



# Prevalence of dysmenorrhea and associated symptoms among adolescent girls: a cross sectional study.

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All the work related to the thesis is been carried out at Parul university limda Vadodara

## Abstract

Introduction : women health disorders are very commonly seen in an individual. Dysmenorrhea is also one of the health problems that are widely seen every year in young females. This study is done to find out the prevalence of dysmenorrhea and its effects on work as well as social performance and its co relation to absenteeism among the young females of Parul University.

Methods: total number of young females of Parul University were analysed and questionnaire will be used to collect information about premenstrual pain in young females of Parul university of Vadodara city.

Results: total 100 participants were included in the study. The results suggested students suffered from difficulty in concentration-50.53% and 7.62% suffered from mood swings during their menstrual cycle. 43.81% of the population always having generalised body pain during menstrual cycle phase. While 42.86% of population had suffered from impaired work performance during menstrual cycle phase.

Conclusion: from the outcome of this study, it was concluded that there is high prevalence of premenstrual pain among young females of Parul University.

Keywords: dysmenorrhea, symptoms, young female.

## Introduction

Menstrual cramps are a series of emotional and physical problems that occur during menstruation. Some women can easily control their menstrual cycle with little fear, while other women may have more uncomfortable physical and/or emotional symptoms generally speaking; menstrual cramps can also be classified into dysmenorrhea or premenstrual syndrome (pms) according to menstrual diagnosis.

The exact source of the term dysmenorrhea is unknown, but it has been mentioned in the world's traditional literature (1). An evocative description and the stigma attached to menstruation related mood and behavioral changes date back to Hippocrates, the Talmudic literature and therefore the bible. Despite the reality of existence of painful menses in ancient literature, it fully was solely inside the 1/2 past century once pain has been accorded impartial scientific evaluation.

Painful menstruation, or dysmenorrhea, occurs when cramps begin a few hours before bleeding and persist for hours or day. It may be either primary (occurs most often between 17 and 22 years of age) when no clear cause can be identified, or secondary to another condition such as organic pelvic diseases (more common in older women). Several associated symptoms are commonly observed, including back pain, nausea, vomiting, headaches, diarrhea, and fatigue. despite attempts to pinpoint its cause, primary dysmenorrhea has been attributed to uterine contractions coupled with prostaglandin production and ischemia.[2] primary dysmenorrhea is defined as pain during menses in the absence of an identifiable pathologic lesion (3).

Abdominal cramps are the most common symptom of dysmenorrhea, but symptoms may include nausea, vomiting, headache, back pain, and dizziness during menstruation. (4,5) dysmenorrhea is classified as either primary or secondary dysmenorrhea. Primary dysmenorrhea usually occurs in adolescence shortly after menarche and is defined as painful menstruation without underlying macroscopic pelvic pathology [19]. Overproduction of uterine prostaglandins is the primary pathogenesis for primary dysmenorrhea [20].

to alleviate dysmenorrhea pain, non-steroidal anti-inflammatory drugs, such as ibuprofen or diclofenac sodium, are commonly prescribed [21]. Secondary dysmenorrhea appears to be caused by existing pathological conditions such as endometriosis or pelvic inflammatory disease. Secondary dysmenorrhea usually begins a few years after menarche [19]. In addition to earlier age at menarche, longer menstrual periods, heavier menstrual flow, and family history of dysmenorrhea, this medical condition is also associated with earlier menstruation and heavier menstrual flow. [22].

Dysmenorrhea is also a standard gynecological disease in young women, with prevalence estimates ranging from 50% to 91% that vary widely (6,7,8,9,10). For these variable estimates, the true prevalence is unknown. In addition, symptoms that may indicate regular menstruation are relatively common, and severe symptoms can interfere with daily functions. Disproportionately, dysmenorrhea has detrimental effects on a variety of important areas of health and development. The disorder affects a high percentage of girls in their adolescence and has been identified as the leading cause of missed classes and work among young adults, adolescents, and teenagers.

(5,11) due to different measurement methods, the prevalence of dysmenorrhea reported between different studies varies greatly, ranging from 93% to 16%. [12] nag (13) reported 33. 5% of dysmenorrhea cases in Indian girls (13). George and bhaduri found that dysmenorrhea is a typical problem in India, with a prevalence of 87.87% (14). The rate for turkeys was 72.7% (n = 453) (15). Primary dysmenorrhea often goes untreated because adolescents regard it as normal part of the menstrual cycle. And do not tell their physicians about the pain.

Primary dysmenorrhea can result in school absences, emotional problems, and high blood pressure among adolescents <sup>[16, 17]</sup> to separation from family and friends. [17 18] therefore, we conducted a study to analyze the

prevalence of dysmenorrhea in young women and analyze the relevant clinical markers of dysmenorrhea. Although dysmenorrhea is considered a common gynecological problem in young women, research on this topic is limited, especially in western India. Due to the severity of dysmenorrhea, the degree of monthly disability of the girl is unclear.

Therefore, it is necessary to assess the menstrual characteristics and dysmenorrhea prevalence of young women entering Vadodara university to assess the severity of the problem, i.e., Dysmenorrhea and so the severity of symptoms that are faced by the females during their cycle.

Objective: the study aims to determine the prevalence of primary dysmenorrhea in young women and to evaluate associated clinical markers for dysmenorrhea in them. The present study is done to estimate the prevalence of dysmenorrhea and its effects, which would indicate the severity of the problem in this area

### Methodology:

Study design: survey study

Study population: young females of Parul University

Study duration: 1 month

Selection criteria: females of age between 18 to 25 years

Inclusion criteria:

- Young adults 18 to 25 years
- Young female of Parul university
- Regular menstrual cycle for a minimum of 3 months having some schooling and agreeing to participate in the survey

Exclusion criteria:

- Females who have irregular menses
- Females taking medication concerning to menstrual issues

Material required: laptop and google forms

Procedure: a descriptive cross-sectional study was conducted in between 17th July 2020 - 17th august 2020 at Parul university. A letter of invitation to participate in this online survey regarding menstruation was sent to all females.

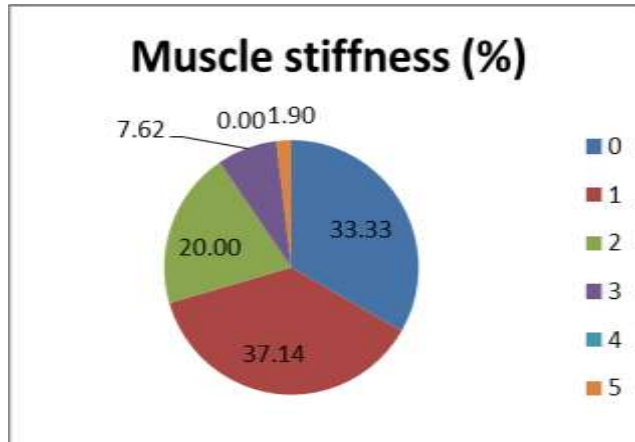
Information about the study and log in details were included as well as information regarding anonymity. By email, two reminders were sent. The survey was open for 4 weeks. Google forms were used to promote participation. 105 female subjects of age groups 18-25 years falling within the inclusion criteria were considered for the study. The inclusion criteria were the girls with regular menstrual cycle for a minimum of 3 months. Those who had irregular menses and were taking medication concerning to menstrual issues were excluded. The students were then gathered in a group and the procedure, and the scale used as the outcome measure was explained to them.

Then the questionnaire was sent by the researchers through the google form to their individual mailing address. The individual classification of grades of dysmenorrhea was assessed using moos menstrual distress questionnaires to identify mild, moderate, and severe symptoms. The questionnaire covers all the problems that young women most commonly face during the menstrual phase, such as pain, concentration, behavioral changes, autonomic responses, water retention, arousals, and control.

## Results

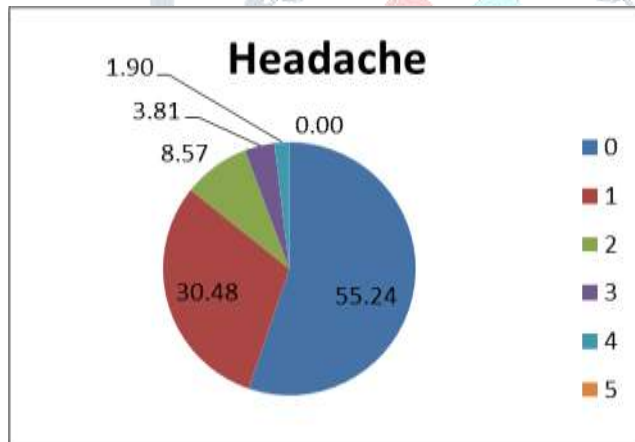
### I. Pain

#### i. Muscle stiffness:



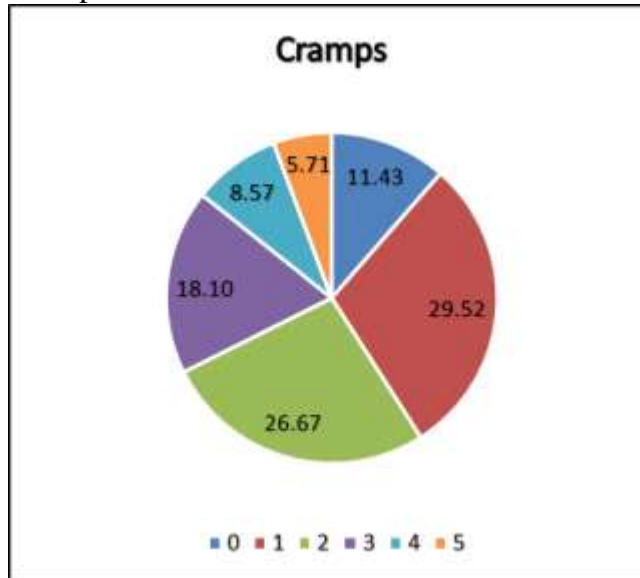
When the females were regarding the presence of muscle stiffness in their menstrual phase, 33.33 % (35) of the population never experienced these symptoms while 37.14% (39) experienced mild symptom in their menstrual phase. It was moderately felt by 20 % (21) during their menstruation, while 7.62 % (8) experienced it strongly and 1.90% (2) always had this symptom at extreme level during their menstrual phase.

#### ii. Headache:



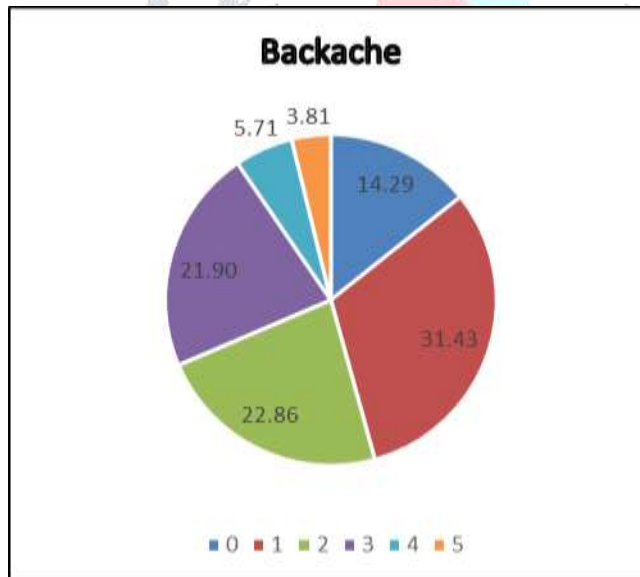
When the females were regarding the presence of headache during their menstrual phase, 55.24 % (58) of the population never experienced these symptoms while 30.48% (32) experienced mild symptom in their menstrual phase. It was moderately felt by 8.57 % (9) during their menstruation, while 3.81 % (4) experienced it strongly. This symptom was severe in 1.90% (2) during their menstrual phase.

## iii. Cramps:



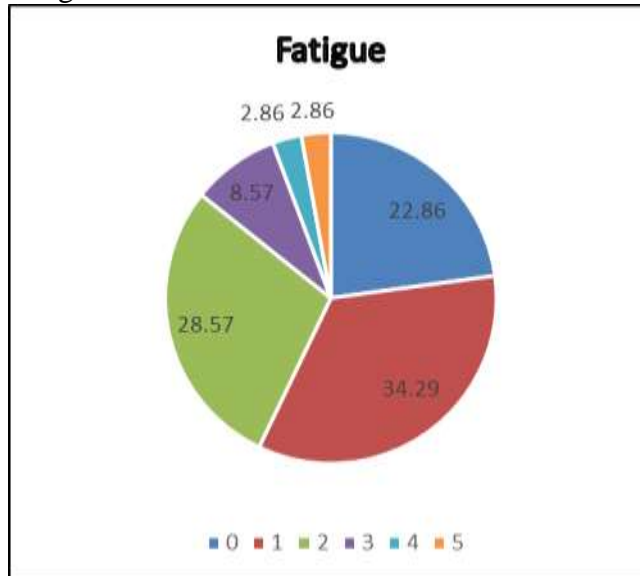
When the females were regarding the presence of headache during their menstrual phase, 11.43 % (12) of the population never experienced these symptoms while 29.52% (31) experienced mild symptom in their menstrual phase. It was moderately felt by 26.67 % (28) during their menstruation, while 18.10 % (19) experienced it strongly. This symptom was severe in 8.57% (9) during their menstrual phase whereas 5.71 % (6) experienced cramps to an extreme extent.

