

STUDY OF MOODS, BEHAVIOURS, AND MEDICATIONS OF FEMALES FOR DYSMENORRHOEA

Submitted in partial fulfillment of the requirements for the degree of Bachelor of
Pharmacy

BY

Shaikh Romana Aafreen 17PH51

Roshni Mujawar 17PH34

Shah Shagufta 17PH44

Saheb Siddiqui 16PH58

Supervisor -

Prof. Mirza Anwar Baig

Co-Supervisor:

Department of Pharmacology,

School of Pharmacy

Anjuman-I-Islam's Kalsekar Technical Campus Plot No. 2 3,

Sector -16, Near Thana Naka, KhandaGaon,

New Panvel, Navi Mumbai. 410206

Academic Year: 2020-2021

TABLE OF CONTENT

- ❖ Certificate
- ❖ Abstract
- ❖ Keyword
- ❖ Approval of bachelor of pharmacy declaration
- ❖ Index
- ❖ List of figures
- ❖ List of tables
- ❖ Plagiarism report

CERTIFICATE

Department of Pharmacology,
School of Pharmacy,
Anjuman-I-Islam's Kalsekar Technical Campus
Khanda Gaon, NewPanvel, Navi Mumbai. 410206

This is to certify that the project entitled
Study of moods, behaviors, and medications of females for Dysmenorrhoea

is a bonafide work of **Shaikh Romana (17PH51), Roshni Mujawar (17PH34),
Shah Shagufta (17PH44), Saheb Siddiqui (16PH58)** submitted for the
appreciation of the degree of Bachelor of Pharmacy in the Department of
Pharmacology.

Supervisor- Prof. Mirza Anwer

Co-supervisor- Department of
Pharmacology, School of Pharmacy.

Dean- Dr. Shariq Sayyed

Director- Dr. Abdul Razak

ABSTRACT

It is estimated that more than half of all women of adolescent age suffer from Dysmenorrhoea and it often interferes with their daily physical and emotional aspects. It is the leading cause of short-term school absenteeism and is associated with a negative impact on academic and daily activities [2].

Objective- To investigate the impacts of Dysmenorrhoea, symptoms associated with it, and its self-management strategies used by students. It is very important to create awareness about the causes and treatment of Dysmenorrhoea via the education system and media. Health professional consultation must be promoted to help students who have Dysmenorrhoea.

Study design- An explorative survey technique with the help of google forms.

Settings and Participants- 225 female participants of age 15-45 years old (Highest participants- young women of age 21).

Result- The majority of the participants experienced backache, cramps and preferred to take naps during Dysmenorrhoea. 43.1% of participants preferred very much to stay at home. 22.2% of participants experienced severe backache and 17.8% had cramps. 11.6% of young women said to have cramps on the second day. Hence, the most common physical symptom told by WHO is tallied with the results from the study. According to the data, 38.2% take medications or other remedies for Dysmenorrhoea whereas 61.7% of participants do not take any medications or use any other remedies. 34.8% prefer OTC medicines to get relief from the pain whereas 65.1% prefer natural remedies to overcome the issue.

