MENSTRUAL DISORDER AMONGST MARRIED WOMEN OF GUWAHATI SLUMS: A CONTINGENCY MEASURE STUDY

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ABSTRACT:

 Menstrual dysfunction is a type of gynaecological morbidity resulting from endocrine or hormonal disorders which include problems with the regularity, frequency, volumeand duration of menstrual bleeding as well as painful menstruation and premenstrual syndrome. It can begin in adolescence and persist for many years throughout the entire reproductive span. This paper aims at studying the prevalence of menstrual dysfunction among the married slum dweller women of Guwahati city and the significance of irregularity of their menstruation cycle with its frequency, volume, durationand dysmenorrhea. Primary Data have been collected from the respondents using a specially designed schedule. The data has been analysed using Pearsonian Chi square Technique for association of attributes. It is found that 71 percent of the women reported the amount of menstrual flow to be normal. A meager 3 percent have an abnormal menstrual cycle (either they experienced menstrual flow more than once in a month or it continued all month through. The duration of flow is the maximum (more than 7 days) for the age group 20 – 29 and gradually decreases with age. 5 percent women reported excessive bleeding. 34 percent of women suffer from Spasmodic Dysmenorrhoea and 46 percent suffer from Congestive Dysmenorrhoea.. Pearsonian chi-square showed significant association of irregularity of their menstruation cycle with its volume and duration of flow, dysmenorrhea (painful menstruation) and appearance of blood clots during menses. However, it has been observed that fever during menses is not related with irregularity of menstruation cycle and may be because of some other factors.

Keywords: Menstrual dysfunction, Spasmodic Dysmenorrhea, Congestive Dysmenorrhea, Personian Chi square Technique.

1. Introduction and Literature Review

The impact of women's menstrual disorders on women's quality of life, health, and work, paid and unpaid, and on the community is substantial. Menstrual dysfunction is a type of gynaecological morbidity resulting from endocrine or hormonal disorders.Menstrual dysfunction is defined in terms of bleeding patterns, for example, amenorrhea (lack of menstruations), menorrhagia (excessive bleeding during menstruation), or polymenorrhea (frequent menstruation); ovarian dysfunction for example, anovulation and luteal deficiency; pain (dysmenorrhea); and premenstrual syndrome (Romm, and Hywood, 2010).

Menstrual disorders are frequently reported in studies on gynaecological morbidity and include problems with the regularity, frequency, volume and duration of menstrual bleeding as well as painful menstruation and premenstrual syndrome. Menstrual dysfunction can begin in adolescence and persist for many years throughout the entire reproductive span (Bates and Boone, 1991). It is common with approximately 9 to 30 percent of reproductive aged women exhibiting menstrual irregularities requiring medical evaluation (Gail Busby, 2016). Approximately one third of all outpatients gynaecologic visits are undertaken for disorders of menses, making menstrual disorders some of the most common reasons women visit their gynaecologists. Menstrual problems can take many forms, including abnormal or irregular bleeding, amenorrhea, dysmenorrhea, premenstrual syndrome, and premenstrual dysphoric disorder (Sokol and Brisinger, 2007). Sixty percent of 17- to 19-year-old in a college cohort reported at least one episode of severe menstrual pain (dysmenorrhea), and 13 percent reported severe pain more than half the time in a 1-year prospective study (Harlow and Park, 1996). In a cross-sectional study on 2000 menstruating girls conducted in primary, junior, and high schools in the city center of Kayseri, Turkey on menstrual dysfunction such as, duration of menstrual intervals, average days of bleeding, and any menstrual problems and their frequencies, a prevalence of 84.8 percent of dysmenorrhea was found. Of the menstruating girls, 34 percent used painkillers, the most commonly used was acetaminophen; during their period the prevalence of nonmedical methods to relieve pain was 35.2 percent; the rate of seeking medical help for dysmenorrhea was 9.3 percent (Gul Yucel et.al, 2018). The condition is highly prevalent among women, with incidence ranging from 45 percent to 97 percent in groups of different ages and nationalities (Kim et.al, 2017 and Lee et.al, 2016).

2. Rationale of the study and its objectives:

Keeping all these factors in view, the present study was carried out in the slums of Guwahati city. The study was designed with the objective to study about the prevalence of menstrual dysfunction among the slum dweller married non menopausal and non pregnant women whose last menses occurred three months prior to the survey. It was specifically aimed to analyse the statistical association of the prevailing menstrual disorders like irregular bleeding, heavy flow and pain during menses, etc. with irregular menstrual cycle.

