

ONSET, BODILY REACTIONS AND PSYCHO-SOCIAL
CONSEQUENCES OF MENARCHE AMONG A GROUP OF
ETHIOPIAN GIRLS

Tirussew Teferra*

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ering. The study reveals the existence of certain peculiarities and universalities of physiological and psycho-social changes and transient-turmoils.

I N T R O D U C T I O N

1.1 Menarche and Age of Onset

Menarche is considered to be a definite landmark of puberty² for girls though signs such as the first occurrence of coarse, kinky pubic hair. Breast budding are some times taken into account.³ There is no corresponding definite event for boys. A criterion sometimes used is nocturnal emission.⁴ Menarche is often assumed to be the time when a girl becomes able to have babies, but a sterile period of a year or more occurs in most girls. After menstruation, maximum fertility seems not to be reached until early 20's.⁵

Menarche occurs at different ages in different places. The variability is great, with many 10 year-old girls having experienced menarche while

16 year-old girls have not.⁶ These variations are responsible for many of the emotional, social and personality problems characteristically associated with puberty.⁷ Recent studies indicate that the onset of menarche is moving earlier than it was at the turn of the century. Tanner estimates that the age of menarche has become less by some four to five months per decade in Western Europe over the period from 1830 to 1960.⁸ Apparently, girls in the U.S. have followed the same pattern. For United States' girls, it is currently estimated to be two and one half years earlier than it was at the turn of the century.⁹

These days, a lot of variables are identified as factors that can either accelerate or retard the onset of the first menstrual flow. Among the many correlates, the most prominent include nutrition, physical health, heredity and possibly geographical conditions. Hormonal factors are preponderant in determining maturation.

There are also findings which correlate the onset of menarche with the state of physical activity. A comparative study conducted among a group of athletes (swimmers and runners) who began train-

ing before menarche and after menarche revealed that the athletic training delayed menarche by five months for each year of training. That is, intense physical activity may also be considered as one of the possible factors for a delay in the onset of menarche.¹⁰

1.2 Bodily Reactions

Around and during the onset of menarche, there is temporary upset in homeostasis as shown in increased blood pressure, basal metabolic rate and pulse rate.¹¹ As a result of glandular changes, and changes in the size and position of the internal organs, the pubescent girl suffers at times from such physical disturbances as digestive upset, finicky appetite, headache, backache, and severe abdominal pain.¹² According to Mussen *et. al* the negative reactions to menstruation may stem in part from these physical discomforts.¹³

1.3 Emotional and Social Consequences

Every pubescent girl experiences changing emotional reactions as concomitants of the processes of growth and maturation. In common parlance, she

is being inducted into the "mysteries of sex".¹⁴ Probably at no other time in her life does an individual girl need more help a sensible and an objective attitude in relation to herself than she does at this stage of development.¹⁵ The onset of menarche in girls is frequently an abrupt phenomenon requiring emotional and social adjustments of an immediate nature. The effects of such growth on the concept of self and personality are pervasive and cannot be over-emphasized.¹⁶ Transference of affection and love from parent to peer and especially members of the other sex represents a major change in emotional catharsis.¹⁷ Many disappointments and much emotional tension result from this key shift of feeling and thinking. Development of new attitudes takes time and consolidation of new gains is a gradual process.

Lack of preparation for the adolescent role, parental objections and financial needs are factors contributing to a state of emotional uneasiness.¹⁸ Such states in turn lead to a superficial release of energy which, when not behaviourally discharged may accumulate and then interrupt functioning of some organismic system. As a result, organismic

balance and personal health may be affected negatively, especially if such states repeatedly arise.¹⁹ Unless parents and teachers have some insight concerning the effects of physical changes upon adolescent behaviour, they may find themselves almost, if not entirely, bewildered by what are often termed as "adolescent vagaries."²⁰

Puberty is sometimes referred to as the "negative phase" in girls. The worst part of the negative phase is over by the time of the menarche.²¹ Although some girls express joy and excitement or accept the arrival of their menstrual periods matter-of-factly, others may react with shame, embarrassment and fear. Causes of the mixed feelings of differences in reaction have a lot to do with how well prepared a girl is. Studies confirm that girls who were unprepared expressed more negative feelings about menstruation, and also were more surprised by it than girls who were "at least a little prepared" for it.²²

Hence the need of identifying the time of the average onset of menarche, and exploring the physical, emotional and psycho-social reactions of the Ethiopian pubescent girl seems to be of paramount

ance. Thus, it is hoped that this piece of
may trigger discussion and inspire other in-
vestigations in the broad spectrum of human growth
development where only meagre local studies
are available.