KEYWORDS

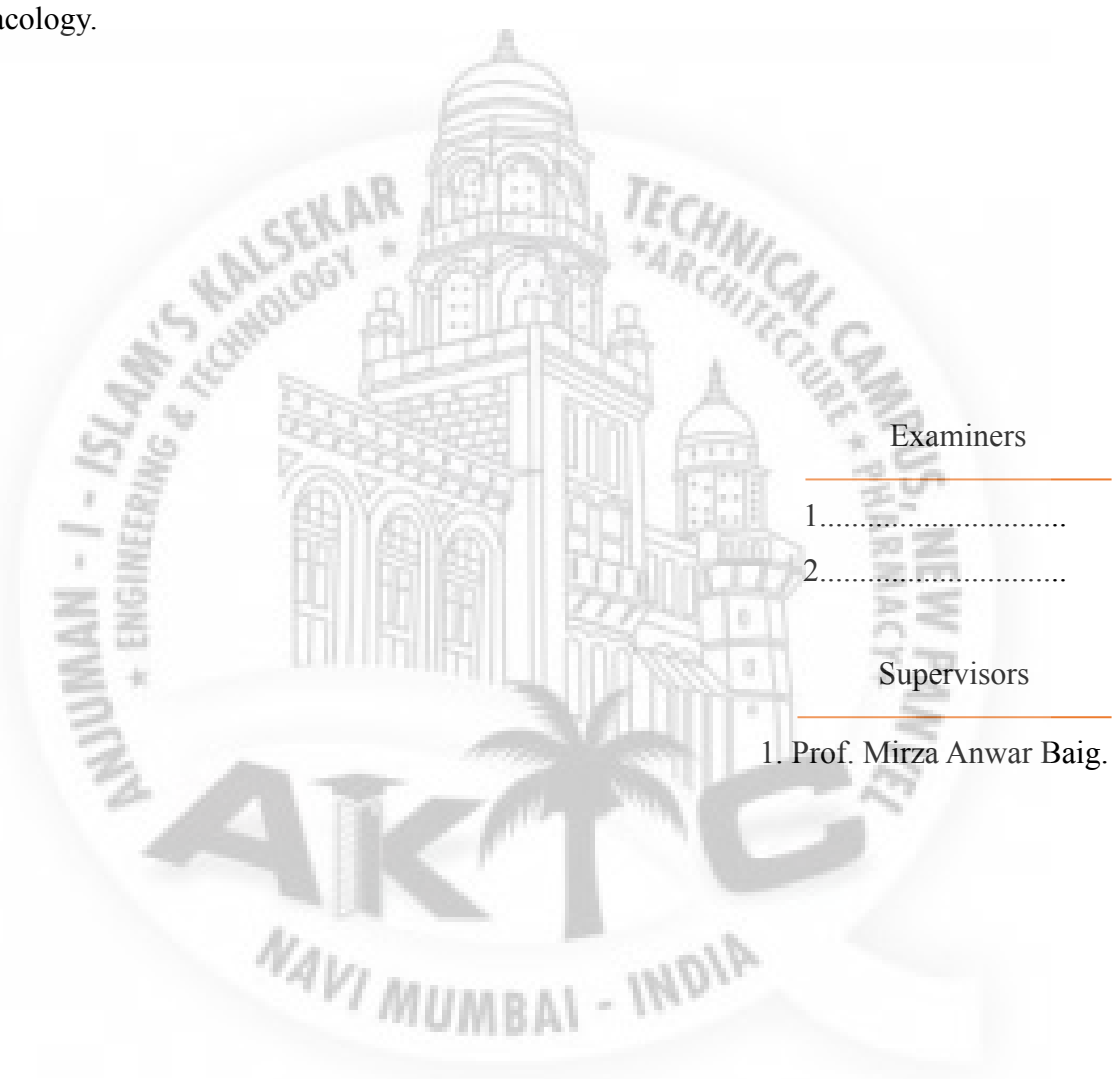
- Dysmenorrhoea
- Symptoms
- OTC medicines
- Natural remedies



Approval For Bachelor of Pharmacy

This project entitled “Study of moods, behaviors, and medications of females for Dysmenorrhoea”

by Romana Shaikh 17PH51, Roshni Mujawar 17PH34, Shah Shagufta 17PH44, Saheb Siddiqui 16PH58 is approved for the degree of Bachelor of Pharmacy in the Department of Pharmacology.



Examiners

1.....

2.....

Supervisors

1. Prof. Mirza Anwar Baig.

Declaration

I declare that this written submission represents my ideas in my own words and where other ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken.

