METHOD

DESIGN

The primary aim of the present investigation was to study stress and coping among Iranian and Indian adolescents in relation to their personality, perceived family environment, happiness measures, positive mental states, health, and depression.

Another aim was to study cultural and gender differences among adolescents on stress, coping, personality, perceived family environment, happiness measures, positive mental states, health, and depression.

Stress Symptoms of the adolescents were measured using Stress Symptoms Rating Scale by Heilbrun and Pepe (1985); Daily Hassles and Uplifts Scale by Delongis et al. (1982) was used to assess Hassles and Uplifts.

The Coping Style Inventory by Carver et al. (1989) was used to measure three types of Coping viz. Task-focused Coping, Emotion-focused coping and Avoidance Coping.

For measuring Personality, Eysenck’s Personality Questionnaire-Revised (EPQ-R) developed by Eysenck et al. (1985) was used to measure Extraversion, Psychoticism, Neuroticism and Lie Scale (Social Desirability).

The Family Environment Scale (FES) by Moos and Moos (1994) was used to measure different dimensions of family environment viz. Family Environment Relationship, Family
Environment Personal Growth and Family Environment System

- Maintenance.

Measures of **Positive mental States** included in the study were Happiness, Hope, and Optimism. For measuring **Happiness**, the following standardized tests were used: **The Happiness Orientations** measure by *Peterson et al. (2005)* was used to measure Meaning, Pleasure and Engagement; the Happiness Score was obtained by using **The Oxford Happiness Questionnaire (OHQ)** by *Hills and Argyle (2002)*; and a self-rating scale was used to measure the **Perceived Happiness Status**. To measure **hope** in adolescents, the **Adult Trait Hope Scale** by *Snyder et al. (1991)* was used which yields two dimensions viz. Pathways and Agency. **The Life Orientation Test (LOT)** developed by *Scheier and Carver (1985)* was used to assess **optimism**.

For measuring **Mental Health**, the WHO measure of Mental Health adapted for use in India by *Wig (1999)* was chosen to assess mental health among adolescents which has three dimensions viz. Being Comfortable with Self, Being Comfortable with Others, and Perceived Ability to Meet Life’s Demands. **Perceived Health Status** was measured by using rating scale devised by *Blaxter (1995)*.

**The Beck Depression Inventory (BDI)** by *Beck and Steer (1987)* was used to measure **Depression**.

**SAMPLE**

The total sample comprised of 400 adolescents in the age range of 16-19 years. Two hundred adolescents were selected randomly from the public schools of Iran-Tehran city. Another two hundred adolescents from India-Tricities of Chandigarh, Panchkula.
and Mohali were selected; Out of these, half were males and half were females. Most of the subjects belonged to middle or upper middle income groups.

All the subjects were apprised about the nature and purpose of research and their willingness ascertained before targeting them for participation.

TESTS AND TOOLS

The following standardized tests and tools were employed:
5. Family Environment Scale (*Moos and Moos*, 1994)
7. The Oxford Happiness Questionnaire (*Hills and Argyle*, 2002)
10. WHO Measure of Mental Health (*Wig*, 1999)
13. In addition, a 10-point Rating Scale was used to measure Perceived Happiness Status.
BRIEF DESCRIPTION OF TESTS

1- Stress Symptoms Rating Scale (Heilbrun and Pepe, 1985)

Heilbrun and Pepe (1985) constructed the Stress Symptoms Rating Scale which is a response-defined measure of stress in contrast to the stimulus-defined measures being used earlier in stress research. The Stress Symptom Rating Scale is an enquiry into the amount of stress experiences without regard to what provoked them. They selected 25 symptoms of stress from a list that Selye (1976) identified as readily detectable by the individual. The subject is required to rate the frequency of each of the stress symptoms (for the previous year) on a six-point scale ranging from “Not at all” to “More than once per day” (i.e. ranging from 0 to 5). The stress score is the summation of obtained over all the ratings.