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Method

In light of the limited available research
technology in the country, the retrospective method
is considered to be an adequate instrument for in-
vestigation in this study. The limitation of this
method is the difficulty of subjects to exactly
recall and/or recognize incidences that accompany
menarche because of time factor. However, as stud-
ies indicate, for most pubescent girls menarche,
which occurs concurrently with other morphological,
physiological and metabolic changes, is a new
and exciting experience in the entire life span
that can hardly be forgotten.²³

In this study, a questionnaire consisting of
55 closed and open-ended items was prepared in Amharic.
In order to develop rapport and get the sub-
jects' frank opinion, the investigator exposed the
subjects to the processes of human growth and deve-

development through lectures with special emphasis on the phase of puberty. Then, the questionnaire was distributed to the subjects. Respondents were participants of the Preschool Teacher Training Institute run by the Ministry of Education. The trainees were within the range of 16-27 years and were primary and secondary school graduates. They were trainees of 1978-1981 who were selected from different administrative regions. The total number of subjects observed was 182.

3. Empirical Results

3.1 Age of Menarche

A previous study of Ethiopian girls indicated that the average age of menarche was about 15 years.²⁴ A subsequent study on a group of school girls in Addis Ababa discloses that the onset of menarche ranges from 11 years and 1 month to 16 years and 3 months and the mean age was found to be 13.6.²⁵ In this study, the following results were obtained.

TABLE 1

Age of Menarche

Age in Months	No.	%
144-155	14	7.69
156-167	31	17.03
168-179	53	29.12
180-191	57	31.31
192-203	23	12.63
204-215	4	2.19

$$\text{Month (X)} = \frac{32249}{185} = 174.32$$

$$\text{Year (X)} = \frac{174.32}{12} = 14.53$$

According to this investigation the age for menarche ranges from 12 to 18 years. Among the respondents, most did experience menarche between 15 and 16 years. As it can be drawn from the data gathered, the average age of menarche is found to be 14.53 years. This finding seems to be close

to the previous study of the Ethiopian girls in which the average age of menarche was indicated to be 15. The six month variations of onset among these two findings by and large suggests that the onset of menarche in Ethiopia revolves around 14-15 years.

This mean age as compared with the figure of other parts of the world shows differences in certain instances and similarities in others. Recent studies on large samples of Australian, British, Hungarian, Polish and Russian Girls indicate that the average age at which girls reach menarche is approximately 13 years.²⁶ For Assamese, Burmese, Japanese and Southern Chinese, it is close to age 13, for Ibo girls in Eastern Nigeria and Mayan Amerindian girls in Guatemala, it is close to age 14 and for South African Bantu girls and Siberian Buryat Mongoloid girls it is close to age 15.²⁷ The variations and similarities in the average age of menarche as pointed out earlier may be explained in terms of genetic patterning, climatical conditions and socioeconomic variables. Among these one of the most important factor that can either retard or accelerate the onset of menarche is the socio-economic dimension. This was

unequivocally proved by Harvard Florence Research Project. In Florence, Italy, girls whose families moved up in socio-economic status reached the a year earlier than their mothers did and whose families had moved down were a year than their mothers in reaching menarche. The socio-economic status is associated with the intake protein rich diet which evidently accelerates the onset of menarche.²⁸

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Bodily Reactions

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Mussen et. al. disclose that the most common physical discomforts during the onset of menarche include: headache, backache, cramps, and severe abdominal pain.²⁹ The results of this study pertaining to this issue is as follows.

TABLE 2

Bodily Reactions

physiological disequilibrium	No.	%
Stomach-ache	123	67.58 ^{89T} _{16'}
Head-ache	13	7.1 ^{pl}
Increase in body temperature	8	4.3
Breast Pain	7	3.8
Nasal bleeding	1	0.58
Felt nothing	30	16.48

The physical pains and discomforts felt by the Ethiopian pubescent girls include stomach-ache, breast pain, increase in body temperature and nasal bleeding. Among these feelings stomach-ache seems to be common for most (67.58%) of the respondents. In addition, 53% of the subjects have indicated in the open-ended items that they had concurrently experienced the following physical and physiological difficulties:

"I had a feeling of physical exhaustion"

"I had a reduced appetite"

"I had a high rate of urination."

These bodily reactions may be partially explained in terms of discharges of sex hormones which have a direct impact on the metabolism, morphology and physiology.³⁰ Nevertheless, results of developmental studies reveal that these disturbing symptoms will gradually disappear as puberty progresses and menstruation becomes more regular.³¹ The painful physiological reactions and physical discomforts coupled with unfavourable socio-cultural influences may be among the major sources for the negative attitude developed by the pubescent girl towards menarche and to the subsequent menstrual flow.