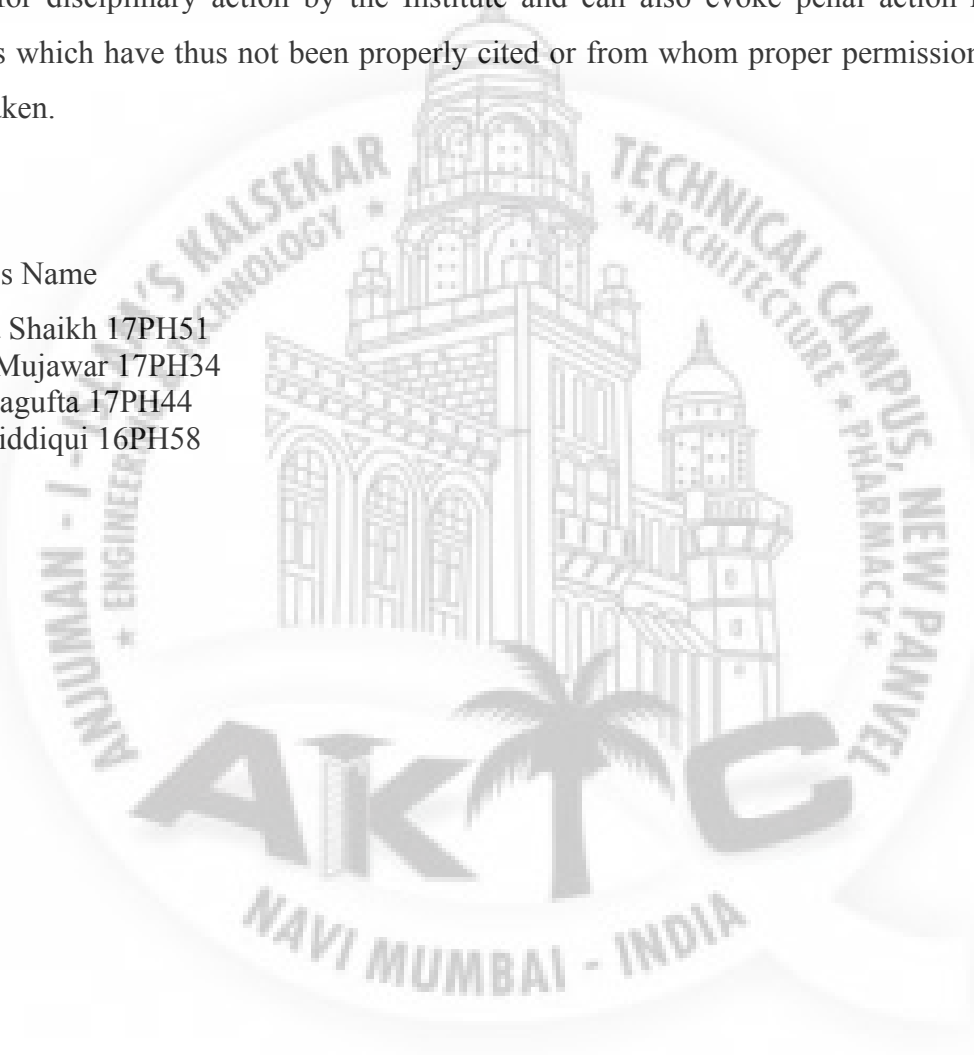
Student's Name

Romana Shaikh 17PH51

Roshni Mujawar 17PH34

Shah Shagufta 17PH44

Saheb Siddiqui 16PH58



Index

Chapter		Page no.
1.	Introduction	11
2	Methods	12
3	Statistical analysis	13
4	Result	14
5	Discussion	20
6	Conclusion	21
7	Bibliography	22
8	Plagiarism report	23

LIST OF TABLES

TABLE NO.	TITLE	PAGE NO.
01	Symptoms and recorded percentage response	15
02	Medications or natural remedies	18
03	Severe symptoms during Dysmenorrhoea	18
04	Single test reliability analysis	19

LIST OF FIGURES

FIGURE NO.	TITLE	PAGE NO.
1.1	Graphical representation of symptoms and its recorded percentage response	17

1. INTRODUCTION:

The term Dysmenorrhoea refers to severe painful cramping sensation in the lower abdomen often accompanied by sweating, tachycardia, headache, nausea, vomiting, diarrhea, and tremulousness occurring just before or during the menses. It is a common gynecological problem among adolescent females which is severe enough to affect their functioning [2].

Based on pathophysiology, dysmenorrhea is classified as primary dysmenorrhea (menstrual pain without organic disease) or secondary dysmenorrhea (menstrual pain associated with underlying pelvic pathology) [9].

Dysmenorrhoea may begin soon after the menarche, after which it often improves with age, or it may originate later in life after the onset of an underlying causative condition. Dysmenorrhoea is common, and in up to 20% of women it may be severe enough to interfere with daily activities. The true incidence and prevalence of Dysmenorrhoea are not clearly established in India. In recent times, George and Bhaduri concluded that Dysmenorrhoea (87.87%) is a common problem in India [5].

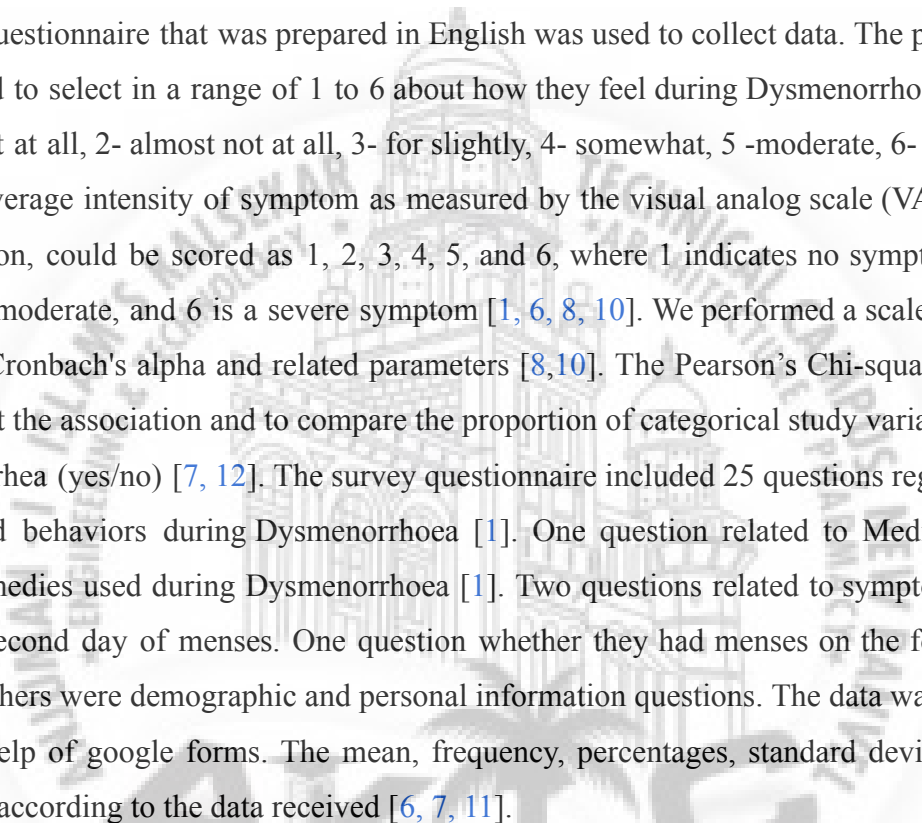
Dysmenorrhoea affects the physical, psychological, and social status of female adolescents. According to a study conducted in India among female medical students who reported Dysmenorrhoea, 31.67% and 8.68% were frequently missing college and classes, respectively [5].