The alpha reliability for the scale was found to be 0.93 by Heilbrun and Putter (1986). Evidence for validity has come from different elevations of stress found in groups, otherwise identified as more stressful. This scale has been successfully used in India by Gujral (1990), Saini (1998), Mohan (1997, 2001, 2002, 2003), Mohan et al. (1999, 2000, 2006), Opara (1999), Sehgal (2003), Shourie (2003), Sharma (2005), Malhotra (2006), Ramma (2006), and Salariya (2006).

2- Daily Hassles and Uplifts Scale (Delongis et al., 1982)

The Daily Hassles and Uplifts Scale was originally constructed by Kanner et al. (1981) to assess the number, severity and intensity of the daily hassles and uplifts that the subject has experienced in the last month. The “Hassles Scale” consisted of a list of hassles or
everyday irritants. These cover the areas of health, family, friends, the environment, practical considerations and chance occurrences. The “Uplifts Scale” consists of a list of uplifts; minor life events that make people feel good.

The present study used a revised version of hassles and uplifts scale by Delongis et al. (1982). In this version, redundant items and words that suggested psychological and somatic symptoms were eliminated. It consists of 53 items. The scale measures hassles that are simple obstructions in the daily life of a person, which may occur few times or many times. The participants rate “How much of a hassle was this item for you today?” and “How much of an uplift was this item for you today?” on a 3-point rating; (0) None or not applicable; (1) Somewhat; (2) Quite a bit; and (3) A great deal.


3- Coping Style Inventory (Carver et al., 1989)

Coping styles were assessed using Carver et al’s (1989) short version. The inventory measures three broad coping dispositions; Task-focused Coping, Emotion-focused Coping, and Avoidance Coping. Items were conceptually grouped into three sub-scales with 10 items in each scale. Each item was answered on 4-point rating scale ranging from “I usually don’t do this at all” to “I usually do this a lot”. Thus, scores on each of the scales may range from 10 to 40.
Internal consistency of each scale was assessed using Cronbach’s alpha. For task-focused coping, it was 0.78, for emotion-focused coping, it was 0.76 and for avoidance coping, it was 0.77. Task-focused and emotion-focused coping were correlated (r= 0.64). Neither task-focused nor emotion-focused coping were associated with avoidance coping (r= 0.16). The scale has been used in India by Sehgal (2003) and Salariya (2006).

4- Eysenck Personality Questionnaire-Revised (Eysenck et al., 1985)

This questionnaire has been developed by Eysenck et al. (1985) from the full Eysenck Personality Questionnaire constructed by Eysenck and Eysenck (1975) to improve the psychosomatic weakness of the psychoticism scale. It has 90 items with a “Yes-No” rating scores for individuals, which are based on 4 dimensions viz. Neuroticism (N), Psychoticism (P), Extraversion (E) and Lie Scale (Social Desirability) (L).

The Cronbach alpha coefficient reliabilities for the revised scale have been found to be as follows:

<table>
<thead>
<tr>
<th>Gender</th>
<th>P</th>
<th>E</th>
<th>N</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>0.78</td>
<td>0.90</td>
<td>0.88</td>
<td>0.82</td>
</tr>
<tr>
<td>Females</td>
<td>0.76</td>
<td>0.85</td>
<td>0.85</td>
<td>0.79</td>
</tr>
</tbody>
</table>

This scale has been used because of its widespread validity and prominence in personality research. Most of the studies linking personality traits to happiness have been used this measure. EPQ-R has been successfully used in India by Datta (1985), Ghalwat
The Family Environment Scale (FES) consists of 90 “True-False” items, yielding 10 subscales which measure the actual, preferred and expected social environment of families. These 10 subscales assess the three underlying sets of dimensions: 

**Relationship Dimension** which includes Cohesion, Expressiveness and Conflict; **Personal Growth Dimension (or Goal Orientation)** which includes Independence, Achievement Orientation, Intellectual-Cultural Orientation, Active-Recreational Orientation, and Moral-Religious Emphasis; and **System Maintenance Dimension** which includes Organization and Control. The Relationship and System Maintenance dimensions primarily reflect internal family functioning, whereas the Personal Growth dimensions primarily reflect the linkages between the family and the larger social context.

