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## Precocious Puberty Age – A Survey Report in Pipri (Meghe)

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**Abstract:** *The aim of the present survey was to examine the critical study of early puberty age in girls and boys separately, with reference to the Pipri (Meghe), Wardha. The critical study of the puberty was influenced by many factors like present condition of hormones and physical appearance, mostly found in India. The physical and mental changes occurred during pubertal age found in girls and boys were studied through a systematic research with the survey. The researcher employed a research design in which self-administered systemic questionnaires were used to collect data from a sample of 30 students from the school. Data were analyzed using the statistical package, and in particular, using means and the independent t-test. Results reflect 60-80% of girls and boys cause's early puberty and only 60 -70% girls having extreme pain and feeling uncomfortable during their periods, 35% of students can't give any information regarding their physical changes in the body whereas about 90% of them showed skin changes and early pitch of the voice.*

*From the present investigation, one can give the conclusion that puberty occurs early at the age of 9-13 years in girls whereas 14-15 years in boys. Special attention and monitoring the life style patters of individuals can resolve such puberty related problems scientifically.*

**Keywords:** *Precocious Puberty Age, Girls, Boys, Pipri (Meghe).*

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### 1. INTRODUCTION

Precocious puberty is defined as the appearance of secondary sex characteristic at an age younger than 8 years in girls and 9 years in boys or the presence of menstruation before 9 years in girls 1-3. The incidence of precocious puberty is estimated to be 1 in 5,000 to 1 in 10,000 children with a high female to male ratio. The etiologies of precocious puberty can be classified into 3 categories: gonadotropin dependent precocious puberty or central precocious puberty (CPP), gonadotropin-independent precocious puberty or pseudo precocity, and variants of puberty such as premature the larche and premature adrenarche. The clinical presentations in each category are different which leads to distinct laboratory investigations for definite diagnosis, for evaluation of precocious puberty and to compare the clinical presentations in each category of patients in terms of the age incidence growth duration of signs of puberty before initial evaluation, and the diagnostic investigations of patients with precocious puberty over the 15 years period. Even if they may be similar in appearance each one is related to different factors, has separate genetic and neural control mechanisms, and is investigated by different external circumstances. The experts don't all agree but we can safely say that on average puberty begins for girls between the ages of 8 and 13. That's an average – which means that some perfectly normal girls will start puberty before the age of 8 and some perfectly normal girls will start puberty after the age of 13. On average, puberty begins for boys between the ages of 10 and 15.

Some perfectly normal boys will start puberty before the age of 10 and some perfectly normal boys will start puberty after the age of 15. Puberty doesn't start and end with breast growth and getting a period for girls, or with a voice that has deepened for boys. It usually takes about 3-4 years to get through puberty. But there are some people who complete the process in just 2 years. Puberty is starting earlier and earlier – especially for girls.

There are a lot of theories as to why this may be happening – including changes in the food we eat, the presence of pesticides, hormones, and preservatives in many foods, changes in our eating habits, and environmental degradation – but there are no definite answers yet. Puberty is a period of physical, hormonal, and psychological transition from childhood to adulthood, with accelerated linear growth and achievement of reproductive function. An effective pubertal onset requires palatial hypothalamic secretion of GnRH stimulating the secretion of gonadotropins by the anterior pituitary gland (LH = luteinizing hormone and FSH = follicles stimulating hormone). Gonadotropins stimulate the gonads and exert a negative feedback effect on the hypothalamus, whereas gonadal steroids (T = testosterone, produced by the testis, and E2 = estradiol, produced by the ovaries) inhibit both hypothalamus and anterior pituitary gland. This process is named gonadarche (1-3). Gonadarche is often preceded by adrenarche a process ACTH-independent (adrenocorticotrophic hormone) and responsible for the secretion of androgens (DHEA = dehydroepiandrosterone and DHEAS = DHEA sulfate) by the adrenal zonareticularis. Adrenarche is clinically characterized by the development of axillary odor, pubic hair, and skin oiliness, whereas in gonadarche the initial clinical manifestation is thelarche in girls and a bilateral increase in testicular volume in boys. The classical definition of precocious puberty is the development of secondary sexual characteristics before the age of 8 years or menarche before the age of 9 years in girls and any secondary sexual characteristic before the age of 9 years in boys.

## **2. RESEARCH AIM AND OBJECTIVES**

The aim and objectives of present project work:

**Aim:** To conduct a survey and record the observations regarding the problem of precocious puberty faced by a specific age group.

**Objectives:**

- 1) To analyze the problem of increasing precocious puberty.
- 2) To set a standard mark for all the conditions faced by the present age group of individuals.
- 3) To rule out the exact reason for the problem and to reach the solution for it.

## **3. LITERATURE REVIEW**

Charles Sultan et. al. (2012), was studied Clinical Expression of Precocious Puberty in Girls. This paper is aimed at a theme that premature development of breast or pubic hair in a prepubertal girl used to raise questions and concerns from the families a wide range of clinical expressions of precocious puberty in girls and not all presentations are considered to be true precocious puberty. A decision on therapeutic management is based on clinical, biological and radiologic examinations, and LHRH analogous treatment should be limited to central precocious puberty before the age of 8 years.

Kaplowitz P. B. et. al. (1999), was studied Re-examination of the age limit for defining when puberty is precocious in girls and boys and implications for evaluation and treatment.

Kletter G. B. et. al., was studied a report on clinical characteristics, growth pattern, endocrine data and pathological testicular findings. To knowledge, the present data on the first one reported with girls and boys.

Barker, D. J. et. al., (2008), was studied the possible link between the pubertal growth of girls and breast cancer.

Mul D. et. al., (2001) was studied on effect of pubertal early by GnRH by changing body structure for better understanding of the clinical presentation should improve the therapeutic indication, especially concerning the use of LHRH analogues, which should be limited to CPP before the age of 8 years as this particular situation is liable to compromise final adult height, according to the clinical, biological and radiologic data.

## **4. RESEARCH METODOLOGY**

The study of this research was conducted with self-design structured closed ended questionnaire with 30 students. Using purposive sampling method, questionnaires were distributed to sample size of 30 students, category of girls and boys. Data collected from dependent and independent variables were assessed, analyzed and interpreted with descriptive statistics.

## **5. RESEARCH HYPOTHESIS**

A good correction was observed by providing the dimensions to boys and girls.

### **a. Research Design**

#### **1. Aim**

To conduct a survey and record the observations regarding the problem of precocious puberty faced by specific age group.

#### **2. Geographical Area**

The survey has been conducted in Pipri (Meghe).

#### **3. Formulating the objective of the study which is as follows**

- i. To analyze the problem of increasing precocious puberty.
- ii. To set a standard mark for all the conditions faced by the present age group of individuals.
- iii. To rule out the exact reason for the problem and to reach the solution for it.

#### **b. Type of Survey**

My research study falls under descriptive research. This includes survey and fact finding enquires of different kinds.

#### **4. Sampling Design**

Sampling design covers a method of selection, sample structure and plans for analyzing for 14 girls and 14 boys.

#### **5. Research Plan**

The research plan is the main body or the blue print in which the researcher carries the research. The research plan consists:

- i. Data sources
- ii. Systematic sampling
- iii. Research approaches

##### **i. Data source**

The information may be collected from primary or secondary both. Primary data are those, which are gathered specifically for the project at hand directly e.g., through questionnaires and interviews.

In the present study, the information is intended to be gathered from primary as well as secondary sources.

##### **A. Primary Data**

- Questionnaires
- Interviews
- Observation

##### **B. Secondary Data**

- Magazines
- Journals
- Newspapers

#### **Data Collection**

In this research, two types of data have been collected to gather the information.

1. Primary Data
2. Secondary Data

##### **1. Primary Data Collection**

###### **a. Questionnaire method**

To reduce the complexity of data collection, I constructed questions covering all my objectives in a single questionnaire. In all, I designed nine questions to cover all the aspects of my objectives. The method was to approach respondents visiting the students of Pipri (Meghe). I experienced no problem while commencing this procedure. We will have a look at a questionnaire at the end of this report.