The objective of this study is to create awareness of different moods and behaviors experienced by young females during menses, to understand the medications used by them for Dysmenorrhoea.

2. METHODOLOGY:

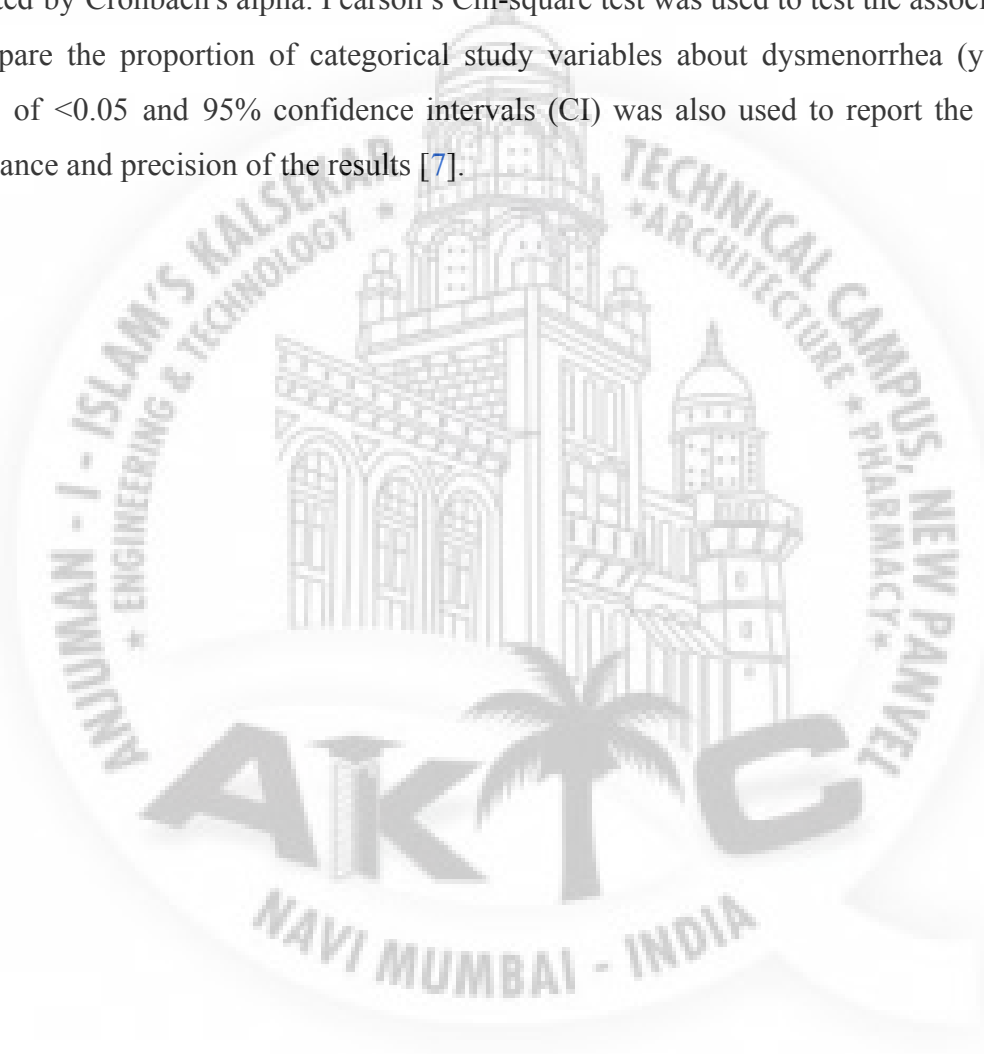
A cross-sectional study was conducted from 15-March-2021 to 13-April-2021 amongst the female students, faculties, and staff of AI's Kalsekar Technical campus and polytechnic, New Panvel, Maharashtra, India. The total sample size was 225.

