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THE DEVELOPMENT OF MENSTRUAL-RELATED BELIEFS AND BEHAVIOURS DURING ADOLESCENCE IN A SEMI RURAL HARYANA (INDIA): A CONCEPTUAL AND EMPIRICAL FORMULATION

ABSTRACT: Data has been collected on a cross-sectional sample of 120 adolescent girls ranging in age from 13 to 18 years. The mean age at menarche of 13.4 years with a standard deviation of 0.99 was estimated by method of recall. The majority of respondents (68%) had no prepubescent knowledge of menarche and its signs and symptoms until they experienced their first menstruation. Many years of school attendance, interaction with peers and access to educational resources and media, seemed to have played little role in helping the young girls to perceive menarche as a natural event. The cultural notions were being reinforced as girls entered their adolescence and were subjected to very strict norms and scrutiny. Parents tended to give limited mobility to adolescent girls to enforce cultural norms. Girl respondents had a lot many concerns and questions related to their identity. They had to cope with new biological and psycho-social realities, as adolescence brings several body and physical changes, and there were restraints placed by the parents, expectations of society to adhere to cultural ethos as expected from the grown up girls to behave in a particular fashion, while no such restrictions were put on males. Results showed that adolescents' expectations of menarche were largely negative and heavily influenced by cultural beliefs about menstruation. The cultural practices associated with menstruation period mainly revolved around the concept of ritual purity and "hot and cold" foods, and food avoidance. Parental education and socioeconomic status were not significant predictors of myths, prevalent taboos and beliefs related to menstruation regarding purity, food avoidance. Lower middle class was more conservative than lower class, middle-, and higher middle classes and were more committed believers of the traditional practices and values.

KEY WORDS: Menarche – Menstrual attitudes – Cultural beliefs – Taboos – Identity concerns – Emotions

INTRODUCTION

Human groups across nations differ in their cultures, spoken dialects and languages. Culture is also a unifying force for the members in each of these different groups as cultural entities. Today, this complex world is experiencing a rapid cultural change due to globalisation. Contemporary

international migrations and communication channels are bringing the members of these separate cultural entities into direct contact with peoples of many regions having different values and ways of life.

According to WHO (1977), adolescent group comprises people between the ages of 10 to 19 years. This phase witnesses a large degree of psychological growth as children

make adjustments in their personality due to the rapid physical and sexual development which is characteristic of this period of life. Adolescents face ongoing conflict and difficulty adapting to the sudden upsurge of sexual and aggressive drives. These changes cause unrest and confusion in the adolescents' inner selves and in the way they perceive the world. Biological and social maturity are not always considered equivalent. The two major problems of the adolescents are identity and sexuality. They are neither children nor adults. Should they be treated as adults to overcome their problems? The literature on the topic is voluminous and its review is beyond the scope of this paper.

India has the largest population of adolescent females in the world, being home to roughly 120 million individuals aged 10–19 years. The lives of these girls are complex, affected by their gender, race, ethnicity, class, differing abilities, and societal pressures. India has a Gender Inequality Index (GII) value of 0.617, ranking it 129 out of 146 countries in the 2011 index (UNDP Report 2011). Children formulate many of their attitudes and values toward society in the early years as part of their socialisation process. It is a challenge to understand adolescents' behaviour in their cultures' perspectives in order to deal with the realities of ethnic and cultural identities, ethos, family bonding and expectations, religious fundamentalism, and other factors like globalisation and media cultures that are shaping the world we live in. Some of these factors have been briefly reviewed hereafter.

Menarche, the occurrence of first menstrual period during adolescence, is an important transitional event in the female life cycle. It is considered as a symbol of girl's sexual maturation to womanhood. The other pubertal signs, such as breast development and pubic hair growth develop slowly, while menarche usually occurs suddenly and without precise predictability. Cross-cultural studies on girls' emotional reactions to menarche have yielded mixed results. Reviewing literature on these aspects, it has been reported that some women recall feeling more mature, grown up, proud, and excited; others report having various negative experiences, such as being scared, worried, anxious, moody, and embarrassed with the onset of menstruation (Woods *et al.* 1982, Morse, McKinnon 1987, Chrisler, Zittel 1998). On the contrary, in Sudan, Chrisler, Zittel (1998) have found that the first menstrual period results in adverse consequences for unprepared and uninformed teenage girls. Consequently these adolescents had more confusion and ambivalence toward menstruation and sexuality and exhibit negative self-image and emotional reactions to menarche (Chrisler, Zittel 1998). There is growing amount of data that has emphasised that Indian adolescent girls and mature women are relatively less prepared for menarche and have poor knowledge of menstruation and reproductive health and its related aspects (Ahuja, Tiwari 1995, Jyothi, Chandralekha 2000, Mahajan, Sharma 2004, Swarnalatha, Vasantha 2007).

Adolescence and parental sensitivity

Parent-child interactions in general and parental monitoring in particular have been mostly studied among Western cultures (Dishion, McMahon 1998, Kerr, Stattin 2000). Parental responsiveness is the extent to which parents use nurturance, affection, involvement, and support in the child rearing process (Baumrind 1978). Parental responsiveness is an important socialisation means in a family (for a review, see Bogenschneider *et al.* 1998), which is especially important for adolescents. Adolescents want to seek independence from their parents, but also strive to remain connected to them (Youniss, Smollar 1985). At this life stage, emotional connectedness with parents, as parental responsiveness fosters, plays a more important role in guiding the behaviours of adolescents than physical rules and supervision do (Bogenschneider *et al.* 1998).

Peer pressure and television (TV)

Childhood TV viewing can also cause teen age problems. Popular media including television shows tends to showcase dating in teens as the norm. Many teens start dating because they want to mimic their favorite television characters or movie stars. Responding to the peer pressure is part of human nature. As one becomes more independent, peers play a greater role in their life. School and other activities take children away from their homes. They spend more time with peers than they do with their parents and siblings. They will probably develop close friendships with some of their peers, and consequently may feel more connected to them like an extended family. Threats and punishment by parents put additional pressure on teenagers. So, they may feel more secure in discussing their teenage problems with their peers than parents and siblings.