**RELATIONSHIP DIMENSION**

Cohesion subscale measures the degree of commitment, help, and support, family members provide for one another. For example, the way they support one another, the amount of energy they put into
what they do at home, and how much feeling of togetherness there is in the family.

**Expressiveness** subscale taps the extent to which family members are encouraged to act openly and to express their feelings directly. For example, how openly family members talk, how freely they discuss their personal problems, and how often they just pick up and go if they feel like doing something on the spur of the moment.

**Conflict** measures the amount of openly expressed anger and conflict among family members.

**PERSONAL GROWTH DIMENSION**

**Independence** subscale measures the extent to which family members are assertive, are self-sufficient and make their own decisions.

**Achievement-Oriented Orientation** subscale taps the extent to which activities, such as school and work, are cast into an achievement-oriented or competitive framework.

**Intellectual-Cultural Orientation** subscale measures the level of interest in political, intellectual and cultural activities.

**Active-Recreational Orientation** subscale taps the amount of participation in social and recreational activities.

**Moral-Religious Emphasis** subscale measures the degree of emphasis on ethical and religious issues and values.
SYSTEM MAINTENANCE DIMENSION

Organization subscale assesses the degree of importance of clear organization and structure in planning activities and responsibilities.

Control subscale assesses the extent to which set rules and procedures are used to run family life.

In short, the Family Environment Scale helps in assessing the overall environment of an individual’s family and how these different dimensions can have impact on one’s personality and well-being. Scoring is based on the template provided and individual sub-scale scores can be obtained. The reliability coefficients for the ten sub-scales were found to range from a low of 0.68 for independent to a high of 0.86 for Cohesion, when test-retest method was used on 47 family members belonging to 9 families with a time interval of 8 weeks. The scale and its subscales have high content validity. The scale has been used in India by Kaur (2002), Thapar (2002), and Dhillon (2005).

6- Happiness Orientations Measure (Peterson et al., 2005)

The scale is developed by Peterson et al. (2005) to measure the three orientations to happiness viz. Meaning, Pleasure and Engagement. It is an 18-item scale with 6 items in each sub-scale; and each item is based on a 5-point rating scale (“1= Very much unlike me” to “5=Very much like me”. The score for each sub-scale is the summation of scores obtained overall all the ratings. Items measuring pleasure and meaning resemble those used in previous research contrasting hedonic versus eudemonic orientations (King and Napa, 1998; McGregor and Little, 1998). Items measuring
engagement were based on the flow state as self-less absorption in ongoing activity (Csikszentmihalyi, 1990).

Internal consistencies of the three sub-scales formed by averaging the respective items, were satisfactory (pleasure: $a = 0.84$; flow: $a = 0.77$ and meaning: $a = 0.88$) and exceeded the sub-scale inter-correlations, which nonetheless were of moderate magnitude (mean $r = 0.51$). These results suggested that the three orientations to happiness are distinguishable but related.

7- The Oxford Happiness Questionnaire (Hills and Argyle, 2002)

Hills and Argyle (2002) developed the Oxford Happiness Questionnaire (OHQ) to be “an improved instrument” to assess subjective well-being (SWB). The Oxford Happiness Questionnaire was derived as an improved version of the Oxford Happiness Inventory by Argyle et al. (1989). The scale has 29 items which include the 20 items of the Oxford Happiness Inventory and an additional 9 items. Responses are based on a 6-point rating scale: (1) Strongly Disagree, (2) Moderately Disagree, (3) Slightly Disagree, (4) Slightly Agree, (5) Moderately Agree, (6) Strongly Agree. Higher scores indicate a measure of broad happiness.

Hills and Argyle (2002) reported acceptable validity for the Oxford Happiness Questionnaire by providing data on correlations with other self-report scales of personality traits, human strengths and subjective well-being. The scale possesses a high scale alpha reliability of 0.91. The inter-item correlations for Oxford Happiness Questionnaire ranged from -0.04 to 0.65. The personality variables correlate very strongly with Oxford Happiness Questionnaire (Hills and Argyle, 2002). In terms of construct validity, the Oxford
Happiness Questionnaire appears to be the preferred measure in terms of its construct validity.

