CHAPTER : IV

DISCUSSION AND INTERPRETATION

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The present research was an attempt at exploring and understanding whether the Christian, Muslim and Hindu College girls falling under four different sex typed groups namely Androgynous, Masculine, Feminine and Undifferentiated with high or low levels of life events stress differed from each other with regard to menstrual distress in all the three phases of menstrual cycle. The means and standard deviations for each group were calculated separately and the data were also analysed in terms of 4 x 2 x 3 ANOVA for unequal cells using the classical method followed by tests of least significant differences. The analysis of data revealed the main effects of sex typing and life events stress to be highly significant at .05 level for most of the symptom clusters across all phases of menstrual cycle while the main effect of religion was found to be insignificant at .05 level in all symptom clusters across all phases of menstrual cycle. (Refer to Chapter III for detailed findings.). The results are discussed and interpreted below :

4.1(a) Effect of Sex typing on Menstrual Distress

Phase I

The Anova tables (Table NOs. 13, 43, 58, 88,118) reveal that sex typing is a highly significant source of variance for symptom clusters **Pain, Water Retention, Behaviour Change, Negative Affect and Cotrol** whereas it is insignificant for the symptom clusters **Impaired Concentration, Autonomic Reaction, Arousal** and as indicated in **Anova** tables (Table Nos. 28, 73, 103).

The major findings for the source of variance sex typing in the menstrual phase as revealed by tables of means and SDs (Table No.129) graphs (Graph Nos. 8, 11, 14, 17, 20, 23, 26, 29) and gap tests are as follows :

The greatest significant difference in means of symptom cluster **pain** is between the mean scores of **feminine** (M = 7.04) and **Androgynous** (M = 5.91) sex typed groups. The Feminine girls seem to experience greatest intensity of pain while the Androgynous girls seem to experience the least intensity of pain.

- The greatest significant difference in mean of symptom cluster **water retention** is between **androgynous** (M = 2.12) and **undifferentiated** (M = 2.60) sex typed groups. The Androgynous girls experience lowest water retention while the undifferentiated girls experience highest water retention.

- The greatest significant difference in means of symptom cluster **behaviour change** is between the **androgynous** (M = 5.30) and **feminine** (M = 6.03) sex typed groups. The Feminine girls are highest on Behaviour change while the Androgynous girls are lowest on behaviour change.

- The greatest significant difference in means for symptom cluster **negative affect** is between the **masculine** (M = 4.80) and **feminine** (M = 6.04) sex typed groups. The Feminine girls are highest on Negative Affect while the Masculine girls are lowest on Negative Affect.

- The symptom cluster of **control** has very low scores which denote **no experience** of the

symptom at all. The above mentioned findings clearly indicate that in all the symptom clusters where sex typing is a significant source of variance it is the **feminine** sex typed group which experiences greatest menstrual distress and **Androgynous** sex typed group which experiences least of menstrual distress in the menstruasl phase.

The results indicate the women with more traditional attitudes towards the role of women tended toreport more menstrual distress than those with liberal views. This has been proved in the past byBrattesani et.al. (1878), Paulson (1961), Psychologically, menstrual distress seems to be related to the manner in which women accept their menstrual functioning. Menninger (1973) explained this phenomenon in terms of rejection of femininity and conflict in women in regard to their femininity experience greater distress. As he expresses : "The envy of the male cannot be repressed and serves to direct her hostility in two directions. She resents the more favoured and envied males, while secretly trying to emulate them and at the same time she hates and would deny her own femaleness(1972 p.84). Feminine sex typed girls have more traditional beliefs and attitudes about menstruation. They are →*

* Turn to page 377.

responsibility, totally confining themselves to bed, keeping away from college or work which results in absolute change of behaviour. Young college girls exhibit more behaviour change due to many other practical difficulties such as sanitary management during long college hours. The Feminine girls take this practical difficulty more seriously than Androgynous because they are resourceful, less enterprising, less adventurous, can think of few alternatives and hence, cannot transact well with their environment which the androgynous girls can do easily being high on resourcefulness, have more alternatives, are more enterprising and courageous. The greater intensity for mood symptoms i.e. Negative Affect in Feminine girls can be explained as an additive reaction due to their rejection of their femininity of which menstruation is an inherent function along with an anticipation of isolation anxiety caused due to staying away from college classes and problems of sanitary management.

4.1(b) Effect of sex typing on Menstrual Distress Phase II

The **Anova** tables (Table Nos.18,33,48,93, 108) reveal that sex typing is a highly significant source of variance for syptom clusters **pain impaired**

concentration, water retention, negative affect and arousal while it is insignificant for **behaviour change autonomatic rection and control** as indicated in **Anova** table (Table Nos. 63, 78, 123).

The major findings for the source of variance sex typing in the premenstrual phase as revealed by tables of means and SDs (Table No.130) graphs (Graph Nos. 8,11,14,17,20,23,26,29) and gap tests are as follows :

1. The greatest significant difference in means of symptom cluster **pain** is between the scores of **masculine** (M = 3.64) and **undifferentiated** (M = 2.83) sex typed groups. The masculine girls experience greatest intensity of pain while the undifferentiated girls experience least pain.

2. The greatest significant mean difference for the cluster of **impaired concentration** is between **masculine** (M = 1.39) and **feminine** (M = .97) sex typed groups. The Masculine girls are highest on impaired concentration while the feminine girls are lowest.

3. The greatest significant mean difference for the cluster **water retention** is between

masculine (M = 2.53) and **androgynous** (M = 1.92) sex typed groups. The Masculine girls are highest on water retention while the Androgynous girls are lowest.

4. The greatest significant mean difference for the cluster **negative affect** is between **masculine** (M = 4.28) and **undifferentiated** (M = 3.15) sex typed groups. The Masculine girls experience greatest Negative Affect while the undifferentiated girls experience least Negative Affect.