The current study

In the light of above theoretical framework, the present study premises on the assumption that adolescent behaviour is influenced by a number of factors. Despite the fact that each new generation would usually show some change from the previous one, but still, population can best be understood when viewed against its cultural background which gives context and meaning to perception and behaviour. Several cultural practices, transmitted from one generation to another, are associated with menstruation among females in India, mainly revolving around the concept of ritual purity and "hot and cold" foods, food avoidance, restricted diet, and remaining in seclusion for a certain time period because of the polluting effects of menstruation. The present study was undertaken to investigate the prevalent knowledge, psychosocial and cultural factors associated with adolescence phase, menarche and menstruation among adolescents in a semi urban Haryana in the light of globalisation factors and local cultural ethos. A number of hypotheses were proposed to be tested: 1) Prevalent indigenous cultural attitudes toward menstruation are a significant predictor of emotional expectations of menarche; 2) Psychosocial factors, such

as menstrual attitudes, preparedness for menstrual cycles, gender-role identity and physical self concept, and stress related to new dawned identity, are correlated with expectations of attaining menarche and sexual maturation; 3) All the prepubescent girls are not expected to have prior knowledge about menarche; 4) The multiple changes taking place during puberty often get many young people confused and perplexed in cultures where most parents refrain from discussing pubertal-related and sexual issues with their children and exposure to adolescent and youth-friendly information and services poor; 5) Socioeconomic factors including parental education are strong factors in rejecting the age-old unscientific beliefs, myths, and superstitions prevalent in human societies in imposing restrictions on females during menstrual periods and considering menstruation phase as a polluting phase making affected female as impure. It was further assumed that negative emotional expectations of menarche might be associated with negative menstrual attitudes, feminine gender-role identity, and poor physical self concept.

MATERIALS AND METHODS

The field area

The present study was carried out in Bilaspur Subdivision on two Developmental Blocks: Bilaspur and Chhachhrauli of the Yamunanagar District, Haryana. The latitude and longitude of Yamunanagar is 30° 6' 0" N / 77° 17' 0" E. The state of Haryana is bounded by Uttar Pradesh in the east, Punjab in the west, Himachal Pradesh in the north, and Rajasthan in the south. A district is divided into one or more subdivisions, further divided into *tehsils* and blocks.

Bilaspur town, named after the writer of the Epic *Mahabharata – Maharishi Ved Vyas*, is a historical place. It is believed that there was an Ashram of Ved Vyas on the bank of a pond situated here. There is a statue of *Uma Mahadev* made in 9th–10th century, and statue of *Ganesha* made in 11th–12th century. As of 2001 India census, Bilaspur had a population of 9620. Males constitute 53% of the population and females 47%. Bilaspur has an average literacy rate of 65%, higher than the national average of 59.5%; with male literacy of 69% and female literacy of 61%, 14% of the population is under 6 years of age. The main Chhachhrauli *tehsil* is situated in north east and 11 km from Jagadhri. In the past, it was the capital of Kalsia state. It was created by Raja Gurbaksh Singh in 1763. Today "Ravi Mahal", Ghantaghar, Janak Niwas, and the fort are some monumental places. There is also a *Sainik Parivar Bhawan* and *Bal-kunj* social welfare institution at Chhachhrauli.

Participants, procedures, and measures

The data was collected on cross-sectional sample of 120 adolescent girls ranging in age from 13 to 18 years. None of the respondents was illiterate since most of them were school going girls. Apart from the school girls, the data was

also collected from the girls in their households, doctor of primary health care centre, and nurse of primary health care centre Chhachhrauli. The primary data was collected with the help of interview guide and schedule (voice-recorded and on paper). Data about beliefs related to menstruation was also collected from some mothers and elderly women. In all, 18 in-depth interviews were conducted with the help of an interview guide and the questions were open ended. The data on the rest of the respondents was collected with the help of interview schedule to save time and to broad-base the sample size. The data was analysed for various aspects in terms of frequencies and percentages. Frequency data were contrasted through Pearson's chi-square contingency tests, in which categorisation is across two or more dimensions. While presenting the results of proportions (%) in tabular form, only affirmative response, i.e., yes, has been given in order to economize on the space, because the rest of the respondents in that category had responded in negative.

RESULTS

Socio-economic status

The data on the parents' education is given in *Table 1*. The table reveals that only 10.0% of fathers and 13.3% mothers were illiterate. Only 10.8% of the respondents' fathers and 10.0% mothers had gone to college or university for higher education. The data on the parents' occupation (*Table 2*) reveal that of the fathers, 43.3% were engaged in daily labour while others were doing their own business (37.0%). Most of the mothers (78.3%) were housewives,

TABLE 1. Education of respondents' parents.

	Father		Mother	
	N	%	N	%
Illiterate	12	10.0	16	13.3
Primary educated	3	2.5	19	15.8
Middle secondary	31	25.8	32	26.7
Matriculation	44	36.6	30	25.0
Higher secondary	17	14.3	11	9.2
Graduate	7	5.8	7	5.8
Post graduate	5	4.2	5	4.2
>Post graduate	1	0.8		
Total	120	100.0	120	100.0

TABLE 2. Occupation of respondents' parents.

	Father		Mother	
	N	%	N	%
Govt. job	19	15.8	8	6.7
Business	45	37.5	8	6.7
Private job	2	1.7	0	0.0
Labourer	52	43.3	10	8.3
Unemployed / Housewife	2	1.7	94	78.3
Total	120	100.0	120	100.0

8.3% were labourers, while 13.4% were doing government job or helping their husband in business. The household income analysis revealed that 17.5% of the families had monthly income less than 2500 INR; while another 34.2% had monthly income between 2500–5000 INR, and 28.3% had income more than 10,000 INR per month. The rest 20% respondent families had income between 5000 and 10,000 INR per month. Most of the girls belonged to lower or lower middle socio-economic status.

Adolescence: knowledge, views, changes, and experiences

Adolescence was considered the age during which a child was neither young nor too mature to take independent decisions. It is a transitory phase during which the child strives for attaining maturity. Though one is able to understand things, but fails to take one's own decisions. Adolescents felt confused or stressed due to the biological and social changes which were occurring too fast to be accepted by them. For some respondents, adolescence had little meaning and a few others it was similar to teen age that correlated with sexual changes and menstruation. Good health had to be maintained for which proper nutrition, drinking safe water, wearing neat clothes, keeping clean surroundings, and good family environment were very necessary. There was variation in the answers regarding the length of adolescence. Most of the respondents believed it ranged between 12–18 years, while few others said it was from 13–18, and for others it was between 14 to 16 years, and a few responded that it started from 16 years onwards till maturity.