8- Adult Trait Hope Scale (*Snyder et al.*, 1991)

The Hope Scale is developed by *Snyder et al.* (1991) to measure individual differences of hope. It has two subscales: (1) Agency (goal-directed determination), and (2) Pathways (planning of ways to meet goals). The factor structure identifies the agency and pathways components and, as predicted, these two components are positively correlated.

This scale has 12 items; 4 items are distracters and are not used for scoring. The agency subscale score is the sum of 4 items; the pathways subscale score is the sum of another 4 items. Hope is the sum of the pathways and agency items. The 4-point response continuum has been used in this scale. Scores range from a low of 8 to a high of 32. Cronbach alphas for the total hope score have ranged from 0.74 to 0.84. Test-retest reliability have been 0.80 or higher over time periods exceeding 10 weeks (*Snyder et al.*, 1991). A series of studies demonstrate acceptable internal consistency and test-retest reliability for the Hope Scale.

9- The Life Orientation Test (*Scheier and Carver*, 1985)

The Life Orientation Test measures dispositional optimism, which is defined as generalized positive outcome expectancies. It provides a self-report measure of individual differences in global optimism.

The scale has 12 items. Four items were positively phrased ("In uncertain times, I usually expect the best") and four were
negatively phrased (“If something can go wrong for me, it will”). An additional four items (i.e. 2, 5, 6 and 8) were fillers and not using for scoring. Responses were recorded on a 5-point scale ranging from (1) Strongly agree to (5) Strongly disagree with score range of 8 (pessimist) to 32 (optimist). Scores were obtained by summing the scores on all the 8 items. The scale has alpha coefficient of 0.76 and test-retest reliability coefficient of 0.79 for a four week time interval; the authors report adequate convergent and discriminant validity.


10- WHO Measure of Mental Health (Wig, 1999)

This scale has 16 items and is designed to measure mental health. It has three categories: Being Comfortable with Self, Being Comfortable with Others, and Perceived Ability to meet Life’s Demands. The test gives scores on 3 dimensions of mental health and a summated score on total mental health. The response format has to categories “Yes” or “No”. A score of one (1) is given if subject ticks “Yes”, zero (0) if he/she ticks “No”. The test has adequate reliability and validity. It has been successfully used in India by Mohan (2002, 2003, 2004, 2005, 2006), Puri (2002), Sehgal (2003), Shourie (2003), Vaidya (2003), Sharma (2005), Malhotra (2006), Ramma (2006), and Salariya (2006).

11- Beck Depression Inventory (Beck and Steer, 1987)

Beck Depression Inventory is a 21-item scale developed by Beck and Steer (1987). It is a self-report scale that assesses
cognitive, affective, and somatic depression symptoms that have occurred over the previous week. This scale measures depressive mood disorder.

The symptoms assessed by the Beck Depression Inventory include the following content areas: mood, pessimism, sense of failure, self-dissatisfaction, guilt, punishment, self-dislike, self-accusation, suicide ideas, crying, irritability, social withdrawal, indecisiveness, body image, work difficulty, insomnia, fatigability, loss of appetite, weight loss, somatic preoccupation and loss of libido. Individual items help the therapist to focus on particular symptoms while also providing information about the patient’s negative mood and thoughts and also the presence and degree of negative emotional states (Kazdin, 2000).

Each category describes behavioral manifestation of depression and consists of a graded series of four to five self-evaluative statements. Items are scored from 0 to 3 to indicate the degree of severity; 3 signifies more depression. Item ratings are summed to produce a total score that may range from 0 to 63. It has acceptable test-retest reliability ($r = 0.79$) in non-clinical population and demonstrates concurrent validity ($r = 0.67$ to $0.79$) in clinical and non-clinical sample. A mean correlation of 0.60 with clinical ratings of depression in non-psychiatric subjects has been reported (Beck et al., 1988). The Scale has been used in India by Kumar (1990), Gupta (1999), Opara (1999), Ramma (2006), and Salariya (2006).
12- The Self-Rating of Perceived Health Status *(Blaxter, 1995)*

Perceived Health Status was measured using a rating scale devised by *Blaxter (1995)*. It is an 11-point scale ranging from Extremely Healthy (10) to Extremely Unhealthy (0). The subjects rated their own health status on a rating scale of 0 to 10. Higher the rating, was higher the perceived health status. This scale was used in India by *Kaur (2002)*, *Sehgal (2003)*, and *Shouri (2003)*.