The above findings clearly indicate that in all the symptom clusters where sex typing is a significant source of variance, it is the Masculine sex typed group which shows maximum of distress. While in the menstrual phase it was the Feminine sex typed group which experienced maximum distressed in the premenstrual phase it is the Masculine sex typed group which experienced maximum distress. This can be explained in terms of feelings of resentment prior to the onset of the menstrual cycle. The girls who acquire a masculine sex role attach greater importance to their chosen roles. Hence, prior to the onset of menstruation they are overcome with feelings of resentment for the menstrual cycle which might prove to be debilitating in their day to day

activities. This makes them restless anxious and moody which is the reason why they score high on Impaired Concentration and Negative Affect too. But being high on masculinity, these girls are high on instrumentality, courageous, adventurous and are better disposed for adaptation. So, it is easier for them to combat with these feelings of resentment, anxiety restlessness and mood fluctuation by the time their menstruation begins. Therefore, the distress these masculine girls experience in the premenstrual stage decreases in the menstrual phase. During the menstrual phase while the feminine girls succumb to the distress, the masculine girls with a determination of not to be affected and obstructed by the distress, take it in their stride, completely ignoring the physiological symptoms, if any, accompanying it, dealing practically with problems of sanitary management.

4.1(c) Effect of sex typing on Menstrual Distress Phase III

The tables of means and SDs reveal that the scores of all clusters of symptoms are very low, lower than 1, which denotes no experience of the symptom in the intermenstrum phase, which indicates that the college girls do not report any, menstrual distress even in mild form during the intermenstrum

phase but whatever minimum distress they report is a function of sex typing. The **Anova** tables (Table Nos.38, 68, 83, 98) reveal that sex typing is a significant source of variance for symptom clusters **impaired concentration, behaviour change, negative autonomic and affect, reaction, arousal & control** whereas it is insignificant for the symptom clusters **pain** and **water retention** as indicated in the Anova tables (Table NOs.22. 53).

The tables of means and SDs (Table NO.131) graphs (Graph Nos. 8, 11, 14,17,20,23,26,29) and gap tests reveal the following major finding :

The greatest significant mean difference for all the clusters is between **masculine and feminine** sex typed groups where masculine girls experience greater distress and Feminine girls experience least distress. The only possible explanation for masculine girls to experience relatively greater distress though the severity of symptoms reported is negligible is role conflict when the masculine girls have to return back into their chosen roles after experiencing an event, which is an integral part of being a female and this they strongly resent.

The significant effect of sex typing on menstrual distress bring to light an important finding that early socialization and child rearing practices in Indian households do nurture various sex roles for a female child and these in turn affect her intensity and pattern of menstrual cycle. The sample distribution table (Table No.3) and Pie Graph (Graph No.3) reveal that the major proportion of the sample constitutes of Androgynous and undifferentiated girls. It is interesting to note that these two extremes of the sex role typology are found at large among college girls. The longest proportion of Androgynous girls in the sample can be explained as a result of the socio-economic class in which the major proportion of the sample falls. It is evident from Diagram No. that majority of the girls belong to the 2000 - 3000 and above 3000 income group. In these income groups families of Gujarat the privileges given to a female child are similar to those given to a male child. A female child is free to choose here own profession drive her own vehicle and play and sport of her own choice even sports such as Cricket, Billiards, Gliding, Kite flying which are supposed to be sports for the males. At the same time she is also expected to observe certain restrictions and learn certain skills which are associated with femininity such as cooking, house-keeping chores maintaining regular

hours of going out & coming back, entertaining guests, soft spokenness, nurturance. This combination of instrumental and expressive traits results in an Androgynous sex type which constitutes 35% of the sample.

But, the Pie Graph (Graph No.3) also reveals that the undifferentiated sex type also constitutes an equally large proportion of the sample (34%) as Androgynous. This dichotomy of two extreme sex types predominating the sample is unusual. The prevalance of a large proportion of undifferentiated sex type in the sample can be explained in terms of age group studied. The age of 19-20 years studied in this research is an age when the girl undergoes a transition phase wherein some girls perceive and follow the role prescriptions while some girls are confused in choosing from the traditional role prescriptions and the new achieved role prescriptions. As a result of this conflict at this transition phase the young college girls of 19-22 years have yet to acquire masculine or feminine or both traits and being low on both the masculine and feminine continumm, they are classified as undifferentiated. Hence, there is a large proportion of girls with undifferentiated sex type in the sample.

4.2 Effect of Life Events Stress on Menstrual Distress : Phase I, II and III.

All the Anova tables, means and SDs tables (Table Nos.132, 133,134( ) reveal that the main effect of stress is consistently, highly significant in all phase of the menstrual cycle for all symptoms. The gap tests reveal that greater menstrual distress is found among girls with high level of life events stress than those with a low level of life events stress.

A high stress score on the life events scale means accumulating or clustering of many stressful life event in just a period of one year which can result in life crisis as termed by Holmes & Rahe (1967). According to them this can tax the individuals adaptive and coping mechanisms and efforts and lower the bodily resistence resulting in physiological distress. The response to each life even stress takes place in four stages.

a) Alarm : when the stressfull life event is identified raised anxiety or alarm.

b) Appraisal : The stressful event is appraised as to whether it leads to threat loss frustration etc.

c) Search for coping strategy :When the individual in distress tries to decide how to cope with it, minimise it or avoid it.

d) Stress Response : A prolonged alarm an inadequate and prolonged coping reaction to the stressful life event may result in -

i) Disorganisation

ii) Exhaustion

Disorganisation leads to feelings of panic disintegration primitivization of ego defenses and physiological responses.

