ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF PSYCHOLOGY

BODY IMAGE, REACTION TO MENARCHE AND PATTERNS OF HETEROSEXUAL RELATIONSHIP AMONG RURAL AND URBAN FEMALE PUBESCENTS: THE CASE OF ADDIS ABABA AND AMBO

BY: TILAYE GELANA

A THESIS SUBMITTED IN THE PARTIAL FULFIMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF ARTS IN DEVELOPMENTAL PSYCHOLOGY

JUNE, 2005
Acknowledgment

I wish to express my heartfelt gratitude to my adviser Dr. Belay Tefera whose valuable comments and criticisms highly contributed to the success of this paper. He devoted his precious time and energy to help the accomplishment of this study.

I also would like to thank my Colleague Jhonse Bane for his assistance by providing computer for data analysis and editing whenever I need it.

I also do not forget my colleague Birhanu Gemechu for his friendly cooperation to translate the questionnaire into local language in a very clear and understandable way.
# Table of content

Acknowledgment                                      
Abstract                                             

## I. INTRODUCTION

1.1. Theoretical background                         
1.1.1. Practical consideration                      
1.2. Purpose                                        
1.3. Operational definitions                        
1.4. Limitations                                    

## II. METHOD

2.1. Design                                         
2.2. Study area                                     
2.3. Population                                    
2.4. Sampling                                      
2.5. Tools                                         
2.6. Pilot study                                    
2.7. Procedures                                    

## III. Findings

3.1. Background information                         
3.2. Descriptive statistics of female adolescents age of menarche, reaction to menarche, body image, patterns of heterosexual relationship and age of menarche. 
3.3. Relationship among body image, reaction to menarche, patterns of heterosexual relationship, age of menarche and birth order. 
3.4. Difference between urban and rural female adolescents in their body image, reaction to menarche, patterns of heterosexual relationship and age of menarche. 

## IV. Discussion

## V. Summary, Conclusion and recommendations

Reference                                            

Appendix - 1                                       
Appendix - 2                                       
Appendix - 3                                       
Appendix - 4
Lists of Tables

Table 3.1. Background information of the respondents.................................16
Table 3.2. Parents’ educational level.................................................................17
Table 3.3. Descriptive statistics of female adolescents age of menarche, reaction to menarche, body image and patterns of heterosexual relationships.................................................................18
Table 3.4. Female adolescents patterns of heterosexual relationship.............19
Table 3.5. patterns of female adolescents heterosexual relationship..............21
Table 3.6. Paired sample t-test between pre and post pubertal body image ....23
Table 3.7. Paired sample t-test between pre and post pubertal body image for urban female pubescent.................................................................25
Table 3.8. Paired sample t-test between pre and post pubertal body image for rural female adolescents.................................................................26
Table 3.9. Independent sample t-test between urban and rural pubescent for body image, reaction to menarche, patterns of heterosexual relationship and age of menarche.................................................................27
Abstract

The purpose of the study was to investigate how factors in the individual, for example body image prior to puberty affects the adjustment of adolescent girls to pubertal changes. In addition, the study also aimed at examining how pubertal changes such as body image, reaction to menarche, and heterosexual relationships are related to one another and affect one another.

About 190 female adolescents (Addis Ababa and Ambo) filled in a questionnaire prepared for data collection.

The finding indicated that pre pubertal body image was negatively correlated with adolescent girls’ reaction to menarche. This means girls who perceived themselves attractive during pre pubertal time fail to adjust themselves to the onset of menstruation. The result of the study also indicated that those girls who negatively reacted to menarche were found to develop body image dissatisfaction. As a result they showed low interest towards opposite sex relationship since heterosexual relationship was found to be correlated positively with body image.

The paired sample t-test revealed that there was a significant difference between pre and post pubertal body image. This relationship was also the same for both urban and rural female pubescent.

Finally, the study indicated that there were significant differences between urban and rural female adolescents in post pubertal body image, reaction to menarche, heterosexual relationship and age of menarche.
I Introduction

Adolescence is a stage of development that begins with rapid physical changes eventually transforming the growing person from asexual to a sexual being. A landmark in such transformation is the occurrence of menarche in girls.

With such changes in place, the period of adolescence proceeds with a search for meaning and eventually culminates with self-definition. An aspect of self-definition that initiates with menarche, ferments with the growth of interest in the opposite sex and takes shape with sexual exploration in heterosexual identity.

Adolescent psychologists have attempted to pinpoint the nature and determinants of adjustment to these initiating.

In most cases, such attempts have dwelled, however, on the role of such external factors as parental background (conger,1991), cultures(Furman and Shaffer, 2001) and others.

Although doubtless it is that all these factors are useful, there still a need to examine the role of certain other factors that reside in the growing person herself. One among this is body image. In fact, body image is not a new topic in adolescence research. According to Jersild (1963) one aspect of adolescent physical development is that they show a great deal of preoccupation with their bodies and individual image of what their bodies like. Here, it appears that body image examined dominantly as an effect of
pubertal changes than as an antecedent factor. It is worth considering then to examine the role of body image as an independent variable, affecting, first and foremost, reaction to menarche, and furthermore, patterns of heterosexuality.

It could be that the prepubertal body image that girls develop long before puberty may some how structure the way they react to menarche. Girls with positive prepubertal body image be coming ready, and then accepting the bodily changes that herald the advent of womanhood compared to those having a negative prepubertal body image. And, this reaction could in turn affect postpubertal body image and pattern of heterosexual interest, attitudes and practices; positive menarcheal reaction and postpubertal body image initiate positive attitudes and intention for early engagement in heterosexual practices.

There could also be the possibilities that precocious body image work in the contrary. Girls with positive prepubertal body image may become beset with the view that pubertal change in general and menarcheal changes in particular could put them out of form or shape and hence prefer not to see them; this negative feeling again taking a preempting role on postpubertal body image and heterosexual pattern.

There is, therefore, a need to examine how body image, reaction to menarche and heterosexual patterns interact one another. This is the purpose of this research.
Keeping in view the role of culture on development, attempts are made to examine these issues against the background of the respondents in urban and rural.

1.1 Theoretical background

Research findings indicate that by the time of adolescence, the majority of girls have developed weight and body image concern and tried dieting or other strategies to alter this physical appearance (phares et al, 2004). According to these researchers between 30% and 59% of adolescent girls are either concerned about their weight or actually dieting.

Although most of the previous researches on body image disorder have focused on adolescents, it has been recently shown that weight concerns and body image disturbances exists even in young children (Schur et al 2000). According to the finding of these researchers children as young as 6 years old express dissatisfaction with their body and a substantial amount have attempted to lose weight.

From experiences and as investigation of gender differences in body image shows there is variation for boys and girls. According to phrase et al (2004) feelings of dissatisfaction with one's body are more common among females than males. As the result of their finding shows 58% of men were either "quite" or extremely "satisfied with their over all appearance while 42% of women felt the same way. Similar finding by Stuhldrher and Rayan (1999) indicated that women perceived themselves to be heavier than they would like to be while men's selections of body image both actual and desired were remarkably similar to each other.
One major factor that contributes to females' body image dissatisfaction is social expectation of ideal body size and shape that is standard for that particular culture. In this regard Thelen and Cormier (1995) found that girls have a harder time developing a positive body image. These researchers concluded that a negative body image results from social conditioning. When women cannot attain the cultural ideal beauty standard, negative self-esteem in women is directly related to attractiveness (Santrock, 1987). In addition, families are another main factor in the development of children's body image (Phares et al, 2004). When there is verbal criticism by family on the physical appearances of young children it is likely that girls develop negative body image.

In Ethiopian cultures girls are important means for families to strength relationships with another families through marriage. This cultural process requires girls to have good physical appearance that is accepted in that culture. This is because one essential criteria in marriage is the girl's "beauty". In this regard the finding of Haile Gebriel (1994) in northern Ethiopia revealed that a peasant family strives to enhance its own status and enlarge its social network through marriage tie with a better endowed family. According to this researcher one of the essential criteria for a desirable marriage in that society is the beauty of the girl. This practice put a high expectation that the girls should be beautiful enough to attract the person with whom social relation is demanded. As a result it is a common practice in Ethiopia that girls who failed to attain standard physical appearance are criticized and given unfavorable comments while those who
full filled the standard physical appearance are appreciated and given good comments by family members, peers and others. The bad comments and criticisms that the girl has been experiencing starting from early age may cause her to feel inferior, develop low self stem and other psychological problems. This feeling of inferiority and the wrong perception about one's physical appearance may affect the girls not to welcome the changes that occur during puberty positively, for example, the onset of menarche and the interest towards opposite sex.

On the other hand girls who have been given appreciation about their physical appearance and developed positive body image may feel self confident and may not face difficulties when they experience pubertal changes. However, this group of female pubescent needs guidance and supervision on their relationship with opposite sex because they are expected to begin heterosexual relationship early and they are at risk of teen age pregnancy and HIV/AIDS.

Although previous studies found that menarche influences adolescent girls' body image (Chung et al 2001), no available literature has related the impact of body image on girl's reaction to the onset of menstruation. This is the focus of the present study.

Menarche affects the life of adolescent girls in many ways. Hence, a number of investigators showed various problems related to the onset of menstruation and adolescent girls maladjustment to it. A study conducted on a group of Ethiopian adolescent girl (Tirussew, 1990) indicated that a considerable number of adolescents felt emotional reaction like feelings of
shyness and uneasiness, lack of sleep, concentration problem and shocking experience. He also suggested that these all disturbing reactions which are felt by a good proportion of the respondents are likely to have an adverse and depreciating effect on their personality and probably impede the normal activity.

The educational impact of menarche on individual girl was studied by Chung et al (2001). The result of the finding of these researchers shows girls experience of menstruation and the effect of these factors on their school attendance and performance. They also indicated that the onset of menstruation has a negative impact on participation in primary school.

Menarche as the most dramatic sign of puberty affects a girl in both how she perceives herself and how she is perceived by those in her environment (Chung et al, 2001). The social dimension of pubescent girl was found to be affected by the onset of menarche. As stated in Tirrusew (1990) the inter personal relation of the pubescent with peers, parents, siblings and community at large seem to be adversely affected in one way or another.

The fact that adolescent girl develop fear of inter personal relation and a feeling of rejection and isolation during menarche may affect their interest towards the opposite sex or on their heterosexual relationship which is one of the important aspects of development during adolescence.

This could mean that experiences of menarche may some how structure patterns of heterosexual relationship in a subsequent development.

The issue of prime concern here is not only that the impact of body image before puberty on experience of menarche is not explored. It is also that the
effect of menarche on subsequent heterosexual development is not explored as the same time.

The purpose of this research is therefore to examine how body image, reaction to menarche and patterns of heterosexual relationship are interacted.

1.1.1 Practical Consideration

One of the biggest contributions parents and teachers can make to the child’s successful growing up is to prepare him or her ahead of time for what to expect and when to expect it (Hurlok, 1959). This is possible mainly by identifying the major developmental changes that occur during puberty and by knowing the interrelationship that exist among these changes. Unfortunately too many parents are ignorant of this and many children enter puberty with little foreknowledge of the pattern that the maturing takes (Hurlok, 1959). In Ethiopia, let alone parents identify factors related to sexual matters and help their children to prepare their occurrence, instead the onset of menstruation is kept secret since menstruation is seen as a shameful event for the unmarried women (Levine, 1965). As a result girls face different psychological problems like disturbances, fear, tension etc. when they begin to experience pubertal changes due to lack of readiness. This may lead to further problems like increasing rate of girls’ school dropout which is common in our country.

Taking this issue into consideration the present study focused on examining how adolescent girls’ pre pubertal experiences and the
interrelationship of pubertal changes affect their behavior and life in general. Therefore, the study is helpful for concerned individuals like social workers, counselors, family, and educators. It also helps those individuals who want to further their research on the area.

1.2. Purpose of the study

Adolescents experiences various complicated changes during puberty. The reaction of adolescent girls to these changes is determined by both external and internal factors that they experienced before puberty and after puberty. For example, their status of pre pubertal body image could affect the reaction of girls to the onset of menstruation. In addition changes that occur during puberty may interact and affect one another. Hence, the main purpose of this study is to examine what relationship exists among pre pubertal experiences and post pubertal changes. Specifically, it tries to answer the following questions.

- How pre pubertal body image does affects reaction to menarche?
- Does reaction to menarche affect post pubertal body image? or does pre pubertal body image differ from post pubertal body image; thus because of menarche?
- How does pre and post pubertal body image affect heterosexual pattern? i.e. what are the heterosexual pattern of those with positive body image compared to negative body image?
- How reaction to menarche does affect heterosexual relationship?
• Are these differences in the form of relationship of these factors differ among rural and urban?

1.3 Operational definitions

Body image: refers to children's and adolescents' perception and beliefs about their physical appearance which are influenced by factors in social, biological cultural and personal.

Reaction to menarche: refers to female adolescents feelings towards the arrivals of menstruations. These feelings include happiness, proud, self confidence, fear, embrace, shock, self rejection etc.

Heterosexual relationship: refers to boy girl interpersonal relationship of adolescents which is accompanied by various activities like dating, courtship, love and sexual intercourse.

Pubescent: refers to school girls whose age are between 14 and 18 years.

1.4 Limitations of the study

One limitation of the study is that it used method of retrospect in identifying adolescents’ perception of their body during pre pubertal period. This is because it is difficult to conduct longitudinal study due to time factor. Another limitation is shortage of reference materials.
II Method

2.1 Design

In this study three major variables were considered. These are body image, reaction to menarche and pattern of heterosexual relationship. The purpose of the study was to examine how these variables affect and related to one another. Hence, to carry out the research quantitative method was used to see the relationship among these variables.