3.3 Emotional Problems

Along with the number of disturbing physical symptoms, studies indicate that the onset of menarche is accompanied by emotional and social maladjustments such as restlessness, moodiness, withdrawal from family and friends, irritability, disinclination to work at home or in school, and a generalized state of unhappiness.³²

TABLE 3

Emotional Reactions

Items	Agree		Disagree		Uni	Total
	No	%	No	%	tif	
Shocking	157	86.26	17	9.34	8	182
A feeling of uneasiness and shyness	141	77.47	27	14.88	14	182
Feeling of inferiority & lack of confidence	102	56.04	61	33.51	19	182
Lack of sleep	99	54.39	53	29.12	30	182
lack of concentration	96	52.74	56	30.76	30	182

Table 3 depicts that for 86.26% of the respondents menarche was one of the most shocking experiences in life; 77.47% had a feeling of uneasiness and shyness; 56.04% had a feeling of inferiority and lack of confidence; 54.39% encountered lack of sleep; and 52.74% had concentration problem. Similar feelings were more or less expressed by

67% of the respondents in the open-ended items as follows:

"I was very much frightened."

"I hate being a woman."

"I had a feeling of fear, shyness and much emotional tension."

"I was lacking self-confidence."

"I was very much shocked and terrified."

የወገን ሁሉም "Every trivial matter made me angry."

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ሆኖ ለጭምር All these disturbing reactions and wrong perceptions of self 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. These undesirable emotional reactions may, for instance, have a cumulative effect on health, academic achievement, peer interaction and family relationship. Though these emotional disturbances are generally taken as transient by nature, studies show that they may also sometimes have a lasting effect on later personality development. This may happen when the self concept of the girl persists to be consistently self depreciating and when strategies of appropriate psycho-educational interventions

are not undertaken at the appropriate time. A wise and understanding approach to the problem is important during this period.

3.4 Social Problems

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mtes

In order to assess whether the social dis-
sion of the pubescent girl was affected or
attempt was made to identify anticipated conf^{INTGEN-}
and interactional shifts which are expecte
occur during the onset of menarche. The r
is as follows.

TABLE 4

Social Interaction

Items	Agree		Disagree		Uniden- tified	
	No	%	No	%	No	%
Parental conflict	33	18.13	124	68.13	25	13.73
Temporary isolation	105	57.69	62	34.06	15	8.24
Association with the opposite sex	85	46.70	83	45.60	14	7.69

As Table 4 shows only 18.13% of the respondents indicated that they encountered parental conflict during the onset of menarche whereas 68.13% of them disagreed. Almost 58% agreed that they encountered a sort of temporary social isolation, and 52% of them said the following:

"I had a feeling of being rejected by the society."

"I thought everybody knows and talks about me."

"I thought that I was a different creature."

"I had a problem interacting with people."

"I had unfavourable attitude to school and peers in general."

"I had nobody to consult and I didn't know what to do"

Their interpersonal relations with peers, parents, siblings and the community at large seem to be adversely affected in one way or another. The basis for all these misconceptions and disagreeable feeling of the self and social situations can be attributed to lack of awareness by the pubescent girl about the nature of this transient phase of

development ahead of time as well as to society's unfavourable attitude toward menstruation. If, for instance, society considers menstrual flow as being "unwell" or "curse" the girl tends to adopt similar attitude towards this natural short-lasting phenomenon. Thus, the interplay of these two interdependent factors coupled with the non-existence of proper guidance ultimately affects the social horizon of the pubescent girl by developing in her a generalized fear of inter-personal relation and a feeling of rejection and isolation.

The third item in Table 4 depicts the association³³ of the Ethiopian pubescent girls toward the opposite sex after the onset of menarche. Among the total respondents 46.70% affirmed that they had association with the opposite sex while 45.60% of the respondents did not show any shift of interest.

Indeed as many empirical findings have confirmed, since puberty is a landmark of sexual maturity, most children at this period are expected to show association with and interest for the opposite sex. However, a good proportion of the subjects asserted that they did not have any associa-

tion with the opposite sex. This response in a sense seems to be contrary to the already existing belief. In several instances, it has been expressed that menarche is a sign of sexual maturity. If so, why didn't a good proportion of the respondents associate with the opposite sex? Does sexual maturity alone imply association with the opposite sex? Or are there other variables to be considered? In fact, among other factors, sexual maturity is a precondition for one to be attracted towards the opposite sex. Studies cite that childhood experiences, environmental conditions and cultural influences play major roles in determining the way, and the extent to which an adolescent's overt behaviour gives evidence of the functioning of his developing sex stimulating urges and drives.³⁴ For instance, a child who has been "protected" continuously by overanxious parents from association with the opposite sex not only fails to exhibit varying heterosexually stimulated behaviour during the developmental years but may be shy and withdraw in the presence of the opposite sex and consciously or unconsciously attempt to repress natural sex urges even with the approach of the adulthood.