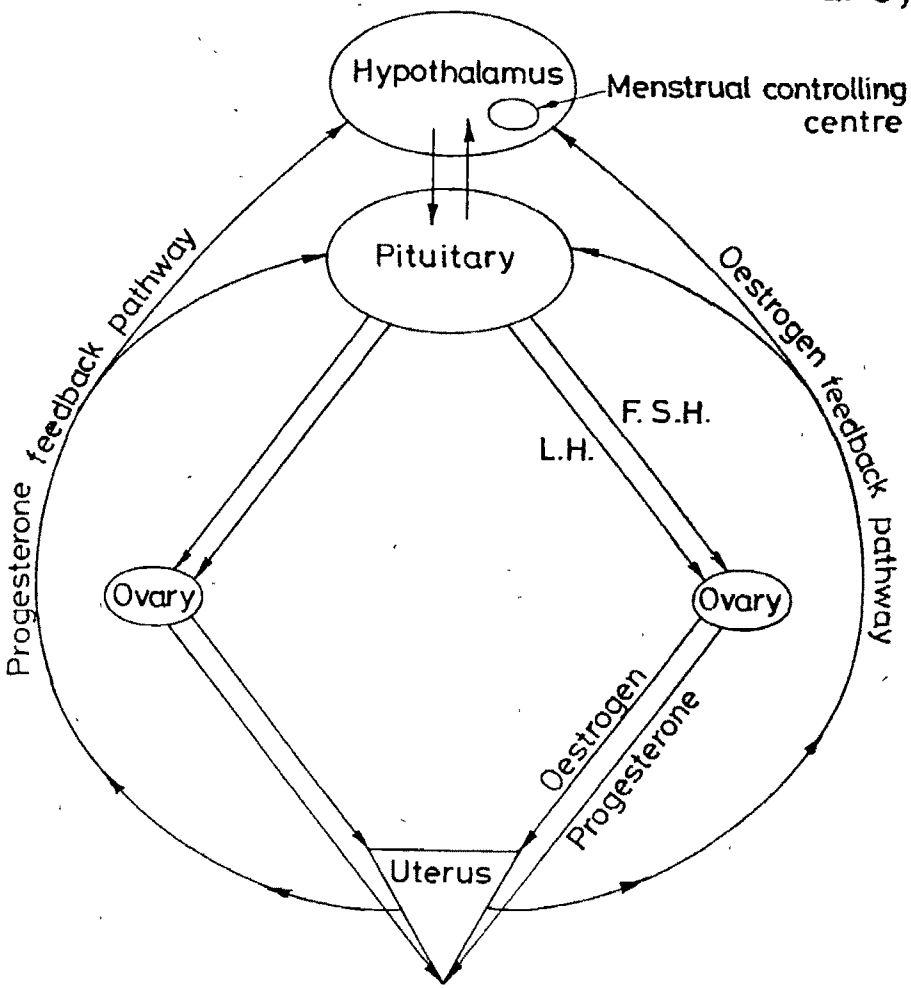
Exhaustion leads to a prolonged search for new coping strategy which results in feelings of depression hopelessness, inability to concentrate physical inertia and irregularities of autonomic and endocrine functions. Menstrual distress is one such pathological endocrine reaction caused due to exhaustion and disorganisation during coping with stressful life events. Hence, higher the stress level greater menstrual distress.

The essential factor is the new demand on the unusual adaptive patterns of the person. This research has not considered the psychological meaning or social desirability of life events of college going girls but only their disruptive impact. Underlying this approach is the assumption that certain events require more intense and prolonged coping efforts than others. The greater strain on the coping mechanisms the more likely that an inadequate or in appropriate response will be utilised them eliciting idiosyncratic or pathological physiological reaction.

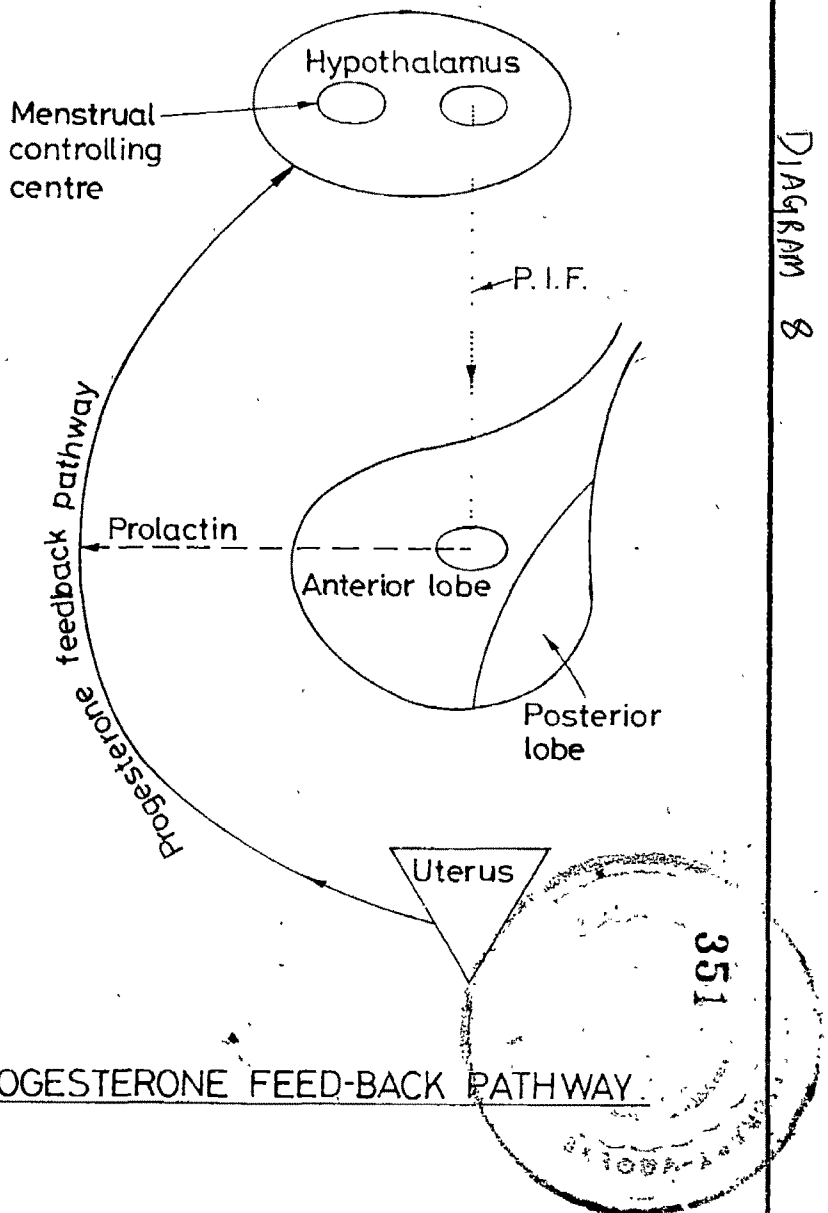
According to Dalton (1977) the concordanee between life events stress and menstrual distress which tends to affect the menstrual pattern as well as its intensity, suggests that a menstrual controlling centre, in the hypothalamus, is implicated in the aetiology of menstrual distress. Dalton's(1977) writings support this hypotheses. This hypotheses as demonstrated in Diagram No.8 the releasing factors stimulate the pituitary gland from the hypothalarms, which as a result releases follide stimulating hormone (FSH) and luteinizing hormone (LH) to act on the ovary.