2.2 Study area (site)

This study was conducted on urban female adolescents of Addis Ababa and rural woreda of Ambo. These two sites were selected because residential areas play significant roles on the development of various aspects of adolescents.

Addis Ababa is the capital of the country where adolescents in the city are exposed to environmental factors like modernization and they are easily accessible to different kinds medias like television, films, and so on which affects adolescents development. In addition, when compared to rural adolescents, adolescents in the city come relatively from educated families.

Ambo woreda is one of the woredas in west Shoa zone. It is located approximately 125 km to the west of Addis. As most of adolescents in rural areas of the country adolescents in this area come from uneducated families and they are not easily accessible to different kinds of media.
The environmental factors mentioned above including family background have their own impact on the development of adolescents. Hence, this is the main reason for why these two sites were selected.

2.3 Population: The target population of this study was 9th and 10th grade students of female adolescents in four high schools of Addis Ababa and rural woreda of Ambo. The total population included in the study was 5,772 female adolescents.

2.4 Sampling: In the process of sampling primarily the schools were selected. In the case of Addis Ababa the total number of 76 high schools in the city was categorized under 10 sub-cities. Following this procedure one sub-city was selected using simple random sampling. Accordingly, Addis ketema kefele ketema was selected. In this sub-city there are five high schools. From these two high schools were selected randomly. The names of the schools are Addis ketema high school and Dilachin.

In the case of Ambo there are two high schools in the woreda namely Ambo comprehensive high school and Gudar high school. The two schools were included in the study.

After school selection was completed the next step was sampling the subjects. In this process students were categorized in to their sections. In the two high schools of Addis Ababa there are 91 sections (49 sections in Addis ketema and 42 sections in Dilachin. From 91 sections 20 sections were selected (11 sections in Addis Ketema and 9 sections from Dilachin).
Finally, 100 students were selected using simple random sampling (i.e. 5 female students from each section).

By the same procedure students in high schools of Ambo were categorized into their sections. There are 65 sections (24 in Guder and 41 in Ambo high schools) and 20 sections were selected from two schools). 100 students were selected using simple random sampling (i.e. 5 students from each section). In general 200 female pubescent were sampled for the study.

2.5. Tools

The instrument which was used to collect the data was questionnaire. A questionnaire which consists 56 items was constructed by the researcher while 11 additional body image rating scale was adapted from other source. The instrument is classified into four parts.

**Part I:** This part of the questionnaire has 7 items. The purpose of these items was to collect data on the general background information of the respondents.

**Part II:** The second part of the questionnaire which consists 33 items were designed so as to get data on female adolescents body image. The items were prepared in such a way that adolescents give their response about their body image of two periods. That is body image before menarche and after menarche. The subjects were asked to give their responses about their prepubertal body image through memorization or in retrospect.

Items which were included in this part were designed to measure four components of body image.
1. **The role of Body image**

There were 5 items under this subscale. The purpose of the items were to elicit adolescents response about their body image in terms of the role of beauty such as popularity, respect, marriage and manner.

2. **Body image self view**: Under this sub-scale 11 items were included. The aim of these items was to obtained data on how female adolescents perceived or evaluated their physical appearance in terms of the role of beauty, marriage, comparison with sisters and friends.

3. **Body image others View**: In this sub scale 6 items were included. The purpose of these items was to measure how female adolescents perceived the others perception of their physical appearance.

4. **General Body image**: This sub-scale consists 11 items. These items were designed to measure general body image. The subjects rate on 3 scales (True, false and undecided). The items were adapted from other source (Sout and Garcia, 2002). In the process of adaptation items which were more relevant to Ethiopian context were selected. Since the original items were prepared in English, translation in to Amharic and afan oromo was made by professional language MA student.

The total number of the original scale was 28 and its reliability was Cronbach alpha .89. The adapted scale was tested on a sample of 30 female adolescents and the reliability was found to be Cronbach alpha .72

**Part III**: The third part of the questionnaire which consists 13 items were prepared to know female adolescents reaction to menarche. From the 13
items some items were used to establish relationship with the respondents and they were not included in the analysis [e.g. item 3.4 and 3.5]. The items were both close and open ended questions.

**Part IV:** The forth part of the instrument was designed to measure the pattern of adolescent heterosexual relationship. This part of the instrument consists 14 items both close and opened questions.

**2.6. Pilot study**

Before the instrument was used for the actual data collection, it was tried on a sample of 30 female adolescents. The purpose of the pilot test was to improve the clarity, validity and reliability of the instrument.

Another purpose of the pilot study was to determine the time needed to administer the instrument.

Based on the responses given on the pilot test items which lacks clarity were rephrased while poor and vague items were discarded.

Finally, the reliability of the instrument was tested for body image questionnaire and the reliability coefficient was found to be Cronbach alpha .76.
2.7. Procedure

After the instrument was made ready and sampling was accomplished, the next task was data collection. 

In the process of data collection the following procedures were followed.

1. One assistant research was employed on per time bases and given orientation on how to distribute and collect the questionnaire.
2. Target group who were included in the study were gathered together and the questionnaire was distributed.
3. The purpose of the study was briefed for the subjects so that they give their response freely.
4. Finally, after respondents completed the questionnaire, the data was collected.

Before the data was analyzed, responses on open ended items were quantified in the form of scale. In this process the responses of subjects on each item were collected and were classified under three categories [positive response, neutral and negative response]. These were rated on three scales [i.e. positive response-3, neutral-2 and negative response-1].

The data was analyzed using frequencies, percentage, maximum and minimum scores, mean and standard deviation. This was to show the general picture of the data.

The relationships among variables were determined using bivariate correlation matrix. In order to see the difference among variables paired sample and independent sample T-test were employed.
III Findings

This section presents the finding. In this section background information, descriptive analysis of variables and relationship among variables were presented one after the other.

3.1 Background information

Table 3.1 Background information of the respondents (age, grade levels, and place of residence).

<table>
<thead>
<tr>
<th>Factors</th>
<th>Group</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>place of residence</td>
<td>Urban</td>
<td>94</td>
<td>48.2</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>96</td>
<td>51.8</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>190</td>
<td>100</td>
</tr>
<tr>
<td>Age</td>
<td>Minimum = 14</td>
<td>16</td>
<td>8.5</td>
</tr>
<tr>
<td></td>
<td>Maximum = 18</td>
<td>35</td>
<td>18.4</td>
</tr>
<tr>
<td></td>
<td>Mean = 16</td>
<td>48</td>
<td>25.3</td>
</tr>
<tr>
<td>Grade level</td>
<td>9</td>
<td>80</td>
<td>42.1</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>110</td>
<td>57.9</td>
</tr>
</tbody>
</table>

Female adolescents who were included in the study were from different residential areas. As shown in table 3.1 above 48.2% were represented from urban area while 51.8% were from rural area. The maximum and minimum ages of the respondents were 14 and 18 years old respectively. The mean age was 16.4.
### Table 3.2 Parents' educational level

<table>
<thead>
<tr>
<th></th>
<th>Mother</th>
<th></th>
<th>Father</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>%</td>
<td>Frequency</td>
<td>%</td>
</tr>
<tr>
<td>Cannot read and write</td>
<td>80</td>
<td>42</td>
<td>53</td>
<td>27.9</td>
</tr>
<tr>
<td>Elementary school</td>
<td>78</td>
<td>41.1</td>
<td>70</td>
<td>36.8</td>
</tr>
<tr>
<td>High school</td>
<td>20</td>
<td>10.5</td>
<td>46</td>
<td>24.2</td>
</tr>
<tr>
<td>Diploma holder</td>
<td>10</td>
<td>5.3</td>
<td>14</td>
<td>7.4</td>
</tr>
<tr>
<td>Degree holder</td>
<td>2</td>
<td>1.1</td>
<td>7</td>
<td>3.7</td>
</tr>
<tr>
<td>Total</td>
<td>190</td>
<td>100</td>
<td>190</td>
<td>100</td>
</tr>
</tbody>
</table>

Concerning parents’ educational level 42% of mothers and 27.9% of fathers were found not able to read and write. Only 5.3% of mothers and 7.4% of fathers were diploma holders and 1.1% of mothers and 3.7% of fathers were degree holders.
3.2 Descriptive statistics of female adolescents’ age of menarche, reaction to menarche, body image, and patterns of heterosexual relationship. Under this sub-topic the mean, standard deviation and maximum and minimum values of the variables were presented.

Table 3.3 Descriptive statistics of female adolescents’ age of menarche, reaction to menarche, body image, birth order and patterns of heterosexual relationship.

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>St.dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of menarche</td>
<td>190</td>
<td>11</td>
<td>17.5</td>
<td>13.94</td>
<td>1.43</td>
</tr>
<tr>
<td>Body image role pre pubertal</td>
<td>190</td>
<td>7</td>
<td>15</td>
<td>12.5</td>
<td>1.58</td>
</tr>
<tr>
<td>Body image self view pre pubertal</td>
<td>190</td>
<td>11</td>
<td>29</td>
<td>18.56</td>
<td>3.88</td>
</tr>
<tr>
<td>Body image others view pre pubertal</td>
<td>190</td>
<td>9</td>
<td>16</td>
<td>14.55</td>
<td>2.795</td>
</tr>
<tr>
<td>General body image pre pubertal</td>
<td>190</td>
<td>13</td>
<td>33</td>
<td>25.65</td>
<td>6.19</td>
</tr>
<tr>
<td>Body image role post pubertal</td>
<td>190</td>
<td>8</td>
<td>15</td>
<td>12.9</td>
<td>1.43</td>
</tr>
<tr>
<td>Body image self-view post pubertal</td>
<td>190</td>
<td>10</td>
<td>30</td>
<td>21.26</td>
<td>3.64</td>
</tr>
<tr>
<td>Body image other view post pubertal</td>
<td>190</td>
<td>8</td>
<td>17</td>
<td>14.85</td>
<td>2.5</td>
</tr>
<tr>
<td>General body image post pubertal</td>
<td>190</td>
<td>11</td>
<td>33</td>
<td>24.92</td>
<td>4.71</td>
</tr>
<tr>
<td>Reaction to menarche</td>
<td>190</td>
<td>11</td>
<td>30</td>
<td>20.4</td>
<td>3.74</td>
</tr>
<tr>
<td>Pattern of heterosexual relationship</td>
<td>190</td>
<td>10</td>
<td>25</td>
<td>16.89</td>
<td>3.311</td>
</tr>
</tbody>
</table>

The present finding indicated that there was variation among adolescent girls in their pre pubertal body image than post pubertal body image. As shown in table 3.3 above the standard deviation of pre pubertal body image was greater than post pubertal body image at all components of body image.

According to the present finding the minimum age of menarche was found to be 11 years while the maximum age of menarche was 17.5 years.
The average age of menarche was 13.94 years. This study suggests that age of menarche is lower than the previously investigated, Tirussew (1991) who conducted a researcher on a group of Ethiopian girls and found the average age of menarche to be 14.53 years. (Randleshort, 1963 and Tekle wold, 1972) as cited in Tirussew, 1991 also found that the average age of menarche was 15 years and 13.6 years respectively. This finding which represents a particular rural and urban area of the country seems to be close to the previous study of the Ethiopian girls.

Table 3.4 female adolescent’s reaction to menarche

<table>
<thead>
<tr>
<th>How did you find the first menstruation?</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>82</td>
<td>43.2</td>
</tr>
<tr>
<td>Illness</td>
<td>22</td>
<td>11.6</td>
</tr>
<tr>
<td>Embarrassing</td>
<td>35</td>
<td>18.4</td>
</tr>
<tr>
<td>Something new</td>
<td>35</td>
<td>18.4</td>
</tr>
<tr>
<td>Losing virginity</td>
<td>12</td>
<td>6.3</td>
</tr>
<tr>
<td>Health and maturity</td>
<td>4</td>
<td>2.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How often you discussed about menstruation with others?</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Often</td>
<td>54</td>
<td>28.4</td>
</tr>
<tr>
<td>Sometimes</td>
<td>91</td>
<td>47.9</td>
</tr>
<tr>
<td>Never</td>
<td>45</td>
<td>23.7</td>
</tr>
<tr>
<td>Tension</td>
<td>57</td>
<td>30.0</td>
</tr>
<tr>
<td>Happiness</td>
<td>24</td>
<td>12.1</td>
</tr>
<tr>
<td>Fear</td>
<td>38</td>
<td>20</td>
</tr>
<tr>
<td>Pride</td>
<td>20</td>
<td>10.6</td>
</tr>
<tr>
<td>Hating oneself and lack of confidence</td>
<td>51</td>
<td>26.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>After you experienced menarche what was your feeling for many times?</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No impact</td>
<td>107</td>
<td>56.3</td>
</tr>
<tr>
<td>Drop class</td>
<td>20</td>
<td>10.5</td>
</tr>
<tr>
<td>Lack concentration in class</td>
<td>63</td>
<td>33.2</td>
</tr>
<tr>
<td>No impact</td>
<td>132</td>
<td>69.5</td>
</tr>
<tr>
<td>Isolation</td>
<td>42</td>
<td>22.1</td>
</tr>
<tr>
<td>Increased sociability</td>
<td>16</td>
<td>8.4</td>
</tr>
<tr>
<td>No impact</td>
<td>156</td>
<td>82.1</td>
</tr>
<tr>
<td>Influenced their attitude</td>
<td>34</td>
<td>17.9</td>
</tr>
</tbody>
</table>

19
In the present study it was found that adolescent girls experienced mixed feelings towards menarche. As indicated in table 3.4 above some female pubescent perceived the onset of menstruation as illness (11.61%), embarrassing (18.4%), and losing virginity (6.3%) while others accepted it normal (43.2%), health and maturity (2.1%) and something new (18.41)

They were also asked how often they discussed about menstruation with others 28.4% said often, 47.9% sometimes and 23.7% answered that they never discussed about menstruation.