## iv. Backache:



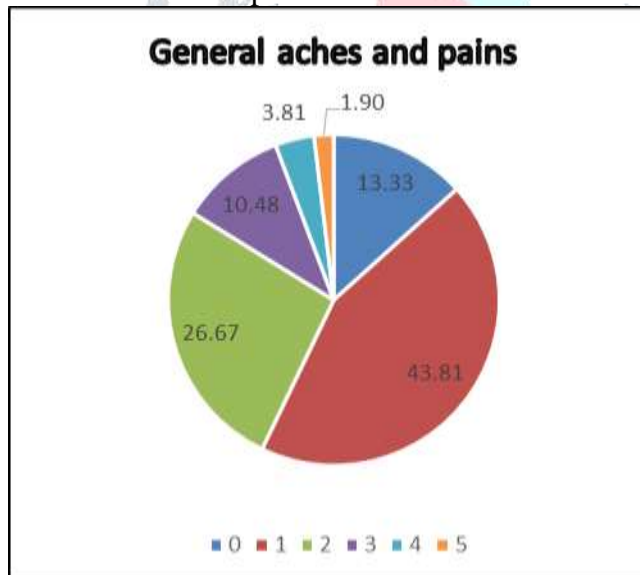
When the females were regarding the presence of backache during the menstrual phase, 14.29 % (15) of the population never experienced this symptom while 31.43% (33) experiences mild symptom in their menstrual phase. It was moderately felt by 22.86 % (24) during their menstruation phase, while 21.90 % (23) experienced it strongly. This symptom was severe in 5.71 (6) during their menstrual phase whereas 3.81 % (4) experiences extreme level of backache.

## v. Fatigue:



When the females were asked regarding the experience of fatigue during their menstrual phase, 22.86 % (24) of the population never experienced these symptoms while 34.29% (36) experienced mild symptom in their menstrual phase. It's moderately felt by 28.57 % (30) during their menstruation, while 8.57 % (9) experienced it strongly. This symptom was severe in 1.90% (2) during their menstrual phase and extreme in 1.90% (2) in their menstrual phase

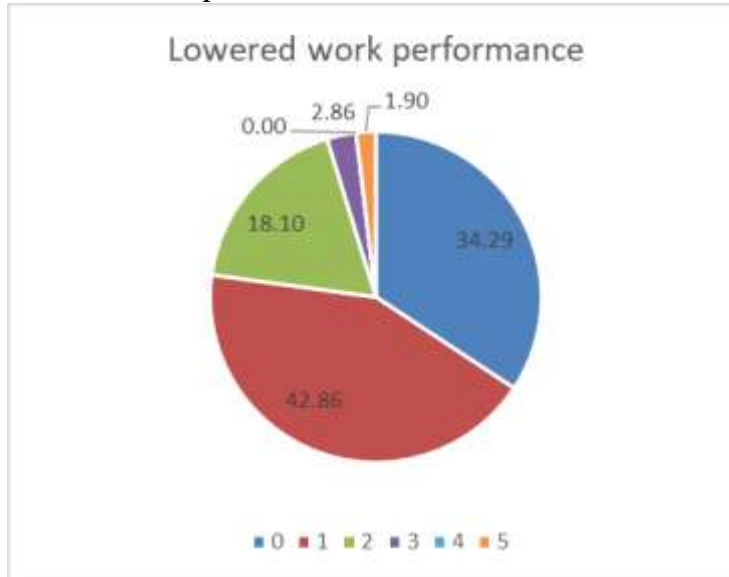
## vi. General aches and pains:



When the females were asked regarding the experience of general aches and pains felt during their menstrual phase, 13.33 % (14) of the population never experienced this symptom while 43.81% (46) experienced mild symptom in their menstrual phase. It's moderately felt by 26.67 % (28) during their menstruation, while 10.48 % (11) experienced it strongly. This symptom was severe in 3.81% (4) during their menstrual phase and extreme body ache and pains in 1.90% (2) in their menstrual phase.

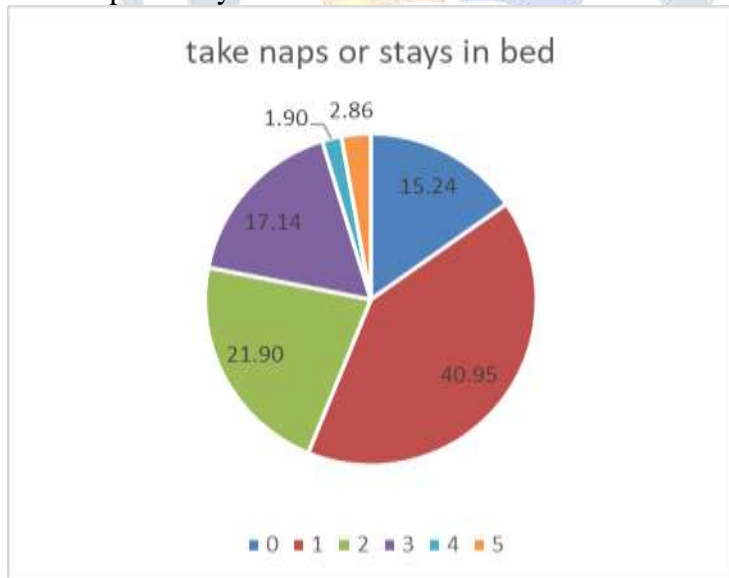
**II. Behavioral change**

i. Lowered work performance:



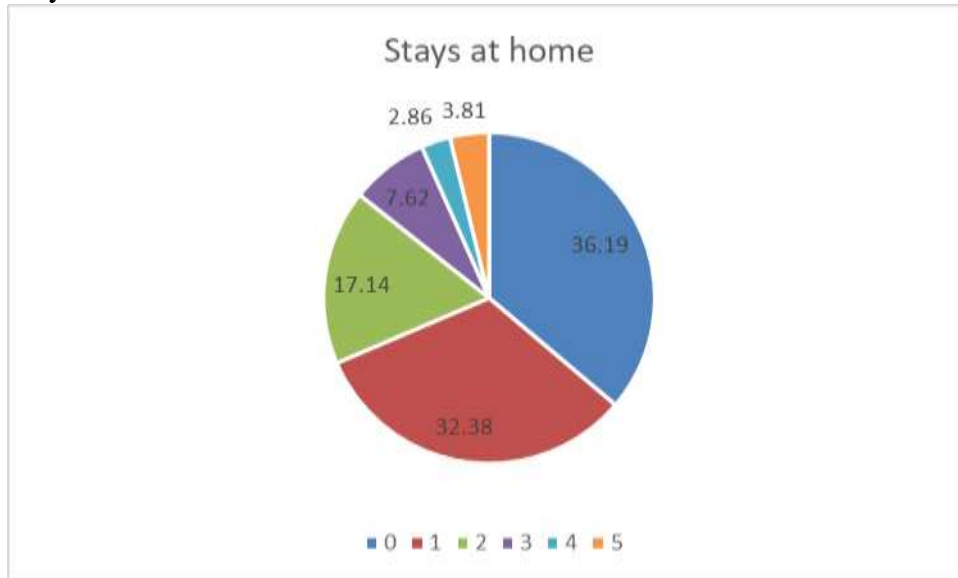
When the females were asked regarding their lowered work performance experience felt during their menstrual phase, 34.29 % (36) of the population never experienced this symptom. 42.86% (45) experiences mild symptom in their menstrual phase. It's moderately felt by 18.10 % (19) during their menstruation, while 2.86 % (3) experienced it strongly. The lowered work performance was extreme in 1.90% (2) in their menstrual phase.

ii. Take naps or stays in bed:



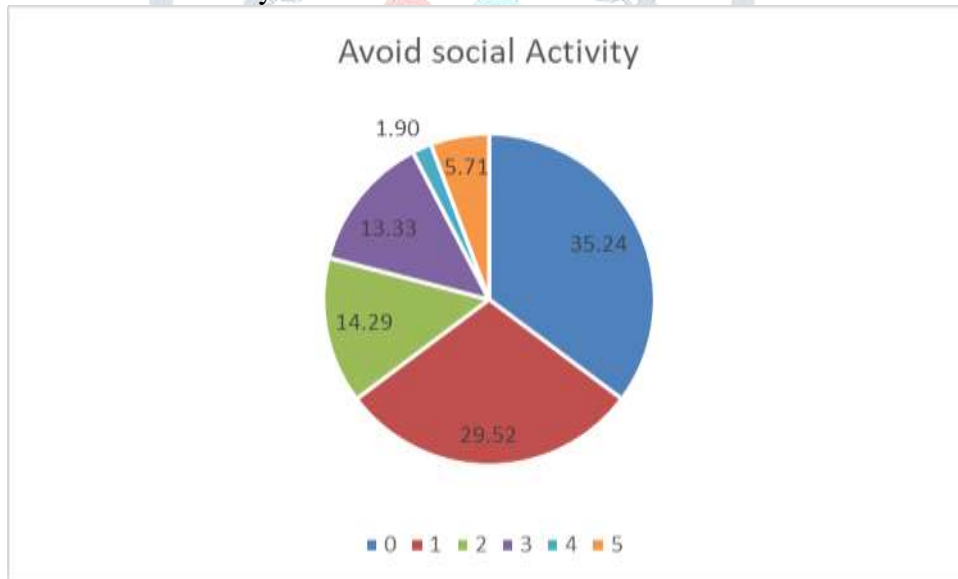
When the females were asked regarding their rest or nap periods during their menstrual phase, 15.24% (16) of the population never experienced this symptom. 40.95% (43) experiences mild symptom in their menstrual phase. It's moderately felt by 21.90 % (23) during their menstruation, while 17.14 % (18) experienced it strongly. The duration of nap period is seen severe in 1.90 % (2) and was extreme in 2.86% (3) in their menstrual phase.

iii. Stays at home:



When the females were asked regarding their rest or nap periods during their menstrual phase, 36.19% (38) of the population never experienced the need to stay at home. 32.38% (34) experiences mild need to stay at home. It's moderately felt by 17.14 % (18) during their menstruation, while 7.62 % (8) experienced strong need to stay at home. The urge to stay to stay at home of is severe in 2.86 % (3) and was extreme in 3.81% (4) in their menstrual phase.

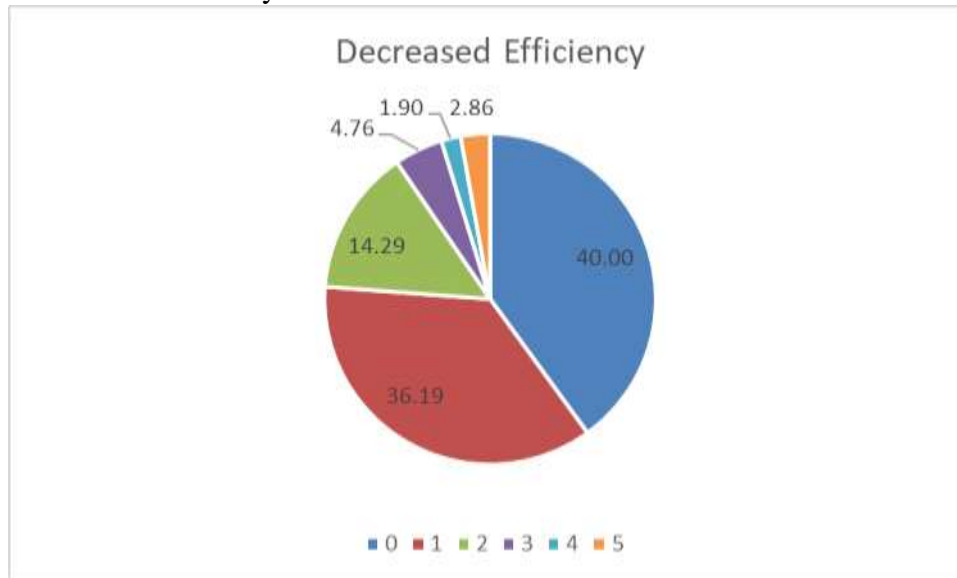
iv. Avoid social activity:



When the females were asked regarding the avoidance of social activity during their menstrual phase, 35.24% (37) of the population never experienced the need to avoid social activity. 29.52% (31) experiences mild urge to avoid social activity. It's moderately felt by 14.29 % (15) during their menstruation, while 13.33 % (14) experienced strong urge to avoid social activity. The urge to avoid social activity of is severe in 1.90 % (2) and was extreme in 5.71% (6) in their menstrual phase.