The ovary secrets estrogen in varying amounts through out the cycle but progesterone is secreted only during the luteal phase. At each stage of this pathway is depicted in Diagram No.8, there is a feedback mechanism the most important one as regards to present discussion, which passes from the uterus to the hypothalamus and pituitary, the progesterone feedback pathway. Dalton further suggested a fault in this feedback pathway may cause menstrual distress. In the anterior lobe of the pituitary, prolaction is secreted and this acts as a controlling mechanism on the feedback pathways. In the hypothalamus there is a centre responsible for the secretion of prolactin inhibiting factor (PIF) which inhibits the continual release of prolactin thus avoiding disorder but in times of stress the hypothalamic levels of PIF are deplected which then fails to inhibit prolaction secretion causing disorder in the progesterone feedback pathway and this leads to lowering of the level of progesterone in the phase causing menstrual distress.

It is due to this that these days administration of progesterone is a popular remedy for menstrual distress as an overdose of progesterone reduces prolactin. Hence, it can be concluded that high stress level leads to menstrual distr



HORMONAL PATHWAYS OF MENSTRUATION.



PROGESTERONE FEED-BACK PATHWAY.

(DALTON 1977)

DIAGRAM 8

which is further supported by Sommers' study on effect of stress on menstrual distress (1978) and the relationship between stress and the progesterone level leading to menstrual distress have also been studied by Ladisich et.al.(1978). Marinars et.al. (1976) also prove this interdependence between stress and menstrual distress.

4.3(a) Effect of Religion on Menstrual Distress Phase I, II and III.

The Anova tables (Table Nos.43, 48,53) indicate that religion is significant source of variance for symptom clusters **water retention** for all phases and **negative affect** for phase I (Table NO.88) while the symptom clusters of **pain impaired concentration behaviour change, autonomic reaction, arousal and control** are insignificant for all phases as indicated in Anova tables (Table Nos.12,18,22,28,33, 38, 58, 63, 68, 73, 78, 83, 103, 108, 113,118, 123, 128).

The tables of means & SDs (Table Nos.135, 136, 137) graphs (Graph Nos. 10, 13, 16, 19, 22, 25, 28,31) and gap tests reveal the following major findings :

1. The greatest significant mean difference for the cluster **water retention** is between **christians** (M = 2.65) and **hindus** (M = 2.18). The Christians experience maximum distress while the Hindus experience minimum distress for all three phases.

2. The greatest significant mean difference for the cluster **negative affect** is between **hindus** (M = 5.38) and **muslims** (M = 4.82). The Hindu girls experience maximum distress while the Muslim girls experience minimum distress for the menstrual phase only.

More or less in all cultures there are certain life styles, which are circumscribed for various phases and stages of life. Every culture has prescribed norms of conduct which encompasses everything from food intake to mental health. The data reveals that religion is not a highly significant source of variance on menstrual distress.

The higher intensity of symptom cluster water retention which being a somatic symptom cluster may be explained as a result of certain cultural patterns especially nutritional factor and diet intake. The Christian girls who are high on water

retention consume a non-vegetarian diet frequently and do not observe anyparticular diet control during menstruation which can aggravate sodium, protein and salt content in the body leading to imbalance in the metabolism and thereby causing high degree of water retention whereas the Hindu girls normally consume a vegetarian balanced diet which does not aggravate sodium, salt & protein content in the body.

As per Hindu norms and cultural beliefs abstain from particular food preparations which aggravate heat and avoid sour food preparations such as curds, sour juices, pickles, papayas, mangoes, etc. because in Hindu families it is a firm age old belief that consumption of hot and sour food can lead to excessive bleeding and swelling of legs, feet, abdomen and breasts. This cultural belief which Hindu girls absorb from earlyyear can be an indirect reason for their experiencing minimum water retention.

In the menstrual phase the Negative Affect symptom cluster is maximum for Hindu girls and minimum for muslim girls which can again be explained as a result of cultural beliefs.

Cultural beliefs vary from region to region but since the sample was drawn from Gujarat, the researcher tried to identify some of the common facts as well as myths related to the menstrual cycle prevalent in the Hindu families of Gujarat. Some of these are that a girl is restricted from participation in some of the day to day activities suchas cooking, praying, filling drinking water, attending weddings or any religious ceremony, visiting friends, neighbours or relaties. There is a tone of secrecy, shame and guilt associated with the menstrual cycle which is not so in the muslim culture. These practices are not congruent with the prevalent life pattern of college girls, which demand uninterrupted more flexible participation in varied activities. Hence the practice of staying isolated during menstruation may often lead to variant psychological reactions such as tension, irritability, anxiety and restlessness which characterize the symptom cluster Negative Affect.

The results reveal that religion is an insignificant source of variance for almost all the symptom clusters viz. Pain, Water retention, Impaired Concentration, Behaviour Change, Autonomic reaction, Negative Affect, Arousal and Control for all three phases. This can be due to the

contemporary social setting demands which seem to have deemphasized the impact of religious beliefs about menstruation, the current social functioning does not demand religion specific behaviour. Moreover, the Christians and the Muslims, being minority classes after living in a common geographical area alongwith Hindus, have intermingled with Hindus so well that the cultural disparities are reduced which brings about cultural confluence, regional confluence, similarity in ethos, norms and hence they do not differ in their beliefs, attitudes and behaviour regarding menstruation.

4.4 Effect of Sex typing and Events Stress on Menstrual Distress : Phase I, II and III

The Anova tables (Table Nos. 13, 43, 88) in Chapter III reveal that in the Menstrual Phase the interaction effect of sex typing and stress level is significant for the symptom clusters **pain, water retention and negative affect.**

In the Premenstrual phase as evident from the **Anova** tables (Table Nos.18,33,93) the interaction effect of sex typing and stress level is significant for the symptom clusters **pain, impaired concentration and negative affect.**

The Anova tables (Table Nos.23, 38, 53, 98) for the Intermenstrum Phase reveals that the interaction effect of sex typing and stress level is significant for the ymptom clusters **pain, impaired concentration, water retention and negative affect.**

As already discussed in Chapter II the gap test was done to find out the direction of the source of significance and these gap test revealed that the source of significance in the interaction effect of sex typing and stress level for the menstrual phase, was due to the significant mean difference between Feminine sex typed girls with high stress level and Androgynous sex typed girls with low stress level. Feminine girls with high stress level experienced maximum menstrual distress while the Androgynous girls with low stress level experienced minimum menstrual distress.

The possible explanation for the Feminine sex typed girls with high stress level experiencing maximum menstrual distress during the menstrual phase could be that being low on adaptability and instrumentality, feminine girls cannot cope with this additional demand of menstruation placed on them while they are trying to cope with the other stressful life events they experience. Their coping

reactions to the stressful life events hence are either inadequate or prolonged which results in feelings of depression, hopelessness, irritability, inability to concentrate and irregularities of endocrine functions. This explains the significant interaction effect of sex typing and stress level for the symptom clusters Pain, Impaired, Concentration, Water Retention and Negative Affect which are characterized by the above mentioned reactions.