###### **b. Interview Method**

I have used personal interview method to explore needs, desires and feelings of some of the respondents. It has provided the great insight into my problems. I generally asked questions in a face-to-face contact with the respondents after filling their questionnaire.

## 2. Secondary Data

- a. Magazines.
- b. Journals.
- c. Books.
- d. Newspapers.

## ii. Systematic Sampling

An element of randomness is usually introduced into this kind of sampling by using random numbers to pick up the unit with which to start. This procedure is useful when sampling frame is available in the form of a list. In such a design the selection process starts by picking some random point in the list and every nth element is selected until the desired number is secured.

## iii. Research Approaches

The research approach applied in this project was personal survey approach. In which the researcher undertook observation of all related consumers and take personal interview of consumers.

## DATA PRESENTATION AND ANALYSIS

Data presentation and analysis is a process of systematically applying statistical and /or logical techniques to describe and illustrate, condense and recap, and evaluate data.

### Questionnaire for Boys

#### 1. At what age did you start with puberty?

- a) 6-9yr
- b) 9-10yr
- c) 10-12yr
- d) Cannot say

a) 0%	b) 22.72%	c) 27.27%	d) 22.72%
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(\* Represents mean  $\pm$  S. D.) (n=3)

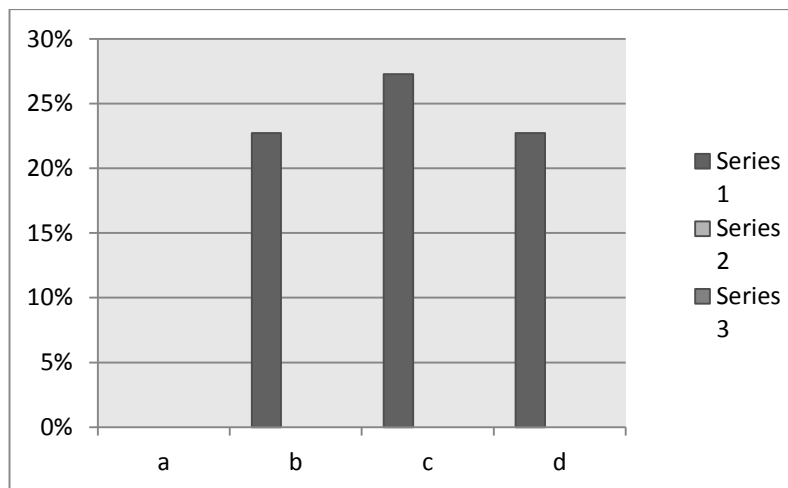


Fig. 1

2. Do any rapid growth of penis was observed?

- a) Yes
- b) NO

a) 50%	b) 22.27%
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(\*Represents mean ± S. D.) (n=3)

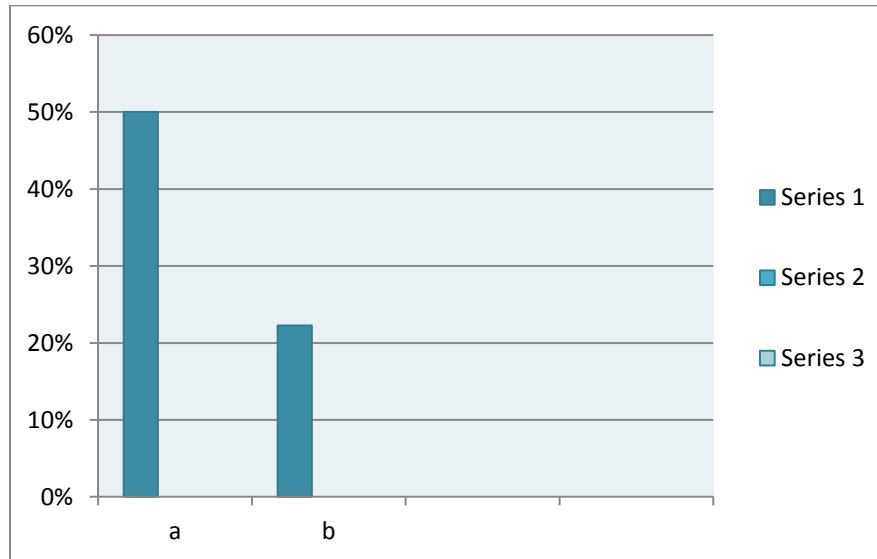


Fig. 2

3. How old are you when you experienced first ejaculation.

- a) 9-10yr
- b) 10-12yr
- c) 14-15yr

a) 9.09%	b) 14-15%	c) 22.72%
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(\* Represents mean ± S. D.) (n=3)

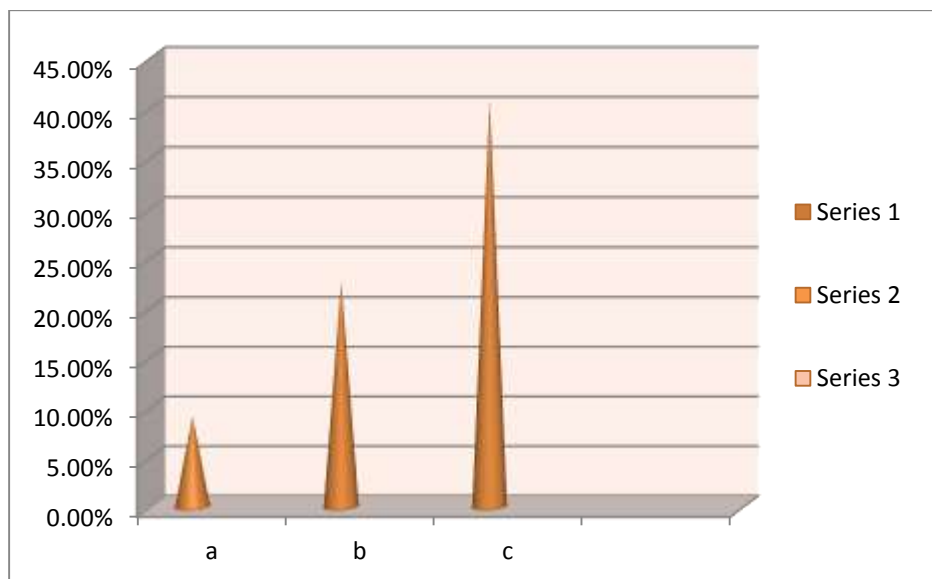


Fig.3

4. During the rapid growth of penis did you observe any pubic hairs?

- a) Yes
- b) No

a) 68.18%	b) 4.5%
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(\* Represents mean ± S. D.) (n=3)

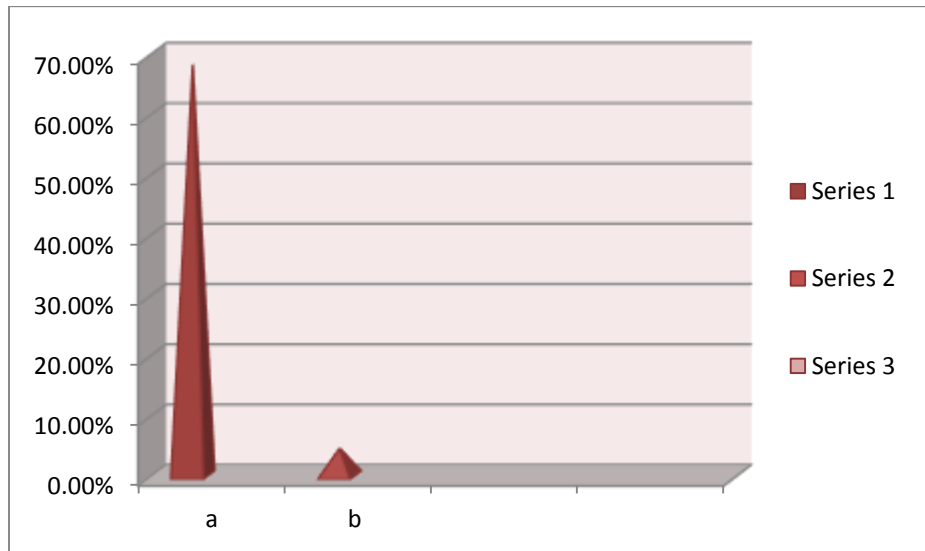


Fig.4

5. Did you experience any kind of pain during penis erection/enlargement?

- a) Yes
- b) No
- c) Never noticed.