68% of the respondents were unaware of the menstruation period and its signs and symptoms before they experienced that for the first time. For some respondents, there were many changes which occurred in a girl's body and these changes were hard to grapple with initially. The changes enumerated by them were: menstruation, voice change, axial and pubic hair growth, breast development, becoming clumsier. Psychological/emotional signs included: moodiness and rapid changes of temperament, increased intensity of emotional feelings (such as embarrassment, love and hate), anxiety and sensitivity over body appearance and other unfamiliar body changes, becoming much more idealistic and aware of external issues, and consequently stopped teasing others about their adolescent changes in body shape.

Regarding gender differences, majority of the respondents suffered more problems than boys. Many restrictions were imposed on menstruating girls. For example, a mere going out to a market was considered unsafe and generated tension in the family until she returned. Freedom of playing outside was curtailed as compared to boys. She had to answer queries like: Where was she? Why was she standing outside? What was she doing? This created stress among the adolescent girls. There were differences in respondents from government versus public/private schools. Private school respondents were more open and

forthcoming in answering the questions than government school girls. The latter were hesitating in responding and uncomfortable while answering the questions. Hesitation was more pronounced among the rural than urban girls.

According to respondents, the perception of people changed for girls who were undergoing various sexual developmental changes and consequently they felt unsecured to go outside alone. There were some reported cases of teenage pregnancy and sexual harassment in which only girls had to suffer. In every case, a girl had to make adjustments within the family and outside the family. They were more involved in the household work and sometimes felt less preferred than boys in the family. After the adolescent age, a girl started behaving more responsibly and cautiously.

Adolescence brought with it new concerns about body image, looks and appearance. Girls who earlier never gave much attention to their looks, suddenly started primping, worrying, and complaining about being too short, too tall, too fat, too skinny or too pimply. The differential changes in body size, proportions, and shape made young adolescents feel clumsy and awkward in performing their physical activities. Girls faced a host of pressures from the adolescent changes and questions related to their identity, e.g., who they were and where did they fit during this natural transition phase from childhood to adulthood, as it accompanied several bodily and physical changes. The symptoms of menstruation among girls were seen in one or the other way, which created difficulty among the few, during this phase, to do certain physical activities.

Menstruation: period symptoms and experiences, and perceptions

The study revealed that the experiences of menarche had a huge impact on the growing adolescent girls. Most respondents agreed that menstruation was one of the most discomfiting periods. This period was often accompanied by extreme discomfort in terms of cramps and inconvenient physical and mental situation. The onset of menstruation, days of menstrual flow interval and periodicity varied. The age at menarche ranged from 12–15 years. Mean age at menarche was 13.4 years with a standard deviation of 0.99 years as estimated by method of recall. The interval between menstrual events varied from 26–30 days. The duration of menstrual flow varied from 2 to 7 days. In the majority of respondents, it was 4–5 days.

Most of the girls came to know about menstruation when they first started menstruating and found it unusual or abnormal. In majority of the cases, the girls were frightened to see and feel the bleeding. For instance, a girl suddenly saw blood spots on her skirt in school. Worried about it, she rushed home and started weeping; finally, out of fear and shame, she told her mother about it. They first shared the problem either with their mother or sister. They trusted their mothers more. Some preferred their elder sisters as there was less age difference between them and also felt more comfortable in talking to them. The respondents,

who were aware of the menstruation prior to its onset, were earlier informed by their mothers/sisters or friends. The most commonly enumerated symptoms associated with menstruation were stomach ache, back ache, pain in legs and thighs, breast tenderness, decreased activity levels, lack of sleep, changes in appetite, irritability or mood swings. Less frequently reported symptoms included lassitude feeling/fever/vomiting. Some respondents had to skip their schools due to lot of pain in the body or other such event. Most of the respondents preferred to take rest during periods as they felt fatigued with no desire do any work. In maximum respondents during the initial years, the menstrual cycle was irregular and a lot of pain used to occur but with growing age the cycle became regular and pain intensity also decreased. A few respondents were not aware of the reasons of occurrence of these changes in the body. They had no clue for occurrence of pain in the body. Sometimes the pain was so acute that they had to visit a doctor.

Beliefs, superstitions, and customary practices

Beliefs and practices prevalent among the respondents have been listed in the Table 3. 92.5% respondents reportedly avoided *puja* (worshiping) during menstrual cycle for fear of annoying goddess. A menstruating girl was considered

impure as per prevalent tradition and hence was not allowed to go to temple. Menstrual blood is believed to be polluting. Worshiping during this phase would bring misfortune and harm for the girl and her family. A menstruating girl was not even allowed to touch the *jyot* (goddess flame) as it would result in its half burning rather than full. A menstruating girl must not participate in the festival, should not attend any function related to *satak* (birth), *patak* (death) and should not touch anything which was considered pious or pure. Most of the respondents said that even keeping fasts was not allowed. Menstruating girls were not allowed to touch the holy books, religious items. Consequently, majority of the respondents avoided going to temple, *gurudwara*, *dargah* and church.

Menstruating females were prohibited to touch certain flowering or fruit plants lest these would die or would not bear fruit, visiting or touching images of gods, temples, and religious scriptures. A fear was inculcated in the adolescent mind that she would commit sin if she broke these taboos. Restrictions were also put on diet and activities. These taboos resulted in many girls getting an enforced rest for at least these three days of the month since they were barred from carrying out their normal activities. Most of the respondents said sour (*khatta*) food items like, curd, *lassi*, pickle, lemon and citric juice, tamarind and *chutney*

TABLE 3. Beliefs, practices, taboos, and awareness associated with menstruation in relation to father's education level. *P*-value refers to chi-square contingency test.