In the Premenstrual and Intermenstrum Phase, the gap tests revealed that the sources of significance in the interaction effect of sex typing and stress leel were due to the significant mean difference between Masculine sex typed girls with high stress level and Androgynous sex typed girls with low stress level. Masculine girls with high stress level experience maximum menstrual distress while Androgynous girls with low stress experience minimum menstrual distress.

The possible explanation for this could be that Masculine Sex typed girls having attached greater importance to their chosen or achieved masculine role than to their ascribed role as a

female resent the onset of menstruation which is associated with femininity. Owing to their ambivalent attitude towards their ascribed role as a female, they seem to introject the negative component of the ambivalence in the form of negative experience namely menstrual distress. It is this ambivalent attitude which leads to infliction of masochistic pain on self resulting in menstrual distress during the pre menstrual and intermenstrum phases.

4.5 Effect of sex typing and Religion on Menstrual Distress : Phase : I, II, III.

The Anova tables (Table 28, 73) in Chapter III reveal that in the Menstrual Phae the interaction effect of sex typing and Religion is significant for the symptom clusters **impaired concentration and autonomic reaction.**

In the Premenstrual phase as evident from Anova table (Table NO.108) the interaction effect of sex typing and religion is significant only for cluster Arousal.

The Anova tables (Table Nos.23, 53, 98) reveal that the interaction effect of sex typing and religion is significant for the Intermenstrum Phase for symptom clusters **pain, water retention, and negative affect.**

The gap tests revealed that the source of significance in the interaction effect of sex typing and religion for the menstrual & premenstrual phase was due to the significant mean difference between Christian Feminine sex typed girls and Christian Androgynous sex typed girls. Christian girls with androgynous sex type experienced minimum menstrual distress. Here it is apparant that the source of significant variance was the variable sex typing and not the variable religion. Sex typing as a main effect was also found to be highly significant consistently for all symptom clusters in all phases. The direction of the results reveal that christian girls experience greater distress than muslim or Hindu girls for menstrual and pre menstrual phase. This difference can be explained as a result of the attitudes towards menstruation as fostered by religion. Christianity is a religion which fosters very rigid and orthodox attitude towards menstruation in girls. The Christian girls do not attend the Church mass during menstruation because menstruation is looked upon as a curse or an unholy event. It seems that this negative attitude towards menstruation leads to greater menstrual distress in Christian girls compared to Hindu and Muslim girls, more so in the premenstrual phase as they become

apprehensive and distressed before the onset of menstruation.

In the intermenstrum phase the gap tests revealed that the source of significance in interaction effect of sex typing and religion was due to the significant mean difference between Muslim Masculine sex typed girls & Muslim Feminine sex typed girls. This once again apparantly indicates that the source of significant variance is the variable sex typing and not the variable religion. The direction of the results reveal that Muslim Masculine girls experience greater distress in the intermenstrum phase than Christian or Hindu girls.

The possible explanation for this could be that Islamism as a religion fosters introversion and femininity in girls though practice such as the **purdah** system. It seems that Islamism fosters the feminine sex type in girls. But the practices are not congruent with the current life style of college girls which demands extroversion, instrumentality and toughness. Thus, muslim girls who go to college acquire traits of instrumentality, extroversion and a masculine sex type to adapt to the demands of today's life style. Thus masculine sex typed muslim girls face a conflict in coping with various demands

of life due to the difference in the home environment and the external environment. This incongruence between the cultural demands at home and the demands outside home may be a cause of greater menstrual distress in muslim girls during the intermenstrum pahse. This can also explain the minimum distress experienced by feminine sex typed muslim girls who may not be facing any conflict between their home and external environment & coping demand.

4.6 Effect of stress level and Religion on Menstrual Distress : Phase I, II, III.

The Anova tables (Table Nos.13, 28, 43, 58, 88) in Chapter III reveal that in the Menstrual Phase the interaction effect of stress level and religion is significant for clusters **pain, impaired concentration, water retention, behaviour change and negative affect.**

In the Premenstrual Phase all the Anova, tables reveal that the interaction effect of stress level and religion is totally insignificant for all symptom clusters.

The Anova table (Table No.53) reveals that in the intermenstrum phase, the interaction effect of

stress level and religion is significant for symptom cluster **water retention** only.

The gap tests revealed that in all phases the source of significance in the interaction effect of stresss level and religion was due to the significant mean difference between Christian girls with high stress level and Muslim girls with low stress level.

Christian girls with high stress level experienced maximum menstrual distress and Muslim girls with low stress level experienced minimum menstrual distress. The source of significant variance was the variable stress level and not religion in this interaction effect as stress level was alsc a highly significant main effect for all symptom clusters in all phases.

The possible explanation for christian girls with high stress level experiencing greater distress than muslim girls with low stress level could be that christian girls who have to cope with many life event stresses which place a lot of demand upon them create high stress in them which is elicited during their menstrual cycle. Muslim girls who have low stress do not experience distress during their menstrual cycle.

4.7 Effect of Sex typing, life events stress and religion on Menstrual Distress.

All the Anova tables for all the symptom clusters for all three phases reveal that the interaction effect of sex tying, life events stress and religion is highly insignificant. It seems that though the variables of sex typing and stress level may be a source of significant variance as a main effect all the three variables in interaction are insignificant source of variance. This could also be due to certain inherent limitations of the Anova model with regard to the interaction effects and its interpretations.

4.8 Menstrual Distress - Clusters & Phases

Tables [redacted], [redacted], and [redacted] graphs show the sample distribution for all symptom clusters and phases in terms of scores on MMDQ which have been divided into equal class intervals denoting mild, moderate, strong and severe intensity of menstrual distress. These tables reveal that a large number of the total selected sample of college girls fall in the first score interval (i.e. 0-6) which indicates that though all the girls experience menstrual distress at some phase or the other, in some symptom cluster or other, the intensity of the menstrual distress

symptoms in all three phases fell under the mild or moderate categories. Thus, it could be said that a high proportion of women in the sample report mild to moderate menstrual distress.