a) 22.72%	b) 31.81%	c) 18.18%
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(\* Represents mean ± S. D.) (n=3)

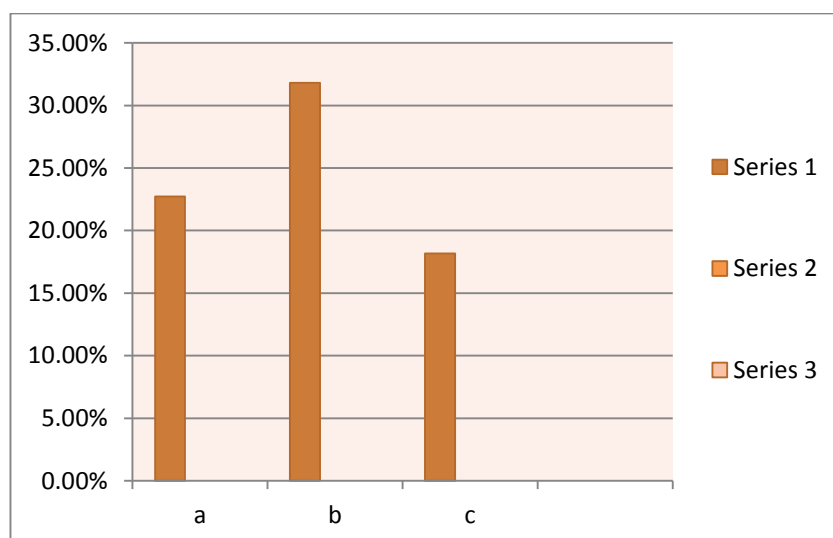


Fig.5

6. Do you notice some kind of stinky smell from the armpits or your genital part? (If yes mentioned age when started).

- a) Yes (.....years.)
- b) No.

a) 36.36%	b) 36%
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(\* Represents mean ± S. D.) (n=3)

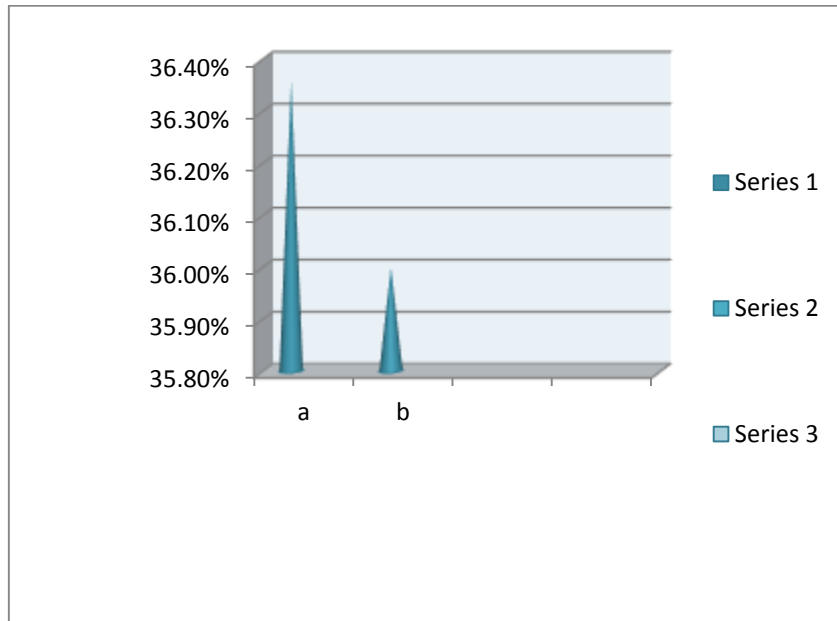


Fig .6

7. At what age you felt aroused and got an urge to masturbate?

- a) 9-10yr
- b) 10-12yr
- c) 14-15yr

a) 22%	b) 28%	c) 50%
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(\* Represents mean ± S. D.) (n=3)

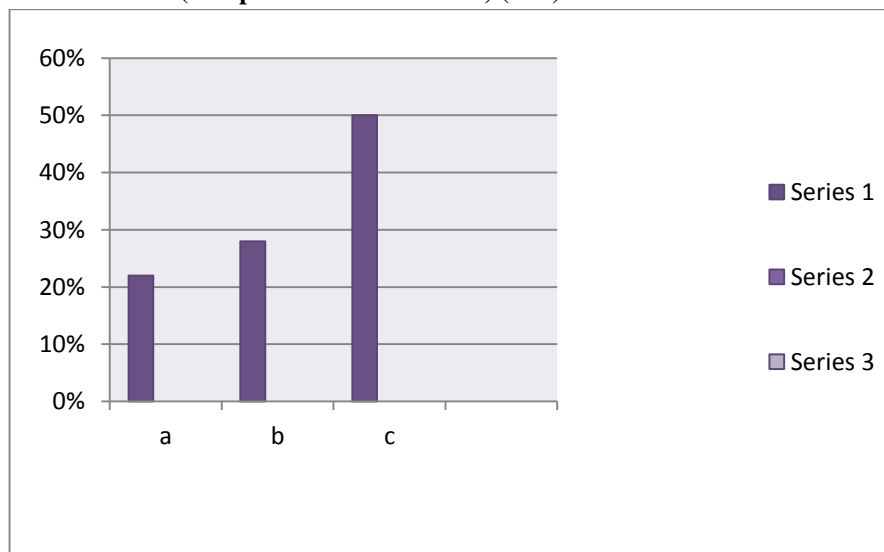


Fig.7

8. Can you relate the sequence of penis enlargement with pimple acne, was it simultaneously or long period of time?

- a) It was simultaneously
- b) It happened after a long time lag.

a) 70%	b) 30%
(* Represents mean ± S. D.) (n=3)	

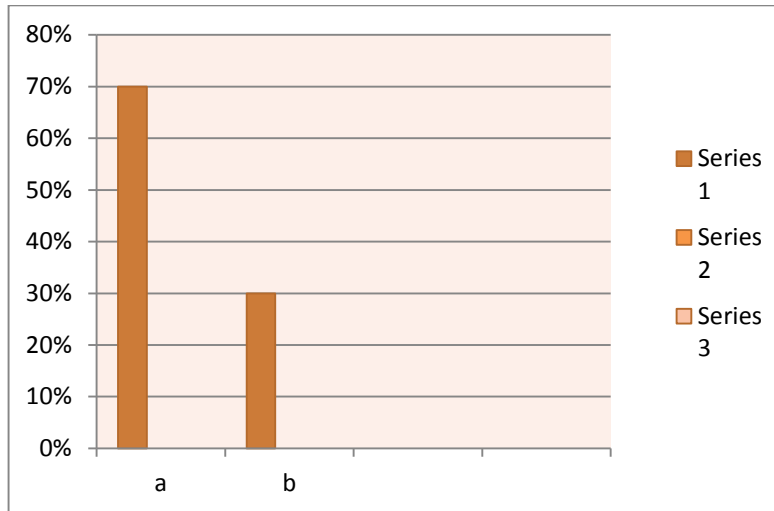


Fig.8

9. Have you noticed any skin changes, especially pimples/acne?

- a) No changes were seen yet
- b) Barely started showing skin changes
- c) Completed skin changes
- d) Don't know

a) 4.5%	b) 75%	c) 10%	d) 13.04%
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(\* Represents mean ± S. D.) (n=3)