Variable	Category		Education level of father								Total	<i>P</i> -value
			Illiterate	Primary educated	Middle secondary	Matriculation	Higher secondary	Graduate	Post graduate	> Post graduate		
Total		<i>N</i>	13	3	29	44	18	7	5	1	120	
		%	10.8	2.5	24.2	36.7	15.0	5.8	4.2	0.8	100.0	
Avoid puja	Yes	<i>N</i>	11	3	28	41	16	6	5	1	111	0.844
		%	9.2	2.5	23.3	34.2	13.3	5.0	4.2	0.8	92.5	
Avoid sour food	Yes	<i>N</i>	11	3	27	36	17	6	4	1	105	0.794
		%	9.2	2.5	22.5	30.0	14.2	5.0	3.3	0.8	87.5	
Avoid hot food	Yes	<i>N</i>	5	0	16	21	10	5	3	1	61	0.453
		%	4.2	0.0	13.3	17.5	8.3	4.2	2.5	0.8	50.8	
Avoid cold food	Yes	<i>N</i>	9	2	20	25	11	4	4	1	76	0.908
		%	7.5	1.7	16.7	20.8	9.2	3.3	3.3	0.8	63.3	
Avoid watering plants	Yes	<i>N</i>	4	1	14	17	11	1	3	0	51	0.360
		%	3.3	0.8	11.7	14.2	9.2	0.8	2.5	0.0	42.5	
Avoid viewing mirror	Yes	<i>N</i>	7	1	18	24	10	5	3	1	69	0.925
		%	5.8	0.8	15.0	20.0	8.3	4.2	2.5	0.8	57.5	
Restricted kitchen entry	Yes	<i>N</i>	5	2	16	22	11	4	2	1	63	0.858
		%	4.2	1.7	13.3	18.3	9.2	3.3	1.7	0.8	52.5	
Avoid outdoor activity	Yes	<i>N</i>	6	1	13	22	11	3	1	1	58	0.730
		%	5.0	0.8	10.8	18.3	9.2	2.5	0.8	0.8	48.3	
Clothing restrictions	Yes	<i>N</i>	8	1	23	36	15	4	4	1	92	0.346
		%	6.7	0.8	19.2	30.0	12.5	3.3	3.3	0.8	76.7	
Prepubescent awareness of menarche	Yes	<i>N</i>	3	2	10	12	7	4	0	1	39	0.220
		%	2.5	1.7	8.3	10.0	5.8	3.3	0.0	0.8	32.5	
Belief of impurity	Yes	<i>N</i>	9	3	12	27	6	3	2	1	63	0.133
		%	7.5	2.5	10.0	22.5	5.0	2.5	1.7	0.8	52.5	

were avoided as it was believed that these would cause over bleeding and more pain to the girl. They were warned that if a menstruating girl would touch the pickle, then it would get spoiled. Menstruating girls were advised not to eat certain "hot" foods (jaggery, dry fruits etc.) and "cold" foods (tamarind, lemons etc.). It was believed that "hot" foods might cause heavy bleeding and "cold" foods might cause severe menstrual pain and interrupts during menstrual cycle. However, *Ajwan* (Bishops Weed) and dry fruits, which also come in the category of hot foods, were used to lessen the feeling of pain.

Most of the menstruating girls were not allowed to enter into the kitchen as it would pollute the kitchen and make it impure. Cooking of food was restricted. After end of the cycle, a girl was allowed entry into the kitchen after taking complete bath and doing *puja*, until then she was considered impure. Maximum respondents avoided looking into the mirror as it was believed to cause skin problems, especially acne and pigmentation. One of the respondent commented: "*Sheesha dekhna se chhaiyan ho jati hai*", meaning viewing mirror would entail dark circles/marks.

Passing over "the crossing" meant harm and misfortune for a menstruating girl. One of the respondent said that it was their belief that a menstruating girl should follow the same path while returning home that she followed while going from the home, otherwise a *Chauraha* (the crossing) would be created and it would be harmful for her. Lifting weight was restricted as it was believed to cause more pain in the back and stomach. It was a taboo for the menstruating girl or woman to water the auspicious plants like *tulsi* (*Ocimum sanctum*), as there is a belief that shadow of menstruating girl would affect the life of the plant and it would perish.

Most of the respondents used a cloth as napkin during menstruation period and it was believed to be thrown outside the premises of the house or should be buried in a pit, as there was a superstition that if it is kept near the house, it would be harmful for the family. Cutting hair was restricted in some. Washing of hair on third day of menstrual cycle, Saturday and Sunday were prohibited, but respondent was not able to answer the reasons for that.

Socioeconomic status and menstrual beliefs, taboos, and practices

It has been commonly hypothesised that socioeconomic factors including parental education are strong factors in rejecting the age-old unscientific beliefs, myths and superstitions prevalent in human societies in imposing restrictions on females during menstrual periods and considering menstruation phase as a polluting phase making affected female as impure. This hypothesis was tested in the present sample and results are presented in *Tables 3–5*.

The data presented in the *Tables 3 and 4* reveal that education levels of the parents were statistically insignificant determinants of the prevalence of the beliefs, taboos, practices and superstitions related with menstruation phenomenon as chi-square tests were insignificant. With respect to household income, *Table 5*

shows that chi-square test was significant for watering the plants, while for all other variables chi-square tests were insignificant. However, critical examinations of the above three tables revealed that frequency of these taboos was highest in the middle categories than the lowest and the highest categories with respect to income and parental education. In general, these results show that lower middle class was more conservative than lower class, middle-, and higher middle classes.

Results related to hypotheses

Not all hypotheses were fully supported by the current results. Hypothesis 1, which postulated that prevalent indigenous cultural attitudes toward menstruation were a significant predictor of emotional expectations of menarche, was corroborated by the results. Hypothesis 2, which proposed that psychosocial factors, such as menstrual attitudes, preparedness for menstrual cycles, gender-role identity and physical self concept, and stress related to new dawned identity, were correlated with expectations of attaining menarche and sexual maturation; was partially corroborated. After attaining menarcheal status, new reality dawned on them and the experiences generated many issues as proposed in this hypothesis. Hypothesis 3, which stated that all the prepubescent girls were not expected to have prior knowledge about menarche, was corroborated by this study as most of the girls were not prepared for the menarche and had no previous knowledge. Hypothesis 4, which claimed that the multiple changes taking place during puberty often got many young people confused and perplexed in cultures where most parents refrain from discussing pubertal-related and sexual issues with their children and exposure to adolescent and youth-friendly information and services poor; was also corroborated by the results, though mothers did help their daughters in many ways. Hypothesis 5, which proposed that socioeconomic factors including parental education were strong factors in rejecting the age-old unscientific beliefs, myths, and superstitions prevalent in human societies in imposing restrictions on females during menstrual periods and considering menstruation phase as a polluting phase making affected female as impure; was not fully confirmed. The results showed that lower middle class is more conservative than lower class, middle-, and higher middle classes.

DISCUSSION

Despite the fact that menstruation is a normal physiological process, it has been viewed differently as per various social and cultural understandings of different human populations. The results of the present study affirm these observations as the experiences of menarche had a huge impact on the growing adolescent girls of the present study.