These tables also indicate that among, the girls reporting strong and severe menstrual distress is relatively high in the menstrual phase & lowest in the intermenstrum phase. These tables further evident that in the menstrual phase & lowest in the intermenstrum phase. These tables further evident that in the menstrual phase the proportion of girls reporting strong and severe distress is relatively high for the symptom clusters pain, impaired concentration and behaviour change and in the premenstrual phase the proportion of girls reporting strong and severe distress is relatively high for the symptom clusters Water Retention and negative Affect.

The Table 138 of means and SD for symptom clusters for all three phases indicates that on an average girls experienced, few, if any, symptoms during the Intermenstrum phase in a very low intensity. This observation is derived from the fact that in the intermenstrum phase the means for all the symptom clusters for all three phases for all

groups of girls are close to no experience at all as denoted by the very low scores, lower to 1, in this phase. e.g. Since the pain scale is composed of six items, the scale score can vary from 0 if all items are rated das no experience of symptom to 24 if all items are rated present, severe. The mean score for the pain scale in the intermenstrum phase is .71 which being nearer to 0 denotes no experience of the symptom. The same is true for all symptom clusters in the intermenstrum phase for all religious sex typed and stress level groups as evident from other mean and SD tables given.

A similar trend in the pattern and intensity of menstrual distress has been reported by woods, Most and Dery (1982) and Moos (1985) in their study of menstrual distress using MMDQ Form C. It can be concluded that this trend is cross culturally consistent on the basis of several researches with women of Australia, Canada, Great Britain, Ireland (Clare 1979; Damas Mora et.al. 1980, Ladisich, 1978, O'Higgins 1983; Sampson 1979; Sampson and Jenner, 1977; Slade and Jenner, 1980) United States (Rouse, 1978), Spain, Egypt, Nigeria, Mexico, Israel, Africa and Latin America (Moos, 1985). thus it could be said that there is a relatively invariant identifiable biological pattern of menstrual distress which is species specific.

Table 132 further reveals that the mean scores for symptom clusters Autonomic Reaction, Arousal and Control are also nearer to 0 for all three phases which indicates that these symptoms are **not experienced** by the girls. One of the reasons for this observed trend of experiencing MD in low intensity and no experience of certain symptoms could be the age of the girls included in the sample for this study which was 19 - 22 years. These clusters are characterized by complicated symptoms such as nausea, dizziness, bursts of energy palpitation, etc. which are experienced by women in the menstrual and premenstrual phase but at an older age or at an age when they are nearing menopause. These symptoms are seldom observed in younger girls (19-22 years) who have just crossed initial menarche period. Katharina Dalton's (1977) observations which support this notion are, that, somatic symptoms are common during initial years of menstruation whereas symptoms tapping mood and behavioural changes are common for women over 30. Thus, according to her menstrual distress is more troublesome after the age of 30.

Moos (1985) too formulates that **Autonomic Reaction** is not frequently reported, **Arousal** taps certain unique symptoms which are not common & **control** is composed of items that are endorsed infrequently.

4.9 Limitations of the study and suggestions for future research

Research is a learning process wherein the researcher by repeated deliberations gains insight into various conceptual and methodological issues, relating to the research inquiries. During the present research too, the researcher came upon certain issues which require further explanations. These limitations of the present study, which could be overcome through future research, have been expressed below :

1. It was felt that in order to establish that certain cyclic changes in behavious are caused as a result of menstruation, it is essential to establish a base line to differentiate between changes in behaviour of menstruating and non menstruating women.

2. A study on male cycle as a concommittant variable or using males as a control group in studies of female menstrual cycles might yield some new data on rythmic behaviour of some unsuspected generality.

could it be that men experience physiological cycle that create as much variability and vulnerability as does the female menstrual cycle but it might be possible that the issue of male cycles have been ignored by the culture and hence not magnified in their effects.

3. The sample in the present study was confined to a typically urban university population comprising mainly of girls from middle and upper socio economic classes.

A comparative study taking into consideration girls from rural classes in studies of menstruation would also yield good comparative data.

4. In order to obtain further comparative data on effect of religion on menstrual distress, various sub sects of religious groups could have been included in the sample. For example, the Christians in the sample could have been drawn from various sects such as Catholics, Protestants, Jews.

A study of the religiosity of women meaning, that to what extent is a woman religious in

views, thoughts, actions and attitudes, irrespective of the religion she belongs to and how it affects her attitudes towards menstruation and her pattern, intensity and experience of the menstrual distress.

5. It was also felt that age parity plays an important role in the intensity of menstrual distress as the results of the present study indicated that girls in the age group of 19 - 22 years experienced mild to moderate distress.

A comparative study of the menstrual cycles and patterns of women from different age groups would also yield good comparative data.

6. A comparative developmental approach to this problem needs to be adopted wherein both longitudinal and cross sectional studies should be carried out on menstrual distress, to obtain descriptive data on the exact pattern of their menstrual distress and the socio cultural beliefs attached to menstruation.

7. It has been seen in several researches as well as common day to day experiences that mothers and daughters hold similar beliefs and report comparable menstrual distress symptoms. It is the mother who prepares her daughter for menstruation and thus transmits her own beliefs and attitudes on menstruation to her daughter.

A comparative study on Menstrual Distress of mothers and their daughters could prove enlightening.

8. while analyzing the data, it was felt that the Anova model used in the analyses needs to be supplemented by some other analyses to assess separate causal significance of interacting variables. The Linear model underlying the Anova provides a local analysis only because, it gives results that depend on the actual distribution of biological and environmental factors in particular population samples. A recent survey of 191 research articles employing Anova designs involving interaction found only 1% of the articles interpreting interactions in an unequuivocally correct

manner (Rosnow & Rosenthal, 1989). Significant interactions are interpreted by examining the differences among original cell means, that is, simple effects. The origin of the problem, as Dawes (1969) suggested, may be a consequence of 'Lack of perfect correspondence between the meaning of **interaction** in Anova model and its meaning in other discourse'. However, the error of looking only to uncorrected cell means for the pattern of the statistical interaction is deeply rooted. As suggested by Rosenow & Rosenthal (1984) all investigators should look at the **corrected** cell means while speaking of interactions. According to them interaction effect is basically defined in terms of the residuals, or left over effect, after the lower order effects have been removed from the original cell means. This is true even though the mean square for interaction in the Anova can be viewed as variability of the differences between the (uncorrected) cell means for the various rows of the table of overall effects. That is, the mean square for interaction will have a nonzero value if the difference between any two cell means in any row differs from the corresponding difference in any other row. Nonetheless, in focussing attention only on original cell means, one is essentially

ignoring the form and degree of relationship of the interaction itself. We need to remove the lower order effects in order to separate the effects of the interaction from the main effects. According to Rosenow & Rosenthal the problem is compounded because virtually all data analytic software packages such as SPSS, SAS, BMDP are poorly served in matter of interactions. Almost no programs provide tabular output giving the residuals defining interaction. The only exception to that, as suggested by Rosnow & Rosenthal (1989) is a little known package called Data Text developed by Armor & Couch (1972) in consultation with leading statisticians including william Cochran and Donald Ruben.