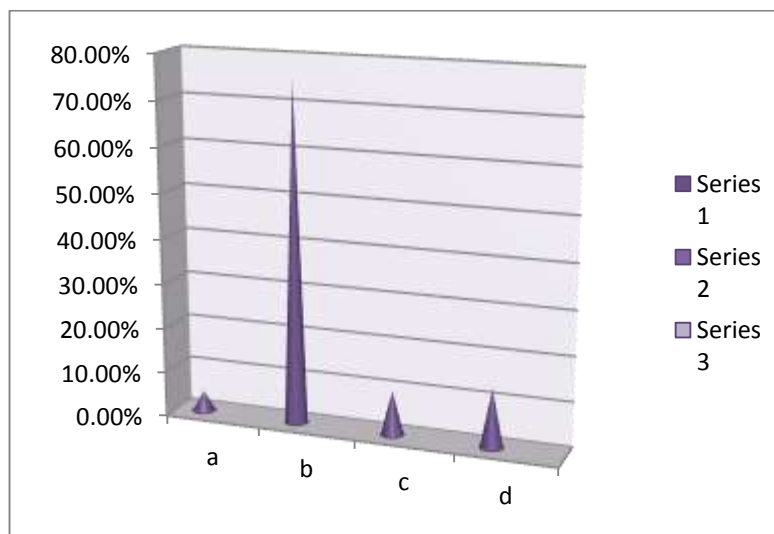


Fig.9

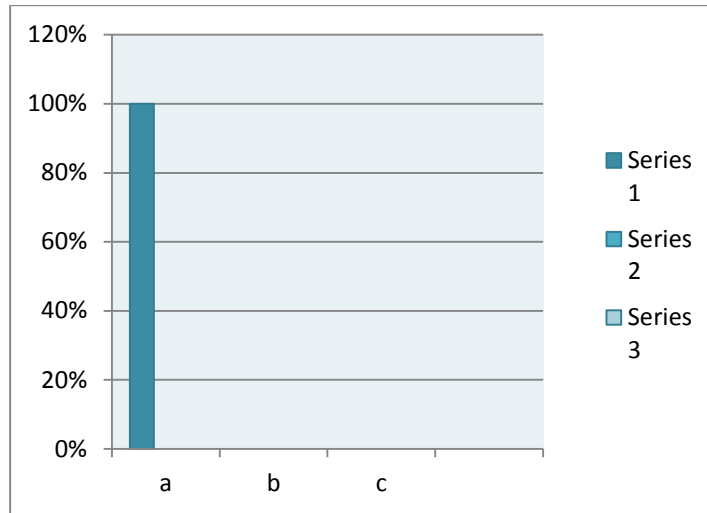


**10. Have you noticed any changes in vocal pitch from high to low or low to high?**

- a) Yes
- b) No
- c) Never noticed

a) 100%	b) 0%	c) 0%
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(\* Represents mean ± S. D.) (n=3)



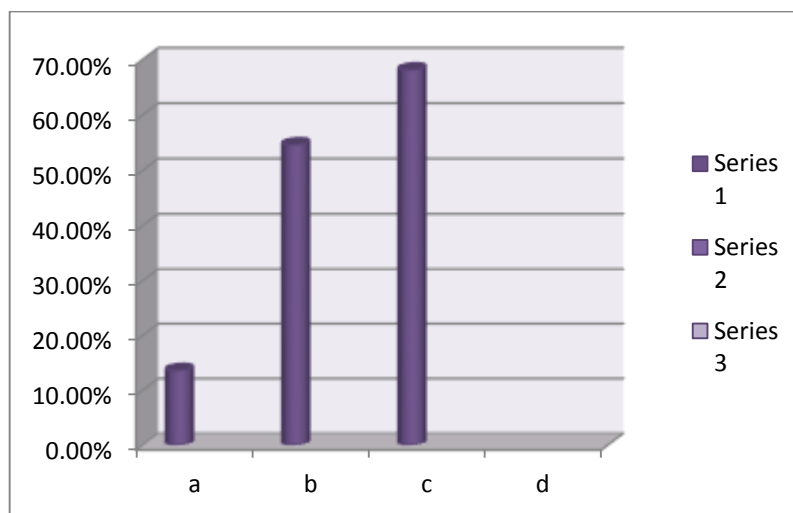
**Fig.10**

**11. What age at did you experience a wet dream?**

- a) 9-10yr
- b) 10-12yr
- c) 12-15yr.

a) 13.63%	b) 54.63%	c)68.17%
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(\* Represents mean ± S. D.) (n=3)



**Fig.11**

12. At what age you observed pubic, facial hairs on your body?

- a) 9-10yr
- b) 10-12yr
- c) 12-15yr

a) 5%	b) 20%	c) 75%
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(\* Represents mean ± S. D.) (n=3)

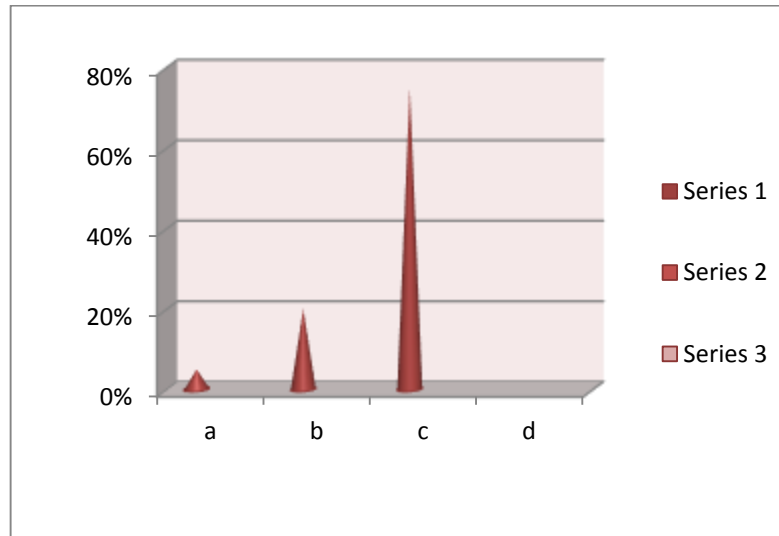


Fig. 12

13. During puberty did you observed perspiration (sweating more)?

- a) Yes
- b) No

a) 90%	b) 10%
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(\* Represents mean ± S. D.) (n=3)