3. Data and Methodology:

A survey was carried out in the March, 2021 in the slum pockets of Guwahati City whereby 758 slum dweller married non menopausal non pregnant women in the reproductive age group whose last menses occurred three months prior to the surveywas questioned regarding their problems related to the menstrual cycle. Information relating to length of menstrual cycle, quantity of menstrual flow (excessive, more, normal and less) were collected from the respondents. Apart from this, information was collected regarding presence of clots in menstrual blood, fever during menses and painful menstruation and, if painful, nature of pain.The data has been analysed using Pearsonian Chi square Technique for association of attributes. Moreover, nominal by nominal contingency co-efficient have been calculatedto study the level of association between these attributes and the cycle of menstruation.

4. Results and Discussions

Information relating to length of menstrual cycle (within 1 – 21 to 35 days, before 21 days, after 35 days), duration (<5 days, 5 – 7 days, >7 days) and quantity of menstrual flow (excessive, more, normal, less and scarce) were collected from the respondents. Apart from this, information were collected regarding presence of clots in menstrual blood, painful menstruation and, if painful, nature of pain. The percentage distribution of women according to length of menstrual cycle, quantity and duration of flow and presence of clots has been separately given in TABLE 1 according to age groups in the reproductive age.

82 percent had a cycle of 21 – 35 days, 5 percent had a cycle of 20 days or less, 11 percent had a cycle of 35 days or more. A meager 3 percent have an abnormal menstrual cycle (either they experienced menstrual flow more than once in a month or it continued all month through). Moreover, it has been observed that the distribution of the women in the age group 40 – 59 is quite different from the distributions of the other age groups. The duration of flow is the maximum i.e., more than 7 days for the age group 20 – 29, which is around 7 percent, andthe percentage has gradually decreased with age.

It is found that 71 percent of the women reported the amount of menstrual flow to be normal. It is seen that the women in the age group 20 – 29 comprises of the highest percentage of 76 percent who has reported to experience normal flow and there is a decrease in it for the older age groups.

5 percent women reported excessive bleeding, 9 percent reported more bleeding, around15 percent reported less and almost 1 percent reported to have scanty bleeding. Excessive bleeding is a symptom of hormonal imbalance and is often present in the adolescents in the years following onset of menstruation and gradually decreases with age. In some cases, it is found in women approaching menopause. Some other causes of excessive bleeding may be presence of fibroid tumors, cervical or endometrial polyps, lumps or cancer.Percent of women with scanty and less menstrual flow is around 15, which may be the result of severe malnutrition, hormonal imbalance and thyroid problems.

A large number of women have reported to suffer from *Dysmenorrhea* i.e painful menstruation. Pain (Dysmenorrhea)is basically of two types**:** *(i) Spasmodic* (Occurs in females with no child-birth,due to tight cervix, lasts usually for first 2 days during menses, occurs in the lower abdomen) *(ii) Congestive* (Found in females with experience of child birth, occurs due to chronic infection in the pelvis, starts 5- 6 days ahead of menses and goes off as soon as menses starts, back pain occurs which goes down to the legs. Around 34 percent of women suffer from Spasmodic Dysmenorrhea and 46 percent suffer from CongestiveDysmenorrhea.

TABLE 1:   Age- wise description of menstrual cycle of non menopausal and non pregnant women whose last menses occurred three months prior to the Survey

Description	Age				
	15-19	20-29	30-39	40-59	Total
	(Percent reported within age group)				
LENGTH OF CYCLE					
Within 1- 21 to 35days	96.7	86.7	74.7	73.4	81.5
Before 21 days	0.0	5.5	4.2	6.3	4.9
After 35 days	3.3	6.0	17.0	16.5	10.8
More than once in a month	0.0	1.6	2.6	3.8	2.1
All month through	0.0	0.3	1.5	0.0	0.7

QUANTITY OF FLOW					
Excessive	10.0	4.7	3.8	7.6	4.9
More	20.0	9.1	8.7	7.6	9.2
Normal	63.3	76.2	67.5	62.0	71.2
Less	6.7	10.0	20.0	22.8	13.9
DURATION OF FLOW					
<5 days	20.0	50.7	58.1	68.0	53.3
5 – 7 days	76.7	43.1	37.0	29.1	40.8
>7 days	3.3	6.3	4.9	2.9	5.9
PRESENCE OF CLOTS IN FLOW					
Yes	23.3	25.6	20.8	30.4	24.4
TYPE OF DYSMENORRHEA					
Congestive	93.3	47.2	46.7	20.6	46.2
Spasmodic	6.7	6.1	28.3	55.9	33.8
TOTAL NO. OF WOMEN	30	383	265	80	758

To study the association of irregular menses i,e the cycle of menstruation with quantity of menstrual flow, duration of menses, Dysmenorrhea, appearance of blood clots in menstrual flow and fever during menses, we set up the following null hypotheses-

H_{01}: There is no association of cycle of menses with the quantity of menstrual flow.