## v. Decreased efficiency:

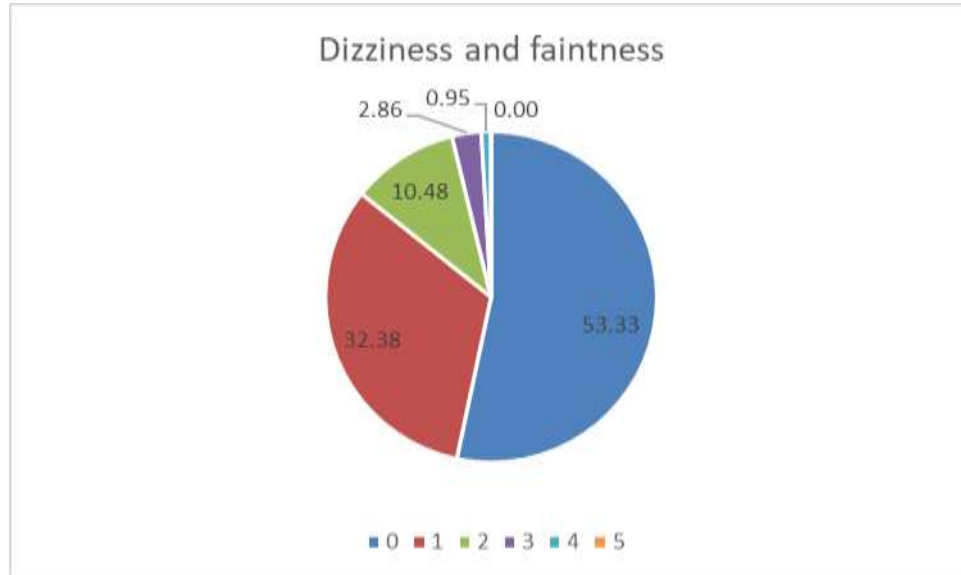


When the females were asked regarding the decreased efficiency during their menstrual phase, 40.00% (42) of the population never experienced decreased efficiency. 36.19% (38) experiences mild urge of decreased efficiency. It's moderately felt by 14.29 % (15) during their menstruation, while 4.76 % (5) experienced strong decreased efficiency. The decreased efficiency is severe in 1.90 % (2) and was extreme in 2.86% (3) in their menstrual phase.



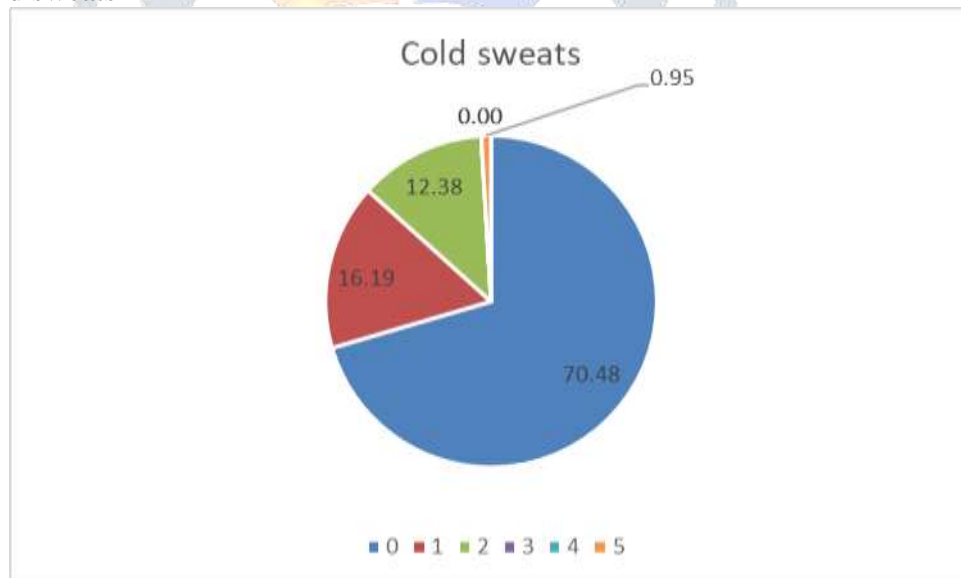
### III. Autonomic reactions

#### i. Dizziness and faintness:



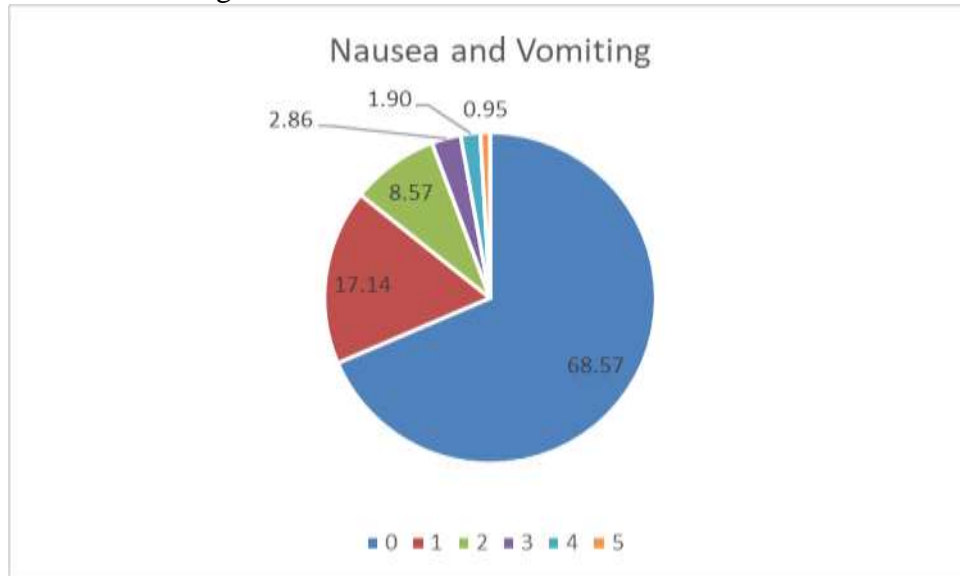
When the females were asked regarding dizziness and faintness during their menstrual phase, 53.33% (56) of the population never experienced dizziness and faintness. 32.38% (34) experiences mild dizziness and faintness. It's moderately felt by 10.48 % (11) during their menstruation, while 2.86 % (3) experienced strong urge to avoid social activity. The degree of faintness and dizziness is severe in 0.95 % (1).

#### ii. Cold sweats



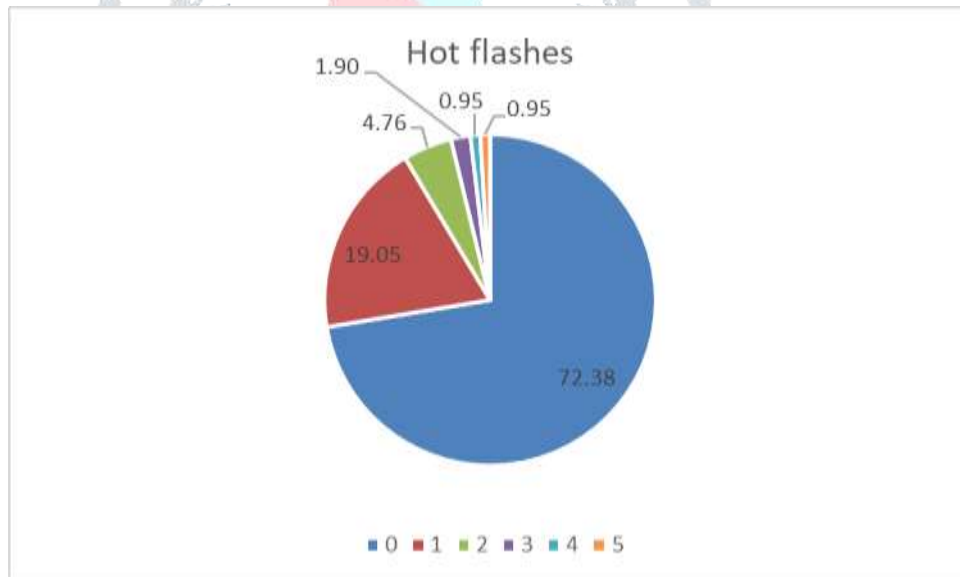
When the females were asked regarding cold sweats during their menstrual phase, 70.48% (74) of the population never experienced cold sweats. 16.19% (17) experiences mild cold sweats. It's moderately felt by 12.38 % (13) during their menstruation. The cold sweats were extreme in 0.95 % (1).

iii. Nausea and vomiting:



When the females were asked regarding nausea and vomiting during their menstrual phase, 68.57 (72) of the population never experienced nausea and vomiting 17.14% (18) experiences mild symptom of nausea and vomiting. It's moderately felt by 8.57 % (9) during their menstruation, while 2.86 % (3) experienced strong symptom of nausea and vomiting. The urge of nausea and vomiting symptom is severe in 1.90 % (2) while it was extreme in 0.95 % (1).

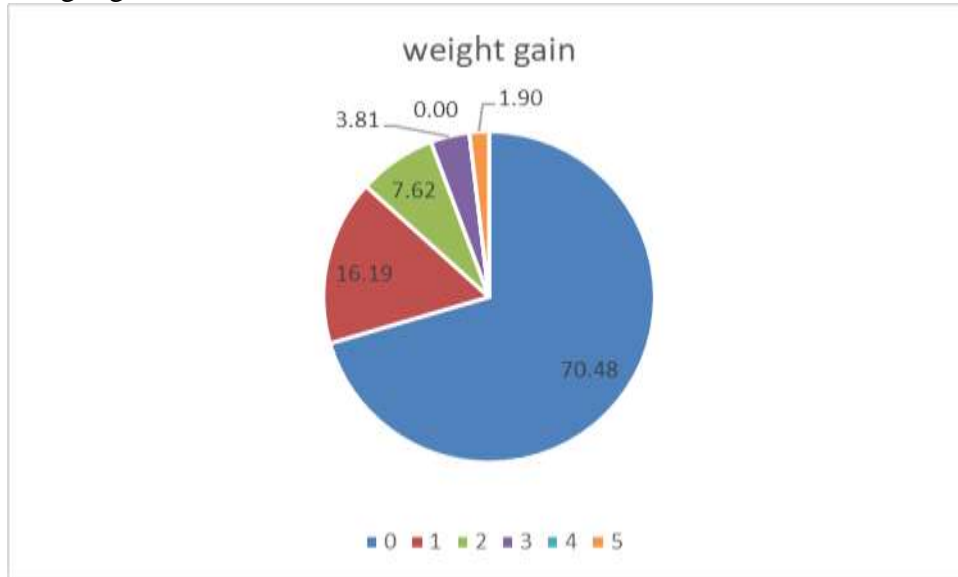
iv. Hot flashes:



When the females were asked regarding hot flashes during their menstrual phase, 72.38 (76) of the population never experienced hot flashes. 19.05% (20) experiences mild hot flashes. It's moderately felt by 4.76 % (5) during their menstruation, while 1.90 % (2) experienced strong hot flashes. The hot flashes sensations are severe in 0.95 % (1). The sensation of hot flashes is extreme in 0.95 % (1).

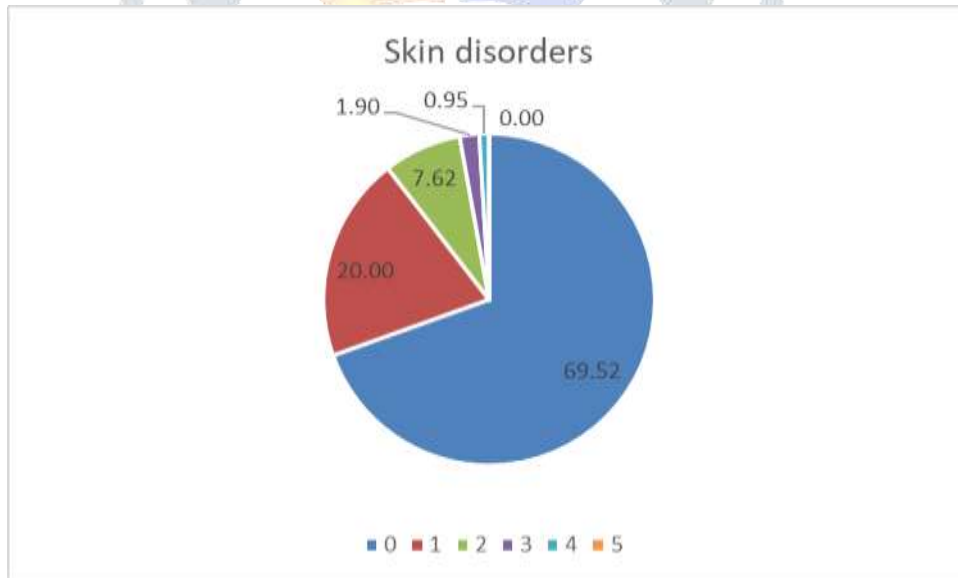
**IV. Water retention**

i. **Weight gain:**



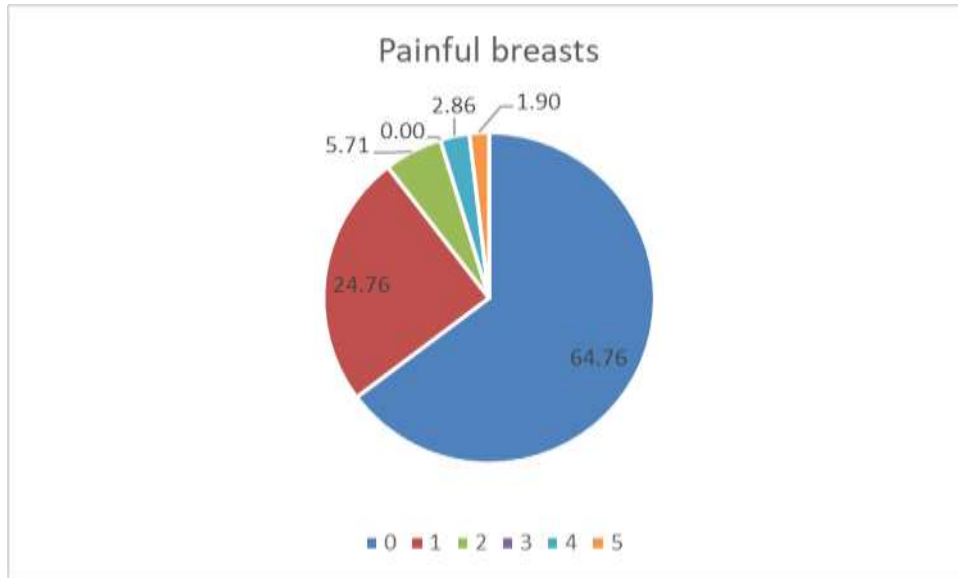
When the females were asked regarding their weight during menstrual phase, 70.48 (74) of the population never experienced weight gain. 16.19% (17) experiences mild weight gain. It's moderately felt by 7.62 % (8) during their menstruation phase, while 3.81 % (4) experienced strong sensation of weight gain. The weight gain change is extreme in 1.90 % (2).