An explorative survey technique with the help of google forms was used for the study. The settings for the study were randomly selected young female participants aged between 15- 45 years. A questionnaire that was prepared in English was used to collect data. The participants were asked to select in a range of 1 to 6 about how they feel during Dysmenorrhoea where 1 implies not at all, 2- almost not at all, 3- for slightly, 4- somewhat, 5 -moderate, 6- very much [1]. The average intensity of symptom as measured by the visual analog scale (VAS), during menstruation, could be scored as 1, 2, 3, 4, 5, and 6, where 1 indicates no symptom, 2-4 is mild, 5 is moderate, and 6 is a severe symptom [1, 6, 8, 10]. We performed a scale reliability test with Cronbach's alpha and related parameters [8,10]. The Pearson's Chi-square test was used to test the association and to compare the proportion of categorical study variables about Dysmenorrhea (yes/no) [7, 12]. The survey questionnaire included 25 questions regarding the moods and behaviors during Dysmenorrhoea [1]. One question related to Medications or natural remedies used during Dysmenorrhoea [1]. Two questions related to symptoms on the first and second day of menses. One question whether they had menses on the form filling day [1]. Others were demographic and personal information questions. The data was analyzed with the help of google forms. The mean, frequency, percentages, standard deviation were calculated according to the data received [6, 7, 11].



3. STATISTICAL ANALYSIS:

The statistical analysis was performed by Statistical Package for Social Sciences, for Windows version 21.0 (IBM Corp, Armonk, NY, USA). Descriptive statistics (mean, standard deviation, frequencies, and percentages) were used to describe the quantitative and categorical variables [11]. Single-test reliability analysis for scale reliability which is calculated by Cronbach's alpha. Pearson's Chi-square test was used to test the association and to compare the proportion of categorical study variables about dysmenorrhea (yes/no). A p-value of <0.05 and 95% confidence intervals (CI) was also used to report the statistical significance and precision of the results [7].



4. RESULTS:

The study has responses between the age of 15 and 45 Years of age, in which the highest response is of 21 years old age group which is 32.9 % (The youth). The majority of the participants experienced backache, cramps and preferred to take naps during Dysmenorrhoea. 43.1% of participants very much preferred to stay at home. 22.2% of participants experienced severe backache and 17.8% had cramps.

The data concludes that 10.2% felt weight gain, 3.6% felt unusually cold and 9.8% were unusually warm 8.9% felt like crying, 7.6% felt lowered schools or work performances, 7.6% felt muscle stiffness and felt forgetfulness and 9.8% felt suffocation. 11.6% of the participant had general aches and pain and 10.7% felt unhappy and fatigued. 13.3% experienced excitement, 12.9% felt helpless and 7.6% felt sexy. (refer to table 1)

29/250 i.e. 11.6% of young women said to have cramps on the second day. Hence, the most common physical symptom told by WHO is tallied with the results from the study.

The majority of women suffer from cramps according to the data collected. 65/250- 26% of young women felt cramps during the first day of their periods. Many young women didn't choose to write how they feel or have any physical symptoms so they are counted as null responses. Hence, 11.6% out of 26% experienced a physical symptom called cramp for consecutive 2 days.

According to the data, 38.2% take medications or other remedies for Dysmenorrhoea whereas 61.7% of participants do not take any medications or some other remedies. 34.8% prefer medicines to get relief from the pain whereas 65.1% prefer natural remedies to overcome the issue.

After analysis of the data, it is observed that the use of a hot water bag is the most preferred option by the study participants. 6.97% use paracetamol, 9.3% use dicyclomine, 5.81% use other painkillers.

Jaggery and hot water are preferred by 4.65%. Carom seeds are used by 2.32%. Yoga and exercise are also preferred by 2.3% of the participants during Dysmenorrhoea. (refer to table 2)

The association between excitement with other psychological symptoms- stay at home, crying and physical symptoms- back pain, cramps in Dysmenorrhea (Dysmenorrhea group,

N=225) was shown with the Chi-square result(refer to table3). The Chi-square's result was significant i.e. $X^2(4, N= 225)=66.3945, p<0.05$. (Refer to table 3).