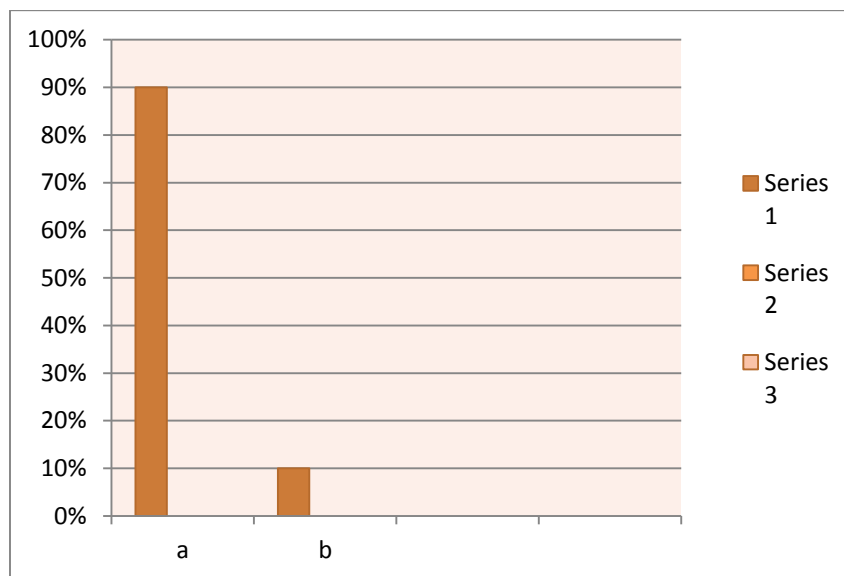


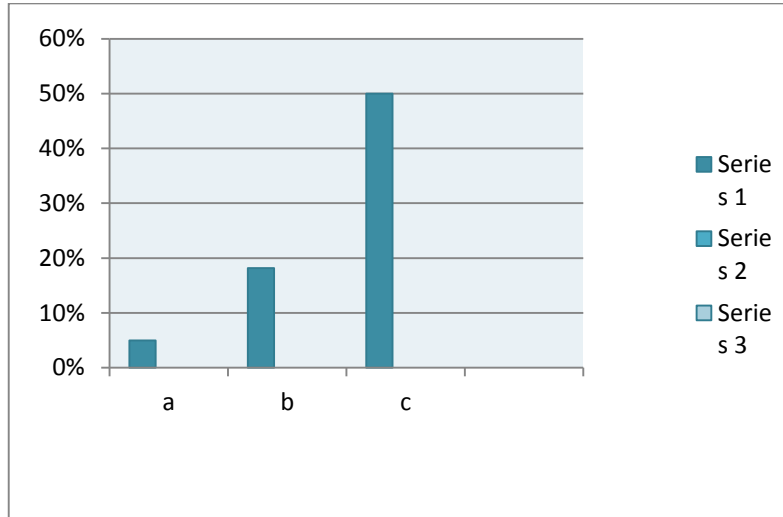
Fig.13

**14. At what age you felt some kind of attraction towards opposite sex?**

- a) 8-9yr
- b) 10-14yr
- c) 14-15yr

a) 5%	b) 18.18%	c) 50%
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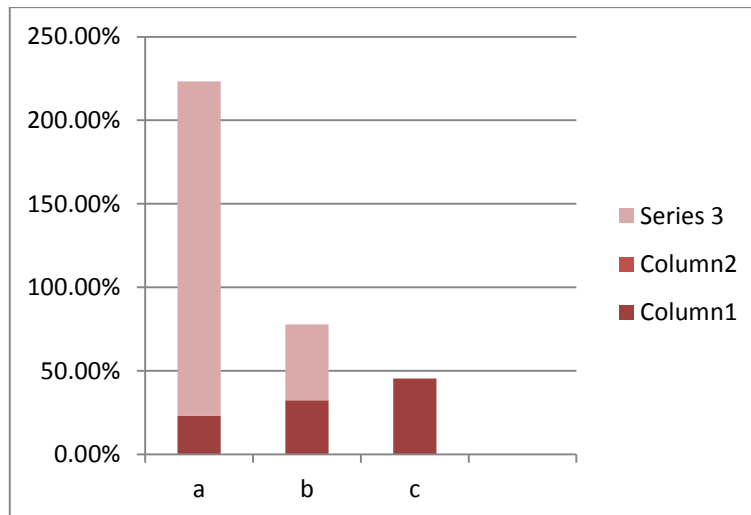
(\* Represents mean ± S. D.) (n=3)



**Fig. 14**

**15. At what age you observed a sudden change in your height, broadness in the chest.**

- a) 9-10 yr
- b) 10-13yr
- c) 13-15 yr



**Fig 15**

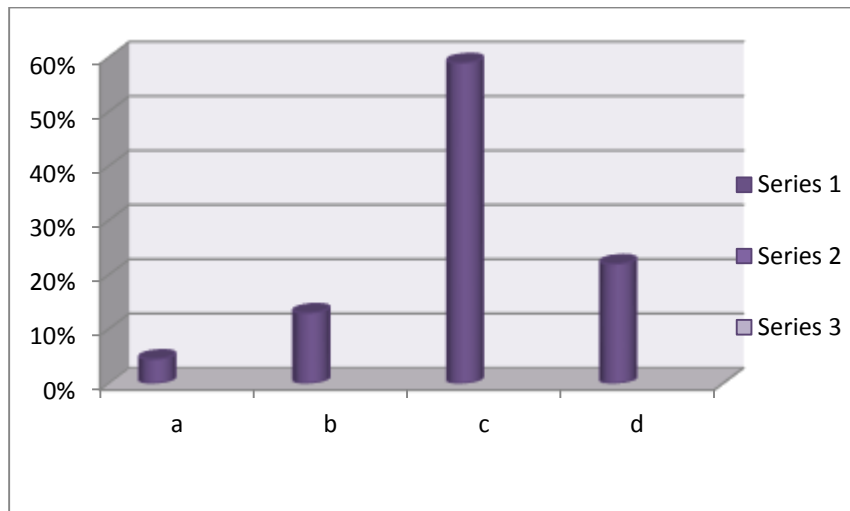
**Questionnaire for girls**

**1. At what age you started first puberty?**

- a) 6-8yr
- b) 8-10yr
- c) 10-14yr
- d) Cannot say.

a) 4-5%	b) 3-13%	c) 13-59%	d) 5-22%
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(\* Represents mean ± S. D.) (n=3)



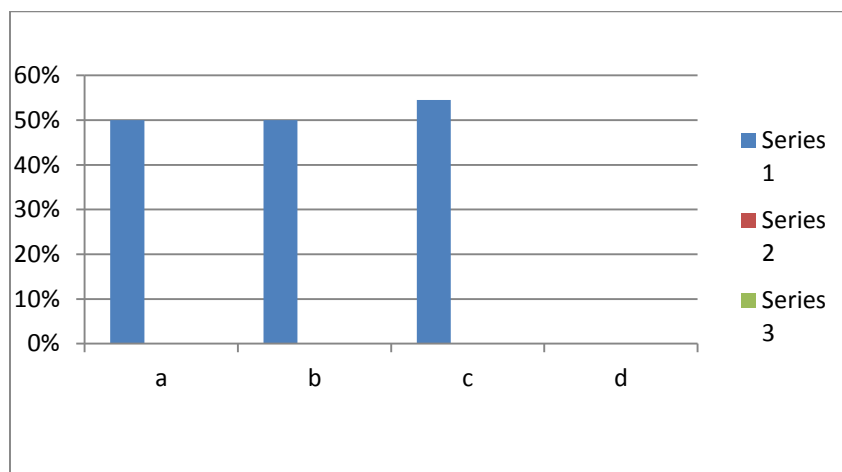
**Fig.1**

**2. What were the symptoms during the puberty?**

- a) Development of breast bud
- b) Uncomfortable during periods
- c) Both A&B
- d) Cannot say

A) 50%	B) 50%	C) 54.54%	D) 0%
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(\* Represents mean ± S. D.) (n=3)



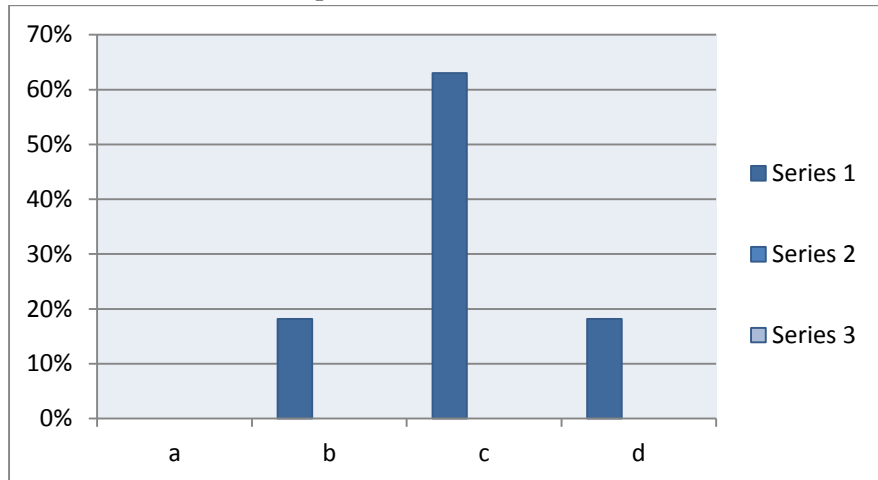
**Fig. 2**

**3. At what age you got your first menstrual cycle (periods)?**

- A) 6-7yr
- B) 9-10yr
- C) 10-15yr
- D) Cannot say

a) 0%	b) 18.18%	c) 63%	d) 18.18%
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(\* Represents mean ± S. D.) (n=3)