When expressed their emotional state after experiencing menarche (30%) said that they felt tension, hating oneself and lack confidences (26%) and fear (20%). However, some female adolescents revealed that they felt pride (10.6%) and happiness (12.1%) after experienced menarche

The impacts of menstruation on female adolescent were explored. Accordingly, menstruation was found to affect their education. For instance, some female adolescents expressed that they do not go to school when they experience menarche (10.5%) and the others said that they lack concentration during class lecture (33.2%).

The social impact of menstruation was that some adolescents isolate themselves from peer interaction during their menstrual period. In the contrary some female adolescents revealed that menstruation increased their sociability. That means, they make discussion about their experiences with their friends.
Practice of heterosexual relationship has both advantages and disadvantages. Early experience of opposite sex relationship may result in adolescent risk of HIV/AIDS and teen age pregnancy unless proper cares are taken. On the other hand heterosexual relationship has its own advantage on the social and identity development.

In the present study the pattern of adolescents’ heterosexual relationship were investigated. As indicated in table 3.5 above female adolescents declared various patterns of heterosexual relationship. According to their response 51.1% said that female adolescent should not stay long to start opposite sex relationship. This group of the respondents preferred to start opposite sex relationship early while the other group (48.9%) preferred to stay long to practice opposite sex relationship.

When asked about their dating experiences only 11.6% expressed that they date often while 52.1 said that they never date.

**Table 3.5 Pattern of female adolescents heterosexual relationship**

<table>
<thead>
<tr>
<th>In your opinion at what age a matured girl should have a boy friend?</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-18years</td>
<td>79</td>
<td>41.6</td>
</tr>
<tr>
<td>18-25 years</td>
<td>92</td>
<td>48.4</td>
</tr>
<tr>
<td>Above 25 years</td>
<td>19</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>In your opinion should a matured girl stay long or not, to have boy friend?</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stay long</td>
<td>97</td>
<td>51.1</td>
</tr>
<tr>
<td>Not stay long</td>
<td>93</td>
<td>48.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What is the use of having boy friend?</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nothing</td>
<td>62</td>
<td>32.6</td>
</tr>
<tr>
<td>For love</td>
<td>16</td>
<td>8.4</td>
</tr>
<tr>
<td>To help each other</td>
<td>112</td>
<td>59</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How often you walk out with your boy and girl friends?</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Often</td>
<td>22</td>
<td>11.6</td>
</tr>
<tr>
<td>Sometimes</td>
<td>69</td>
<td>36.3</td>
</tr>
<tr>
<td>Never</td>
<td>99</td>
<td>52.1</td>
</tr>
</tbody>
</table>
3.3 Relationship among body image, reaction to menarche, patterns of heterosexual relationship, age of menarche and birth order.

The correlations among pre and post pubertal body image, reaction to menarche, age of menarche, birth order, pattern of heterosexual relationship and parents’ educational level were investigated. Pre pubertal body image was negatively correlated with reaction to menarche. Accordingly, pre pubertal self-view and pre pubertal role of body image made a negative correlation with menarche (-0.321 and -0.283 respectively). General body image and others view body image have a negative correlation of (-0.243 and -0.185) with reaction to menarche respectively.[see appendix 2]

However, correlation between reaction to menarche and post pubertal body image was found to be positively correlated (see appendix 2).

The correlation between age of menarche and reaction to menarche indicated that there was a significant positive relationship. Similarly, age of menarche made a significant positive correlation with post pubertal body image. The correlations were (0.15) for post pubertal role of body image (0.143) for others view of post pubertal body image and (0.223) for post pubertal general body image. There was no significant correlation between pre pubertal body image and age of menarche.

The correlation between birth order and body image shows that pre pubertal body image was negatively correlated with birth order. The correlations were (0.152) for pre pubertal self view (-0.177) for general body image and (-0.434) for role of body image. There was no significant correlation between birth order and post pubertal body image.
Parents' educational level and their daughters' reaction to menarche held a significant positive correlation (i.e. 0.345, for mother educational level and 0.521 for father educational level.

Regarding the correlation between female adolescents' pattern of heterosexual relationship and their body image, no significant correlation was found between pre pubertal body image and pattern of heterosexual relationship. However, post pubertal body image was positively correlated with pattern of heterosexual prelationship. For instance, female adolescents' pattern of heterosexual relationship was positively correlated with post pubertal self view body image (0.280), Others view (0.256) and general body image (0.215).

No significant relationship was found between age of menarche and pattern of heterosexual relationship

Table 3.6 paired sample t-test between pre and post pubertal body image.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Means</th>
<th>N</th>
<th>Std.</th>
<th>T</th>
<th>Df</th>
<th>Sig (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body image roles pre pubertal</td>
<td>12.54</td>
<td>190</td>
<td>1.50</td>
<td>-2.50</td>
<td>189</td>
<td>0.013*</td>
</tr>
<tr>
<td>Body image role post pubertal</td>
<td>12.91</td>
<td>190</td>
<td>1.43</td>
<td>-2.50</td>
<td>189</td>
<td>0.013*</td>
</tr>
<tr>
<td>Body image self view pre</td>
<td>18.56</td>
<td>190</td>
<td>3.88</td>
<td>-8.1</td>
<td>189</td>
<td>0.000**</td>
</tr>
<tr>
<td>Body image self view post</td>
<td>21.26</td>
<td>190</td>
<td>3.64</td>
<td>-8.1</td>
<td>189</td>
<td>0.000**</td>
</tr>
<tr>
<td>Body image others view pre</td>
<td>14.65</td>
<td>190</td>
<td>2.79</td>
<td>-1.35</td>
<td>189</td>
<td>0.077</td>
</tr>
<tr>
<td>Body image others view post</td>
<td>14.85</td>
<td>190</td>
<td>2.5</td>
<td>-1.35</td>
<td>189</td>
<td>0.077</td>
</tr>
<tr>
<td>General body image pre</td>
<td>25.3</td>
<td>190</td>
<td>4.21</td>
<td>1.033</td>
<td>189</td>
<td>0.255</td>
</tr>
<tr>
<td>General body image post</td>
<td>24.92</td>
<td>190</td>
<td>4.7</td>
<td>1.033</td>
<td>189</td>
<td>0.255</td>
</tr>
</tbody>
</table>

* * Significant at P< 0.001  * Significant at P< 0.05
As indicated in table 3.6 there was a significant difference between pre and post pubertal body image. The result of parried sample t-test revealed that the difference was $p< 0.001$ for self-view body image and $P<.05$ for role of body image. No significant difference was obtained for pre and post pubertal others view of body image and general body image at $P< 0.05$.

The correlations among variables were examined for urban and rural adolescents independently. The result showed that there was a negative relationship between pre pubertal body image and reaction to menarche for urban and rural female pubescent. The negative relationship was observed between all components of body image and reaction to menarche for urban females while pre pubertal self-view and role of body image were negatively correlated with reaction to menarche for rural pubescent (see appendix 3 and 4).

The correlation between age of menarche and reaction to menarche indicate that there was a significant positive relationship for both urban and rural female pubescent (0.323 and 0.245 respectively). Similarly, positive relationship was observed between age of menarche and post pubertal body image for urban and rural female adolescents. For instance, age of menarche was positively related to post pubertal self-view body image (0.220) and post pubertal general body image (0.232) for rural pubescent. For urban pubescent age of menarche was positively related to post pubertal self-view and role of body image (see appendix 3 and 4).
The correlation between birth order and body image indicated that prepubertal body image was negatively correlated with birth order for rural female pubescent while there was no correlation for urban females.

There was no significant relationship between birth order and postpubertal body image for urban and rural pubescent.

As the result of correlation indicated heterosexual pattern was positively related to post pubertal body image for both urban and rural female pubescent (see appendix 3 and 4). There was no significant relationship between pre pubertal body image and female adolescents’ patterns of heterosexual relationship.

*Table 3.7 Paired sample t-test between pre and post pubertal body image for urban female pubescent.*

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>St.D</th>
<th>T</th>
<th>Df</th>
<th>Sig(2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body image role pre</td>
<td>94</td>
<td>12.52</td>
<td>1.75</td>
<td>-0.686</td>
<td>93</td>
<td>0.414</td>
</tr>
<tr>
<td>Body image post</td>
<td>94</td>
<td>12.66</td>
<td>1.55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body image self view</td>
<td>94</td>
<td>18.16</td>
<td>3.59</td>
<td>-5.87</td>
<td>93</td>
<td>0.000*</td>
</tr>
<tr>
<td>Body image self view post</td>
<td>94</td>
<td>20.63</td>
<td>3.71</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body image others view pre</td>
<td>94</td>
<td>14.13</td>
<td>2.57</td>
<td>-0.0795</td>
<td>93</td>
<td>0.428</td>
</tr>
<tr>
<td>Body image others view post</td>
<td>94</td>
<td>14.34</td>
<td>2.37</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General body image pre</td>
<td>94</td>
<td>25.55</td>
<td>4.3</td>
<td>1.81</td>
<td>93</td>
<td>0.074</td>
</tr>
<tr>
<td>General body image post</td>
<td>94</td>
<td>24.84</td>
<td>5.39</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Significant at P< 0.001
Table 3.8 Paired sample t-test between pre and post pubertal body image for rural female pubescent

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Std</th>
<th>T</th>
<th>Df</th>
<th>Sig (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body image role pre</td>
<td>12.56</td>
<td>96</td>
<td>1.398</td>
<td>-2.79</td>
<td>95</td>
<td>0.06</td>
</tr>
<tr>
<td>Body image role post</td>
<td>13.16</td>
<td>96</td>
<td>1.26</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body image self-view pre</td>
<td>18.96</td>
<td>96</td>
<td>4.12</td>
<td>-566</td>
<td>95</td>
<td>000*</td>
</tr>
<tr>
<td>Body image self-view post</td>
<td>21.89</td>
<td>96</td>
<td>3.48</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body image other view pre</td>
<td>14.96</td>
<td>96</td>
<td>2.96</td>
<td>-1.1</td>
<td>95</td>
<td>0.277</td>
</tr>
<tr>
<td>Body image others view post</td>
<td>15.35</td>
<td>96</td>
<td>2.55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General body image pre</td>
<td>24.85</td>
<td>96</td>
<td>4.1</td>
<td>-3.42</td>
<td>95</td>
<td>0.733</td>
</tr>
<tr>
<td>General body image post</td>
<td>25</td>
<td>96</td>
<td>3.96</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Significant at P< 0.001

To investigate whether there is a difference in the form of relationship of pre and post pubertal body image among rural and urban female pubescent, a paired sample t-test was employed for both urban and rural pubescent independently. The result of the finding indicated that there was a significant difference between pre and post pubertal body image for both urban and rural pubescent. The significant difference was observed between pre and post pubertal self-view (p< 0.001) only.
3.4. Difference between urban and rural female adolescents in their body image, reaction to menarche, patterns of heterosexual relationship and age of menarche

Table 3.9 Independent sample t-test between urban and rural pubescent for pre and post pubertal body image, reaction to menarche, heterosexual relationship and age of menarche.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Place of precedence</th>
<th>N</th>
<th>Mean</th>
<th>St.d.</th>
<th>T</th>
<th>Df</th>
<th>Sig(2-taile)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body image pre puberty role</td>
<td>Urban</td>
<td>94</td>
<td>12.52</td>
<td>1.75</td>
<td>.179</td>
<td>188</td>
<td>.858</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>96</td>
<td>12.56</td>
<td>1.39</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body image self-view pre</td>
<td>Urban</td>
<td>94</td>
<td>18.16</td>
<td>3.57</td>
<td>1.423</td>
<td>188</td>
<td>.156</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>96</td>
<td>18.96</td>
<td>4.12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body image others view pre</td>
<td>Urban</td>
<td>94</td>
<td>14.13</td>
<td>2.57</td>
<td>2.065</td>
<td>188</td>
<td>.04*</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>96</td>
<td>14.96</td>
<td>2.96</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body image total pre</td>
<td>Urban</td>
<td>94</td>
<td>44.81</td>
<td>5.73</td>
<td>-1.87</td>
<td>188</td>
<td>.062</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>96</td>
<td>46.48</td>
<td>6.52</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G. body image pre</td>
<td>Urban</td>
<td>94</td>
<td>25.76</td>
<td>4.3</td>
<td>-1.48</td>
<td>188</td>
<td>.140</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>96</td>
<td>24.85</td>
<td>4.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body image role post</td>
<td>Urban</td>
<td>94</td>
<td>12.66</td>
<td>1.55</td>
<td>2.428</td>
<td>188</td>
<td>.16*</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>96</td>
<td>13.16</td>
<td>1.26</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body image self view post</td>
<td>Urban</td>
<td>94</td>
<td>20.63</td>
<td>3.71</td>
<td>2.413</td>
<td>188</td>
<td>.858</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>96</td>
<td>24.89</td>
<td>4.48</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body image other view post</td>
<td>Urban</td>
<td>94</td>
<td>14.34</td>
<td>2.37</td>
<td>2.841</td>
<td>188</td>
<td>.005**</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>96</td>
<td>15.35</td>
<td>2.55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body image total post</td>
<td>Urban</td>
<td>94</td>
<td>47.63</td>
<td>5.62</td>
<td>-3.44</td>
<td>188</td>
<td>.001**</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>96</td>
<td>50.395</td>
<td>5.47</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body image scale post</td>
<td>Urban</td>
<td>94</td>
<td>24.84</td>
<td>5.39</td>
<td>.233</td>
<td>188</td>
<td>.816</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>96</td>
<td>25.00</td>
<td>3.96</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pattern of heterosexual</td>
<td>Urban</td>
<td>94</td>
<td>16.34</td>
<td>3.43</td>
<td>2.31</td>
<td>188</td>
<td>.022*</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>96</td>
<td>17.43</td>
<td>3.11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reaction to menarche</td>
<td>Urban</td>
<td>94</td>
<td>21.93</td>
<td>3.33</td>
<td>-5.9</td>
<td>188</td>
<td>.000***</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>96</td>
<td>18.97</td>
<td>3.56</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age of menarche</td>
<td>Urban</td>
<td>94</td>
<td>13.73</td>
<td>1.33</td>
<td>-2.00</td>
<td>188</td>
<td>.047*</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>96</td>
<td>14.15</td>
<td>1.49</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Significant at P<0.05
** Significant at P<0.01
*** Significant at P<0.001
To find whether there is a significant difference between urban and rural female pubescent in their body image, reaction to menarche, heterosexual relationship and age of menarche independent t-test was used. According to the result of the study there was no significant difference between urban and rural female pubescent for all components of body image except for prepubertal others view of body image (p<0.05). However, a significant difference was obtained for two components of post pubertal body image, (P<.05, role of body image and P<.01 others view). Similarly, pattern of heterosexual relationship was significantly different between urban and rural female pubescent.