TABLE 1

Symptoms	Percentage response (%)					
	1 (not at all)	2 (Almost not at all)	3-(slightly)	4 (Somewhat)	5 (moderate)	6 (Very much)
Weight gain	23.1	20.9	19.1	16	10.7	10.2
Unusually cold	43.1	15.6	17.8	13.8	6.2	3.6
Crying	26.7	16.4	20	35	28	8.9
Lowered schools or work performance	19.1	20	18.7	20	14.7	7.6
Muscle stiffness	19.1	22.2	21.3	16.4	13.3	7.6
Forgetfulness	21.8	20.4	17.3	15.6	17.3	7.6
Confusion	17.8	16.4	16.4	22.2	13.8	13.8
Take naps-stay in bed	10.7	9.8	16.9	21.3	20.4	20.9
Headache	31.6	16.9	16.4	11.6	11.6	12
Skin disorders	41.3	13.8	16.4	12.9	8.9	6.7
Loneliness	29.8	16	15.6	17.8	6.2	14.7
Feeling of suffocation	36	20	34	26	7.6	9.8
Affectionate	21.3	20.4	20	16.9	11.6	9.8
Orderliness	26.7	19.1	21.3	13.8	13.8	5.3
Stay at home	11.6	10.7	13.3	7.1	14.2	43.1
Cramps	21.3	12	16	16	16.9	17.8

excitement	21.8	17.8	22.2	13.3	11.6	13.3
Backache	20	13.3	14.2	11.1	19.1	22.2
Fatigue	26.2	20.4	15.6	15.6	11.6	10.7
Sleepy	11.1	12	16	20.4	17.8	22.7
Unusually warm	26.2	16.4	21.8	16	9.8	9.8
Helpless	32	17.3	15.1	14.7	8	12.9
General aches and pain	14.7	15.1	23.1	19.6	16	11.8
Sexy	40.4	18.2	16	12	5.8	7.6
Unhappy	28	14.7	20.9	12.4	13.3	10.7