ii. **Skin disorders:**



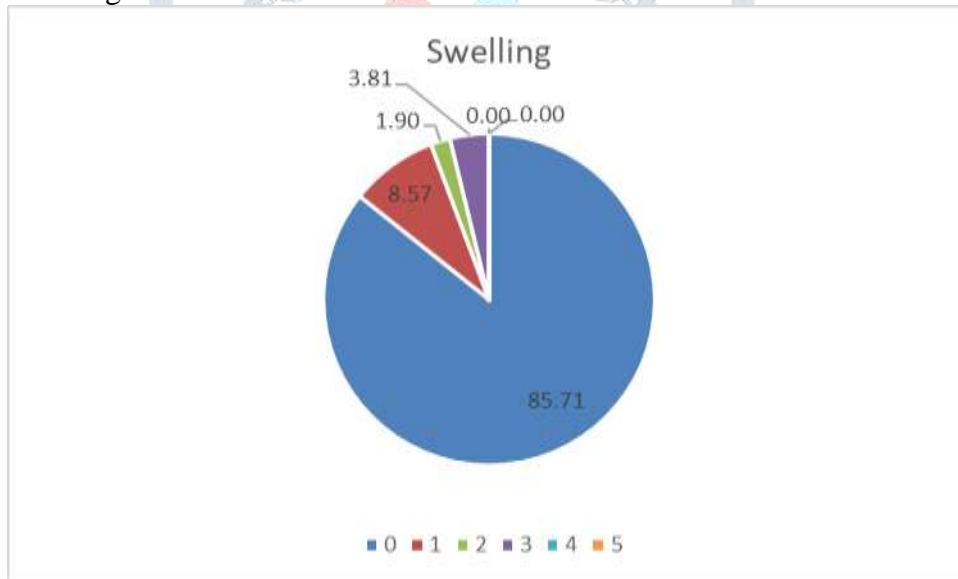
When the females were asked regarding skin disorders during their menstrual phase, 69.52% (73) of the population never experienced skin disorders. 20% (21) have experience mild skin disorders. It's moderately seen by 7.62 % (8) during their menstruation while 1.90 % (2) experienced strong relation to skin disorder. The skin disorders were severely seen in 0.95 % (1).

iii. Painful breasts:



When the females were asked regarding the feeling of painful breast during their menstrual phase, 64.76% (68) of the population never experienced this. 24.76% (26) have experience mild pain over the breast. It's moderately felt by 5.71 % (6) during their menstruation. The painful breasts were severely seen in 2.86 % (3) and it was extreme in 1.90 % (2).

iv. Swelling

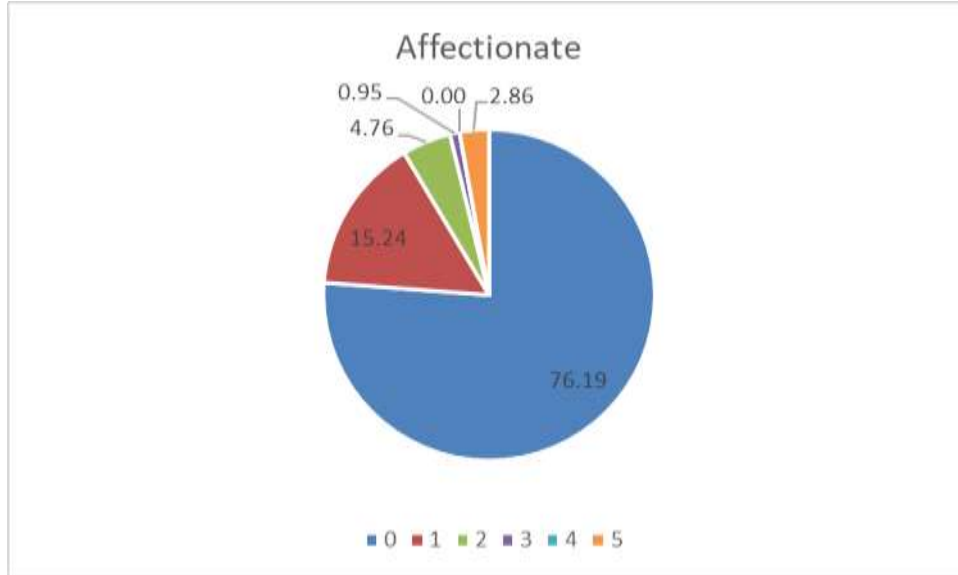


When the females were regarding the presence of swelling in their menstrual phase, 85.71 % (90) of the population never experienced these symptoms while 8.57% (9) experienced mild symptom in their menstrual phase. It was moderately felt by 1.90 % (2) during their menstruation, while 3.81 % (4) experienced the presence of swelling strongly.

V.

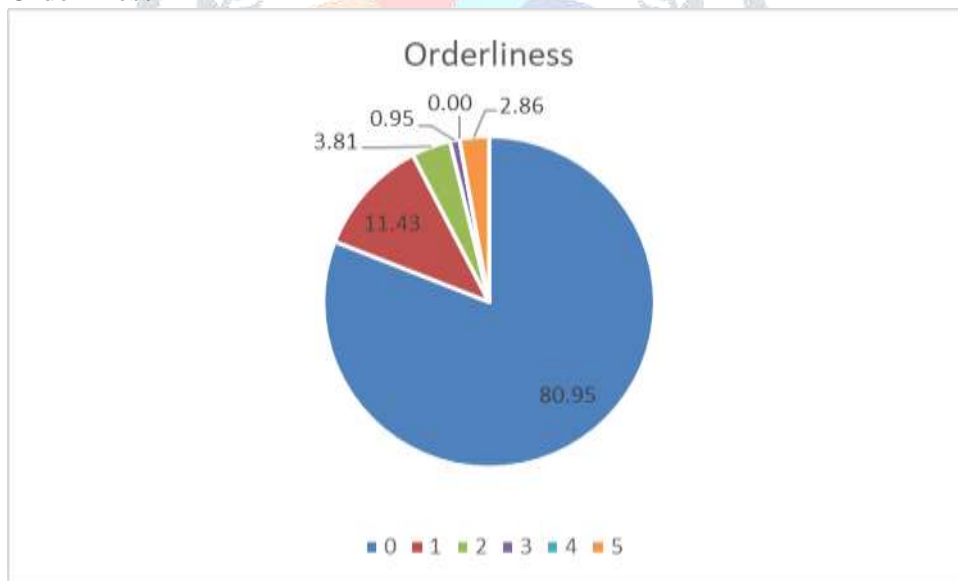
V. **Arousal**

i. Affectionate



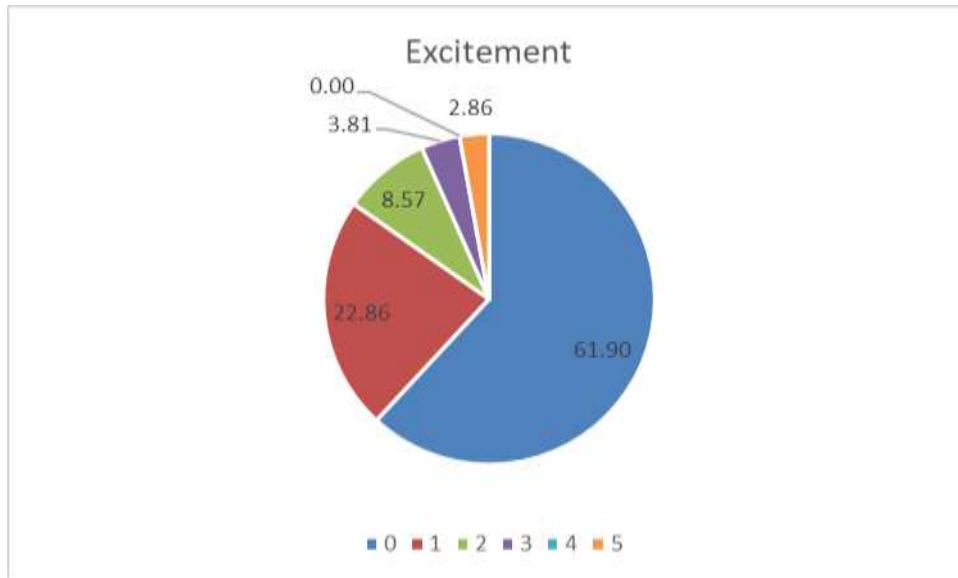
When the females were regarding the feeling of affection in their menstrual phase, 76.19 % (80) of the population never experienced this feel while 15.24% (16) experienced mild feel of affection in their menstrual phase. It was moderately felt by 4.76 % (5) during their menstruation, while 0.95 % (1) experienced it strongly and 2.86% (3) always have this feeling of affection at extreme level during their menstrual phase.

ii. Orderliness



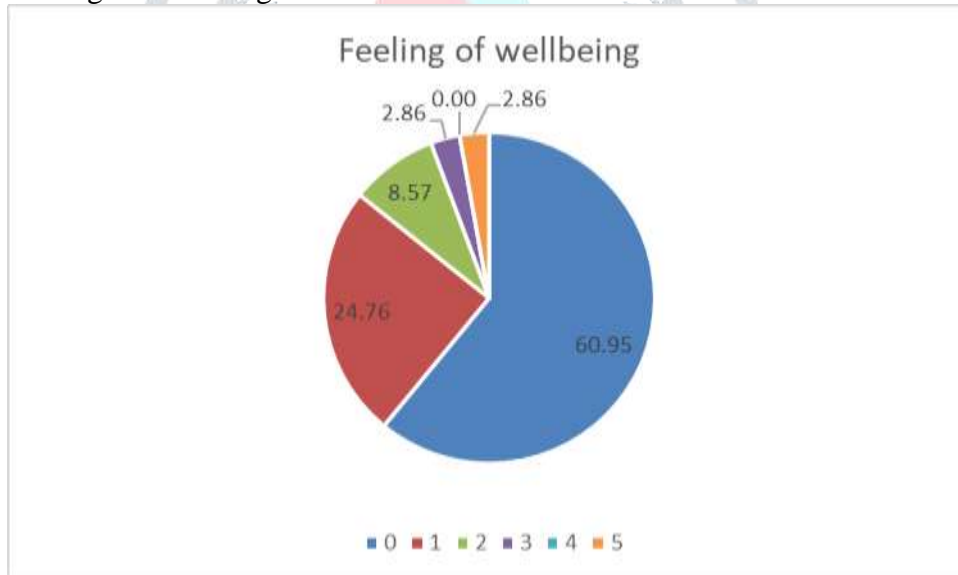
When the females were regarding the presence of orderliness in their menstrual phase, 80.95 % (85) of the population never experienced these symptoms while 11.43% (12) experienced mild symptom of presence of orderliness in their menstrual phase. It was moderately felt by 3.81 % (4) during their menstruation, while 0.95 % (1) experienced it strongly and 2.86% (3) always had this symptom at extreme level during their menstrual phase.