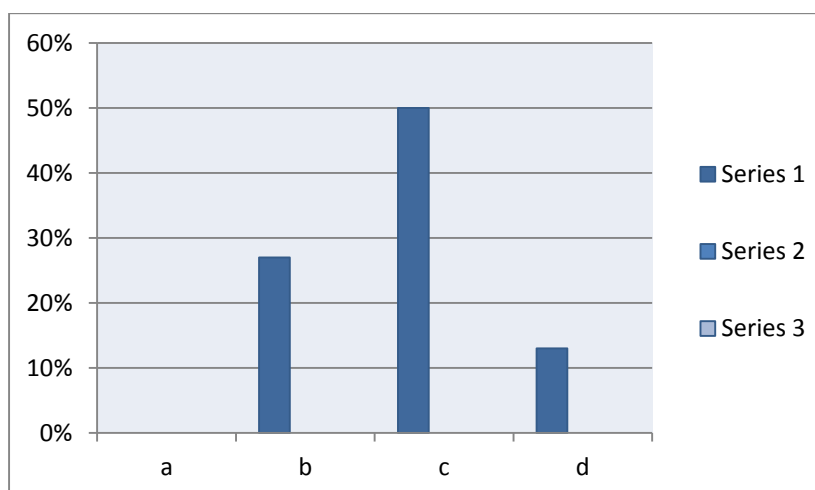
**Fig.3**

**4. During menstrual cycle what type of mental and emotional body status you feel?**

- a) Anxiety
- b) Uncomfortable
- c) Too much paining of stomach
- d) Cannot say.

a) 0%	b) 27%	c) 50%	d) 13%
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(\* Represents mean ± S. D.)(n=3)



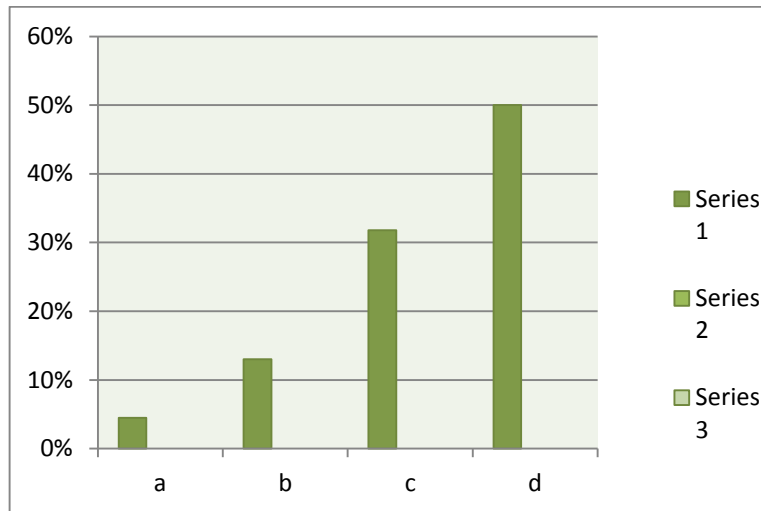
**Fig.4**

**5. Growth of pubic hairs at what age do you feel?**

- a) 6-8yr
- b) 8-9yr
- c) 9-10yr
- d) Cannot say.

a) 4.5%	b) 13%	c) 31.81%	d) 50%
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(\* Represents mean ± S. D.) (n=3)



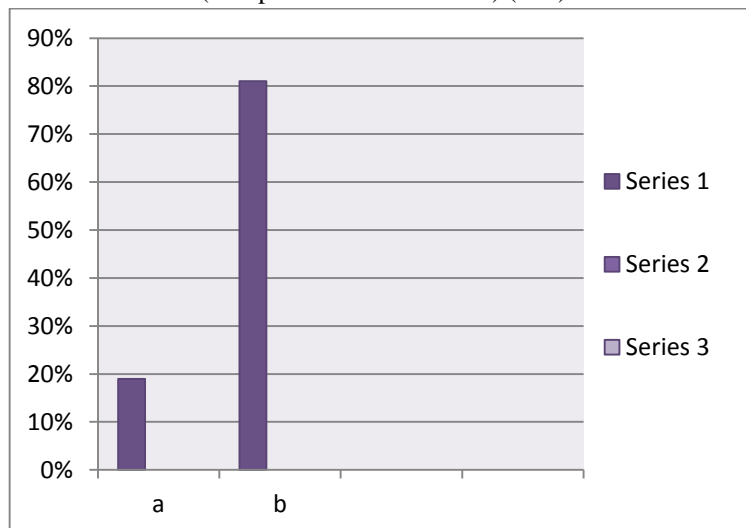
**Fig. 5**

**6. Are you suffering from breast cancer? (If yes mention the age)**

- a) Yes (.....years)
- b) No

a) 19%	b) 81%
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(\* Represents mean ± S. D.) (n=3)



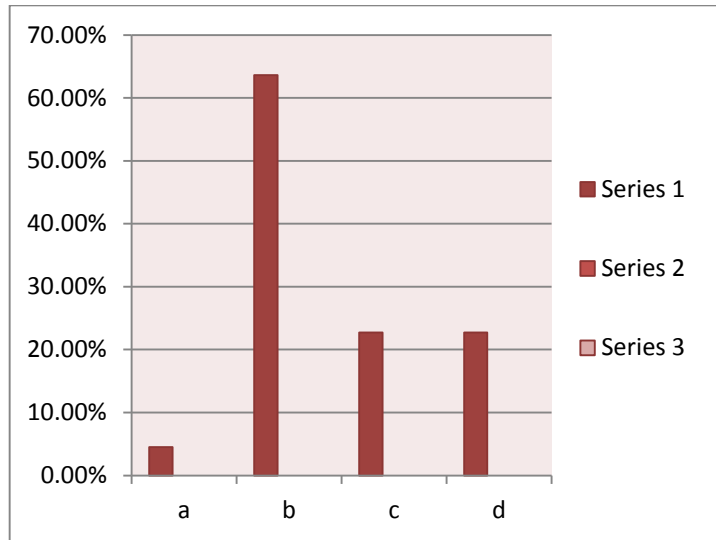
**Fig. 6**

**7. How does the girl physically feels related to her periods?**

- a) Comfortable
- b) Uncomfortable
- c) Mentally stressed
- d) Cannot say.

a) 4.5 %	b) 63.63%	c) 22.72%	d) 22.72%
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(\* Represents mean ± S. D.) (n=3)



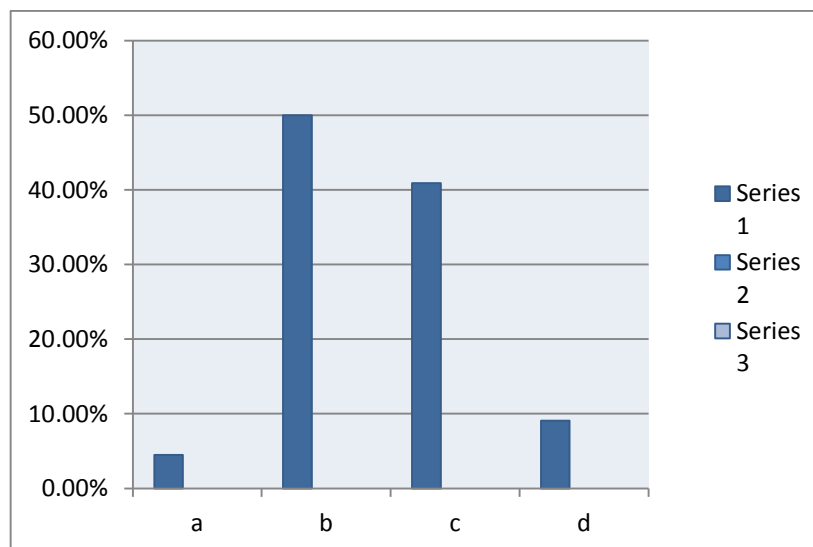
**Fig.7**

**8. Comparing your height to other girls your own age. Do you think you are?**

- a) Much shorter.
- b) Somewhat shorter.
- c) Somewhat taller
- d) Much taller.

a) 4.5%	b) 50%	c) 40.90%	d) 9.09%
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(\* Represents mean ± S. D.) (n=3)