The present study finds adolescence as period of stress and strain. The causes included emotive issues of grappling with fast-paced biological changes, changed attitudes of

TABLE 4. Beliefs, practices, taboos, and awareness associated with menstruation in relation to mother's education level. *P*-value refers to chi-square contingency test.

Variable	Category		Education level of mother						Total	<i>P</i> -value	
			Illiterate	Primary educated	Middle secondary	Matriculation	Higher secondary	Graduate			Post graduate
Total		<i>N</i>	16	19	32	30	11	7	5	120	
		%	13.3	15.8	26.7	25.0	9.2	5.8	4.2	100.0	
Avoid puja	Yes	<i>N</i>	14	19	30	29	8	6	5	111	0.124
		%	11.7	15.8	25.0	24.2	6.7	5.0	4.2	92.5	
Avoid sour food	Yes	<i>N</i>	13	19	7	3	0	2	0	44	0.126
		%	10.8	15.8	5.8	2.5	0.0	1.7	0.0	36.7	
Avoid hot food	Yes	<i>N</i>	6	8	17	17	3	6	4	61	0.136
		%	5.0	6.7	14.2	14.2	2.5	5.0	3.3	50.8	
Avoid cold food	Yes	<i>N</i>	11	13	20	16	6	5	5	76	0.522
		%	9.2	10.8	16.7	13.3	5.0	4.2	4.2	63.3	
Avoid watering plants	Yes	<i>N</i>	5	6	15	15	5	2	3	51	0.688
		%	4.2	5.0	12.5	12.5	4.2	1.7	2.5	42.5	
Avoid viewing mirror	Yes	<i>N</i>	8	12	16	16	9	5	3	69	0.570
		%	6.7	10.0	13.3	13.3	7.5	4.2	2.5	57.5	
Restricted kitchen entry	Yes	<i>N</i>	6	12	16	13	8	4	4	63	0.342
		%	5.0	10.0	13.3	10.8	6.7	3.3	3.3	52.5	
Avoid outdoor activity	Yes	<i>N</i>	9	8	15	16	5	4	1	58	0.823
		%	7.5	6.7	12.5	13.3	4.2	3.3	0.8	48.3	
Clothing restrictions	Yes	<i>N</i>	10	15	25	25	9	4	4	92	0.634
		%	8.3	12.5	20.8	20.8	7.5	3.3	3.3	76.7	
Prepubescent awareness of menarche	Yes	<i>N</i>	6	6	10	9	3	3	2	39	0.989
		%	5.0	5.0	8.3	7.5	2.5	2.5	1.7	32.5	
Belief of impurity	Yes	<i>N</i>	5	11	19	10	6	3	3	57	0.291
		%	4.2	9.2	15.8	8.3	5.0	2.5	2.5	47.5	

TABLE 5. Beliefs, practices, taboos, and awareness associated with menstruation in relation to monthly income of families. *P*-value refers to chi-square contingency test.

Variable	Category		Monthly income (INR)				Total	<i>P</i> -value
			<2,500	2,500–5,000	5,000–10,000	>10,000		
Total		<i>N</i>	21	41	24	34	120	
		%	17.5	34.2	20.0	28.3	100	
Avoid puja	Yes	<i>N</i>	20	40	20	31	111	0.204
		%	16.7	33.3	16.7	25.8	92.5	
Avoid sour food	Yes	<i>N</i>	18	37	20	30	105	0.645
		%	15.0	30.8	16.7	25.0	87.5	
Avoid hot food	Yes	<i>N</i>	8	25	12	14	59	0.227
		%	6.7	20.8	10.0	11.7	49.2	
Avoid cold food	Yes	<i>N</i>	15	26	15	20	76	0.953
		%	12.5	21.7	12.5	16.7	63.3	
Avoid watering plants	Yes	<i>N</i>	13	9	13	16	51	0.010*
		%	10.8	7.5	10.8	13.3	42.5	
Avoid viewing mirror	Yes	<i>N</i>	13	22	14	20	69	0.939
		%	10.8	18.3	11.7	16.7	57.5	
Restricted kitchen entry	Yes	<i>N</i>	10	22	10	21	63	0.357
		%	8.3	18.3	8.3	17.5	52.5	
Avoid outdoor activity	Yes	<i>N</i>	14	16	13	15	58	0.270
		%	11.6	13.3	10.8	12.5	48.3	
Clothing restrictions	Yes	<i>N</i>	15	31	20	26	92	0.662
		%	12.5	25.8	16.7	21.7	76.7	
Prepubescent awareness of menarche	Yes	<i>N</i>	7	15	7	10	39	0.917
		%	5.8	12.5	5.8	8.3	32.5	
Belief of impurity	Yes	<i>N</i>	7	19	14	17	57	0.316
		%	5.8	15.8	11.7	14.2	47.5	

* Statistically significant at the 5% level.

people around them, security related issues if they go alone outside, restrictions imposed on their natural behaviour and outdoor activity, and gender-role identity related problems. A traditionally held view by the majority of people in India has been that a good child is expected to be obedient and respectful to elders. This pattern of obedience and respect to elders is expected more from girls since they have to go to other home after marriage and to make more adjustments. A strict obedience and conformism in early childhood and adolescence are likely to condition the individual to a closed system of thinking and behaviour. Moreover, this pattern of behaviour is expected to continue throughout an individual's life and she is never permitted to question the word of an elder. After attaining menarche gender-role socialisation and perceptions relating to femininity and women's roles in the society intensifies in rural/semi rural areas. Females in India are raised as care givers and not as caretakers. They are made responsible for all that goes in the house. In a perspective of our culture, women are considered to be the upholders of the family name and honour, so they are more susceptible to being shamed. Less support is available to them compared with boys for the usual human frailties. They feel more stressed due to the variety of roles assigned to them and greater expectations of the family and society at large. However, it is not necessary that stress is always harmful; it may have negative, positive, and neutral elements.