iii. Excitement



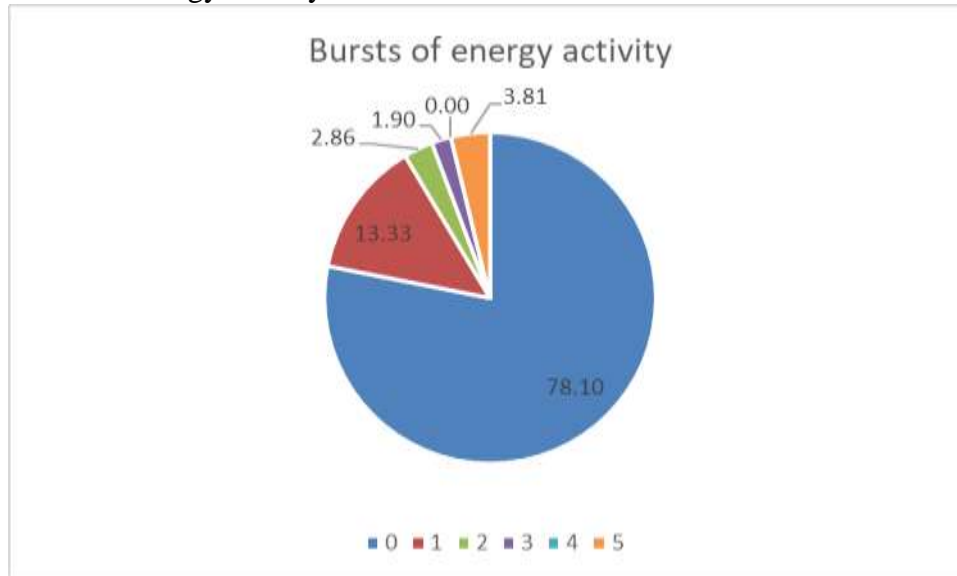
When the females were regarding the feeling of excitement during their menstrual phase, 61.90 % (65) of the population never experienced these symptoms while 22.86 % (24) experienced mild level of excitement in their menstrual phase. It was moderately felt by 8.57 % (9) during their menstruation, while 3.81 % (4) experienced it strongly and 2.86% (3) always had this symptom at extreme level during their menstrual phase

iv. Feeling of wellbeing



When the females were regarding the presence of feeling of wellbeing in their menstrual phase, 60.95 % (64) of the population never experienced these symptoms while 24.76% (26) experienced mild feeling of wellness in their menstrual phase. It was moderately felt by 8.57 % (9) during their menstruation, while 2.86 % (3) experienced the feeling of wellbeing strongly and 2.86% (3) always had this feel at extreme level during their menstrual phase

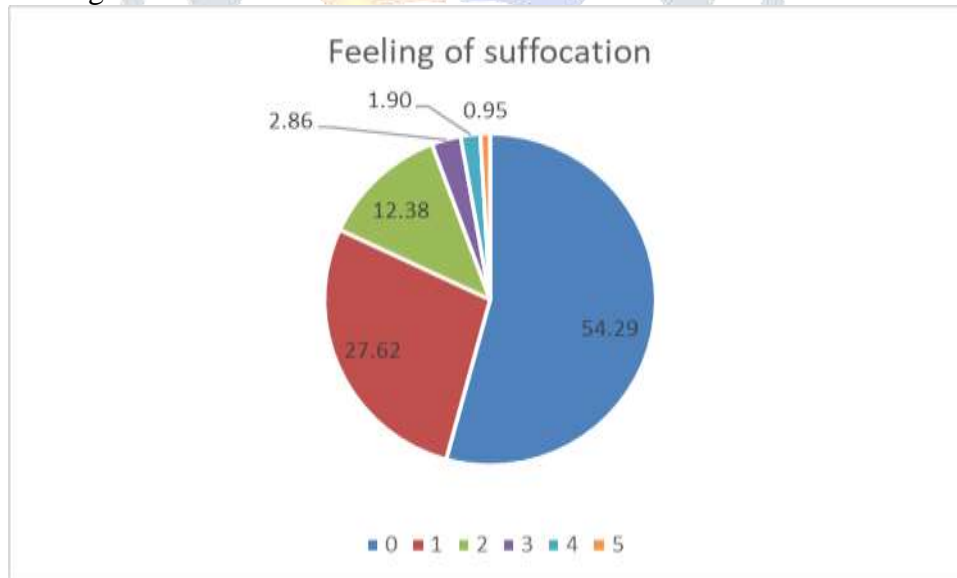
## v. Bursts of energy activity



When the females were regarding the presence of bursts of energy activity in their menstrual phase, 78.10 % (82) of the population never experienced burst of energy while 13.33% (14) experienced mild symptom in their menstrual phase. It was moderately felt by 2.86 % (3) during their menstruation, while 1.90 % (2) experienced this energy burst strongly and 3.81% (4) always had extreme level of bursts of energy during their menstrual phase.

VI. Control

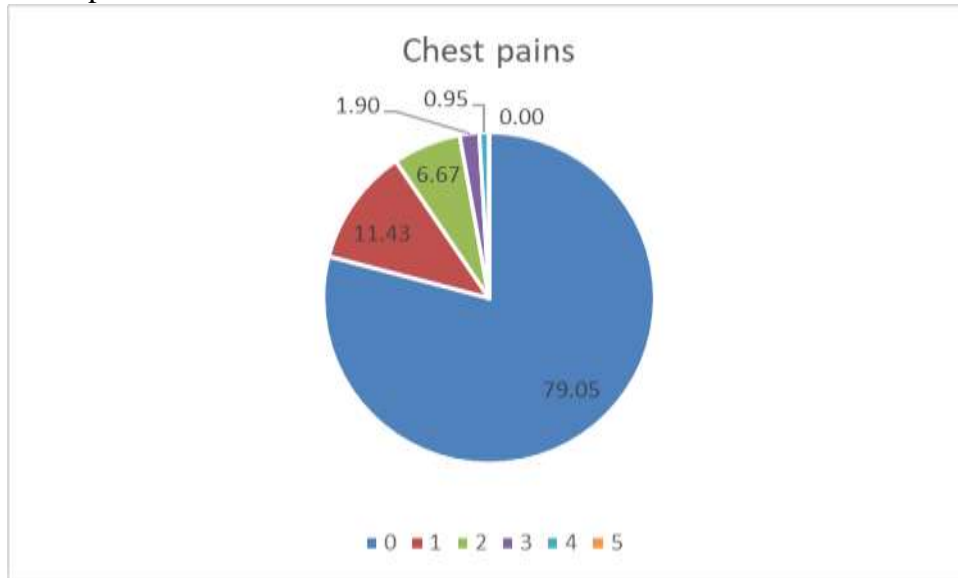
## i. Feeling of suffocation



When the females were regarding the presence of feeling of suffocation in their menstrual phase, 54.29 % (57) of the population never experienced these symptoms while 27.62% (29) experienced mild feeling of suffocation in their menstrual phase. It was moderately felt by 12.38 % (13) during their menstruation, while 2.86 % (3) experienced the feeling of suffocation strongly. In 1.90 % (2) have felt suffocation severely and 0.95% (3) always had this feel at extreme level during their menstrual phase.

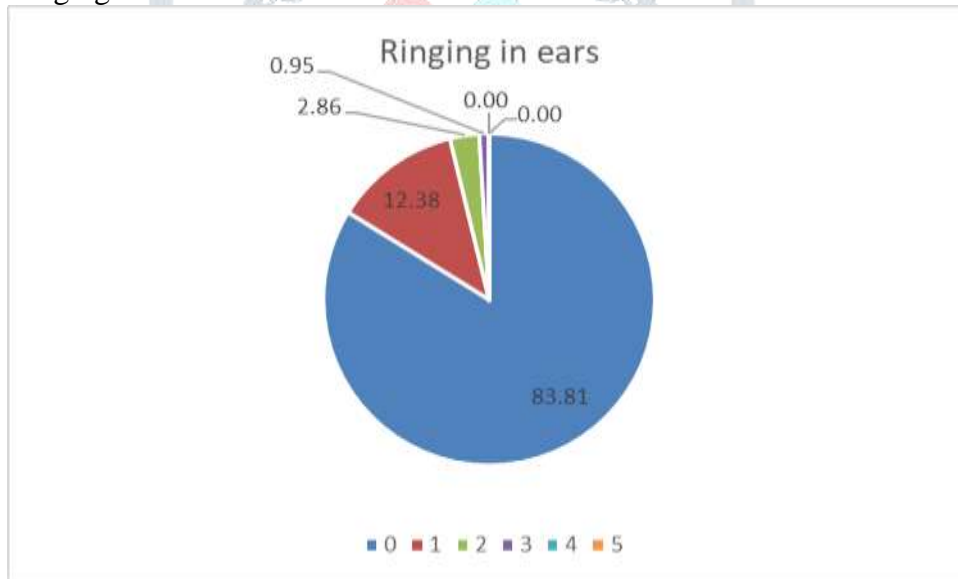


ii. Chest pains



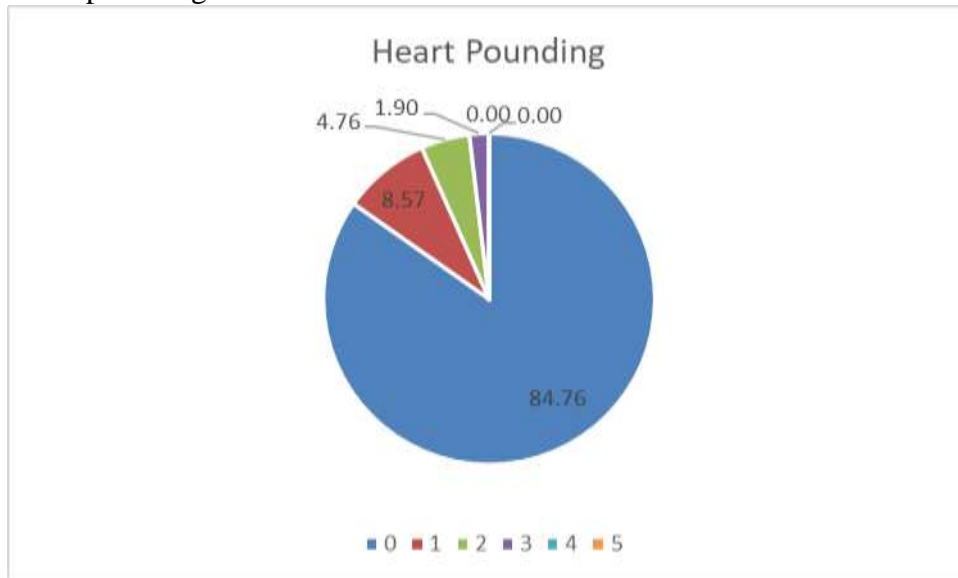
When the females were regarding the presence of chest pains in their menstrual phase, 79.05 % (64) of the population never experienced these symptoms while 11.43% (12) experienced mild feeling of chest pain in their menstrual phase. It was moderately felt by 6.67 % (7) during their menstruation, while 1.90 % (2) experienced the feeling of chest pain strongly. It was in 0.95% (3) at severe level during their menstrual phase.

iii. Ringing in ears



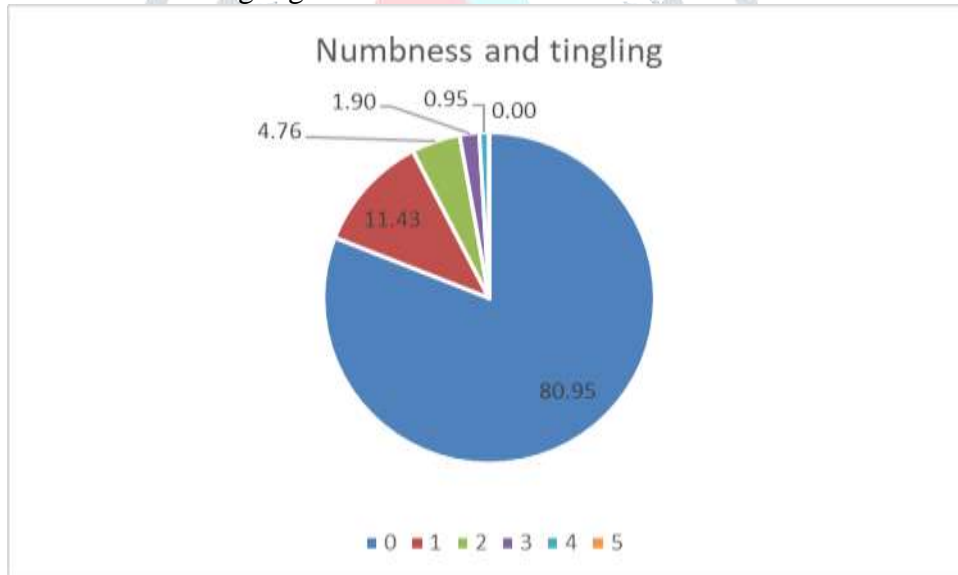
When the females were regarding the feeling of ringing in ears in their menstrual phase, 83.81 % (88) of the population never experienced these symptoms while 12.38% (13) experienced mild feeling of ringing in ears in their menstrual phase. It was moderately felt by 2.86 % (3) during their menstruation, while 0.95 % (1) experienced the feeling of ringing in ears strongly.