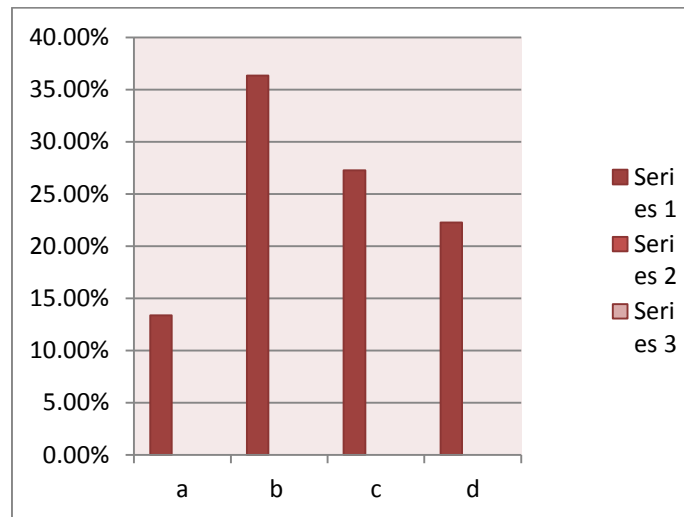
**Fig.8**

**9. What are you trying to do your weight right now? Are you/**

- a) Not trying to do anything about my weight.
- b) Trying to gain my weight
- c) Trying to stay the same weight.
- d) Trying to lose.

a) 13.63%	b) 36.36%	c) 27.27%	d) 22.27%
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(\* Represents mean ± S. D.) (n=3)



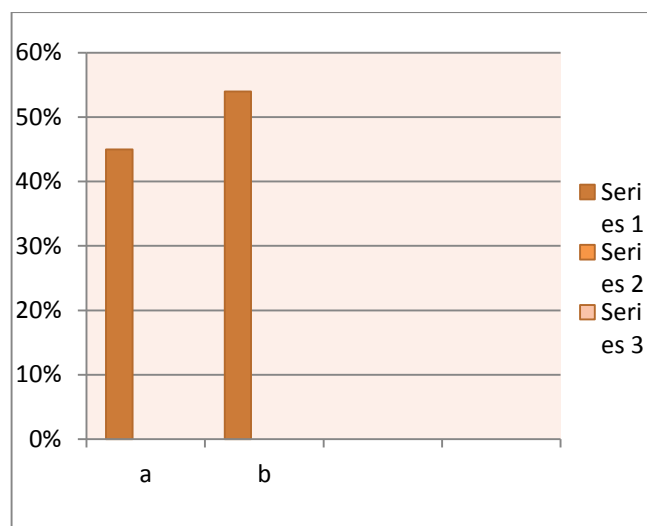
**Fig.9**

**10. Do you usually know when to expect periods?**

- a) No
- b) Yes

a) 45%	b) 54%
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(\* Represents mean ± S. D.) (n=3)



**Fig.10**

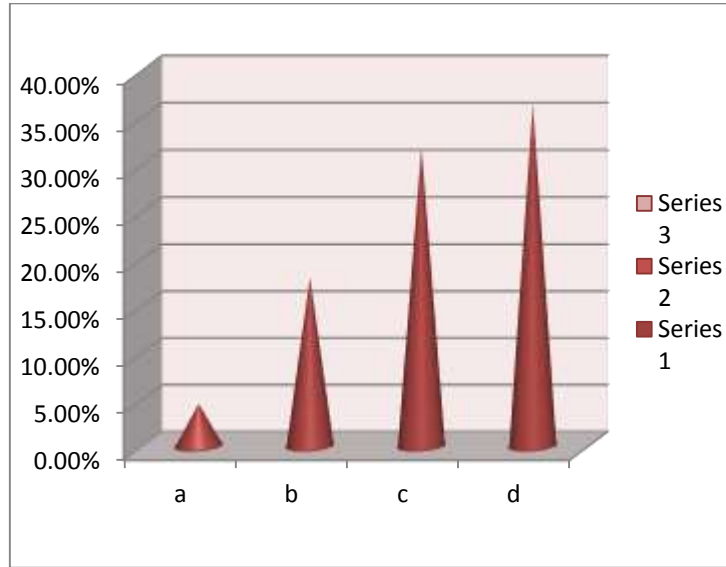


**11. Have you noticed any skin changes, especially pimples?**

- a) No changes have not yet
- b) Barely started showing skin changes.
- c) Completed skin changes.
- d) Don't know.

a) 4.5%	b) 18%	c) 31.81%	d) 36.36%
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(\* Represents mean ± S. D.) (n=3)



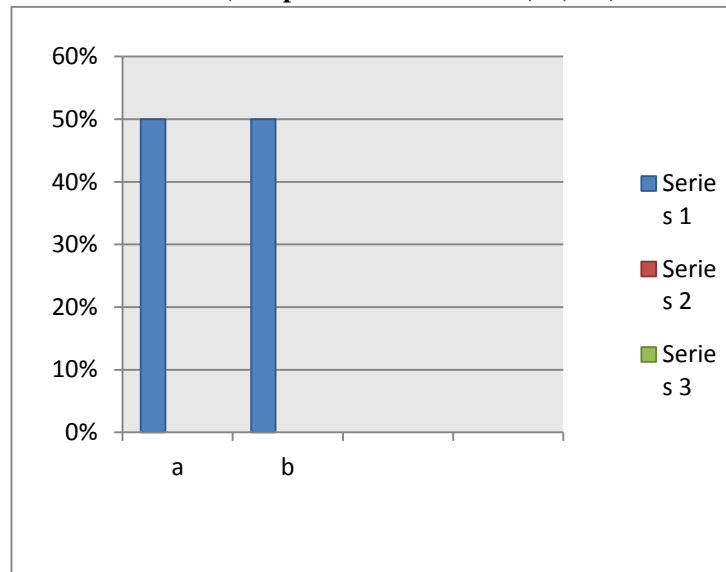
**Fig.11**

**12. Are your cycles usually regular? Regular means you get your periods about every 4-6 weeks.**

- a) No
- b) Yes

a) 50%	b) 50%
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(\* Represents mean ± S. D.) (n=3)



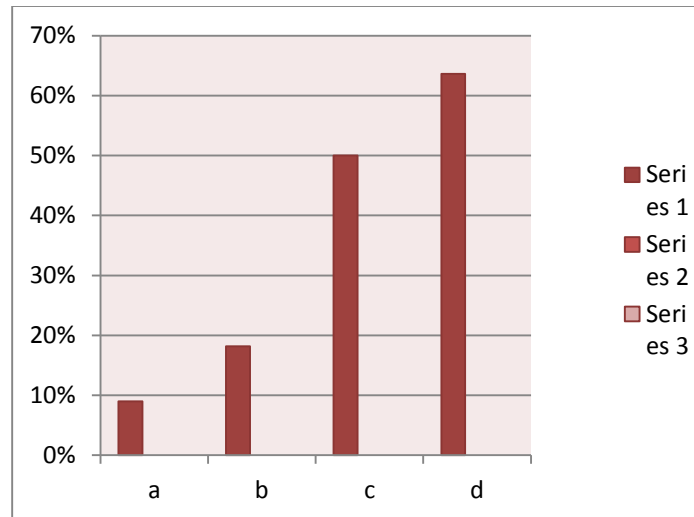
**Fig. 12**

**13. Would you say growth of your underarm hair has started yet?**

- a) No
- b) Barely started
- c) Definitely started
- d) Don't know

a) 9%	b) 18.18%	c) 50%	d) 63.63%
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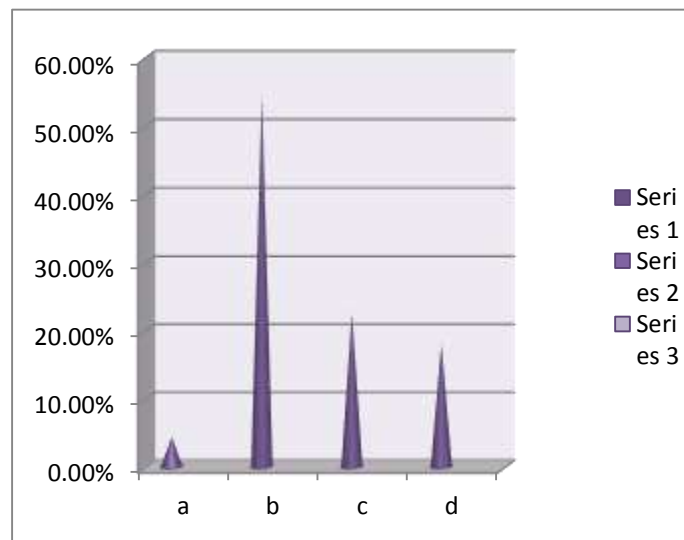
(\* Represents mean ± S. D.) (n=3)



**Fig. 13**

**14. Comparison with other girls as development of breast is?**

- a) Much earlier
- b) Somewhat earlier
- c) Somewhat later
- d) Much later.