H_{02}: There is no association of cycle of menses with the duration of menstrual flow.

H_{03}: There is no association of cycle of menses with dysmenorrhea

H_{04}: There is no association of cycle of menses with the appearance of blood clots   in menstrual flow.

H_{05}: There is no association of cycle of menses with fever during menses.

The data have been analysed using Pearsonian Chi square tests and also by Nominal by Nominal Contingency Co-efficient. TABLE 2 shows the Chi square and Contingency coefficient values as follows:

TABLE 2: Pearsonian Chi Square tests and Contingency Co-efficient

Parameters	Pearsonian Chi Square	d.f	Assymtotic Significant values(2 sided)	Nominal by Nominal Contingency co-eff
Quantity of flow	81.74	4	0.00000	0.703 *
Duration of flow	8.439	2	0.015	0.105[**]
Dysmenorrhea	3.492	1	0.062	0.068[***]
Blood clots appearance	14.682	1	0.000	0.138[**]
Fever during menses	.016	1	0.899	0.011[****]

*Strong association, ** moderate association, ***weak association, ****very weak association

From the above table it is seen that the Pearsonian Chi Square values for quantity of flow, duration of flow and appearance of blood clots have highly significant values. Therefore, we reject the null hypotheses viz, H_{01}, H_{02} and H_{04} and infer that possibly there exists significant association of quantity of menstrual flow, duration menstrual flow and appearance of blood clots in menstrual flow with the cycle of menstruation.Moreover, Contingency Coefficient values reveal strong association($\geq$=0.31) between menstrual cycle and quantity of flow, moderate association (0.11 to 0.30) between menstrual cycle and duration of flow and also between menstrual flow and appearance of blood clots.

However, the Pearsonian Chi Square values for dysmenorrhea and fever during menses are not significant. We get no evidence against hypotheses H_{03} and H_{05} and therefore infer that possibly there exists no association of painful menstruation and fever during menses with menstrual cycle. Moreover, Contingency Coefficient values reveal weak and very weak association (< 0.10)or no association at all respectively of menstrual cycle with dysmenorrhea and fever during menses.

5. Conclusion and Suggestion:

Menstrual dysfunction is a pertinent reproductive morbidity issue which require immediate attention. Though much have been achieved in enhancing the quality of lives of the women folk as far as their

reproductive health is concerned, yet the issue stillremain unaddressed or rather, under addressed. Whether be it dysmenorrhea (painful cramps during menses) or be it menorrhagia (heavy flow during menses), metrorrhagia (vaginal bleeding at irregular intervals), or menometrorrhagia (prolonged vaginal bleeding at irregular intervals), they are all clinically known to be triggered due to hormonal imbalances, genetic factors, clotting disorders and pelvic diseases. Age also plays a key role in menstrual dysfunction. As such, it is highly imperative that health care facilities and awareness programmes be made available to the women folk in general and the underprivileged women in particular, so as to enable the reproductive population live healthier and happier productive lives.

References

Bates, G. W., and Boone, W. R. (1991): The female reproductive cycle: New variations on an old theme. *Curr. Opin. Obstet. Gynecol.* 3(6):838-843.

Busby, G. (2016): Obstetrics, Gynaecology & Reproductive Medicine, Volume26, Issue 5, May 2016: 149-154.

Harlow, S. D., and Park, M. (1996): A longitudinal study of risk factors for the ccurrence, duration and severity of menstrual cramps in a cohort of college women. *Br. J.Obstet. Gynaecol.* 103(11):1134-1142.

Kim KI, Nam HJ, Kim M, Lee J, Kim K., (2017): Effects of herbal medicine for dysmenorrhea treatment on accompanied acne vulgaris: a study protocol for a randomized controlled trial. *BMC Complement Altern Med* 17:318–318.

Lee H, Choi TY, Myung CS, Lee MS., (2016): Herbal medicine Shaofu Zhuyu decoction for primary dysmenorrhea: a systematic review protocol. *Syst Rev.* 2016;5(9)

Romm, A., Hywood, A.J.,(2010): Botanical Medicine for Women Health.

Sokol, E.R., Brisinger, M.N., (2007): General Gynaecology

Yucel, G., Kenderci, M., Gul, U., (2018):Menstrual Characteristics and Related Problems in 9- to 18-Year-Old Turkish School Girls: Journal of Pediatric and Adolescent Gynaecology: Aug31(4): 350- 355.