iv. Heart pounding



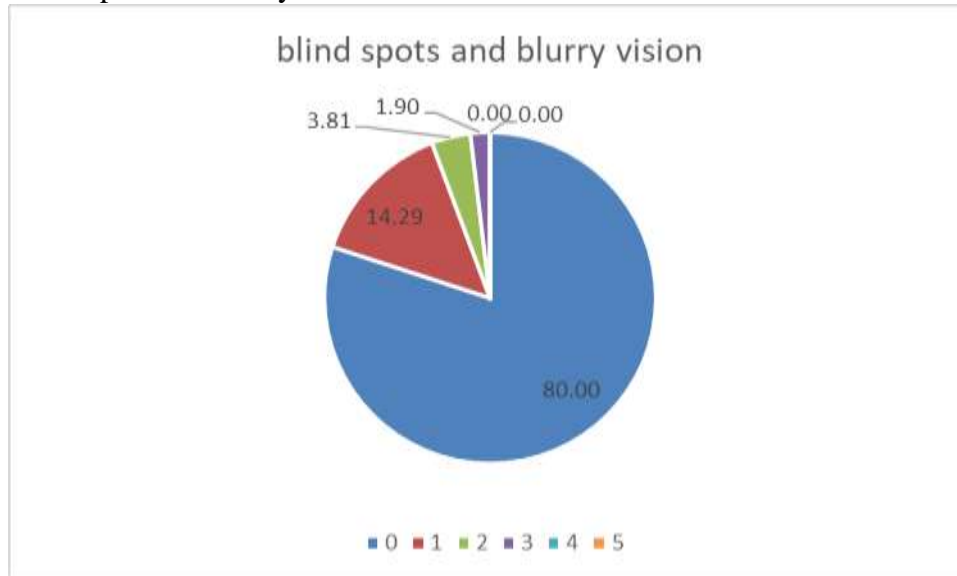
When the females were regarding the presence of feeling of heart pounding in their menstrual phase, 84.76 % (89) of the population never experienced these symptoms while 8.57% (9) experienced mild feeling of heart pounding in their menstrual phase. It was moderately felt by 4.76% (5) during their menstruation, while 1.90 % (3) experienced the feeling of heart pounding strongly

v. Numbness and tingling



When the females were regarding the presence of numbness and tingling in their menstrual phase, 80.95 % (85) of the population never experienced these symptoms while 11.43% (12) experienced mild feeling of numbness and tingling. It was moderately felt by 4.76 % (5) during their menstruation, while 1.90 % (2) experienced the feeling of numbness and tingling strongly and 0.95 % (1) always had this feel at severe level during their menstrual phase.

vi. Blind spots and blurry vision



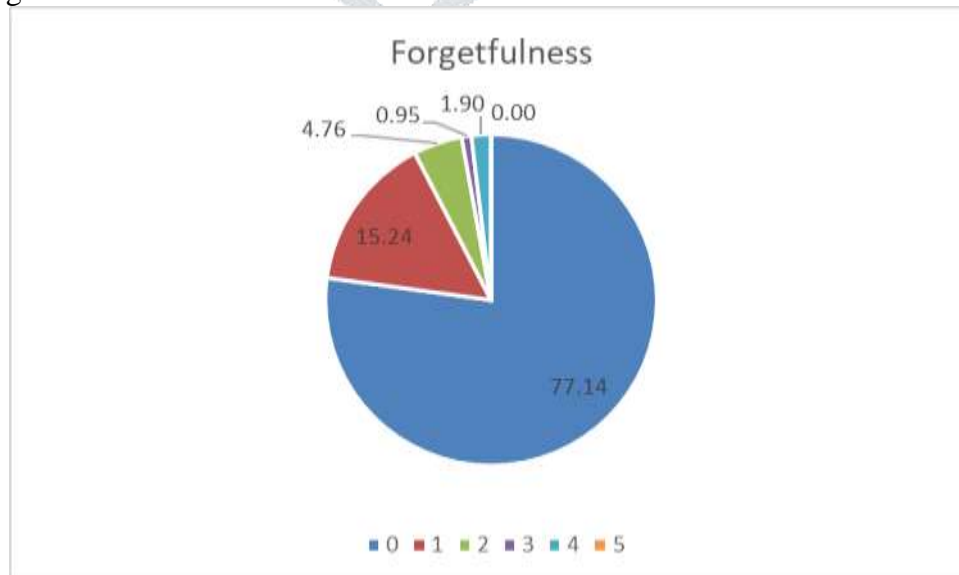
When the females were regarding the presence of blind spots and blurry vision in their menstrual phase, 80 % (84) of the population never experienced these symptoms while 14.29% (15) experienced mild feeling of blind spots and blurry vision in their menstrual phase. It was moderately felt by 3.81 % (4) during their menstruation, while 1.90 % (2) experienced the feeling of blind spots and blurry vision strongly.

VII. Concentration

i. Insomnia

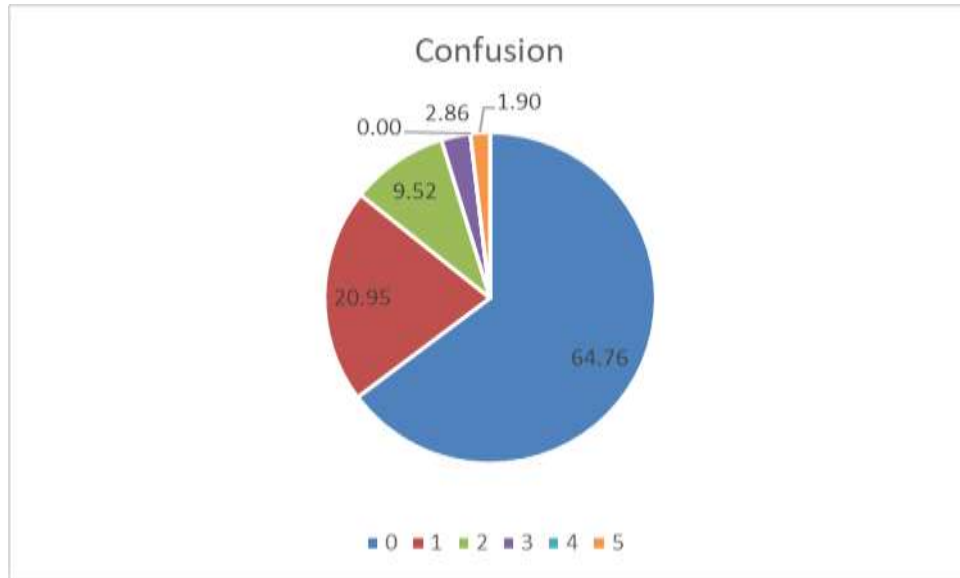
When the females were regarding the presence of insomnia during their menstrual phase, 11.43 % (12) of the population never experienced these symptoms while 29.52% (31) experienced mild symptom in their menstrual phase. It was moderately felt by 26.67 % (28) during their menstruation, while 18.10 % (19) experienced it strongly. This symptom was severe in 8.57% (9) during their menstrual phase whereas 5.71 % (6) experienced cramps to an extreme extent.

ii. Forgetfulness



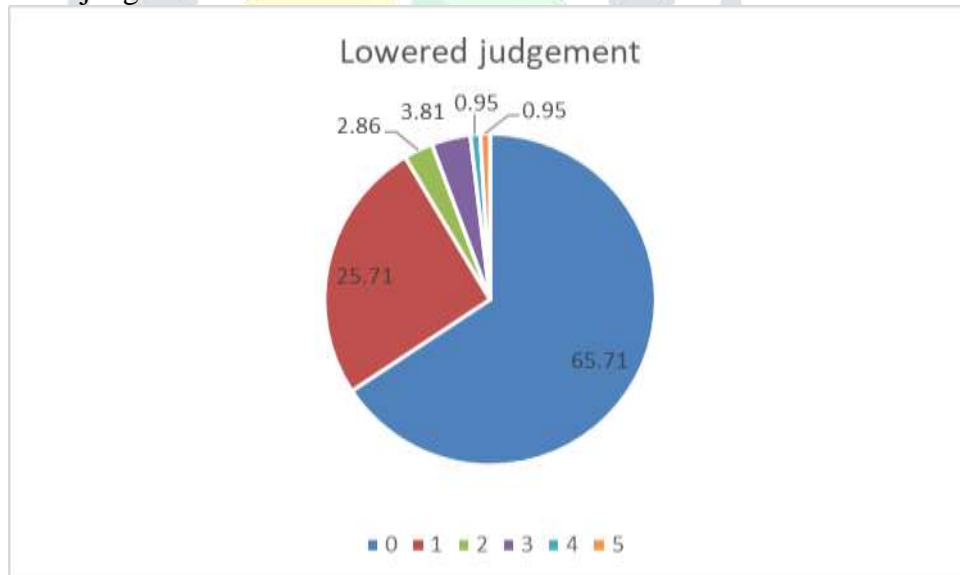
When the females were regarding the forgetfulness they face during their menstrual phase, 77.14 % (81) of the population never experienced these symptoms while 15.24% (16) experienced mild symptom in their menstrual phase. It was moderately felt by 4.76 % (5) during their menstruation, while 0.95 % (1) experienced it strongly. This symptom was severe in 1.90% (2) during their menstrual phase.

iii. Confusion



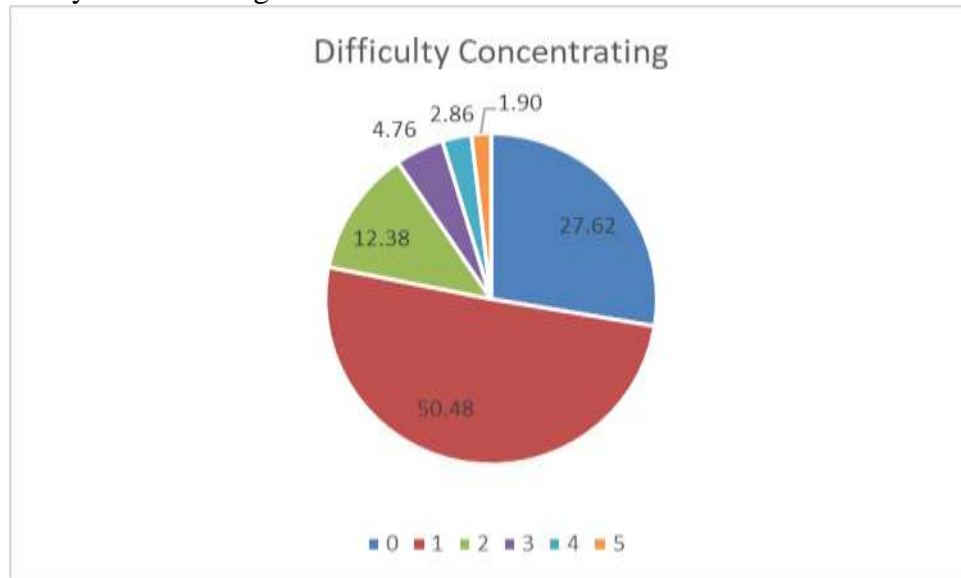
When the females were regarding the presence of confusion during their menstrual phase, 64.76 % (68) of the population never experienced these symptoms while 20.95% (22) experienced mild symptom in their menstrual phase. It was moderately felt by 9.52 % (10) during their menstruation, while 2.86 % (3) experienced it strongly. In 1.90 % (2) experienced forgetfulness to an extreme extent.

iv. Lowered judgment



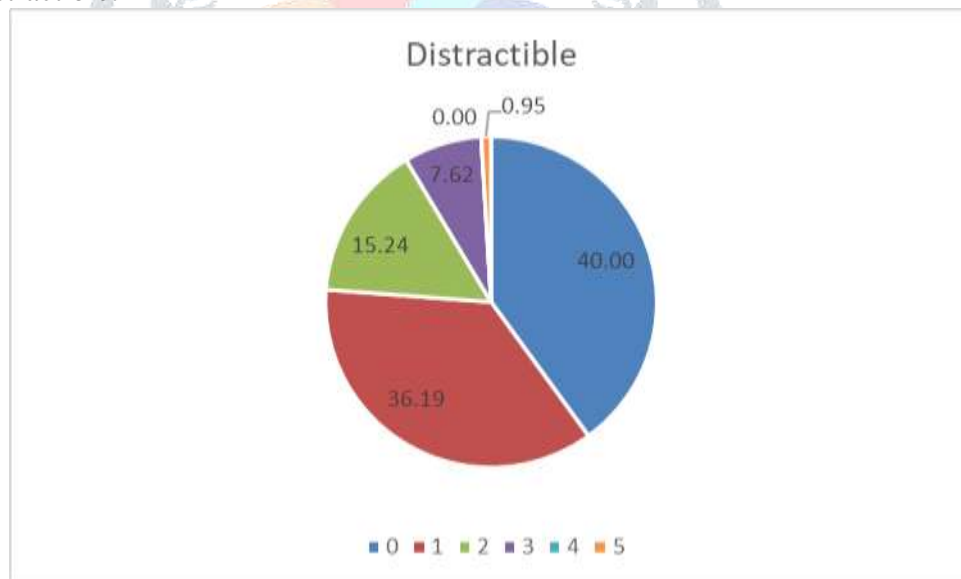
When the females were regarding the presence of lowered judgment ability during their menstrual phase, 65.71 % (69) of the population never experienced these symptoms while 25.71% (27) experienced mild symptom in their menstrual phase. It was moderately felt by 2.86 % (4) during their menstruation, while 3.81 % (3) experienced it strongly. This symptom was severe in 0.95% (1) during their menstrual phase whereas 0.95 % (1) experienced lowered judgment ability to an extreme extent.