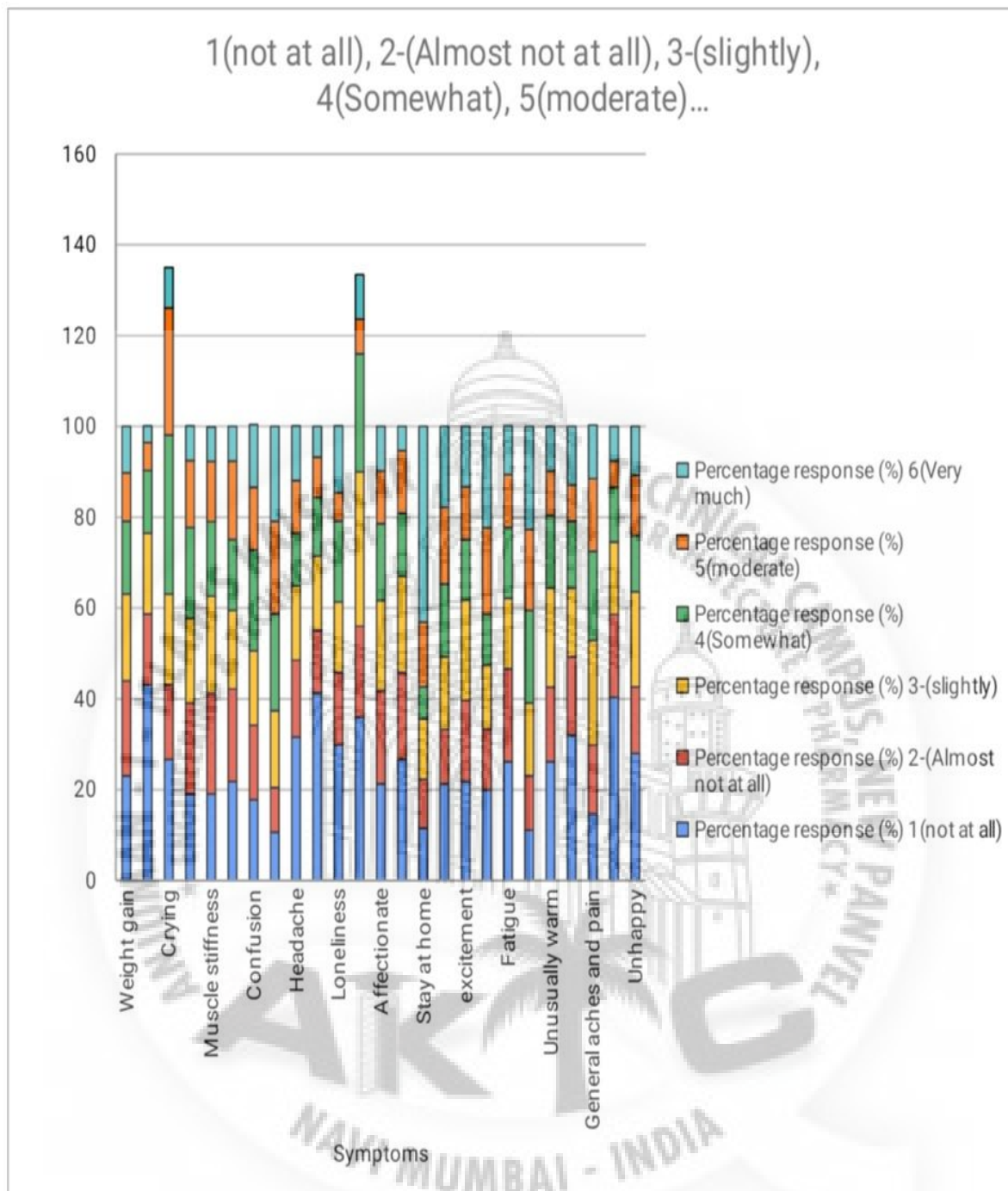


Figure 1.1

Graphical representation of symptoms and its recorded percentage response

TABLE 2- Frequency and percent of medications or natural remedies. (This table does not include the image)

Medications or natural remedies	Frequency(N=225)	Percent(%)
Hot water bag	21	24.4
Paracetamol	6	6.97
Dicyclomine	8	9.3
Pain relieving ointments	2	2.32
Other painkillers	5	5.81
Carom seeds	2	2.32
Jaggery	4	4.65
Hot tea	4	4.65
Yoga and exercise	2	2.32
Chocolates	3	3.48

TABLE 3- The Pearson Chi-square test table of severe symptoms of Dysmenorrhoea (Yes/No). (This table does not use the image)

	severe symptom during dysmenorrhea.		Results	Row Totals
	No	Yes		
Excitement	49 (38.74) [2.72]	30 (40.26) [2.62]		79
Backpain	45 (46.58) [0.05]	50 (48.42) [0.05]		95
Stay at home	26 (60.31) [19.52]	97 (62.69) [18.78]		123
Cramps	48 (43.15) [0.55]	40 (44.85) [0.52]		88
Crying	60 (39.23) [11.00]	20 (40.77) [10.58]		80
Column Totals	228	237		465 (Grand Total)

Table 4- Single-Test Reliability Analysis includes Cronbach's alpha values.

Single-Test Reliability Analysis

Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	Guttman's λ_2	Guttman's λ_6	Greatest Lower
Point estimate	0.884	0.889	0.913	0.9
95% CI lower bound	0.861	0.868	0.906	0.9
95% CI upper bound	0.904	0.908	0.934	0.9

Frequentist Individual Item Reliability Statistics

Item	If item dropped		
	Cronbach's α	Guttman's λ_2	Guttman's λ_6
Weight gain	0.884	0.889	0.913
Unusually cold	0.882	0.887	0.910
Crying	0.880	0.885	0.910
Lowered schools or work performance	0.879	0.885	0.909
Muscle stiffness	0.879	0.885	0.908
Forgetfulness	0.877	0.882	0.906
Confusion	0.878	0.884	0.907
Take naps- Stay in bed	0.880	0.886	0.908
Headache	0.878	0.884	0.908
Skin disorders	0.883	0.888	0.912
Loneliness	0.877	0.882	0.906
Feeling of suffocation	0.877	0.882	0.907
Affectionate	0.883	0.888	0.910
Orderliness	0.881	0.886	0.908
Stay at home	0.884	0.889	0.911
Cramps	0.880	0.886	0.910
Excitement	0.887	0.892	0.912
Backache	0.878	0.884	0.907
Fatigue	0.877	0.882	0.907
Sleepy	0.877	0.882	0.906
Unusually warm	0.880	0.886	0.909
Helpless	0.875	0.880	0.906
General aches and pain	0.877	0.883	0.906
Sexy	0.885	0.890	0.912
Unhappy	0.877	0.882	0.906

5. DISCUSSION:

An estimated 10–15% of women experience monthly menstrual pain severe enough to prevent normal daily function at school, work, or home [5]. In this study, 7.6% of participants said to have lowered school or work performance while experiencing Dysmenorrhoea.

52% of the female students at the university experienced back pain [2]. In this study, 22.2% of the female participants experienced severe backache. It is 29.8% less which can be a good sign where females are less affected by secondary dysmenorrhea, as severe physical pain is a major sign of secondary dysmenorrhea.

The previous study showed that all the psychological symptoms except excitability were closely associated with the occurrence of Dysmenorrhoea and the intensity of the pain [4]. In this study, it is found that 13.3% felt excitability during menses. The severity comparison of excitement with other symptoms and back pain in dysmenorrhea was shown with the Chi-square result (refer to table 3). Excitement association with dysmenorrhea has been found.

Previous data shows 12% of females use paracetamol to overcome the pain during Dysmenorrhoea [2] but in this study, it is observed that only 6.97% of females use paracetamol for relieving pain. The other 31.6% prefer homemade hot beverages. It has been found that the majority of the participants that is 65.1% use natural remedies in Dysmenorrhoea.

Single-test reliability analysis has been performed for the reliability of the scale taken. (Refer to table 4).