Adolescent stress across cultures related controversy

Adolescence became a topic of intense discussion in the early years of the 20th century. Hall (1916), in his psychoanalytical analysis, described this as a period of "storm and stress" and this was attributed to biology, i.e., hormonal changes. This biological upheaval resulted to internal turmoil, mood swings, rebellion, and problem behaviours, stretched to the level on the fringe of psychopathology. To counter biological determinism thought and eugenic movement which was getting stronger, and to strengthen the contrarian call on the nurture side of the argument, Franz Boas sent his 23-year-old student, Margaret Mead, to Samoa in 1920, to work on adolescents to test the extent to which the troubles of adolescence depended upon the attitudes of a particular culture and the hereditary adolescent stage of psychobiological development. Boas was of the view that finding a single exception to the biological determinism, where a human society was undergoing a smooth transition from childhood to adulthood without any storm and stress, would be enough.

Mead investigated Samoan culture and childrearing practices, in particular the sexual freedom allowed in Samoa during adolescence. She studied the customs and habits of the villagers on Ta'u, one of three small islands in the Manu'a group, about a hundred miles east of Pago Pago. She presented to the public the idea that the individual experience of developmental stages could be shaped by cultural demands and expectations. Mead's (1928) book, *Coming of age in Samoa: A Psychological Study*

of Primitive Youth, in which she described that smooth transition among Samoan girl's occurred because they belonged to a stable, monocultural society, surrounded by role models, and where nothing concerning the basic human facts of copulation, birth, a bodily function, or death, was hidden. This work was an immediate and tremendous success, and has no doubt contributed to the change in lifestyle concerning sexual permissiveness in Euro-American society. She was a celebrity over a short span of time. Six decades later, Freeman (1983) tore apart all of Mead's romantic descriptions. According to his own field observations, historical accounts, content analysis of court cases, and more, Samoan society was described as puritan, guilt-ridden, and violent, and adolescence was a time of trouble as in other cultures. How did two reach to such diametrically opposite descriptions? This question had launched one of the biggest controversies among scholars with hundreds of papers, several books, and a film (e.g., Holmes 1983, Murray 1990). Mead's study has been subjected to critical evaluation and the interpretation posed by her has not considered being authentic (Freeman 1989). Many mainstream psychologists are of the view that the ethnocentric approach of treating the adolescence as a period of the storm and stress is incorrect even for most Euro-American adolescents. This "emic" approach has been completely rejected by them and dubbed as an extreme cultural relativism approach. For example, Dasen (2000) is of the opinion that adolescence does not need to be a period of storm and stress, and the generation gap and problem behaviours considered a "normal" part of adolescence are in fact culturally produced.

Globalisation, modernisation and glocalisation

Globalisation and modernisation are expected to influence the behaviour patterns in adolescents as there is lot of exposure to media and movies resulting in churning of thoughts and attitudes among youths. This change is expected to be taking place in all cultures. Consequently, youth are expected to move from the more conservative and traditional ways of life and thoughts to the more modern pole in their attitudes, values and behaviour. A lot of restrictions are expected to generate more explosive behaviour patterns among adolescents, and that may lead to more stress. The respondents in the present study had limited access to the mass media as compared to the adolescents in the metropolitan cities. But this exposure had limited impact on them as family and social control were strong. But simmering grudges were found among respondents for the gender specific differential attitudes and expectations of the elders. Are these complaints of gender discrimination an indication of struggle for personal liberation? It may be seen as a sign of moving from "rigidity and closed-mindedness" towards "flexibility and cognitive openness" by some. Is this impact an example of glocalisation? The answer to this question is no at this point of time, though there was an element of simmering discontentment, but still a majority of the respondents

had faith in the traditional cultural values and wanted to faithfully adhere to the decisions of their elders.

Theoretical conceptualisation of the results

Human behaviour becomes meaningful in their cultural context. The patterns of behaviour found in different cultures emerge in the context of interactions of the people which are encoded in their various traditions, customs and cultural artefacts. Thus the beliefs and values of a community are what their members learnt from their ancestors and that becomes a part of their social consciousness. Hence, socialisation is the process through which cultures are maintained and transmitted across generations. Agencies such as parents, media, school, peer group and religious institutions deliberately shape children and people to develop specific behaviour patterns. They make conscious and deliberate attempt to define the expectations of a society. The parents, for instance, adopt various styles of parenting which vary in the degree of affection and degree of control exercised on children. When the existing natural things change with human efforts may be known as cultural change. It is also essential to know that human behaviour is shaped by the biological potential as well as environmental contributions. However, the two interact and jointly determine behaviour in a culture which gives a specific shape or direction to behaviour. While each culture tries to maintain its identity, it also interacts with other cultures and is influenced by them. Thus there is both continuity and as well as change.

A central question of anthropology has been how to understand the variability in behaviour of human societies across space and time. How can the historical processes of human social-cultural evolution be explained? In some sense, each society is unique as being a product of its own history in a distinct environment, with its own characteristic technologies, economies, and cultural values. Cultural relativism approach of anthropology recognizes and respects cultural integrity of a community. Keeping that moral fibre in mind, anthropologists make efforts to identify and explain cross-cultural patterns observed over space and time. Anthropologists attempt to explain causes and mechanisms for the occurrence of patterns of cultural diversity, despite taking many divergent paths, in terms of a coherent theory. In the context of the present study, cross cultural occurrence of menstrual pollution beliefs and taboos may be characterised as quasi-naturalistic as pollution is "conceptualised as a mystical force". There are culturally prescribed rules learned early in life that dictate the management and expressions of behaviour of the members of a community.

Cross-cultural ethnological patterns of ritualistic behaviour in so called premodern societies reveal some commonality in their perceptions. Anthropologists from Emile Durkheim through Turner and contemporary theorists like Michael Silverstein treat ritual as social action aimed at particular transformations often conceived in cosmic terms (see Silverstein 2004). These transformations

can also be thought of as personal. However, at community level, biogenetic structuralism approaches are also used to investigate the origins of human ritual to provide additional empirical evidence of biological determinants of behavioural traits. Prior to the emergence of a structuralist theory, related disciplines of ethology and sociobiology talked about biological determinants of behavioural traits (see Wilson 1975, Sharma 2010). The earliest statements of biogenetic structuralism were found in 1970's in the writings of C. D. Laughlin and E. G. D'Aquili (see Laughlin, D'Aquili 1974). This theory endeavoured to explain the relationships among neurological structures, consciousness and cultures (see Laughlin, D'Aquili 1974, Rubinstein *et al.* 1984, Laughlin *et al.* 1990). Here consciousness is assumed as a cognitive factor. Cultural behaviour is regarded as a "variant behaviour manifestations of universal structural models", which are "initially totally and later partially determined by genetic coding and susceptible to processes of natural selection" (Laughlin, D'Aquili 1974). Altruism may be cited as an example where natural selection seemed to have been operative (see Sharma 2007, 2010). Under this model, structures are not rigid but are alive, active and changing as per requirements of the time and space.