## v. Difficulty concentrating:



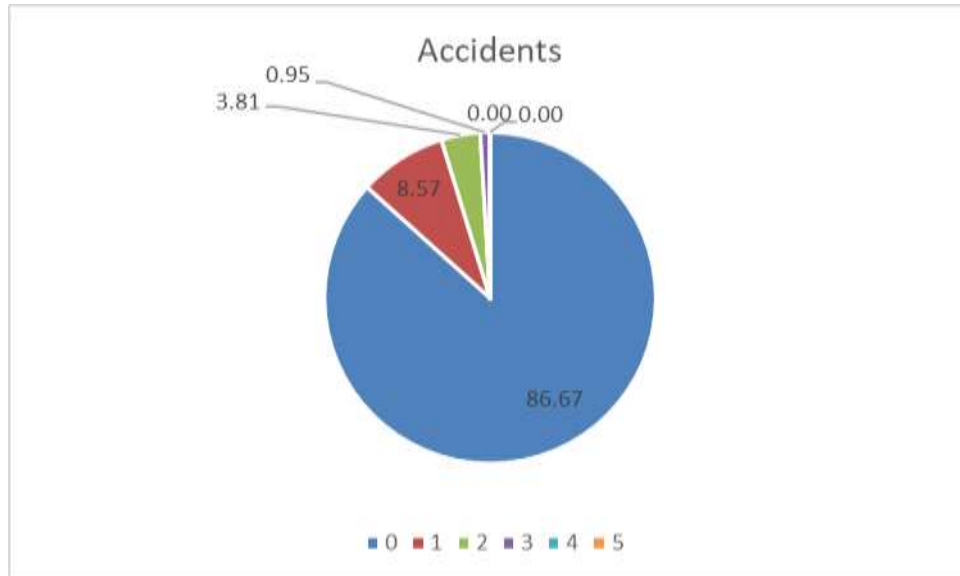
When the females were regarding difficulty in concentrating during their menstrual phase, 27.62 % (29) of the population never experienced these symptoms while 50.48% (53) experienced mild difficulty in their menstrual phase. It was moderately felt by 12.38 % (13) during their menstruation, while 4.76 % (5) experienced it strongly. This symptom was severe in 2.86% (3) during their menstrual phase whereas 1.90 % (2) had trouble in concentrating to an extreme extent.

## vi. Distractible:



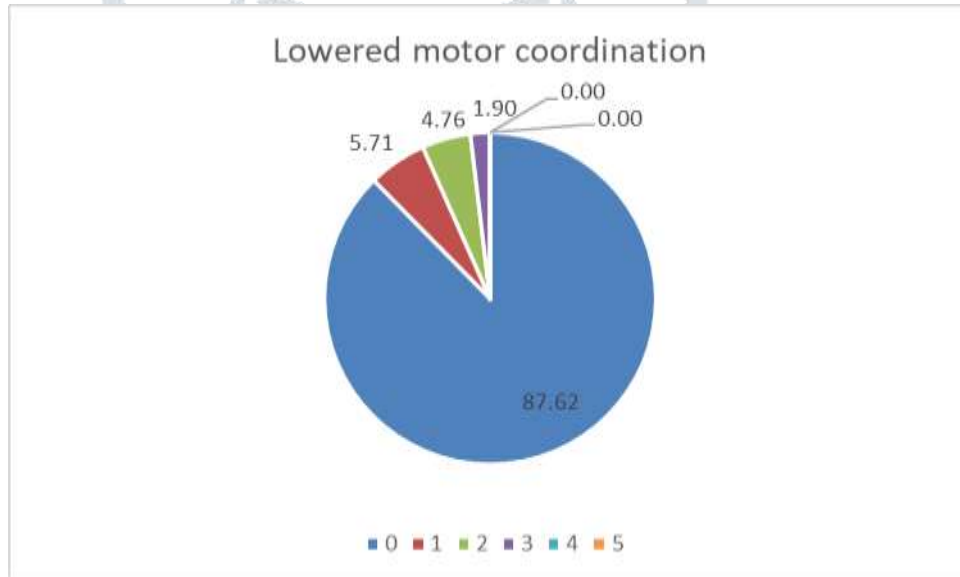
When the females were regarding the presence of distractibility during their menstrual phase, 40 % (42) of the population never experienced these symptoms while 36.19% (38) experienced mild symptom in their menstrual phase. It is moderately felt by 15.24 % (16) during their menstruation, while 7.62 % (8) experienced it strongly. In 0.95 % (1) females experienced distractibility to an extreme extent.

vii. Accidents



When the females were regarding the presence of headache during their menstrual phase, 86.67 % (91) of the population never experienced these symptoms while 8.57% (9) experienced mild symptom in their menstrual phase. It was moderately felt by 3.81 % (4) during their menstruation, whereas 0.95 % (1) experienced it strongly.

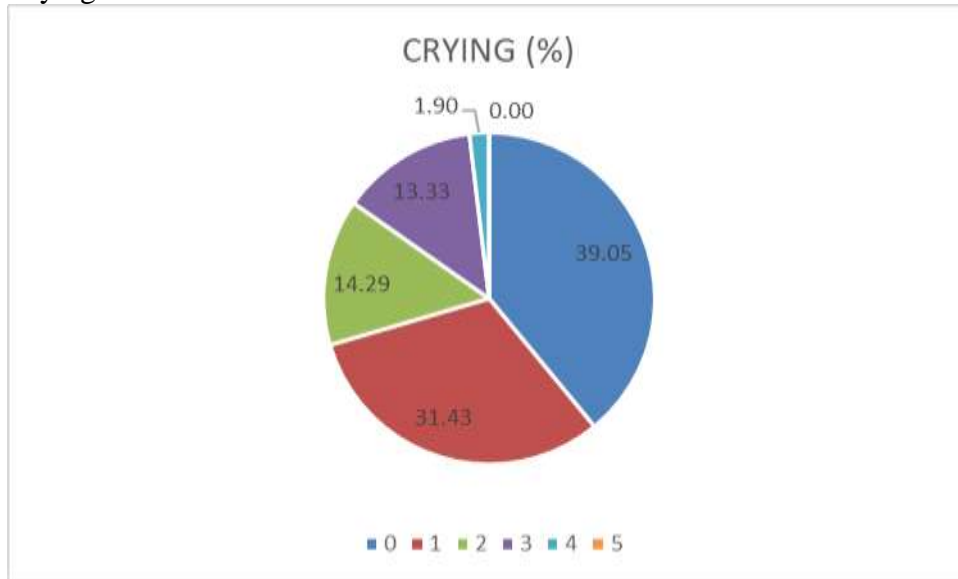
viii. Lowered motor coordination



When the females were regarding the lower motor coordination during their menstrual phase, 87.62 % (92) of the population never experienced these symptoms while 5.71% (6) experienced mild symptom in their menstrual phase. It was moderately felt by 4.76 % (5) during their menstruation, while 1.90 % (2) experienced it strongly.

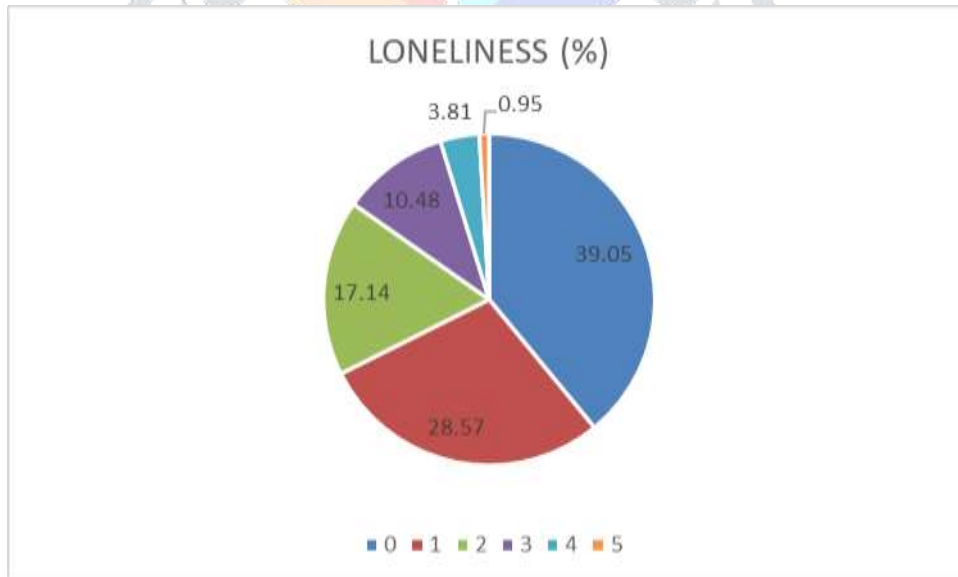
**VIII. Negative effects**

**i. Crying**



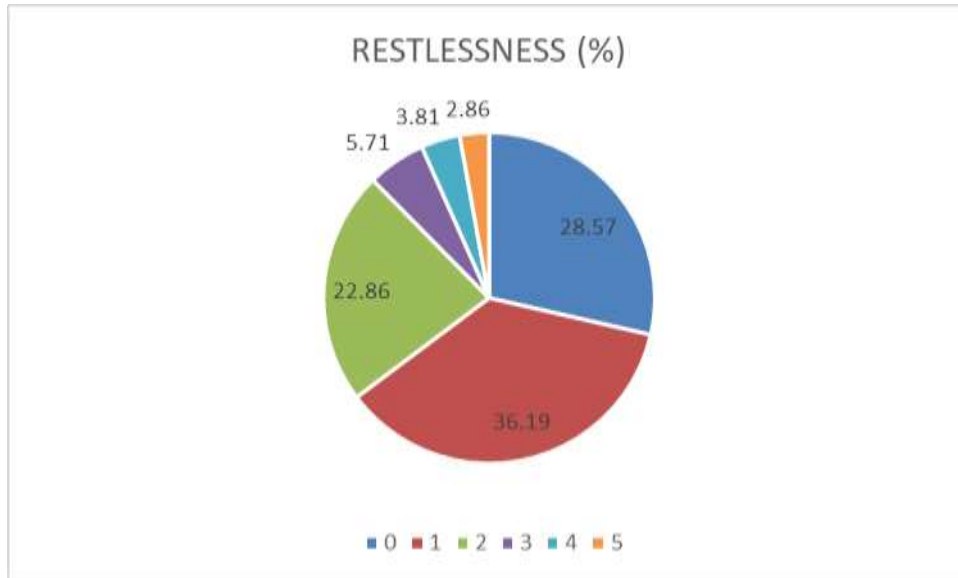
When the females were asked regarding feeling of crying during their menstrual phase, 39.05 % (41) of the population never experienced feeling of crying 31.43% (33) experiences mild feeling of crying. It's moderately felt by 14.29 % (15) during their menstruation, while 13.33% (14) experienced strong feeling of crying. The urge to cry is severe in 1.90 % (2) of the females.

**ii. Loneliness**



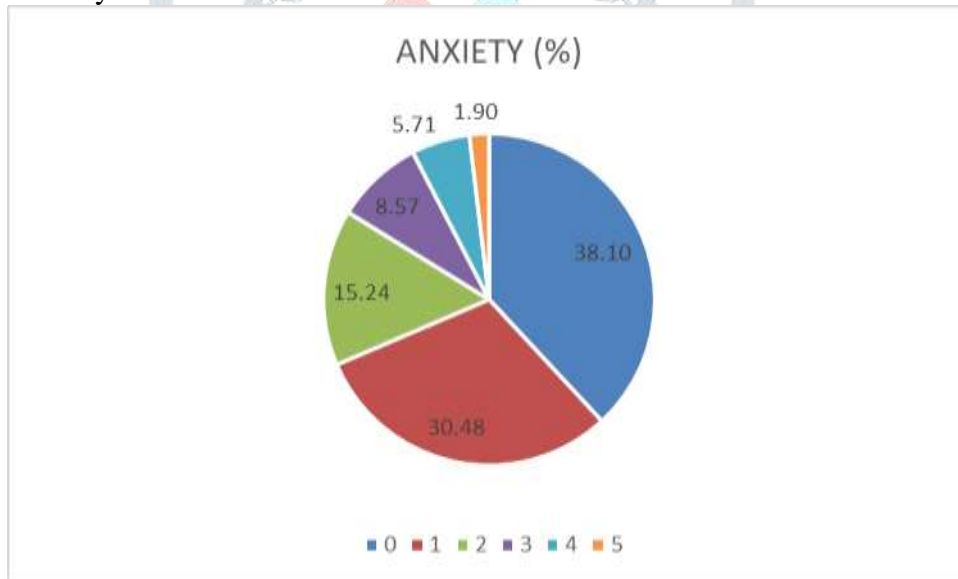
When the females were asked regarding loneliness feeling during their menstrual phase, 39.05% (41) of the population never experienced loneliness 28.57% (30) experiences mild loneliness. It's moderately felt by 17.14 % (18) during their menstruation, while 10.48 % (11) experienced strong symptom of loneliness. The loneliness symptom is severe in 3.81 % (4) while it was extreme in 0.95 % (1).

iii. Restlessness



When the females were asked regarding restlessness during their menstrual phase, 28.57% (30) of the population never experienced restlessness 36.19% (38) experiences mild restlessness. It's moderately felt by 22.86 % (24) during their menstruation, while 5.71 % (6) experienced strong restlessness. The restlessness symptom is severe in 3.81 % (4) while it was extreme in 2.86 % (3).