The researcher hopes that in the future extension of this research, it would be possible for her to use this package, that may bring out the information and interpretations in an unequivocally correct manner.

9. In view of the prevalance of culturally transmitted attitudes about menstruation, it is important to recognize verbal and

nonverbal behavioural patterns of females during menstruation. it is important to study as to what the subject says about menstruation or what she does nonverbally during her cycle. A study on attitudes of the menstruating woman towards menstruation would show the influence of social and psychological factors influencing menstrual cycle.

10. Majority of the studies on menstrual distress take menstrual distress as an independent variable in relation to other dependent variables such as depression, competency, anxiety, efficiency etc.

11. Another significant dimension which can be studied is the diet habits and nutritional balance in relation to menstrual distress to find out whether menstrual distress is caused due to purely physiological or biological reasons.

12. A comparative study between women who use oral contraceptives and those who do not would also prove to be beneficial for therapeutic reasons.

13. A study on the personality typology of a woman such as that given by Sheldon or Jung, and her menstrual distress could be an interesting psychological study.

14. A study on self disclosure and menstrual distress could also prove to be helpful in determining whether self disclosure, if greater can act as a moderator on menstrual distress.

All these studies could be carried out with a comparative cross cultural and cross regional perspective in Indian context.

It seems that the future trend in research on menstrual distress seems to suggest a Biopsychosocial perspective through which it would be possible to understand the diversity of factors involved in menstrual distress. Such a perspective would open up new modalities of health care and delivery system. Such a perspective could also prove beneficial for government public health and sanitation departments, educational institutions, voluntary organizations and institutions which are developmental and change agents of social intervention. They can intervene in our social

system and educate the women of all classes and create an awareness in them regarding the process pattern, intensity, hygiene care, cycles, phases, symptoms , aetiology, therapeautic measures and sanitary management with regard to menstruation and menstrual distress.

also low on self-disclosure and hence cannot seek supports from self and environment to cope with stressful events. Hence, they are more vulnerable to menstrual distress. Moreover, feminine girls seem to be low on adaptiveness, instrumentality and hence, cannot take menstruation as a routine event but as a debilitating 'messy' event which brings distress every month. This can be explained as a consequence of myths, beliefs and practices embedded in the female adolescent during her early menstrual experiences.

As per traditional beliefs held in Indian culture, the girl is to remain in isolation during the 4 days of the cycle when she is not allowed to go to worship, touch anyone in the house, touch the utensils, bed, furniture and other articles in the house. She is to abstain from doing any household chores during the menstrual cycle. This practice though not followed these days as a regular custom in many Indian homes has become such an integral part of the feminine role that even today girls with a feminine sex type succumb totally to the discomfort of menstrual cycle and plunge into a phase of non-action, non-participation and escape from any

TABLE 129

Mean And SD Table For Four Sex Typed Groups
For Eight Symptom Clusters in Menstrual Phase

luster	Sex Role			
	Androgynous	Masculine	Feminine	Undifferen-tiated
n=	689	330	326	649
ain				
Mean	5.91	6.65	7.04	6.32
SD	4.68	4.55	5.17	4.34
mpaired Concentration				
Mean	2.26	2.43	2.73	2.73
SD	3.28	3.36	3.61	3.68
ater Retention				
Mean	2.12	2.52	2.59	2.60
SD	2.43	2.90	2.77	2.49
ehavioural Changes				
Mean	5.30	5.90	6.03	5.95
SD	4.30	4.77	4.76	4.58
utonomic Reaction				
Mean	1.35	1.38	1.27	1.39
SD	2.34	2.26	1.84	2.02
egative Affect				
Mean	5.27	4.80	6.04	4.90
SD	5.60	5.58	6.16	4.65
rousal				
Mean	1.33	1.68	1.64	1.51
SD	2.16	2.95	2.87	2.61
ontrol				
Mean	.78	1.11	.94	.76
SD	1.96	2.80	1.74	1.86

TABLE 130

Mean And SD Table For Four Sex Typed Groups
For Eight Symptom Clusters in Pre Menstrual Phase

Cluster	Sex Role			
	Androgynous	Masculine	Feminine	Undifferentiated
n=	689	330	326	649
Pain				
Mean	3.13	3.64	3.34	2.83
SD	4.11	4.30	3.87	3.60
Impaired Concentration				
Mean	1.31	1.39	.97	1.10
SD	3.11	2.41	1.98	2.37
Water Retention				
Mean	1.92	2.53	2.11	1.99
SD	2.62	3.25	2.66	2.71
Behavioural Changes				
Mean	2.04	2.25	2.09	2.24
SD	3.25	3.24	3.31	3.41
Autonomic Reaction				
Mean	.85	.99	.79	.72
SD	1.79	2.28	1.42	1.68
Negative Affect				
Mean	3.92	4.28	3.79	3.15
SD	5.70	6.02	5.21	4.52
Arousal				
Mean	.63	.86	.77	.44
SD	1.80	2.34	2.04	1.26
Control				
Mean	.53	.56	.29	.47
SD	1.94	2.25	.77	1.57

TABLE 131

Mean And SD Table For Four Sex Typed Groups
For Eight Symptom Clusters in ~~Pre~~ Inter Menstrual Phase

	Sex Role			
Cluster	Androgynous	Masculine	Feminine	Undifferentiated
n=	689	330	326	649
Pain				
Mean	.64	.87	.60	.77
SD	1.69	2.25	1.50	2.14
Impaired Concentration				
Mean	.46	.67	.25	.48
SD	1.73	2.36	.85	1.62
Water Retention				
Mean	.61	.73	.49	.64
SD	1.39	1.51	1.17	1.36
Behavioural Changes				
Mean	.46	.46	.18	.46
SD	1.56	1.56	.64	1.23
Autonomic Reaction				
Mean	.30	.43	.19	.32
SD	1.05	1.70	.66	1.14
Negative Affect				
Mean	1.02	1.29	.57	1.01
SD	2.71	3.66	1.79	2.81
Arousal				
Mean	.86	1.25	1.00	1.04
SD	2.10	2.45	1.65	1.89
Control				
Mean	.18	.38	.09	.24
SD	.88	1.89	.47	1.15