Age of menarche and reaction to menarche were also significantly different among urban and rural female adolescents (P<.05 and P<0.001) respectively (see table 3.9)
IV. Discussion

The main purpose of the present study was to investigate how factors in the individual affect adolescent girls' adjustment to pubertal changes. In addition, the study aimed at identifying how pubertal changes themselves are related to one another and affect one another. One of the specific objectives of the present finding was to study the relationship between body image and adolescent girl's reaction to menarche. In an investigation of how female body image before puberty relates to the onset of menstruation, the result of the study indicated that there was a negative relationship. This means, girls who developed positive body image prior to puberty were not ready to accept the occurrence of menstruation while those who developed unfavorable body image had positive reaction to the onset of menstruation.

This finding is consistent with the longitudinal study of (Davidzakin, Dale Blyth, and Roberta simon, 1984 as cited is Santrock, 1987). According to the result of the finding of these researchers unattractive girls exhibited a favorable attitude towards pubertal changes than attractive one. One explanation they gave to their result was the degree of risk or uncertainty involved in making the transition through early adolescence. The attractive girl, prior to experiencing pubertal change has been accustomed to preferential treatment because of her looks. When the attractive girl begins menarche and other physical changes, this may be more threatening to her because of the risk involved in possible losing her attractive. By contrast, the unattractive girls may welcome the onset of menstruation probably
because these likely will not be any loss as she experience menarche and other body changes. So, she holds the possibility that puberty will make her body beautiful. This study suggests that the attractive girls show more difficult adjustment than the unattractive girl to the onset of puberty.

To see whether this relationship was different among urban and rural female adolescents, independent correlation between pre pubertal body image and reaction to menarche was computed. The result of correlation indicated that the same relationship was obtained for both urban and rural adolescents. That is, pre pubertal body image and reaction to menarche was negatively correlated for both urban and rural female adolescents.

The impact of pubertal change on their post pubertal body image was also explored. As the result of paired sample t-test shown there was a significant difference between pre and post pubertal body image. According to the result of the present finding menarche may contribute to the development of positive body image.

However, previous studies (Jennifer, ODea and Abracham, 1999) revealed that post menarcheal females were more dissatisfied with their body than were pre menarcheal females.

The positive impact of menarche on body image can be explained by the positive reaction they exhibited to menarche. Researchers clearly expressed that female adolescents have both positive and negative reaction to menarche. The positive reactions are that menarche is an indicator of maturity and girls perceive menarche as sign of maturity. In the present finding also female adolescents expressed the positive aspect of menarche.
For example, many of them were happy, pride, and self-confident after they experienced menarche and they felt health and able to have children. So, these positive aspects of menarche may help them to have positive body image probably because they associated menarche with femininity.

In order to find whether the difference of pre and post pubertal body image is different for urban and rural female pubescent paired sample t-test was employed for urban and rural separately. The result showed that there was a significant difference between pre and post pubertal body image for both urban and rural (P<0.001). The significant difference was obtained for self-view body image. This indicates that puberty affects rural and urban female pubescent's body image in the same manner.

The present study also revealed that there was a positive correlation between adolescent girls' reaction to menarche and interest towards opposite sex. For example, as it was drawn from the response of the subjects girls who have positive attitude towards menstruation expressed that they have a good relationship with their opposite sex friends.

Researchers agreed that attractive women have relatively more sexual experience and greater sexual esteem as a result of greater male attention than unattractive women. (Maccord, Auodale and Dealmaker, 1979; Mursterir and Holden, 1979 as cited in Weatherman and Hurst, 1998) found that self rated facial attractiveness; general body satisfaction and physical attractiveness were positively related to the amount of life time sexual experience for women. Although physical attractiveness may be important determinants of male attention and sexual opportunity, subjective views
about one's facial bodily attractiveness is also related to heterosexual experiences. In line with this the present study indicated that female adolescents' body image was positively correlated with their heterosexual pattern. The correlation was high for self-view body image (0.241, p< 0.01) than others view of body image (0.156, P< 0.05) and general body image (0.215, P< 0.01) see table 3.6).

In the present study reaction to menarche was found to be positively related to both post pubertal body image and heterosexual relationship. That is, girls who experienced unfavorable attitude towards menarche showed negative body image and low interest towards opposite sex. It was discussed earlier in this paper that girls who exhibit negative reaction to menarche was those who developed positive body image prior to puberty and perceived menarche as treating to their beauty. These girls when they entered puberty accept the onset menstruation as bad occurrence and they start to develop negative body image. This negative body image leads to low interest towards opposite sex relationship.

This result of the finding also indicated on the other hand that adolescent girls who did have negative body image before puberty were found to have body image satisfaction after puberty. This body image satisfaction was resulted in increasing rate of heterosexual relationship.

When this relationship was examined for urban and rural female pubescent separately, similar relationships were found.
The relationship between age of menarche and reaction to menarche was examined in the present study. The result showed that reaction to menarche was positively related to age of menarche. According to this finding female adolescents who experienced menarche early were found to be less comfortable about the onset of menstruation than those who experienced late. (Brooks-Gunn, 1988, Petersen, 1983; Rieverdan and kofr, 1985 as cited in Conger, 1991) found that attitudes towards menstruation are influenced by the time at which menarche occurs relative to peers. According to their study college women who perceived themselves as reaching menarche early relative to their peers had more negative memories of menarche than those who perceived themselves as either “on time” or late.

In the same way the correlation between age of menarche and body image indicated that there was positive correlation. This result suggested that females who experienced menarche late have more positive body image than those who experienced early. Previous research agrees with this finding that early matures are less satisfied with their bodies than late matures. (Kimmel and Weiner, 1985).

A research reported by (Weiderman and Hurst, 1998) suggested that heterosexual relationship is connected to age of menarche. According to this researcher the rate of heterosexual intercourse related to the steady falling of age of menarche. In opposite to this previous research report the present finding indicated that there was no significant correlation between pattern of heterosexual and age of menarche.
Environment has a significant impact on the development of individual behavior. Person brought in different environmental conditions are expected to differ in their experiences of developmental events. With this assumption the present study considered urban and rural female pubescent while investigating pubertal changes.

According to the result of the study a significant difference was obtained between urban and rural female pubescent in their pre pubertal body image only for others view of body image while there were no significant differences for others components of body image. This study suggested that during their pre pubertal time children have almost similar body image regardless of their residential areas. However, there were significant differences along the various components of post pubertal body image between urban and rural female pubescent. This may indicate that the difference in body image become more magnificent during puberty. The study also further implies that environmental factors have more impact on the development of body image during adolescence. As it was observed from the result of the study (see table 3.9) the mean value of rural adolescents were greater than that of urban at all components of body image. The possible explanation for this can be connected to environmental factors that influence adolescent’s body image. First, adolescent in urban areas are more exposed to Medias such as television, films, news papers, posters and so on which convey a different model of physical appearances. Researchers identified that a relationship exists between magazines read and the likely hood that the reader could dissatisfied with one’s own body image. Phares
et. al (1994) revealed that the adolescents' body images are shaped by societal expectations imparted through magazines, television, and movies as well as by people's response to their appearance. Second, because of the heightened importance of the peer group during adolescence the motivation to confirm to the values, costumes and interest of the peer culture increase during this period (Conger, 1991). This conformity also exists concerning physical appearance since peers are role model and they are sources of praise and criticism about physical appearance. Although not supported by research evidence, the researcher of this study believes that this influence of peers on body image increases in urban than rural adolescents and this may be the reason for the lower body image for urban female adolescents.

Another developmental event that was compared between urban and rural female pubescent was their reaction to menarche. The result of t-test showed that there was a significant difference. The mean value of urban adolescents was higher than that of rural. The difference can be explained by certain factors which contribute to adolescent girls' reaction to menarche. For example, adequate preparation for menarche determines the way female pubescent react to the onset of menstruation. It is expected that urban female adolescents have adequate information about menarche before its occurrence than rural adolescents since they live relatively in educated family and informed society.

The result of independent t-test also revealed that there was a significant difference between urban and rural pubescent on the age of
menarche. According to the result obtained the mean age of menarche was lower for urban than rural adolescents.

Researchers associated the late or early onset of menstruation with a lot of variables. Among these are nutrition, physical health, heredity and possibly geographical conditions are the prominent one. Tarrer, 1971 as cited in Kemmil and Wiener, 1985 augured that the trend toward earlier maturity is largely a result of improved nutrition from conception through puberty. He noted that there are marked variations among countries, paralleling nutritional difference.

The difference in age of menarche between urban and rural female pubescent in the present finding could be attributed to the above mentioned factor. In Ethiopia as compare to female in rural area urban female adolescents live better life and so get better nutrition. This may be the reason for the difference in age of menarche between urban and rural female adolescents.

As the independent t-test was showed there was a significant difference between urban and rural female pubescent in their heterosexual relationship. The result of the finding indicated that the mean value of rural pubescent was greater than that of urban pubescent. This shows that rural female adolescents are more active in their opposite sex relationship than urban female adolescents. This may be due to as found in the present finding rural adolescents perceived their body as amore attractive than urban female adolescents and body image is positively correlated with heterosexual relationship.
V Summary, Conclusion, and Recommendation

5.1 Summary

Previous studies focused mostly on external factors such as culture, family background, and socio-economic status and so on as determinant factors for adolescents' adjustment to pubertal changes.

Although it is doubtless that these external factors are useful to explain adolescents, difficult adjustment to developmental changes the role of factors inside the individual are not negligible.

Therefore, the present study aimed at identifying how factors in the individual affect adolescent adjustment to developmental changes and how developmental changes themselves interact and affect one another.

One factor that was found to affect female adolescent's reaction to menarche was pre-pubertal body image. Previous studies indicated that children start to concern about their body earlier before puberty. Hence, the way they perceive their physical appearance before puberty determines how they react to the onset of menstruation.

As observed in the present finding pre-pubertal body image was negatively correlated to adolescent reaction to menarche. This finding indicated that female adolescents who perceived themselves attractive in their pre-pubertal time reacted negatively to the onset of menstruation while those who perceived themselves unattractive showed positive feeling towards menarche. This study further suggested that adolescent girls who
developed positive body image have difficulty in making adjustment to pubertal changes.

In this finding menarche was found to have a positive impact on post pubertal body image. That is, adolescent girls shown favorable body image after experiencing menarche. This may be as suggested in the study due to the positive attitude towards menarche.

The relationship between age of menarche and reaction to menarche was found to be negative. According to this finding early maturers exhibit negative reaction to menarche than late matures.

Age of menarche was also made a positive correlation with post pubertal body image.

Similarly, pattern of heterosexual relationship was positively correlated with post pubertal body image while no significant correlation was obtained between pattern of heterosexual relationship and pre pubertal body image.

This finding indicated that female adolescents who have positive body image during their post pubertal period are prone to the practice of opposite sex relationship.

When urban and rural female adolescents were compared in the form of relationship of these variables, the relationship between pre pubertal body image and reaction to menarche was negative for both rural and urban female pubescent. However, the relationship was different at different components of body image. For example, the negative relationship was held at all components body image for urban female pubescent while for rural
pubescent the negative relationship was obtained between reaction to menarche and self-view and role of body image.

The correlation between birth order and pre pubertal body image was negative for rural adolescents while there was no correlation between birth order and pre pubertal body image for urban female pubescent. This indicated that birth order affects rural female adolescents than urban adolescents.

Heterosexual relationship was positively correlated with post pubertal body image for both urban and rural female pubescent.

When the difference between urban and rural pubescent was compared in terms of single variable, no significant difference was obtained between urban and rural female pubescent in all components of pre pubertal body image except pre pubertal self-view body image. However, there was a significant difference between urban and rural female pubescent in two components of body image namely, role of body image and other view of body image. This finding suggested that during adolescence urban and rural female pubescent vary in their body image than during childhood.

Similarly, urban and rural pubescent showed a significant difference in their pattern of heterosexual relationship. According to the study rural pubescent exhibit high rate of heterosexual relationship than urban pubescent. This is probably because rural adolescents have more positive body image than urban adolescents.
5.2 Conclusion

In the present study factors with in the individuals were found to affect female adolescent's adjustment to pubertal changes. i.e

- Adolescents who developed positive body mage prior to puberty were found to fail to adjust themselves to pubertal changes (e.g the onset of menstruation). These adolescents experienced negative reaction to menarche.