3.5 Erroneous Outlook of Girls Towards Menarche

The following table provides some information about the attitudes of the respondents towards menarche.

TABLE 5

Attitude of the Respondent Girls towards Menarche

Items	Agree		Disagree		Unidenti- fied	
	No	%	No	%	No	%
	Feeling of disvirgin- ity	105	57.69	70	38.46	7
Feeling of Bleeding or being injured	95	52.19	76	41.75	11	6.04

An inspection of Table 5 reveals that 57.69% of the respondents considered the first menses as a sign of "disvirginity". Such a feeling may be one of the factors which induces undesirable psycho-social state into the pubescent girl. The

degree of the impact depends upon the value attached to virginity by a given culture or subculture. It may involve social and psychological factors, that is, factors that underlie the way disvirginity as a value loss is perceived and reacted by other people as well as the self. Actually, problems which on the first appraisal may seem purely personal often reveal a social base. For instance, though the value attached to virginity at the time of marriage is declining especially in the urban sectors of the country, there are still subcultures which consider disvirginity before marriage as a loss of honour and respect not only to the bride but also to the family

The subjects also expressed related feelings:

"I thought something wrong had happened to my reproductive organ."

"I thought it was a continuous process which does not have an end."

"I thought my body was bleeding."

3.6 Synopsis and Recommendations

According to this study, the onset of menarche

varies from age 12-18; the mean age being 14.53 years. As most girls in other parts of the world, the first menses in the Ethiopian girl is usually accompanied by physical discomforts such as severe abdominal pain, headache, increase in body temperature and backache. However, certain peculiar physiological changes as nasal bleeding and increase in the rate of urination were observed in the case of our subjects. Concurrent with these bodily symptoms, they had emotional and psycho-social disturbances which are transient in nature. It was the feeling of the subjects that this incident was shocking and frightening experience accompanied by undesirable emotional reactions and temporary withdrawal from interpersonal relations. In short, menarche was a period of worry, fear and stress for our subjects who were ignorant and ill-prepared for it.

All these undesirable emotional and social responses at this critical period of development should not be undermined. Among the other pubertal changes, it was not by accident that menarche was considered in this study. The very reason for undertaking such a deliberate venture in this particular study was that, its antecedents and conse-

quences in a country like Ethiopia are anticipated to have a host of inter-related multidimensional influences which more or less affect the personality development of the pubescent girl. Especially at his critical juncture, disintegrative emotional reactions will undoubtedly force such girls to mis-channel and misuse their emerging and new cognitive powers. As Jean Piaget and Barbel Inhelder have suggested:

The physiological onset of puberty coincides roughly with the emergency of new intellectual and cognitive abilities. At about the time of puberty, the individual first becomes capable of deductive and systematic thinking of constructing hypothesis, ideologies, utopias, and models of reality with which she compares the world around her. If encouraged and supported by her environment, the adolescent can develop her cognitive abilities in constructive and rational ways, developing an increased capacity of planning for the mental rehearsal of alternate plans of actions and for guiding her behaviour according to long range purposes.³⁶

Hence, providing basic knowledge to pubescent girls about the developmental changes that occur at this critical period particularly at the begin-

ning of their Junior High School years is of crucial importance. It would also be the right time to discuss sex-related relevant issues in order to avoid unnecessary health, physical, and psycho-social complications that may come out of ignorance and lack of appropriate information pertaining to early sex. In this endeavour, collaboration with the Family Guidance Association, Ethiopian Women's Association and the Ethiopian Youth Association as well as the schools needs special consideration.

Identification of particular developmental trends and age-specific needs of the child within its cultural frame-work would help to determine reality-oriented proper upbringing as well as learning-teaching strategies.

Notes and References

1. Menarche refers to the first occurrence of menstruation or menses. See for instance, A.T. Jersild, The Psychology of Adolescence (New York: Macmillian 1963), p.71.
2. Puberty which sometime is referred as preadolescence, denotes the transition from a childish body, a childish outlook on life, a childish forms of behavior to a mature body and to changed attitude and behavior. See, E.B. Hurlock, Developmental Psychology (New York, McGraw-Hill, 1959). See, Also, J.Pikunas, Psychology of Human Development (New York: McGraw-Hill, 1961).
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4. Mollie S. Smart and Russell C. Smart, Children Development and Relationships (New York: Macmillian Company, 1968), p. 443.
5. Boyd McCandles, Op. cit, p.4.
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14. L.D. Crow and A. Crow. Adolescent Development and Adjustment (New York: McGraw-Hill, 1958), p.235.
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