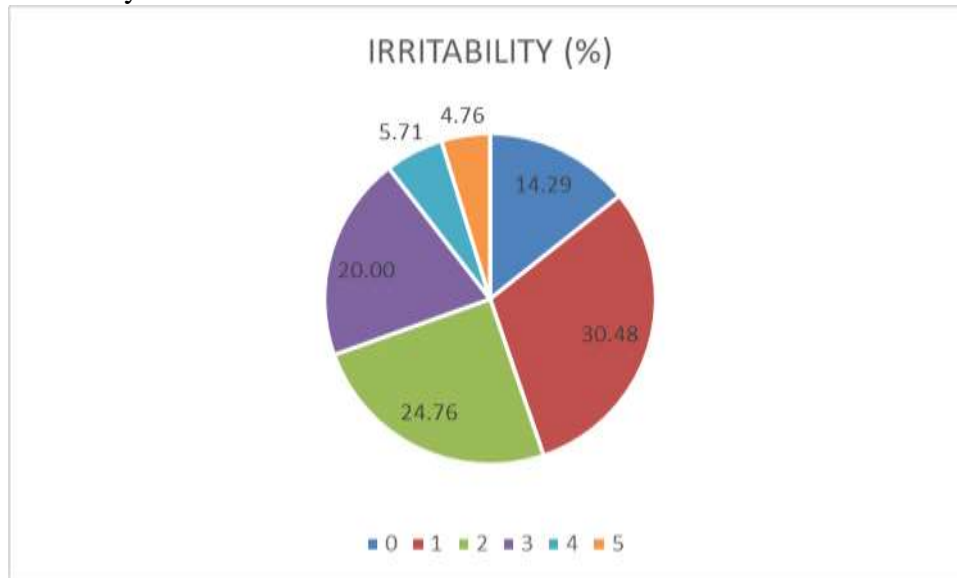
iv. Anxiety



When the females were asked regarding the anxiety they felt during their menstrual phase, 38.10% (40) of the population never experienced anxiety 38.48% (32) experiences mild symptom of anxiety. It's moderately felt by 15.24 % (16) during their menstruation, while 8.57 % (9) experienced strong symptom of anxiety. The feeling of anxiety is severe in 5.71 % (6) while it was extreme in 1.90 % (2).

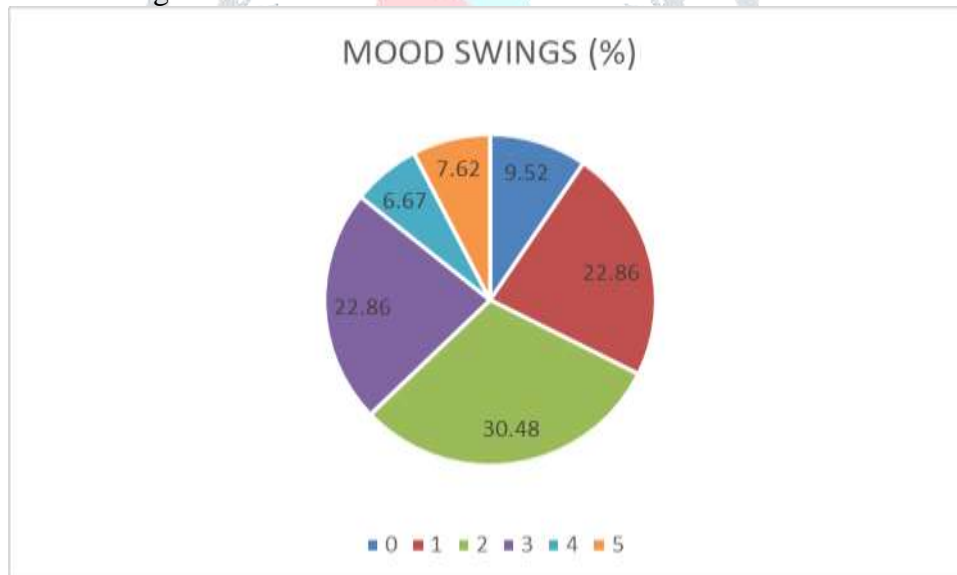


## v. Irritability



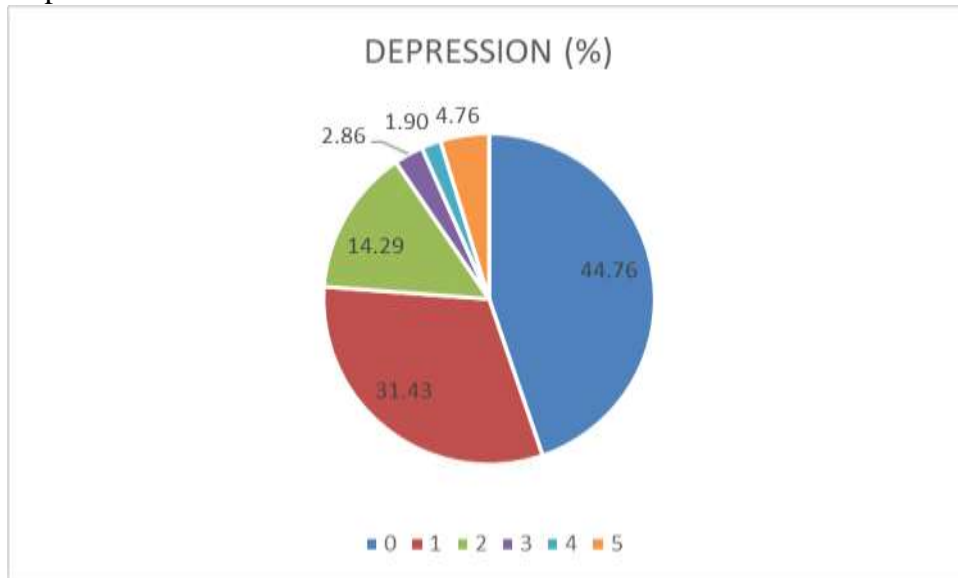
When the females were asked regarding irritability during their menstrual phase, 14.29 % (15) of the population never experienced irritability 30.48% (32) experiences mild irritability. It's moderately felt by 24.76 % (26) during their menstruation, while 20.0 % (21) experienced strong symptom of irritability. The irritability symptom is severe in 5.71 % (6) while it was extreme in 4.76 % (5).

## vi. Mood swings



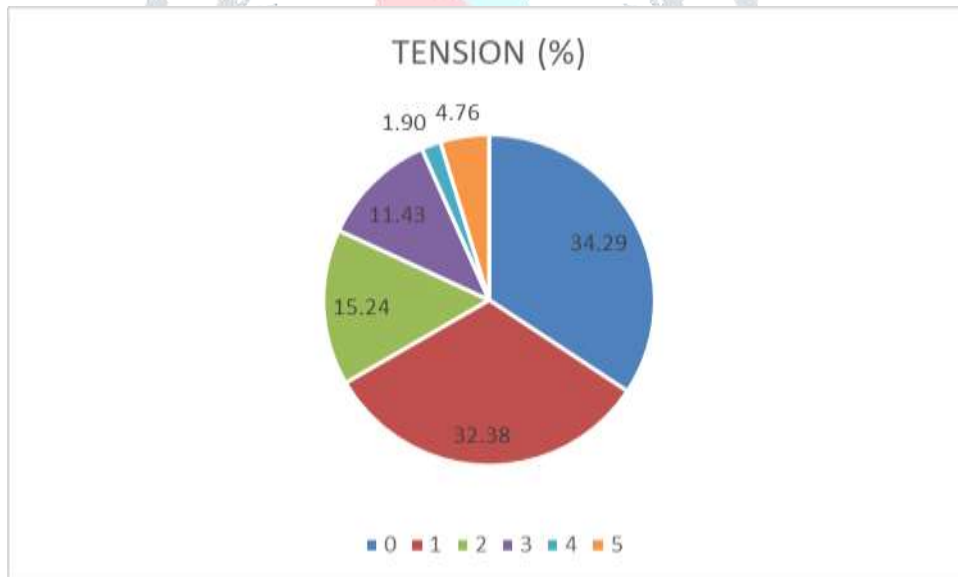
When the females were asked regarding mood swings, they felt during their menstrual phase, 9.52 % (72) of the population never experienced mood swings 22.86% (24) experiences mild symptom mood swings. It's moderately felt by 30.48 % (32) during their menstruation, while 22.86 % (24) experienced strong mood swings phases. The mood swings are severe in 6.67 % (7) while it was extreme in 7.62 % (8).

vii. Depression



When the females were asked regarding depressive feeling during their menstrual phase, 44.76 % (47) of the population never experienced depression 31.43% (33) experiences mild symptom depression. It's moderately felt by 14.29 % (15) during their menstruation, while 2.86 % (3) experienced strong depression symptom. The depression feeling is severe in 1.90 % (2) while it was extreme in 4.76 % (5).

viii. Tension



When the females were asked regarding tension during their menstrual phase, 34.29 % (36) of the population never experienced tension 32.38% (34) experiences mild tension. It's moderately felt by 15.24 % (16) during their menstruation, while 11.43 % (12) experienced strong symptom of tension. The tension symptom is severe in 1.90 % (2) while it was extreme in 4.76 % (5).

## Discussion

Dysmenorrhea is a serious health condition that has a detrimental impact on women's life throughout their menstrual cycles. When adolescents reach their ovulatory cycles, usually within the first year after menarche, primary dysmenorrhea sets in. The increased synthesis of prostaglandins in the endometrium throughout the ovulatory cycle is thought to be the cause of the pain. In this study, regular menstrual cycles were found to be a risk factor for dysmenorrhea

Women with regular cycles are thought to ovulate at the same time each month. Given the likelihood of women with a regular menstrual cycle to ovulate on a regular basis, the prostaglandin generated during ovulation is hypothesized to cause dysmenorrhea. The syndrome of dysmenorrhea is known to encompass a wide variety of physical (and affective) symptoms. Physical weariness (fatigue) and mental instability manifesting as nervousness/irritability were the most common symptoms related with dysmenorrhea in our study. The 'stomach cramps' and the 'mood swings' accompanied with the 'decreased concentration' were by far the most frequently reported complaint among sufferers in the present study. Our study did not specifically assess school absentee rates.

We found that almost all dysmenorrhea subjects were limited in their school activities most or every menstrual period. In addition, girls with dysmenorrhea stated that their activities in general have been restricted by dysmenorrhea. Almost half of the women who took part in the study reported tiredness or fatigue as a symptom of their dysmenorrhea. It has also been discovered that girls suffering from dysmenorrhea report that it has a negative impact on their school or work performance. This adverse effect on ability to study has serious implications with respect to school achievement and prospects. It has been concluded that dysmenorrhea affects daily activities, school attendance, and limitations in social activity/functioning.

## Conclusion

Total prevalence of dysmenorrhea is 58.1%.

The prevalence of dysmenorrhea and its effect of cramps in general is high among young females of Parul university with the prevalence of 100% out of which 29.52% have mild symptoms, 26.67% have moderate symptoms, 18.10% experience strong symptoms, 8.57% are severely affected and 5.71% are extremely affected.

The most common physical and psychological symptoms are fatigue and difficulty in concentrating as well as they will be suffering from different mood swings. Due to which there is loss of interest and will feel tired in performing certain activities and due to which they will avoid doing those activities. Severe symptoms have negative impact on quality of life and impaired work performance and social performances.

the young girls will avoid going to school due to difficulty in concentrating and mood swings and which will ultimately affect their academics. They will also avoid participating in social activities as they get tired easily and will prefer to stay at home.

## AABBREVIATIONS

PMS : premenstrual syndrome

## DECLARATIONS:

Ethics approval and consent to participate: approval was taken from university ethical committee but the participants consent was taken through the Google forms that were given to them

Consent for publication: Written informed consent for publication was already done through Google forms and those who gave consent were only included in the study

Availability of data and material: Not applicable.

Competing interests: The authors declare that they have no competing interests

Funding: no funding was provided for this research work by the college authorities

Authors' contributions: Dr Shaily Parekh did the work from the making the introduction to analysing the results and all the other typing work under the guidance of Dr. Madhavi Sontakkey who is my guide and the proof reading was done by Dr Madhavi Sontakkey

Acknowledgement: not applicable

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