- Those adolescents who did have negative reaction to menarche experienced unfavorable body image and thus low interest towards opposite sex relationship.

- Female adolescents who experienced menarche earlier than their peers was found to react negatively to the occurrence of menstruation.

- Body image was found to increase the rate of adolescent’s heterosexual relationship. That is, adolescents who perceived themselves attractive were more active in their opposite sex relationship than their counter part unattractive.

- Age of menarche was found to affect female adolescents’ body image. That is, as shown in the study adolescents who experienced menarche earlier than their peers have negative body image than who experienced latter.

- Adolescent who exhibited positive reaction to menarche showed high rate of heterosexual relationship.
• Rural female adolescents showed more practices of heterosexual relationship than urban adolescents may be due to their more positive body image than urban female adolescents.

5.3 Recommendation

Based on the present finding the researcher suggests the following recommendations for families, educators, teachers, counselor and any concerned bodies working on adolescents particularly female pubescent.

• In order to alleviate female adolescents’ difficult adjustment to pubertal changes emphasis should be given not only to external factors but also internal factors i.e.

  • Internal factors like female adolescents pre pubertal body image should be assessed and proper strategy should be designed to prepare the girl for pubertal changes.

• In an intervention program of female adolescents’ difficult adjustment of developmental changes families, teachers, counselor etc should know or identify what are these developmental changes and how they interact to one another to effect adolescent behavior i.e.

• Since the attractive girls prior to puberty face difficulty to accept the onset of menstruation because they fear to lose their beauty they should be helped to prepare themselves for pubertal changes in general and the onset of menstruation in particular. This could be done by-providing adequate information about developmental changes that occur at this
critical period particularly at beginning of their Junior high school years is of crucial importance.

- Necessary follow up should be undertaken after the pubescent girl starts to experience pubertal change. This is because on one hand, girls who experienced positive body image before puberty are expected to develop body image dissatisfaction after menarche and as result they develop low interest towards heterosexual relationship. On the other hand female adolescents who perceived themselves unattractive before menarche well come the onset of puberty positively and this may help them develop positive body image. So, these individuals should also be monitored and given appropriate guidance for they are highly susceptible to early engagement of opposite sex relationship. This could be done by arranging discussions of sex-related relevant issues in order to avoid unnecessarily, health physical and psychosocial complication that may come out of ignorance, lack of appropriate information pertain in to early sex.

- Finally, further research should be conducted to make the problem easier and solvable
References


Tirussew, Tefera (1990). "Onset, Bodily Reactions and Psychological Consequences of Menarche among a Group of Ethiopian Girls..


Appendix
Addis Ababa University
School of Graduate Studies
Department of Psychology

Questionnaire Prepared to be filled by Female Adolescents

The objective of this questionnaire is to study the relationship that exist among female adolescents developmental changes. The questionnaire has four parts. Each part has its own directions. Please, complete the items according to the instruction given to each part.

Each question has no right or wrong answer it invites you to give your opinion. Please, give you frank and honest response.

Thank you for your cooperation.

Part I
This part of the questionnaire is designed to obtain data on female adolescents' background information. Please, give your response to each item.

1.1 Age __________________
1.2. Place of residence ______________
1.3. Grade _______________________
1.4. Number of brother _____________
1.5. Number of sitters ______________
1.6. Birth order ____________________
1.7. Family situation 1. Both parents alive
2. Only father alive
3. Only Mother alive
4. Both parents died
1.8. Father educational level: 1. Can not read and write
Part II

Questionnaire included in this part is prepared to measure female pubescent body image. The questionnaire is classified into two sub-parts. In the first sub-part students are expected to give their response to items about their body image before puberty. In the second sub-part students give response to items about their body image after puberty.

2.1 Items on body image before puberty.

Directions: Items included in this sub-part of the questionnaire are prepared to measure females' body image before puberty. Please, give your repose about your body image before experiencing menarche.

2.1.1. From males and females who were more beautiful to you?
   1. Females  2. Males  3. No difference

2.1.2. From more popular and less popular females who were more beautiful to you? 1. More popular  2. Less popular  3. No difference

1.1.3. From more respected and less respected females who were more beautiful to you?
   1. More respected  2. Less respected  3. No difference
2.1.4. From well-mannered and ill-mannered females who were more beautiful to you? 1. Well-mannered 2. Ill-mannered 3. No difference

2.1.5. From females those who deserved high demand and deserved less demand to marriage who were beautiful to you? 1. High demand 2. Less demand 3. No difference

2.1.6. To what extent you had been appreciating your being female? 1. Highly 2. Moderately 3. Less

2.1.7. Did you ever think that you were decent girl? 1. Yes, I thought 2. No, I don't not 3. I did not decide

2.1.8. How far you thought that you were popular among people? 1. Much 2. Average 3. Less

2.1.9. To what extent had you been respected among people? 1. Highly 2. Less 3. I was not sure that people might have respected me

2.1.10. How often you thought that you were demanded to marriage? 1. Often 2. Sometimes 3. Never


2.1.12. How much did people like you? 1. Much 2. Less 3. I was not sure

2.1.13. How often had you been told that you would get husband? 1. Often 2. Sometimes 3. Never
2.1.14. Did you ever think that you could marry to a wealthy husband?
1. ye I did 2. No, I did not 3. I was not sure

2.1.15. How often you thought that you could marry of you wish?

2.1.16. How often did you worry that you might be abducted?
1. Often 2. Sometimes 3. Never would

2.1.17. How often your parents told you that you would marry to a wealthy husband? 1. Often 2. Sometimes 3. Never

2.1.18. How often did your parents tell you that you would be demand for marriage and you would be married earlier?

2.1.19. Did you think that you were more beautiful than your sisters?
1. Yes, I did 2. No, I did not 3. I thought that we were equal

2.1.20. Did you think that you were more beautiful than your friends?
1. Yes, I did 2. No, I did not 3. I thought that we were equal

2.1.21. How did your parents made a comparison as to your beauty to your sisters? 1. That you were the most
2. That you were equal in beauty 3. That you were less beautiful.

2.1.22. What did your sisters say about your beauty?
1. that you were beautiful 2. that you were not beautiful
3. said nothing about your beauty
The items given below are body image rating scales. Please, give your response by circling the choice given against the item.

2.1.23 I like my body the way it was
1. True 2. False 3. I did not decide

2.1.23 I thought my body was exactly the way I always wished.
1. True 2. False 3. I did not decide

2.1.24 I hid part of my body, because it was not perfect.
1. True 2. False 3. I did not decide
2.1.25 I avoided looking at some part of my body because it did not please me.
1. True 2. False 3. I did not decide

2.1.26 I wished I have been someone with different physical appearance.
1. True 2. False 3. I did not decide

2.1.27 I liked the shape and look of my face.
1. True 2. False 3. I did not decide

2.1.28 No matter what clothes or adornment I used, my physical appearances did not please me.
1. True 2. False 3. I did not decide

2.1.29 I thought my body was insignificant.
1. True 2. False 3. I did not decide

2.1.30 I was excessively concerned about people’s opinions about my physical appearance.
1. True 2. False 3. I did not decide
2.1.31. I was upset because my body was not that I wished it had been
1. True 2. False 3. I did not decide

2.1.32. I felt unsatisfied with my physical appearance.
1. True 2. False 3. I did not decide

2.2 Items on body image after puberty
Directions: items included in this sub-part of the questionnaire are
prepared to measure female's body image after puberty. Please, give your
response to items about your body image after you experienced
menarche.

2.2.1. From males and females who are more beautiful to you?

2.2.2. From more popular and less popular females who are more
beautiful to you?
1. More popular 2. Less popular 3. No difference

2.2.3. From more respected and less respected females who are more
beautiful to you?
1. More respected 2. Less respected 3. No difference

2.2.4. From well-mannered and ill-mannered females who are more
beautiful for you?
1. Well-mannered 2. Ill-mannered 3. No difference

2.2.5. From females those who deserved high demand and less demand
to marriage who are more beautiful to you?
1. High demand 2. Less demand 3. No differences
2.2.6 To what extent you have been appreciating your being female?
1. Highly  
2. Moderate  
3. Less  

2.2.7. Do you think that you are decent girl?
1. Yes, I think  
2. No, I do not  
3. I have not decided.  

2.2.8 How far you think that you are popular among people?
1. Much  
2. Average  
3. Less  

2.2.9. To what extent have you been respected among people?
1. Highly  
2. Less  
3. I am not sure  

2.2.10 How often you think that you are demanded to marriage?
1. Often  
2. Sometimes  
3. Never  

2.2.11 What is people's opinion for you?  
1. Good  
2. Fair  
3. Bad  

2.2.12. How much do people like you?
1. Much  
2. Less  
3. I am not sure  

2.2.13. How often have you been told that you will get husband?
1. Often  
2. Some times  
3. Never  

2.2.14 Do you think that you can marry to a wealthy husband?
1. Yes, I do  
2. No, I do not  
3. I am not sure  

2.2.15. How often you think that you can marry if you wish?
1. Often  
2. Sometimes  
3. Never  

2.2.16. How often do you worry that you may be abducted?
1. Often  
2. Some times  
3. never
2.2.17. How often do your parents tell you that you will marry to a wealthy husband? 1. Often 2. Sometimes 3. Never

2.2.18. How often do your parents tell you that you will be demanded for marriage and you will be married earlier?

2.2.19. Do you think that you are more beautiful than your sisters?
1. Yes, I do 2. No, I do not 3. I think that we are equal

2.2.20. Do you think that you are more beautiful than your friends?
1. Yes, I do 2. No, I do not 3. I thought we are equal

2.2.21. How do your parents make a comparison as to your beauty to your sisters?
1. That you are the most beautiful 2. That you are the same as to your sisters 3. That you are less beautiful

2.2.22. What do your sisters say about your beauty?
1. That you are beautiful 2. That you are not beautiful 3. Say nothing about your beauty.

The items given below are body image rating scales. Please, give your response by circling the choice given against the items.

165. I like my body the way it is
2.2.23. True 2. False 3. I am not sure

2.2.24. I think my body is exactly the way I always wish
1. True 2. False 3. I am not sure
2.2.25. I hid part of my body, because it is not perfect.
1. True 2. False 3. I am not sure

2.2.26. I avoided looking at some part of my body because it do not please me.
1. True 2. False 3. I am not sure

2.2.27. I wish I were some one with different physical appearance.
1. True 2. False 3. I am not sure

2.2.28. I like the shape and look of my face
1. True 2. False 3. I am not sure

2.2.29. No matter what clothes or adornments I use, my physical appearance does not please me.
1. True 2. False 3. I am not sure

2.2.30. I think my body is insignificant.
1. True 2. False 3. I am not sure

2.2.31 I am excessively concerned about people's opinions about my physical appearance.
1. True 2. False 3. I am not sure

2.2.32. I am upset because my body is not that I wished it were.
1. True 2. False 3. I am not sure

2.2.33. I feel unsatisfied with my current physical appearance.
1. True 2. False 3. I am not sure
Part III.

Questionnaire which is included in this part is prepared to measure female adolescents' feelings towards the onset of menstruation. Please, give your response to the items your feelings towards menstruation

3.1. When did you experience menarche?

3.2. How you found the first menstruation

3.3. How were you sure that it was menstruation

3.4. Who told you that it was menstruation

3.5. To whom you told as you observed the first menstruation?

3.6. How often you discussed about menstruation with others?

3.7. If you have ever discusses about menstruation with whom you made discussion? 1. Mother

3.8. After you experienced menarche what was your feeling for many times

3.9. After you experienced menarche what was your felling for sometimes?

3.10. What is your feeling when you experience menarche now?
3.11. How you get observing menstruation? (for example; is it necessary or embarrassing or mention other)

3.12. With respect to your age what do you say about the onset of menarche? 1. It is on time 2. I like if it comes latter 3. I wish if there were no menstruation

13. Mention the impact of menarche on your:
   3.13.1 Education
   3.13.2 Relationship with peer
   3.13.3 Relationship with parent

Part IV

Questionnaire which is included in this part is prepared to measure patterns of female pubescent heterosexual relationship.

4.1. In your opinion at what age a matured girl should have a boy friend?

4.2. In your opinion should a matured girl stay long or not, to have a boy friend?

4.3. To help each other 3. For love 4. For safety (to be limited one person)

4.4. In establishing a relationship with opposite sex what kind of cares should be taken?
   1. Reducing activities which initiate to sexual intercourse
   2. Using contraceptives
3. Reading books, leaflet, newspaper, fiction concerning opposite sex relationship.

4.5. What is your peers intentions to have a boy friend?
   1. Many of them have the intention to have boy friend
   2. Some of them have the intention to have boy friend
   3. Some of them have boy friend.

4.6. What is the readiness of your peers to have boy friends?
   1. Many of them read books leaflets, newspaper concerning opposite sex relationship.
   2. Some of them read books leaflets, newspaper concerning opposite sex relationship.
   3. None of them read books, leaflet, newspaper and magazines concerning opposite sex relationship.

4.7. How often you think to have boy friend?

4.8. What is your readiness to have boy friend?
   1. I read books, leaflet, newspaper, fiction and magazines concerning opposite sex.
   2. I make discussion with my friends concerning opposite sex relationship.
   3. I performed nothing concerning opposite sex relationship.

4.9. What is your reaction if one of your class mate boys request you for love? ________________________

4.10. How often you walk out with your boy and girl friends?
4.11. Where do you go when you walk out with your boy and girls friends?