Human emotional behaviour is also linked with ritualistic behaviour. Biogenetic structuralism views emotion as a social-experiential phenomenon produced by structures developing from neural networks universal to human brain during the ontogenesis of the individual and is expressed according to enculturated but neuro-endocrinologically patterned ways (Laughlin, Throop 1999). It has been further argued by Laughlin and Throop (1999) that emotions refer to a number of complex neuropsychological events that are constructed by parallel processes operating at several levels of nervous system. The role of ontogenetic factors in understanding human behaviour has been emphasised under this approach. Cognitive processes link human brain, a particular society's perceptions and global considerations as envisaged by the global community in the present globalizing age. It is theorised under the biogenetic structuralism approach that cognitive processes play a major role in the spectrum of rituals observed among human populations spread over the globe. Winkelman (2010) has analysed cross-cultural patterns of shamanism and associated biogenetic basis of shamanism. According to him, there occurs a common biogenetic foundation of shamanism across cultures, which involves a cultural universal involving a community ritual in which the induction of altered states of consciousness is seen as a tool for engaging interaction with spirits for the purposes of divination and healing (Winkelman 2010).

The naturalistic theories maintain that emotions are universal, not only among adult humans but also among animals and human infants which are devoid of social consciousness. According to this view, emotions result from hormones, neuro-muscular feedback from facial expressions, and genetic mechanisms. The protagonists of these theories hold the view that emotions are independent

of cognition (Zajonc 1980, Izard 1984). The transmission of sensory energy to emotional reactions is held to be independent of consciousness and involves no mediation or transformation of information (Izard, Buechler 1980, Zajonc 1980).

To role of human brain in the expression of many human behavioural traits has been forcefully highlighted in the last couple of decades. The two of the most important early observations of cortical functions in the development of speech were made by surgeon Pierre Paul Broca, the founder of anthropology in France and neurologist Carl Wernicke in the nineteenth century. The limbic system, often referred to as the "emotional brain", is found buried within the cerebrum. This system contains the thalamus, hypothalamus, amygdala, and hippocampus. The studies have shown that the anatomical structures of amygdala and hippocampus have a role to play in memory, emotion, attention, and the processing of complex auditory and visual stimuli, and the temporal lobe became similarly organised for these functions (see Gloor 1997). Neocortical surface of the temporal lobes can be broadly subdivided into the superior, middle, and inferior temporal gyri complexes and of these; the anterior and superior temporal lobes are concerned with complex auditory and linguistic functioning and the comprehension of language (see Binder *et al.* 1994, Nelken *et al.* 1999, Nishimura *et al.* 1999). The right and left temporal lobe are functionally lateralised, with the left being more concerned with non-emotional language functions, as functional imaging studies have shown that the left posterior temporal lobe becomes highly active when reading and speaking, presumably due to its involvement in lexical processing (Binder *et al.* 1994). However, the language capacities of the left temporal lobe have also been indicated (Scott *et al.* 2000). Language is a tool of consciousness, and the linguistic aspects of consciousness are dependent on the functional integrity of the left half of the brain (Rhawn 2000). Language has also been suggested as a more fundamental ingredient in emotion (Barrett 2006, Lindquist 2009).

Many scholars find one of the major postulates of biogenetic structuralism model, "cultural behaviour as variant behaviour manifestations of universal structural models", as flawed. They interpret variant behavioural manifestations of human societies as evidence that personality structure varies appreciably across cultures. Moreover, neural responses are determined by genetic and/or environmental factors. The claims of universal basis for emotional expression have had an enormous impact on contemporary psychology. Progress in evolutionary psychology (Konner 1991) and behaviour genetics (Loehlin 1992) has provided a rationale for examining universals of human nature that transcend cultural differences. Many psychologists are now convinced that the best representation of personality trait structure is provided by the five factors, namely extraversion, openness to experience, agreeableness, conscientiousness and emotional stability, although scholars have used "somewhat different labels

for these five personality traits making up this taxonomy" (Barrick Mount 1991). This big five model of personality is one of the most comprehensive and parsimonious personality taxonomies (Costa, McCrae 1992). A lot of work is being done on these aspects. Shane *et al.* (2010) applied multivariate genetics techniques to a sample of 3,412 monozygotic and dizygotic twins from the United Kingdom and 1,300 monozygotic and dizygotic twins from the United States to examine whether genetic factors account for part of the covariance between the Big Five personality characteristics and the tendency to be an entrepreneur. They found that common genes influenced the phenotypic correlations between only Extraversion and Openness to Experience and the tendency to be an entrepreneur. They further argued that although the phenotypic correlations between the personality characteristics and the tendency to be an entrepreneur were small in size, genetic factors accounted for most of them.

Traditionally anthropologists and cross-cultural psychologists have emphasised the tremendous diversity of human cultural institutions and their profound impact on individual psychology (Markus, Kitayama 1991). Developments in anthropology and strong posturing against in biology adopted by some have seen anthropological theory moving away from structural/functionalism and semiotic structuralism into what is now being called the new cognitive science (see Bruner 1983, Hunt 1982). This is a multidisciplinary approach to mind, and most importantly of all, to the understanding of cultures as symbolic systems. Scholars have also taken a more "functionalist" approach to describing emotional experience, suggesting that emotion is a set of "socially shared scripts" composed of physiological, behavioural, and subjective components that develop as individuals are enculturated (see Markus, Kitayama 1991, Wierzbicka 1994). The social constructionist theory maintains that adult human emotions depend upon social concepts (Averill 1980, Harre 1986, Lutz, 1988, Shweder, LeVine 1984, Super, Harkness 1982, Ratner 1990: chapter 2, Vygotsky 1987). Such a view also emphasizes that there is no universality on empirical basis, as emotions have to be as distinct as each culture is different in different societies. However, there are many studies giving evidence for a distinct autonomic response for many emotions tested on samples across many races and cultures (Ekman *et al.* 1983, Levenson *et al.* 1992, Tsai, Levenson 1997, Ekman 2003).