TABLE 132

Mean And SD Table For Two Stress Level Groups
For Eight Symptom Clusters in Menstrual Phase

Cluster	Stress Level: High Stress Group	Stress Level: Low Stress Group
n=	1086	908
Pain		
Mean	8.02	4.35
SD	4.94	3.32
Impaired Concentration		
Mean	3.68	1.13
SD	4.04	1.90
Water Retention		
Mean	3.27	1.40
SD	2.93	1.63
Behavioural Changes		
Mean	7.48	3.64
SD	4.74	3.27
Autonomic Reaction		
Mean	1.93	.67
SD	2.49	1.35
Negative Affect		
Mean	7.18	2.83
SD	6.09	3.13
Arousal		
Mean	2.06	.83
SD	2.99	1.75
Control		
Mean	1.29	.32
SD	2.58	.95

TABLE 133

Mean And SD Table For Two Stress Level Groups
For Eight Symptom Clusters in Pre Menstrual Phase

Cluster	Stress Level: High Stress Group	Stress Level: Low Stress Group
n=	1086	908
Pain		
Mean	4.41	1.65
SD	4.48	2.48
Impaired Concentration		
Mean	1.89	.37
SD	3.25	1.02
Water Retention		
Mean	3.00	.97
SD	3.24	1.44
Behavioural Changes		
Mean	3.07	1.04
SD	3.83	2.07
Autonomic Reaction		
Mean	1.23	.34
SD	2.13	1.10
Negative Affect		
Mean	5.50	1.56
SD	6.29	2.59
Arousal		
Mean	.96	.23
SD	2.29	.75
Control		
Mean	.75	.16
SD	2.26	.64

TABLE 134

Mean And SD Table For Two Stress Level Groups
For Eight Symptom Clusters in Pre Inter Menstrual Phase

Cluster	Stress Level: High Stress Group	Stress Level: Low Stress Group
n=	1086	908
Pain		
Mean	1.03	.34
SD	2.40	.98
Impaired Concentration		
Mean	.72	.16
SD	2.20	.70
Water Retention		
Mean	.95	.23
SD	1.67	.69
Behavioural Changes		
Mean	.60	.20
SD	1.63	.84
Autonomic Reaction		
Mean	.49	.09
SD	1.51	.41
Negative Affect		
Mean	1.57	.30
SD	3.59	1.01
Arousal		
Mean	1.43	.50
SD	2.42	1.27
Control		
Mean	.35	.06
SD	1.51	.39

TABLE 135

Mean And SD Table For Three Religious Groups
For Eight Symptom Clusters in Menstrual Phase

	Religion		
	Christian	Hindu	Muslim
n=	668	685	641
Pain			
Mean	6.54	6.17	6.35
SD	4.77	4.78	4.37
Impaired Concentration			
Mean	2.55	2.58	2.41
SD	3.45	3.69	3.30
Water Retention			
Mean	2.65	2.18	2.43
SD	2.74	2.39	2.64
Behavioural Changes			
Mean	5.79	5.62	5.78
SD	4.46	4.88	4.30
Autonomic Reaction			
Mean	1.35	1.31	1.41
SD	2.17	2.07	2.20
Negative Affect			
Mean	5.37	5.38	4.82
SD	5.73	5.35	5.14
Arousal			
Mean	1.84	1.28	1.37
SD	3.02	2.16	2.44
Control			
Mean	1.03	.78	.75
SD	2.57	1.71	1.80

TABLE 136

Mean And SD Table For Three Religious Groups
For Eight Symptom Clusters in Pre Menstrual Phase

	Religion		
	Christian	Hindu	Muslim
n=	668	685	641
Pain			
Mean	3.25	3.04	3.17
SD	4.09	4.10	3.64
Impaired Concentration			
Mean	1.24	1.09	1.28
SD	2.89	2.27	2.64
Water Retention			
Mean	2.13	1.84	2.27
SD	2.72	2.59	2.99
Behavioural Changes			
Mean	2.14	2.22	2.08
SD	3.42	3.46	3.01
Autonomic Reaction			
Mean	.72	.82	.93
SD	1.74	1.89	1.73
Negative Affect			
Mean	3.71	3.53	3.90
SD	5.36	5.25	5.39
Arousal			
Mean	.72	.55	.63
SD	2.03	1.61	1.74
Control			
Mean	.56	.40	.47
SD	2.15	1.33	1.66

TABLE 137

Mean And SD Table For Three Religious Groups
For Eight Symptom Clusters in Inter Menstrual Phase

	Religion		
	Christian	Hindu	Muslim
n=	668	685	641
Pain			
Mean	.71	.70	.72
SD	1.84	2.04	1.88
Impaired Concentration			
Mean	.46	.42	.52
SD	1.85	1.51	1.77
Water Retention			
Mean	.74	.52	.61
SD	1.63	1.13	1.29
Behavioural Changes			
Mean	.49	.38	.37
SD	1.59	1.25	1.15
Autonomic Reaction			
Mean	.36	.27	.30
SD	1.36	.90	1.19
Negative Affect			
Mean	1.21	.83	.94
SD	3.35	2.44	2.53
Arousal			
Mean	1.09	.87	1.05
SD	2.29	1.78	2.00
Control			
Mean	.24	.18	.24
SD	1.35	.98	1.10

TABLE 138

Mean And SD Table For Eight Symptom Clusters And Three Phases Of Menstrual Cycle

Cluster	Menstrual	Pre Menstrual	Inter Menstrual
n=	1994	1994	1994
Pain			
Mean	6.35	3.15	.71
SD	4.65	3.95	1.92
Impaired Concentration			
Mean	2.52	1.20	.47
SD	3.49	2.61	1.71
Water Retention			
Mean	2.42	2.08	.62
SD	2.60	2.77	1.37
Behavioural Changes			
Mean	5.73	2.15	.42
SD	4.56	3.31	1.35
Autonomic Reaction			
Mean	1.36	.82	.31
SD	2.15	1.79	1.16
Negative Affect			
Mean	5.20	3.71	.99
SD	5.42	5.33	2.81
Arousal			
Mean	1.50	.63	1.00
SD	2.58	1.80	2.03
Control			
Mean	.85	.48	.22
SD	2.06	1.74	1.15

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