4.13. What was your feeling the first day when you contact your boy friend?

4.14. What is your feeling when you contact your boy friend now?
አስ የለው የእንድር እውለ ይታወስ ከማይታወሱ ያላ�سلح


d.fetch

የባል ከላሸ ያለው የእንድር እውለ ይታወስ ከማይታወሱ ያላሸእ


d.fetch

1. ወይም
2. የተለያዩ ውሬ ይሆን ይህን ወይም ከተማ
3. የተለያዩ ውስጥ
4. የተለያዩ ውስጥ ከተማ በተለያዩ
5. በተለያዩ ውስጥ ከተማ
6. በተለያዩ ውስጥ ከተማ
1. ከተማው ውስጥ ከተማ
2. ከተማው ውስጥ ከተማ
3. ከተማው ውስጥ ከተማ
4. ከተማው ውስጥ ከተማ
7. የተለያዩ ውስጥ ከተማ

ወንስ: 1. ከተማው ውስጥ ከተማ
2. ከተማው ውስጥ ከተማ
3. ከተማው ውስጥ ከተማ
4. ከተማው ውስጥ ከተማ
5. ከተማው ውስጥ ከተማ

ወንስ: 1. ከተማው ውስጥ ከተማ
2. ከተማው ውስጥ ከተማ
3. ከተማው ውስጥ ከተማ
4. ከተማው ውስጥ ከተማ
5. ከተማው ውስጥ ከተማ

ነስተኛ: ከተማው ውስጥ ከተማ
2. ከተማው ውስጥ ከተማ
3. ከተማው ውስጥ ከተማ
4. ከተማው ውስጥ ከተማ
5. ከተማው ውስጥ ከተማ

ተለያዩ ውስጥ ከተማ
ስል ብለት

| 11. የአ.Names እ.ትargent የው የራ ጉዳይ ከNC? |
|---|---|---|
| 1. ከወ.ዉ | 2. የሆ.ሆ | 3. ከወ.ዉ |
| 12. ከወ.ዉ እ.ትargent የው የራ ጉዳይ ከNC? |
|---|---|---|
| 1. ከወ.ዉ | 2. የሆ.ሆ | 3. ከወ.ዉ |
| 13. የአ.Names እ.ት ከወ.ዉ ልዩ የ鲁 ከNC? |
|---|---|---|
| 1. ከወ.ዉ ከNC | 2. ከወ.ዉ ከNC | 3. ከወ.ዉ ከNC |
| 14. ከወ.ዉ እ.ት ከወ.ዉ ልዩ የ鲁 ከNC? |
|---|---|---|
| 1. ከወ.ዉ ከNC | 2. ከወ.ዉ ከNC | 3. ከወ.ዉ ከNC |
| 15. የአ.Names እ.ትargent የው የራ ጉዳይ ከወ.ዉ ከNC? |
|---|---|---|
| 1. ከወ.ዉ ከወ.ዉ ከNC | 2. ከወ.ዉ ከወ.ዉ ከNC | 3. ከወ.ዉ ከወ.ዉ ከNC |
| 16. ከወ.ዉ እ.ትargent የው የራ ጉዳይ ከወ.ዉ ከNC? |
|---|---|---|
| 1. ከወ.ዉ ከወ.ዉ ከNC | 2. ከወ.ዉ ከወ.ዉ ከNC | 3. ከወ.ዉ ከወ.ዉ ከNC |
| 17. የአ.Names እ.ትargent የው የራ ጉዳይ ከወ.ዉ ከNC? |
|---|---|---|
| 1. ከወ.ዉ ከወ.ዉ ከNC | 2. ከወ.ዉ ከወ.ዉ ከNC | 3. ከወ.ዉ ከወ.ዉ ከNC |
| 18. ከወ.ዉ እ.ትargent የው የራ ጉዳይ ከወ.ዉ ከNC? |
|---|---|---|
| 1. ከወ.ዉ ከወ.ዉ ከNC | 2. ከወ.ዉ ከወ.ዉ ከNC | 3. ከወ.ዉ ከወ.ዉ ከNC |
| 19. የአ.Names እ.ትargent የው የራ ጉዳይ ከወ.ዉ ከNC? |
|---|---|---|
| 1. ከወ.ዉ ከወ.ዉ ከNC | 2. ከወ.ዉ ከወ.ዉ ከNC | 3. ከወ.ዉ ከወ.ዉ ከNC |
20. እውነት የምን ዋና ከፋኅ ከፋኅ ይታገኝ ይ ያለበት ከፋኅ ከፋኅንን በ ዋና የምን ያስፈልጋል።
1. ከፋኅ የምን ዋና ከፋኅ ከፋኅ ይታገኝ ይይስ የምን ያስፈልጋል።
2. ከፋኅ የምን ዋና ከፋኅ ይታገኝ ይይስ የምን ያስፈልጋል።
3. ከፋኅ የምን ዋና ከፋኅ ይታገኝ ይይስ የምን ያስፈልጋል።

21. እውነት የምን ይታገኝ ይህ ዋና ያስፈልጋል። የምን ዋና ያስፈልጋል?
1. የታገ
2. የ thụን
3. የ thụን

22. እውነት የምን ይታገኝ ይህ ዋና ያስፈልጋል። የምን ዋና ያስፈልጋል?
1. የ𝛼ን
2. የ thụን
3. የ thụን

23. እውነት የምን ይታገኝ ይህ ዋና ያስፈልጋል?
1. ከፋኅ የምን ዋና ከፋኅ ይታገኝ ይይስ የምን ያስፈልጋል።
2. ከፋኅ የምን ዋና ከፋኅ ይታገኝ ይይስ የምን ያስፈልጋል።
3. ከፋኅ የምን ዋና ከፋኅ ይታገኝ ይይስ የምን ያስፈልጋል።

24. እውነት የምን ይታገኝ ይህ ዋና ያስፈልጋል?
1. ከፋኅ የምን ዋና ከፋኅ ይታገኝ ይይስ የምን ያስፈልጋል።
2. ከፋኅ የምን ዋና ከፋኅ ይታገኝ ይይስ የምን ያስፈልጋል።
3. የ thụን

25. እውነት የምን ይታገኝ ይህ ዋና ያስፈልጋል። የምን ዋና ያስፈልጋል?
1. ከፋኅ የምን ዋና ከፋኅ ይታገኝ ይይስ የምን ያስፈልጋል።
2. ከፋኅ የምን ዋና ከፋኅ ይታገኝ ይይስ የምን ያስፈልጋል።
3. የ thụን

26. እውነት የምን ይታገኝ ይህ ዋና ያስፈልጋል። የምን ዋና ያስፈልጋል?
1. ከፋኅ የምን ዋና ከፋኅ ይታገኝ ይይስ የምን ያስፈልጋል።
2. ከፋኅ የምን ዋና ከፋኅ ይታገኝ ይይስ የምን ያስፈልጋል።
3. የ thụን

27. እውነት የምን ይታገኝ ይህ ዋና ያስፈልጋል። የምን ዋና ያስፈልጋል?
1. ከፋኅ የምን ዋና ከፋኅ ይታገኝ ይይስ የምን ያስፈልጋል።
2. ከፋኅ የምን ዋና ከፋኅ ይታገኝ ይይስ የምን ያስፈልጋል።
3. የ thụን

28. እውነት የምን ይታገኝ ይህ ዋና ያስፈልጋል። የምን ዋና ያስፈልጋል?
1. የ thụን
2. ከፋኅ የምን ዋና ከፋኅ ይታገኝ ይይስ የምን ያስፈልጋል።

3. unil 3. unil

29. Näheest aüle haleem za ooyu aüle haleem. Pani in soju haleem?
   1. un
   2. lame. lame
   3. mahalana

30. AHH nahe haleem za ooyu aüle haleem. Pani in soju haleem?
   1. un
   2. lame. lame
   3. mahalana

31. Näheest aüle haleem. Pani in soju haleem?
   1. un
   2. lame. lame
   3. mahalana

32. AHH nahe haleem. Pani in soju haleem?
   1. un
   2. lame. lame
   3. mahalana

33. Näheest aüle haleem. Pani in soju haleem?
   1. un
   2. lame. lame
   3. mahalana

34. AHH nahe haleem. Pani in soju haleem?
   1. un
   2. lame. lame
   3. mahalana

35. Näheest aüle haleem. Pani in soju haleem?
   1. un
   2. lame. lame
   3. mahalana

36. AHH nahe haleem. Pani in soju haleem?
   1. un
   2. lame. lame
   3. mahalana
3.

1. የصاحب እ الماضي ያሱ በአቱ ከምን ይሸፍል በማወት እ ጊዜ ከወ ያሸፍል የምስራት የወስወት ያልተስፋ ከአቱ የአቱ ከወ ያሸፍል የሚስራት ያስገባ ይታል።

1. ከ1-2 መር 2. ከ2-4 መር 3. ከ4-12 መር 4. ከ1-2 ዋውት 5. ከ2-3 ዋውት 6. ከ3 ዋውት በአሁ

2. ማስቀመገኝ ይህ የአሁን የአሁ የአሁ ከወ ያሸፍል የወስ ያስፈል ይኖር መር?

3. የአሁን ያሸፍል እ ጊዜ በአሁን ያሸፍል ይሸፍል?

4. የአሁን ያሸፍል የሚስራት ያሸፍል ያስፈል ይኖር?

1. ከወ ያሸፍል 2. ከወ ያሸፍል 3. ከወ ያሸፍል 4. ከወ ያሸፍል

5. ከወ ያሸፍል ያሸፍል ያሸፍል ያሸፍል ያሸፍል ያስፈል ይኖር?

6. ከወ መር ያሸፍል ከወ መር ያሸፍል ያሸፍል ያሸፍል ያሸፍል ያሸፍል ያሸፍል ያሸፍል ያሸፍል ያሸፍል ያሸፍል ያሸፍል ያሸፍል ያሸፍል ያሸፍል ያሸፍል ያሸፍል ያሸፍል ያሸፎሉ ያስፈል ይኖር?

1. ከወ መር ያሸፍል ከወ መር ያሸፍል ያሸፍል ያሸፍል ያሸፎሉ ያስፈል ይኖር?

2. ከወ መር ያሸፍል ከወ መር ያሸፍል ያሸፎሉ ያስፈል ይኖር?

3. ከወ መር ያሸፍል ከወ መር ያሸፍል ከወ መር ያሸፎሉ ያስፈል ይኖር?

7. ከወ መር ያሸፍል ከወ መር ያሸፍል ያሸፎሉ ያስፈል ይኖር?

8. የአሁን ያሸፍል ያሸፍል ያሸፍል ያሸፍል ያሸፎሉ ያስፈል ይኖር?

1. ከወ መር ያሸፍል ከወ መር ያሸፍል ያሸፎሉ ያስፈል ይኖር?

2. ከወ መር ያሸፍል ከወ መር ያሸፎሉ ያስፈል ይኖር?

3. ከወ መር ያሸፍል ከወ መር ያሸፎሉ ያስፈል ይኖር?

4. ከወ መር ያሸፍል ከወ መር ያሸፎሉ ያስፈል ይኖር?
<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5.</td>
<td>6.</td>
<td>7.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>10.</td>
<td>11.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>13.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. Mõne õhku hõlmatud õhku põleb taas, kuna see paljastab õhku põletamise põhjusid. Mõne õhku hõlmatud õhku põleb taas, kuna see paljastab õhku põletamise põhjusid.

2. Mõne õhku hõlmatud õhku põleb taas, kuna see paljastab õhku põletamise põhjusid. Mõne õhku hõlmatud õhku põleb taas, kuna see paljastab õhku põletamise põhjusid.

3. Mõne õhku hõlmatud õhku põleb taas, kuna see paljastab õhku põletamise põhjusid.
7. ከተለ ይህ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወይ ወyscale;
**Yuniversiitii Aaddis Ababaa**  
**Barnoota Digrii Lamaffaa**  
**Kutaa Barnoota Saayikooloojii**

Gaaffilee shammarraniin guutamuuf dhiyaatan

Gaaffiileen kun kutaa afuriin goodamanii kan dhihaatan yommuu ta'u, kaayoon gaaffilee kanaas yeroo dargaggummaa isaanii shamarran irratti jijjiirama qamaa fi amalaal dhufu q'achu dhaafi.Gaaffleen dhiyaatan deebii soba ykn dhugaa ta'e hinggaan.ilaacha dhunfaa kee akka himtuf kan dhiyatani dha. Kanaafuu, gaaffilee dhiyaaataniif deebii ifa ta'e kenni.

Gargaarsa keetif duraan dursee sin galateefadha

---

### Kutaa tokkoffaa

Kutaa kana keessatti gaaffileen dhiyaatan walumaa galatti odeeffanno waayee ke ibsan baruufi.Kanaaf gaafflee dhiyaatanif deebii ifa ta'e kenni.

1. Umurii kee
2. Bakka/naanno/magaalaa itti guddatte
3. Sadarkaa baruootaa kee
4. Obbolaa durbaa fi dhiira meega qabda? **Durba**
4. Obbolaa durbaa fi dhiira meega qabda? **Dhiira**
5. Warra keetiif ati mucaa meeqaffa dha?
6. Warri ke lubbu dhaan jiruu ?
   1) Lammeenuu jiru  
   2) abbaa qofaa jira  
   3) haadha qofaa jira  
   4) Lammeenuu lubbu dhan hin jiran
7. Sadarkaa barnootaa kan warra keetii
   **Haadha**
   1) Barreessuu fi dubbisuun
      hin danda'an
   2) Barnoota sadarkaa 1ffaa barataa
   3) Barnoota sadarkaa 2 ffia
   4) Dipiloomaa qabu
   5) Digrii qabu
   **Abbaa**
   1) Barreessuu fi dubbisuun
      hin danda'an
   2) Barnoota sadarkaa 1ffaa barataa
   3) Barnoota sadarkaa 2 ffia
   4) Dipiloomaa qabu
   5) Digrii qabu
Kutaa Lammaffaa

Kutaa kana keessatti gaaffileen dhiyaatan shamarran yeroo dargagummaafii ijoollummaaansii waa'ee bareedina isaanii yaada isaan qaban go'achu dhaaf kan qoph'ee dha. Kanaaafuu, waa'ee bareedina kee yaada qabdu akka gaaffii armaan gaditti ibsi.