The nonadaptive posturing of social constructionists may not be correct about the nature of emotions, because they emphasize cognitively mediated cultural scripts, rather than bodily responses. Emphasizing the role of biological potential in generating emotions under the social constructionist thought, there are two major perspectives on origin of emotions: (1) Joy, sadness, fear, and jealousy are examples of biologically mediated emotions. But these emotions may also be expressed qualitatively different from their counterpart in organisms devoid of social consciousness; (2) in the second category include that

are not naturally controlled. Anger is an example of this category of emotion. According to Solomon (1984), the Eskimos lack anger, because they do not blame individuals for their actions. They may feel displeased to the extent of acting violently, yet this is not equivalent to anger. Solomon argues that the Eskimo do not merely suppress anger; they evidently do not feel it. The emotion of anger is experienced by all humans and so it may also have genetic component. Moreover, it is related to many physical traits like blood pressure and increased heart rate. Emotion of anger is important in many instances. Revolutions come when people are provoked and feel frustrated. Spiritual leaders tell their devotees to detach themselves from anger, ego and desire as these being undesirable characteristics. These characteristics help us in performing worldly functions. These could be positive attributes of a spiritual man but dangerous in an ignorant soul. So there is no contradiction here in the preaching of a noble soul. Some of us are at the bottom of the scale of spiritual evolution, while some others are at the top, near liberation. Each emotion may, thus, bear the mark of both nature and nurture.

Animal studies have recently affirmed that the neurotransmitter systems that control brain activity at the molecular level are nearly identical among all vertebrates and the layout of the brain structures is the same (see Fortune *et al.* 2011). However, there is highest development of cooperative activity built on collaborative activities in human societies than non-human primates like chimpanzees and it is attributed to the evolutionary mechanism for having a preference for cooperative activity (Rekers *et al.* 2011). The number of synapses per neuron increases with growing age after birth, but brain also eliminates connections that are seldom or never used. It is this inherent tendency for cooperative activity that allows cultural processes to influence human behavioural attributes. Here, culture has been conceived as a process for cooking meaning into peoples' heads. The meaning has to be transmitted in society so that when symbols as precepts are presented to mind in whatever way, meaning is evoked. This reading of culture makes it much easier to accept the notion of culture, and the development of meaning evoked by symbols – a process known by the name "semiosis". It has been further advocated that people modify their expressions on the basis of "cultural display rules" (Ekman, Friesen 1969). There are culturally prescribed rules learned early in life that dictate the management and modification of the universal expressions depending on social circumstances. Cultural influences on subjective emotional experience. It has been argued that while cultural differences existed, the differences among the emotions were much larger than the differences between cultures; that is, emotions appeared to share a more or less universal experiential base across cultures (see reviews in Wallbott, Scherer 1986, Scherer, Wallbott 1994). McCrae and Costa (1997) assessed the cross-cultural generalizability of the five-factor model for personality traits. The data from studies using six translations of the Revised NEO Personality Inventory

(Costa, McCrae 1992) were compared with the American factor structure. They found that German, Portuguese, Hebrew, Chinese, Korean, and Japanese samples showed similar structures after varimax rotation of five factors. On the basis of this study McCrae and Costa (1997) concluded that personality trait structure among these highly diverse cultures with languages from five distinct language families is universal.

The traits which are considered mystic may generate fear and myths and one may take recourse to magic, rituals and supernatural beliefs as adaptive responses. One may follow beliefs and myths existing in other cultures if none existed in their culture. All myths, beliefs and taboos related to menstruation may not have risen out of mysticism; many of these may have other reasons. Menstrual bleeding at symbolic level has been identified with the blood of game animals in hunter and gathering societies, a generalised avoidance of blood ensuring both a periodic separation of sexual partners necessary for hunting and separation of male hunters as consumers for their own kills to regularise male periodic hunting (Knight 1995). The commonality of behaviour patterns across cultures may also be due to diffusion of cultural elements across boundaries. Behavioural attributes may be "biologically determined" and/or "hardwired" to the category of "learned", "cultural", or "socially constructed". As almost everything human is variable in one respect or another, nearly the whole lot of "human nature" has been subtracted from the "biologically determined" column and moved to the "socially determined" column by the majority of socio-cultural anthropologists. One of the classical cases of such a subtraction was engineered by Mead (1928). The left-over attributes, according to Geertz (1975) are such watered-down universals that are no more fundamental or essential to humans than the behaviours in which humans vary.

Human populations are different and alike in so many different respects that any framework must necessarily be inaccurate because it focuses on a narrow range of issues, disregarding variety and other aspects. Consequently new models have been developed on the basis in depth studies conducted on different populations, and these different models make things complex. There is a number of basic personality and behavioural traits that have significant genetic component like cognitive abilities, intelligence, exceptional abilities or disabilities, suckling the new borns, extended developmental period and altruism (see Sharma 2010 for review). Geneticists have claimed the existence of genes like selfish gene and god gene (see Sharma, 2007). While genes are important, the role of environmental factors can be ignored. Commonality of beliefs may be due to diffusion or may have independent reasons for their occurrence in any population. Cultural responses helped human societies in tiding over environmental stressors, confusions, societal issues, unknown situations and catastrophes. The interactions among genomes, epigenomes and environment play a great role in determining

phenotypes including personality and behavioural traits (see Sharma 2011).

CONCLUSIONS AND SUGGESTIONS

The present study clearly emphasize that there is a need of having an early dialogue with adolescents about their experiences, concerns, misgivings and identity crisis during this transitory phase from childhood to adulthood to alleviate their negative concerns rather than to dismiss experiences related to menarche as a transitory experience. In the absence of such an intervention, adolescents with abnormal psycho-social behaviour may develop any of several disorders including affective disorder, anxiety disorders, or impulse control disorder. It is very necessary to know the cultural setup of the community before undertaking intervening education programmes appropriately as this will help in improving knowledge about menstruation. There is need to educate the society through Media. This in turn could change the practices followed by the families regarding menstruation and would be beneficial for improving their life processes and promoting their quality of life. It is recommended that school authorities should take up at least a weekly session on the issues related to menstruation with the parents. They can invite various experts at times to address the important issues. Teachers should also address some issues in the class and also inform the students about good and reputable sources which they should access for correct information. In any society, a family is an important aspect of the social organisation phenomenon that strongly influences cultural behaviour through a process of socialisation or enculturation of kids and group members. These learned cultural behaviours guide individuals through life situations, events and health practices. The family should create an environment which is friendly for a girl. She should be encouraged to talk about the confusion she had in her mind about adolescent changes. There is need to undertake steps to educate the society through Media.

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