**Fig.14**

### 15. At what age teen girls mood swings?

- a) 10-12yr
- b) 13-15yr
- c) 16- 18yr

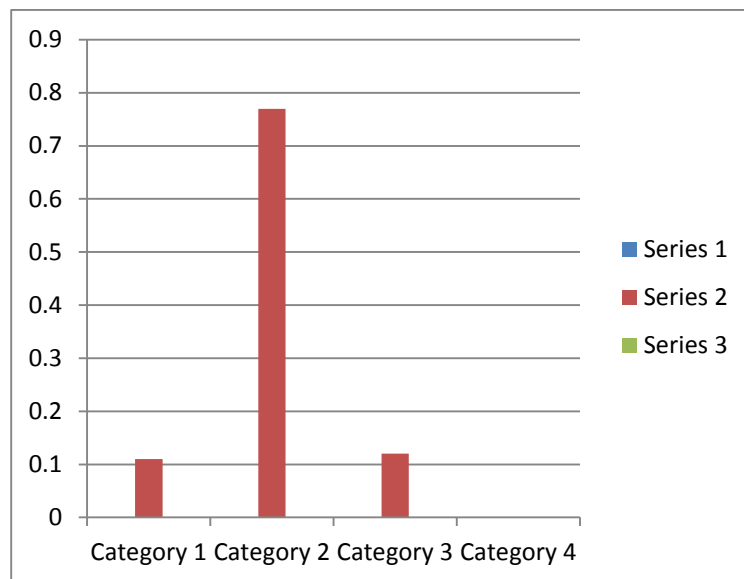


Fig .15

## 6. CONCLUSION

The various facts related to precocious puberty have been overcome the problems in boys and girls.

The studied parameters are as follows:

- The samples comprising as shown, it is found that, about 50% of the school students suffered from much pain in stomach during periods.
- From the collection of data analyzed it is found that early puberty occurs mainly in girls as compared to boys.
- The girls gave the data of evaluation and more information related to their periods and development of breast.
- From the above data it is concluded that many students were affected by early puberty, which is nowadays increasing in India.
- This may help to solve the problems of each and every individual.
- One can express such severe problem in society as they occurs early changes in body physiology.

## 7. FUTURE SCOPE

Present investigation will help to researcher, doctors as well as parents to know the anxiety in a boys or girls who wants help in their life as some physical changes are occurred in individuals. .

## 8. LIMITATIONS

As the coin has two sides, similarly the whole project study offers limitations such as.

- The survey is conducted in Pipri (Meghe) only, so the result should not be applicable to another region.
- Some students were not showing their interest in filling the questionnaire.
- Some students were not ready to the true information
- The whole project is depended on the information which was provided by students

## 9. ACKNOWLEDGEMENT

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### ANNEXURE

#### QUESTIONNAIRE

To know about the puberty study, following mechanism / procedures pattern are adopted,

**Personal Details:**

Name:

Age:

Qualification:

Occupation:

Address:

**For Boys:**

- 1. At what age, did you started with puberty?**
  - a) 6-9yr
  - b) 9-10yr
  - c) 10-12yr
  - d) Cannot say
  
- 2. Do you observed any rapid growth of penis?**
  - a) Yes
  - b) NO
  
- 3. How old are you when you experienced first ejaculation.**
  - a) 9-10yr
  - b) 10-12yr
  - c) 14-15yr
  
- 4. During the rapid growth of penis did you observe any pubic hairs?**
  - a) Yes
  - b) No
  
- 5. Did you experience any kind of pain during penis erection/enlargement?**
  - a) Yes
  - b) No
  - c) Never noticed.
  
- 6. Do you notice some kind of stinky smell from the armpits or your genital part? (If yes mentioned age when started).**
  - a) Yes (.....years.)
  - b) No.
  
- 7. At what age you felt aroused and got an urge to masturbate?**
  - a) 9-10yr
  - b) 10-12yr
  - c) 14-15yr
  
- 8. Can you relate the sequence of penis enlargement with pimple acne, was it simultaneously or long period of time?**
  - a) It was simultaneously
  - b) It happened after a long time lag.
  
- 9. Have you noticed any skin changes, especially pimples/acne?**
  - a) No changes seen yet
  - b) Completed skin changes
  - c) Don't know
  
- 10. Have you noticed any changes in vocal pitch from high to low or low to high?**
  - a) Yes
  - b) No
  - c) Never noticed
  
- 11. What age at did you experienced a wet dream?**
  - a) 9-10yr
  - b) 10-12yr
  - c) 12-15yr.
  
- 12. At what age you observed pubic, facial hairs on your body?**
  - a) 9-10yr
  - b) 10-12yr
  - c) 12-15yr

**13. During puberty did you observed perspiration (sweating more)?**

- a) Yes
- b) No

**14. At what age you felt some kind of attraction towards opposite sex?**

- a) 8-9yr
- b) 10-14yr
- c) 14-15yr

**15. At what age you observed sudden change in your height, broadness in chest?**

**For Girls:**

**1. At what age you started first puberty?**

- a) 6-8yr
- b) 8-10yr
- c) 10-14yr
- d) Cannot say.

**2. What were the symptoms during the puberty?**

- a) Development of breast bud
- b) Uncomfortable during periods
- c) Both A&B
- d) Cannot say

**3. At what age you got your first menstrual cycle (periods)?**

- a) 6-7yr
- b) 9-10yr
- c) 10-15yr
- d) Cannot say

**4. During menstrual cycle what type of mental and emotional body status you feel?**

- a) Anxiety
- b) Uncomfortable
- c) Too much paining of stomach
- d) Cannot say.

**5. Growth of pubic hairs at what age do you feel?**

- a) 6-8yr
- b) 8-9yr
- c) 9-10yr
- d) Cannot say

**6. Are you suffering from breast cancer? (If yes mention the age)**

- a) Yes (.....Years)
- b) No

**7. How does the girl physically feels related to her periods?**

- a) Comfortable
- b) Uncomfortable
- c) Mentally stressed
- d) Cannot say.

**8. Comparing your height to other girls your own age. Do you think you are?**

- a) Much shorter.
- b) Somewhat shorter.
- c) Somewhat taller
- d) Much taller.

**9. What are you trying to do to gain your weight right now, Are you?**

- a) Not trying to do anything about my weight.
- b) Trying to gain my weight
- c) Trying to stay the same weight.
- d) Trying to lose.

**10) Do you usually know when to expect periods?**

- a) No
- b) Yes

**11) Have you noticed any skin changes, especially pimples?**

- a) No changes have not yet
- b) Barely started showing skin changes.
- c) Completed skin changes.
- d) Don't know.

**12) Are your cycles usually regular? Regular means you get your periods about every 4-6 weeks.**

- a) No
- b) Yes

**13) Would you say growth of your underarm hair has started yet?**

- a) No
- b) Barely started
- c) Definitely started
- d) Don't know

**14) Comparison with other girls as development of breast is?**

- a) Much earlier
- b) Somewhat earlier
- c) Somewhat later
- d) Much later.

**15) At what age teen girl's mood swings?**

- a) 10-12yr
- b) 13-15yr
- c) 16- 18yr

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