1. Yeroo ijoollummaa kee eenytu irra caalaa sitti bareeda ture?
   1) Dubartoota  
   2) Dhiirota  
   3) Garaagartummaa hin turre

2. Amma hoo?
   1) Dubartoota  
   2) Dhiirota  
   3) Garaagartummaa hin jiru

3. Yaroo ijoollummaa kee dubartoota namootaan jaallatamaniiif kan hin jaallatamne keessaa kamtu bareedoo sitti fakkaatu ture?
   1) Kan namotaan jaallataman  
   2) Kan namootan hin jaallatamne  
   3) Garaagartummaa hin turre

4. Amma hoo?
   1) Kan namootaan jaallataman  
   2) Kan namootaan hin jaallatamne  
   3) Garaagartummaa hin jiru

5. Yeroo ijoollummaa kee dubartoota kabaja qabaniifi kan hin qabne keessaa kamtu bareedoo sitti fakkaatu ture?
   1) Warreen kabaja qaban  
   2) Warreen kabaja hin qabne  
   3) Garaagartummaa hin turre

6. Amma hoo?
   1) Warreen kabaja qaban  
   2) Warreen kabaja hin qabne  
   3) Garaagartummaa hin jiru

7. Yeroo ijoollummaa kee dubartoota gaarii ta'aniifi hin taane keessaa kamtu miidhagoo sitti fakkaatu ture?
   1) Warreen garii turan  
   2) Warreen garii hin turre  
   3) Garaagartummaa hin turre

8. Amma hoo?
   1) Warreen garii ta'an  
   2) Warreen garii hin taane  
   3) Garaagartummaa hin jiru
9. Yeroo ijoollumma kee dubartoota ga'elaaf barbadamaniifi hin barbaadamne keessaa kamtu miidhagoo sitti fakkaatu ture?
   1) Warreen ga'ilaaf barbaadaman
   2) Warreen ga'ilaaf hin barbaadaman
   3) Garaagartumaan hin ture

10. Amma hoo?
    1) Warreen ga'elaaf barbaadamaan
    2) Warreen ga'elaaf hin barbadamne
    3) Garaagartumaan hin jiru

11. Yeroo ijoollumma kee durba ta'uu kee amam dingisifatta turte?
    1) Baay'ee
    2) Giddu galeessa
    3) Gadi aanaa

12. Amma hoo durba ta'uu kee amam dingisifatta?
    1) Baay'ee
    2) Giddu galeessa
    3) Gadi aanaa

13. Yeroo ijoollumma kee mucayyoo gaarii dha ofiin jetta turtee?
    1) Eyy'ee nan yaada
    2) Yaadee hin beeku
    3) Mucayyoo gaarii ta'uu koo gutumaa gututti hin amanun ture

14. Amma hoo?
    1) Eyy'ee
    2) Hin yaadu
    3) Mucayyoo gaarii ta'uu koo gutumaa gututti hin amanu

15. Yeroo ijoollumma kee namoota biratti ammam nan jaallatama jettee yaaddaturte?
    1) Baay'ee jaallatamtuu akkan ta'ettan yaada ture
    2) Namootni na jaallatu kan jedhu amantii ofkeessaa hin qabun ture
    3) Namoota biratti akkan jaallatamtuu ta'e hin yaaduun ture

16. Amma hoo?
    1) Baay'ee jaallatamtuu akkan ta'ee nan yaada
    2) Namootni na jaallatu kan jedhu amantaa hin qabu
    3) Namoota biratti jaallatamtuu ta'uu koo hin yaadu

17. Yeroo ijoollumma kee namoota birratti kabaja akka qabdu ammam yaadda turte?
    1) Namoota biratti kabajaa guddaa akkan qabu nan yaadan ture
    2) Namoonni kabaja naaf qabu amantaa jedhu hin qabu
    3) Namootni kabaja naaf hin agarshisan turan
18. Amma hoo?
   1) Namoota biratti kabaja guddaa akkan qabu nan yaada
   2) Namootni kabaja naaf qabu amantaa jedhu hin qabu
   3) Namootni kabaja naaf hin agarsiisan

19. Yeroo ijoollummaa kee ammam gaa'elaaf nan barbaadama jette yaadda turte ?
   1) Gaa'elaaf hedduun barbaadama jedheen yaada ture.
   2) Gaa'elaaf nan barbaadama jedhee darbee darbee nan yaadan ture
   3) Gaa'elaaf nan barbaadama kan jedhu amantaa hin qabun ture

20. Amma hoo?
   1) Gaa'elaaf nan barbaadama jedhee yeroo baay'een yaada
   2) Gaa'elaaf nan barbaadama jedhee darbee darbeen yaada
   3) Gaa'elaaf nan barbaadama kan jedhu amantaa hin qabu

21. Yeroo ijoollummaa kee namoonni yaada akkamii siif qabu turan ?
   1) Gaarii
   2) Ba'eessa
   3) Yaraa

22. Amma hoo?
   1) Gaarii         2) Ba'eessa             3) Yaraa

23. Yeroo ijoollummaa kee namoonni ammam si jaallatu turani?
   1) Namoonni sirritti na jaallatu turan
   2) Namoonni najaalltu amanttaa jedhu hin qabun ture
   3) Nammi na jaallatu hin turre

24. Amma hoo namoonnii ammam si jaallatu ?
   1) Namoonni sirritti na jaallatu
   2) Namoonni najaalltu amanttaa jedhu hin qabu
   3) Nammi najaalllu hin jiru

25. Yeroo ijoollummaa kee namoonni abbaa manaa ni argatta amam siin jedhu turani?
   1) Yeroo bay'ee
   2) Darbee darbee
   3) Abbaa manaa ni argatta namni naan jedhe hinturre

26. Amma hoo?
   1) Yeroo bay'ee
   2) Darbee darbee
   3) Abbaa manaa ni argatta namni naan jedhu hin jiru
27. Yeroo ijoollummaa kee abbaa manaa sooressa nan argadha jettee ni yaadda turee?
   1) Yeroo baay'een yaadan ture   2) Darbee darbeen yaadan ture
   3) Abbaa manaa sooressa nan argadha jedhee yaadee hinbeeku.

28. Amma hoo?
   1) Yeroo baay'een yaada   2) Darbee darbeen yaada
   3) Abbaa manaa sooressa argadha jedhe hin yaadu

29. Yeroo ijoollummaa kee yoo barbaadde dafeen eeruma jettee amam yaadda ture?
   1) Yeroo bay'ee nan yaadan ture   2) Darbee darbee nan yaadan ture
   3) Dafeen eeruma amantaa jedhu hin qabun ture

30. Amma hoo?
   1) Yeroo baay'een yaada
   2) Dafeen eeruma amantaa jedhu hin qabu
   3) Abbaa manaa sooressa nan argadha jedhee hinbeeku

31. Yeroo ijoollummaa kee nan butama jettee amam yaadda ture?
   1) Yeroo baay'ee nan yaadan ture   2) Darbee darbee nan yaadan ture
   3) Nan butama amantaa jedhu hin qabu ture

32. Amma hoo?
   1) Yeroo baay'ee nan yaada
   2) Darbee darbee nan yaada
   3) Nan butama amantaa jedhu hin qabu

33. Yeroo ijoollummaa kee warrikee abbaa manaa gaariifi sooressatti ni eerumta amam siin jedhu turanii?
   1) Yeroo baay'ee nan jedhuu turan   2) Darbee darbee naan jedhu turan
   3) Abbaa mana akkasitti ni herumta naan jedhanii hin beekan

34. Amma hoo?
   1) Yeroo baay'ee naan jedhu   2) Darbee darbee naan jedhu
   3) Abbaa manaa akkasitti ni heerumta naan hin jedhani?

35. Yroo ijoollummaa kee warriige daftee ni eerumta amam siin jedhu turanii?
   1) Yeroo baay'ee nan jedhoo turan   2) Darbee darbee naan jedhu turan
   3) Daftee nieerumta naan jedhanii hin beekani

36. Amma hoo?
   1) Yeroo baay'ee naan jedhu
   2) Darbee darbee naan jedhu
   3) Daftee ni eerumta jedhannii natti hin imani

37. Yeroo ijoollummaa kee obboleeyyan kee durbaa bareedummaan ni jaalta turtee?
   1) Hundumasaanii nan caalan ture   2) Hundi keenya barreedinan walqixa ture
   3) Ani bareedinaan warra kaanii gadin ture

38. Amma hoo?
   1) Hundumasaanii nan caala jedheen yaada
2) Hundi keenya baredinaan wal qixadha
3) Ani baredinaan warra kaanii gadi akkan ta'en yaada

39. Yeroo ijoollummaa kee iriyyottan kee baredinaan ni calta turtee?
1) Unda isaanii nan caalan ture
2) Undi keenya baredinaan wal qixaa ture
3) Ani baredinaan warrakani gadin ture

40. Amma hoo?
1) Unda isaanii nan caala
2) Undi keenya baredinaan wal qixaa dha
3) Ani baredinaan warra kaanii gadi dha

41. Yeroo ijoollummaa kee warri kee obboleeyyaan kee durbaa wajjin baredinaan
yommuu si madaalan akkamitti silaalu turan?
1) Ati obboleeyyan kee durbaa baredinaan akka caaltutti silalu turan
2) Undi keessan baredinaan wal qixaa akka taataniit silalu turan
3) Ati baredinaan warra kaan iira gadi akka taatetti si ilalu turan

42. Amma hoo?
1) Ati obboleeyyan kee durbaa baredinaan akka caaltutti si ilalu
2) Undi keessan baredinaan akka wa'l qixa akka taatetti si ilalu
3) Ati baredinaan bared ina an iraa gadi akka taatetti si ilalu turan

43. Yeroo ijoollummaa kee obboleeyyan kee durbaa waa'ee baredina kee maal
siin jedhu turan?
1) Barededduu akkan ta'e natti himu turan
2) Ati bareeddu miti naan jedhu turan
3) Waa'ee barediina kootii yaada naaf hin keennan turan

44. Amma hoo?
1) Ati bareeddu dha nan jedhu
2) Ati bareeddu miti naan jedhu
3) Waa'ee barediina kootii yaada naaf hin kennani

Kutaa sadaffaad
Gaffileen kutaa kana keessatti dhiyaatan shamarran ilaalcha laguu ji'aa irratti
yaada isaan qaban go'aachiif kan qoph'aee dha. Kanaaf ilaalcha laguu ji'aa irratti
qabdu akka gaffilee armaan gaditti ibsi.
1. Laguu ji'aa isa calqabaa erga argitee ammam ta'e?
   1) Ji'a 1-2
   2) ji'a 2-4
   3) ji'a 4-12
   4) Wagga 1-2
   5) wagga 2-3
   6) Wagga 3 ol

2. Yeroo duraatiif laguu ji'aa yommuu argitu maal sitti
fakkaate?
3. Laguu ji'aa ta'u isaa akkamitti barte?

4. Laguu ji'aa ta'u u isaa eenyutu siif ibsee ture?
   1) Haadha
   2) Abba
   3) Obboleetti
   4) hiriyyaa

5. Laguu ji'aa akka argiteen enynutti himete?

6. Waa'ee laguu ji'aa namoota kaan wajjin mari'attee beektaa?
   1) yeroo baay'ee ni mari'anna
   2) Darbee darbee ni mari'anna
   3) Waa'ee laguu ji'aa namoota wajjin mari'adhee hinbeeku.

7. Waa'ee laguu ji'aa yeroo baay'ee enyuu wajjin mari'attu?

8. Laguu ji'aa akka argiteen booddee yeeroo baay'ee maaltu sitti dhagahame?
   1) Diphina
   2) Sodaa
   3) Gammachuu
   4) Boonuu
   5) Of jibbuu
   6) Bashananuu
   7) Deebii biraa yooqabaatte ibsi

9. Laguu ji'aa akka argiteen booddee darbee darbee maaltu sitti dhagahame?
   1) Sodaa
   2) Bashananuu
   3) Jeeqamuu
   4) Boonuu
   5) Deebii biraa yooqabaatte

10. Laguu ji'aa amma yoommuu argitu maaltu sitti dhagahama?
    1) Diphina
    2) Gamachuu
    3) Sodaa
    4) Boonuu
    5) Deebii biraa yoo qabaatte ibsi

11. Laguu ji'aa arguu akkamitti ilaalta? (fkn: barbaachisa dha moo wanta nama saalfachisu dna ykn deebii biraa yoo qabaatte ibsi)

12. Laguu ji'aa akkamitti argite?
    1) yeroodhumaasatti
    2) Xiqqoo otoo turee jaal'a
    3) Laguun ji'aa otoo hin jiru ta'e na gamachiisa ture.

13. Laguun ji'aa dhibbaa sirraan ga'e ibsi.
    1) Barnoota kee irratti
    2) Walitti dhufeennyaa hiriyyota kee wajjin qabdu irratti

3) Ilaalcha warri kee siif qaban irratti
Kutaa araffaa

Kutaa kana keessatti gaaffileen diiyaatan walqunnamtii shamarran dargagoota wajjin qaban go'achuf kan qopaa'e dha. Kanaaf gaaffi armaan gaditti dihiyatanif deebii si ilaalomu deebisi.