6. CONCLUSION:

There can be as many as 25 moods and behaviors associated with dysmenorrhoea of which excitement can also be one of the symptoms. There is a significant relationship between severe symptoms and dysmenorrhoea. The selected population preferred home remedies more than medications. The psychology of treatment needs to be generated.

Despite knowing about medications and natural remedies, they had severe physical symptoms which can be a sign of secondary dysmenorrhoea where surgery is needed. More awareness regarding secondary dysmenorrhoea is needed where parts of sonography are checked to find abnormalities. It is very important to create awareness about the causes and treatment of Dysmenorrhoea via the education system and media.

7. REFERENCES:

1. Conrad, Marlys Ann, "Mood and Behavior Changes During the Menstrual Cycle in Depressed and Nondepressed Women: An Unaware Study" (1985). Dissertations. 2339. [https://ecommons.luc.edu/luc_diss/2339]
2. Teshager Aklilu Yesuf, Nigist Assefa Eshete, Eskinder Ayalew Sisay. Dysmenorrhea among University Health Science students, Northern Ethiopia: Impact and Associated Factors. Volume 2018 |Article ID 9730328 | [<https://doi.org/10.1155/2018/9730328>]
3. Karen Barnard , Susan M Frayne , Katherine M Skinner, Lisa M Sullivan. Health status among women with menstrual symptoms. *Journal of Women's Health* 12 (9), 911-919,2003. [<https://pubmed.ncbi.nlm.nih.gov/14670171/>]
4. Anil K Agarwal and Anju Jain, " Indian Journal of Community Medicine: Official Publication of Indian Association of Preventive & Social Medicine- A Study of Dysmenorrhea during menstruation in adolescent girls". [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC288834>]
5. Gumanga and A. Kwame, "Prevalence and severity of dysmenorrhea among some adolescent girls in a secondary school in Accra, Ghana," *Postgraduate medical journal of Ghana*, vol. 1, no. 1, 2012". [<https://pubmed.ncbi.nlm.nih.gov/22605882/>]

6. Elia Fernández-Martínez, María Dolores Onieva-Zafra, María Laura Parra-Fernández. Lifestyle and prevalence of dysmenorrhea among Spanish female university students. [<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0201894>]
7. Refan T. Hashim, Medical Student, Sara S. Alkhalifah, Medical Student, [...], and Shaffi A. Shaik, Ph.D. Prevalence of primary dysmenorrhea and its effect on the quality of life amongst female medical students at King Saud University, Riyadh, Saudi Arabia. [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7841556/#!po=46.0526>]
8. Allison M Nguyen et al. Qual Life Res. Psychometric validation of the dysmenorrhea daily diary (DysDD): a patient-reported outcome for dysmenorrhea. [<https://pubmed.ncbi.nlm.nih.gov/28405780/>]
9. Michelle Proctor, editor and Cynthia Farquhar, postgraduate professor in obstetrics and gynecology. Diagnosis and management of dysmenorrhea [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1459624/?report=reader>]
10. Chen X Chen et al. West J Nurs Res. Development and Testing of the Dysmenorrhea Symptom Interference (DSI) Scale. [<https://pubmed.ncbi.nlm.nih.gov/32680445/>]
11. Authors Kamel DM, Tantawy SA, Abdelsamea GA. Experience of dysmenorrhea among a group of physical therapy students from Cairo University: an exploratory study. [<https://pubmed.ncbi.nlm.nih.gov/28533696/>]
12. Mohammed Abadi Alsaleem. Dysmenorrhea, associated symptoms, and management among students at King Khalid University, Saudi Arabia: An exploratory study. [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6131986/>]

Plagiarism report:

Turnitin Originality Report

Processed on: 29-May-2021 12:49 PM IST
ID: 1596531766
Word Count: 1902
Submitted: 1

project on dysmenorrhea By Mirza Anwar

Similarity Index	
21%	

Similarity by Source	
Internet Sources:	21%
Publications:	18%
Student Papers:	10%

9% match (Internet from 10-May-2021)
<https://www.hindawi.com/journals/ijrmed/2018/9730328/>

5% match (Internet from 19-Sep-2020)
<https://www.smj.org.sa/index.php/smj/article/view/smj.2020.3.24988/12048>

2% match (Internet from 18-Apr-2021)
<https://pubmed.ncbi.nlm.nih.gov/21718556/>

2% match ()
Priya, T. "Effectiveness of mint paste on dysmenorrhoea among adolescent girls at selected schools, Salem", 2012

2% match (Internet from 20-Apr-2021)
[http://ijmers3.amazonaws.com/pdf/volume9/volume9-issue10\(9\)-2020.pdf#page=77](http://ijmers3.amazonaws.com/pdf/volume9/volume9-issue10(9)-2020.pdf#page=77)