their experience of second menstruation, was it experienced in the following month, or after how many months. Questions about the regular menstruation, were as follows. How many days bleeding lasted, on which day it was more and the amount of blood loss - normal, more or less. Whether experienced pain on any day during menstruating period. If yes, on which day (s) and location of pain, how many days which lasted and on which day it was maximum. Questions related to menstrual synchrony were to be answered by hostellers 1. Awareness about the menstrual status of their room-mates, 2. Whether room-mates experienced menstruation on same day or almost at same time or not. 3. Among room - mates how many days of difference was present in menstruation. 4. The source of knowledge regarding other's menstruation- whether roommate revealed or by understanding the change in habit, behavior or due to any smell or any other reasons.

**RESULTS**

Out of 110 participants, 99 were hostellers and 11 were day scholars. Sixty seven of them experienced second menstruation in the following month; twenty three after two months; and remaining from three to six months. Second cycle onwards majority (n=65) of them experienced it regularly and others (n=45) irregularly. On blood loss pattern 31 of them experienced maximum on day one and others (n=79) from second to sixth day. Regarding the bleeding pattern it was reported as normal (n=65), profuse (n=18) or less (n=27). Majority (n=67) of them experienced pain. Pain was experienced by majority of them (n=54) on first day and others experienced from second to sixth day. Thirty five normal girls included in this study were experiencing normal menstrual cycle and their source of knowledge about room mates menstruation is given in Table 1.

Those blind girls included in the study on synchronization of menstruation were hostellers. They reported that all room-mates experienced menstruation within ±2 days. Their source of knowledge is given Table 1.

**Table 1. Showing participants method of identification of menstrual status of hostelmates**

Sources	Percentage	
	Normal	Blind girls
Directly revealed	65	39.39
Tensed behavior	13.9	15.15

Avoiding participation In Religious meet	10.1	8.08
Smelling different	11	26.26
Preference in use of bathroom facility	Not applicable	11.11

Statistical study significantly revealed that normal girls were aware of menstrual status of others by their direct revelation .

## DISCUSSION

Sex education is not imparted in our country. Due to this reason, discussion on sex related topic is not done in the presence of opposite sex members. Due to this reason boys were separated from the class before study was initiated.

Various aspects of menarche are studied by several groups of workers. Influence of special senses on MA is being studied. MA in deaf girls was similar to normal.<sup>15,27</sup> Though MA was low among blind women, it was influenced by social and socio economic environment of their family.<sup>35</sup>

Our results showed that menstrual cycle followed by menarche varied from following second month to six months period. It was similar to that reported in general population.<sup>25,26</sup> Sixty seven of them experienced their second menstruation in the following month. Others experienced it from 2-6 months time. since then menstrual cycle is regular with an interval of 21-35 days. It may require 5-7 years after menarche to attain regular normal cycle<sup>30</sup>.

In our study 83 participants experienced menstrual bleeding 1-4 days times. In remaining others which lasted 5- 6 days. Upto 7 days bleeding is accepted as normal.<sup>30</sup> Regarding the amount of menstrual blood, participants reported it as normal, less, or profuse . Normal volume of menstrual blood loss is 30ml, greater than 80ml is abnormal<sup>30</sup>. Thus all participants were experiencing normal menstrual cycle. The conclusion is that though MA is experienced earlier by blind women, their following menstrual cycles function like that of normal women. We attempted to find out if synchronization of menstruation existed among hostellers. Responding to our enquiry, participants reported that they all regularly experienced menstruation almost on same day ( $\pm 2$ ). Such observation was reported in case of normal women as synchronization of menstruation.<sup>16,24</sup> On which a theory was proposed that existence of a pheromone may be a responsible factor which may remain true among blind girls also. Many disagreed to the theory of synchronization of menstruation.<sup>10,11,37,42</sup>

We attempted to find out how each one of them was knowing the menstrual status of others (results) 1. many (n=39) of them used to share the knowledge about new cycle. 2. occasionally experience of emotionally tensed nature of the person (n=15) was indicating. 3. some (n=8) did not participate in any religious activities. Girls who followed Hinduism or Jainism did not visit a temple or pray in common prayer hall. They did not accept 'Prasad'(the "offering" to God, served after prayer). 4. all blind women in a hostel are provided a single long bathroom where several taps were available for their use. One observation was that many times a menstruating partner used a distant place for tap facility, 5. many (n=26) times they felt different smell when a menstruating partner was nearby or washing her clothes. Smell is an important factor leading to synchronization of menstruation .<sup>24</sup> Possibly a pheromone is responsible for this.<sup>28</sup>

Light seems to play pivotal role in synchronizing hormonal rhythmicity.<sup>3,13</sup> Light stimulates, the pineal gland by which it secretes melatonin.<sup>22</sup> A correlation between melatonin and human reproductive system is known.<sup>21</sup> Melatonin from pineal gland reaches hypothalamic pituitary gonadal axis.<sup>21</sup> Receptors of melatonin are seen at hypothalamic - pituitary - gonadal level.<sup>1</sup> Melatonin is reported to increase serum

prolactin which controls the menstrual cycle.<sup>1</sup> The lack of light in blind subjects is responsible for increased melatonin secretion in glands which disturbs pituitary gonadal axis and reproductive process.<sup>4</sup>

In conclusion, we observed synchronization of menstruation among blind girls.

## Acknowledgement

Authors are highly thankful to authorities, teachers and participants of following blind schools where the study was conducted.

1. Andh Mahila Vikas Grih, Rajkot
2. Shri. RV Thakker Andh Kanya Chatralaya, Bhavnagar
3. Dadar School for the blind, Bombay

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