1. Durbi geessuun tokko hiriyaa dhiiraq qabachuf umuriin shii yoo meeqa ta'e jetta?

2. Durbi geessuun tokko hiriyaa dhiiraq qabachuf baay'ee turuu qabdi moo hin qabdu?[maaliif?]

3. Hiriyaa dhiiraq qabachuun maalif gargaara?

4. Hiriyaa dhiiraq wajjin walquunnamtii taasifamu keessatti of eeggannoone taasifamuq qaban maal fa'i?
   1) Gocha gara wal-quunnamtii salaat atti nama geessu irraa of qusachuu
   2) Tootfaalee da'uumsa choowoqan fayyadamuu
   3) Waa'ee quunnamtii saalaa ilaalchisee barreefama adda addaa dubisu

5. Shamarran siin gita ta'an hiriyaa dhiiraq qabachuuf fedhiin isaan qaban maal fakkaata?
   1) Baay'een isaanii hiriyaa dhiiraq qabachuuf fedhii qabu
   2) Muraasti isaanii hiriyaa dhiiraq qabachuuf fedhii qabu
   3) Tokko tokkon isaanii hiriyaa dhiiraq qabu

6. Shamarran gita kee ta'an hiriyaa dhiiraq qabachuuf qophiin isaan qaban maal fakkaata?
   1) Baay'een isaanii waa'ee quunnamtii saalaa ilaalchisee barreefama adda addaa ni dubisu
   2) Muraasti isaanii waa'ee quunnamtii saalaa ilaalchisee barreefama adda addaa ni dubisu
   3) Quunnamtii saalaa ilaalchisee barreefama adda addaa kan ordoftu hiriyaa hin qabu

7. Ati hiriyaa dhiiraq baafachuuf fedhiin ati qabdu amami?
   1) Yeroo baay'ee hiriyaa dhiiraq baafachuuf fedhii qaba
   2) Darbee darbee hiriyaa dhiiraq baafachuuf fedhii qaba
   3) Waa'ee hiriyaa dhiiraq baafachuuf yaadeen hin beeku

8. Jaalala ilaalchisee ykn walquunnamtii saalaa ilaalchisee armaan gaditti kan caqafaman keessaa kam raawwattee beekta?
   1) Jaalalaa fi walquunnamtii saalaa ilaalchisee barreefama adda addaa nan dubbisa
2) Hiriyooota koo durbaa wajjin waa'ee jaalalaa ni mari'anna
3) Waa'ee jalalaa fi walqunnamtii saalaa ilaalchisee waantaa raawwadhe
        hin qabu
9.1joollee dhiiraa amma waliin barattan keessaa tokko otoo hiriyyummaadhaaf si
gaaftee maaltu sitti dhagahama?

10.Hiriyooota kee durbaa fi dhiiraa wajjin bashannanudhaaf baatee beektaa?
    1) Yeroo baay'ee nan baha
    2) Darbee darbee nan baha
    3) bahee hin beku

11.Hiriyooota kee burbaa fi dhiiraa wajjin bashannanuudhaaf yommuu baatan
    eessafaa dhaqxuu?
    1) Bakkee bashanannaa adda addaa
    2) Tapha ispoortii ilaalu
    3) Bakka gophii mirbaa

12.Hiriyooota kee dhiiraa fi durbaa wajjin waa'ee jalalaa yommuu haasoftaan
    hirimmaananaa kee maal fakkaata?

13.Guyya calqaba hiriyyaa kee dhiiraa wajjin yommuu walbartan maaltu
    sitti
    dhagahame?

14. Amma hoo hiriyyaa kee dhiiraa wajjin yommuu walargitan maaltu
    sitti?
Appendix 2
Relationship among body image, reaction to menarche, patterns of heterosexual relationship, age of menarche and birth order.

<table>
<thead>
<tr>
<th>variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 role of body image pre. pub</td>
<td></td>
<td>-0.048</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 body image self rating pre pub</td>
<td>-0.134</td>
<td>0.676**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 body image other opinion pre. pub</td>
<td>0.003</td>
<td>0.047</td>
<td>0.044</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 general body image pre. Pub</td>
<td>.165*</td>
<td>0.921**</td>
<td>0.842**</td>
<td>0.05</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 body image total</td>
<td>0.092</td>
<td>0.082</td>
<td>0.093</td>
<td>-0.172*</td>
<td>0.117</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 role of body image post pub</td>
<td>-0.103</td>
<td>.253**</td>
<td>.161*</td>
<td>0.012</td>
<td>.205**</td>
<td>0.006</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 body image other rating post pub</td>
<td>-0.056</td>
<td>.244**</td>
<td>.265**</td>
<td>.144*</td>
<td>.282**</td>
<td>0.051</td>
<td>.576**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 general body image post.pub</td>
<td>-0.056</td>
<td>0.05</td>
<td>0.056</td>
<td>.480**</td>
<td>0.048</td>
<td>-0.141*</td>
<td>0.125</td>
<td>0.122</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 total body image post pub</td>
<td>-0.067</td>
<td>.289**</td>
<td>0.265**</td>
<td>0.028</td>
<td>.284**</td>
<td>.276**</td>
<td>.894**</td>
<td>0.821**</td>
<td>0.098</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 reaction to menarche</td>
<td>0.283**</td>
<td>-0.321**</td>
<td>0.243**</td>
<td>-0.185*</td>
<td>-0.26**</td>
<td>0.231**</td>
<td>0.342**</td>
<td>0.34**</td>
<td>0.392**</td>
<td>0.312**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 place of residence</td>
<td>-0.013</td>
<td>-0.103</td>
<td>-0.149*</td>
<td>0.107</td>
<td>-0.135</td>
<td>-0.172*</td>
<td>-0.012</td>
<td>-0.203**</td>
<td>-0.017</td>
<td>-0.243**</td>
<td>.396**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 age of menarche</td>
<td>0.013</td>
<td>0.098</td>
<td>0.041</td>
<td>-0.062</td>
<td>0.083</td>
<td>0.15*</td>
<td>0.143*</td>
<td>0.223**</td>
<td>0.138</td>
<td>0.192*</td>
<td>0.145*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 birth order</td>
<td>0.434*</td>
<td>-0.152</td>
<td>0.02</td>
<td>-0.177*</td>
<td>0.034</td>
<td>-0.005</td>
<td>0.131</td>
<td>0.025</td>
<td>0.004</td>
<td>0.003</td>
<td>-0.021</td>
<td>-0.099</td>
<td>-0.003</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 heterosexual pattern</td>
<td>-0.058</td>
<td>0.118</td>
<td>0.13</td>
<td>0.017</td>
<td>0.113</td>
<td>0.103</td>
<td>0.26**</td>
<td>0.25**</td>
<td>0.215**</td>
<td>0.237**</td>
<td>0.241**</td>
<td>0.166*</td>
<td>0.109</td>
<td>0.126</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 mothers educ. level</td>
<td>-0.01</td>
<td>-0.152</td>
<td>-0.062</td>
<td>0.106</td>
<td>-0.126</td>
<td>0.103</td>
<td>0.331**</td>
<td>0.002</td>
<td>0.21**</td>
<td>0.026</td>
<td>0.112</td>
<td>0.326**</td>
<td>-0.34**</td>
<td>-0.085</td>
<td>0.1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>16 fathers educ. level</td>
<td>0.001</td>
<td>0.05</td>
<td>0.027</td>
<td>0.139</td>
<td>-0.019</td>
<td>-0.004</td>
<td>-0.022</td>
<td>-0.05</td>
<td>0.044</td>
<td>-0.028</td>
<td>0.085</td>
<td>.334**</td>
<td>0.312**</td>
<td>0.134**</td>
<td>0.1</td>
<td>.564**</td>
<td>1</td>
</tr>
</tbody>
</table>

** significant at 0.01
* significant at 0.05
<table>
<thead>
<tr>
<th>variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>role of body image pre. Pub</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>body image self rating pre Pub</td>
<td></td>
<td></td>
<td></td>
<td>-0.005</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>body image other opinion pre. Pub</td>
<td></td>
<td></td>
<td></td>
<td>-0.022</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>general body image pre. Pub.</td>
<td></td>
<td></td>
<td></td>
<td>-0.058</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>body image total</td>
<td>0.293**</td>
<td></td>
<td></td>
<td></td>
<td>0.862</td>
<td></td>
<td></td>
<td></td>
<td>0.293**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>role of body image post pub.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>body image self rating post pub</td>
<td></td>
<td></td>
<td></td>
<td>-0.179</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>others opinion post. pub.</td>
<td></td>
<td></td>
<td></td>
<td>-0.057</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>general body image post. pub.</td>
<td></td>
<td></td>
<td></td>
<td>-0.158</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>total body image post. pub.</td>
<td></td>
<td></td>
<td></td>
<td>-0.015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>reaction to menarche</td>
<td>-0.261*</td>
<td>-0.201*</td>
<td>-0.321***</td>
<td>-0.272**</td>
<td>-0.282**</td>
<td>0.31**</td>
<td>0.265*</td>
<td>0.192</td>
<td>0.192</td>
<td>0.253*</td>
<td>0.283**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>age of menarche</td>
<td>0.039</td>
<td></td>
<td></td>
<td>-0.066</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>birth order</td>
<td>-0.095</td>
<td></td>
<td></td>
<td>-0.064</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>heterosexual pattern</td>
<td>-0.049</td>
<td></td>
<td></td>
<td>0.058</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mothers' educ. level</td>
<td>0.026</td>
<td></td>
<td></td>
<td>-0.002</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>fathers' educ. Level</td>
<td>0.035</td>
<td>0.025</td>
<td></td>
<td>0.095</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**significant at 0.01
* significant at 0.05
## Appendix-4  Bivariiate Correlation among variables for rural adolescents

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>role of body image</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>body image self rating pre pub</td>
<td>-0.096</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>body image other opinion</td>
<td>-0.264*</td>
<td>0.745**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>total body image pre. pub</td>
<td>0.949**</td>
<td>0.949**</td>
<td>0.669**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>general body image post. pub</td>
<td>0.087</td>
<td>0.076</td>
<td>0.082</td>
<td>0.082</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>role of body image post. pub</td>
<td>-0.23*</td>
<td>0.064</td>
<td>0.101</td>
<td>0.101</td>
<td>-0.174</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>body image self rating post pub</td>
<td>-0.157</td>
<td>0.195</td>
<td>0.131</td>
<td>0.131</td>
<td>-0.007</td>
<td>0.019</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>body image other opinion post</td>
<td>0.071</td>
<td>0.193</td>
<td>0.175</td>
<td>0.175</td>
<td>-0.063</td>
<td>0.333**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>total body image post pub</td>
<td>-0.146</td>
<td>0.18</td>
<td>0.184</td>
<td>0.184</td>
<td>0.038</td>
<td>0.188</td>
<td>0.512**</td>
<td>0.823**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>general body image post pub</td>
<td>0.114</td>
<td>0.210*</td>
<td>0.199</td>
<td>0.199</td>
<td>-0.461**</td>
<td>-0.156</td>
<td>0.007</td>
<td>0.049</td>
<td>0.005</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>reaction to menarche</td>
<td>0.326**</td>
<td>0.256*</td>
<td>-0.017</td>
<td>-0.017</td>
<td>-0.195</td>
<td>0.252*</td>
<td>0.304**</td>
<td>0.194</td>
<td>0.26*</td>
<td>0.28*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>age of menarche</td>
<td>0.019</td>
<td>0.198</td>
<td>0.083</td>
<td>0.159</td>
<td>0.015</td>
<td>0.31**</td>
<td>0.325**</td>
<td>0.234*</td>
<td>0.225*</td>
<td>0.351**</td>
<td>0.245*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>birth order</td>
<td>-0.248`</td>
<td>0.255`</td>
<td>-0.267`</td>
<td>-0.265`</td>
<td>0.321`</td>
<td>-0.069</td>
<td>0.102</td>
<td>0.017</td>
<td>-0.132</td>
<td>0.089</td>
<td>0.03</td>
<td>-0.123</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>heterosexual pattern</td>
<td>0.077</td>
<td>0.054</td>
<td>0.132</td>
<td>0.08</td>
<td>0.047</td>
<td>0.017</td>
<td>0.22</td>
<td>0.068</td>
<td>0.138</td>
<td>0.232*</td>
<td>0.431**</td>
<td>0.053</td>
<td>0.074</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>mothers educ. level</td>
<td>-0.63**</td>
<td>-0.131</td>
<td>0.031</td>
<td>-0.009</td>
<td>0.175</td>
<td>0.111</td>
<td>0.046</td>
<td>0.155</td>
<td>0.155</td>
<td>0.151</td>
<td>0.345**</td>
<td>0.04</td>
<td>-0.055</td>
<td>0.064</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>fathers educ. Level</td>
<td>-0.33**</td>
<td>-0.054</td>
<td>0.072</td>
<td>-0.11</td>
<td>0.206`</td>
<td>0.025</td>
<td>-0.008</td>
<td>0.015</td>
<td>0.015</td>
<td>-0.109</td>
<td>0.521**</td>
<td>0.14</td>
<td>-0.118</td>
<td>0.048</td>
<td>0.535**</td>
<td>1</td>
</tr>
</tbody>
</table>

**significant at 0.01
*significant at 0.05
DECLARATION

This thesis is my original work and has not been presented for a degree in any other university and that all sources of materials used for the thesis has been dully acknowledged.

Tilaye Gelana

June, 2005

This thesis has been submitted for the examination with my approval as university advisor.

Dr. Belay Tefera