**PROCEDURE**

All the respondents who were volunteers for the testing schedules were given the questionnaire in a booklet form and were requested to fill out the booklet in the school environment and respond to them truthfully according to given instruments. They were assured that the information they would give about themselves and the results would be kept strictly confidential and used for research purpose only.

The testing schedule was started by firstly, asking the participants to fill in the general information schedule and then requested to respond to the tests one after the other until all the tests and all the questions had been responded to. The testing schedule was conducted in one sitting and the booklet took 2 hours to complete with 30 minutes gap in between.

For the Iranian sample, the questions were translated into Persian, the language being used in Iran, and translations were done by three faculty members in Psychology who were fluent in both English and Persian. The instruments were presented in the same order to both the samples. All the respondents were given
INSTRUCTIONS FOR THE QUESTIONNAIRES

1- Instructions for the Stress Symptoms Rating Scale

The following instructions were given for the Stress Symptoms Rating Scales: “Rate the frequency of each item for the previous year along the following scale: (0) Not at all, (1) Less than once per month, (2) Between once per week and once per month, (3) About once per day, (4) Between once per day and once per week, (5) More than once per day. Indicate your answer by circling a number for each item. All your responses will be kept strictly confidential”.

2- Instructions for the Daily Hassles and Uplifts Scale

Instructions for the Daily Hassles and Uplifts Scale were: “Given below are 53 statements with the scale of 0-3 on each side. Please circle one number on the left side to describe the situations as Hassles and circle one number on the right hand side to describe the situation as Uplifts, 0 implies being “none/not applicable” and 3 implies “a great deal”.

The statements used for assessing Hassles and Uplifts and the response alternatives for each scale are given below:

<table>
<thead>
<tr>
<th>Hassles</th>
<th>Uplifts</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much of a hassle was this item for you yesterday?</td>
<td>How much of an uplift was this item for you yesterday?</td>
</tr>
<tr>
<td>0= None or Not applicable</td>
<td>0= None or Not applicable</td>
</tr>
<tr>
<td>1= Somewhat</td>
<td>1= Somewhat</td>
</tr>
<tr>
<td>2= Quite a bit</td>
<td>2= Quite a bit</td>
</tr>
<tr>
<td>3= A great deal</td>
<td>3= A great deal</td>
</tr>
</tbody>
</table>
3- Instructions for the Coping Style Inventory

The subjects were given the following instructions: “Rate your response for each item along the following four point rating scales: (0) Don’t do it at all, (1) Rarely do it, (2) Often do it, (3) Usually do it a lot”.

4- Instructions for the Eysenck Personality Questionnaire-Revised

Instructions for Eysenck Personality Questionnaire-Revised were: “Please answer each question by putting mark in the box following ‘Yes’ or ‘No’. There is no right or wrong answers or no trick questions. Work quickly and do not think too long about the exact meaning of the question”.

5- Instructions for the Family Environment Scale

Instructions for the Family Environment Scale were: “There are 90 statements in this booklet. They are statements about families. You are to decide which of these statements are true of your family and which are false. Make all your marks on the separate answer sheet. If you think the statement is true or mostly true of your family, make an X in the box labeled T (True). If you think the statement is false or mostly false of your family, make an X in the box labeled F (False). You may feel that some of the statements are true for some family members and false for others. Mark T if the statement is true for most members. Mark F if the statement is false for most members. If the members are evenly divided, decide what is the stronger overall impression and answer accordingly. Remember, we would like to know what your family seems like to you. So, do not try to figure out
how other members see your family, but do give us your general impression of your family for each statement”.

6- Instructions for the Happiness Orientations Measure

Instructions for the Orientations to Happiness Measure were: “Choose any one of the following alternatives by putting mark in the box to indicate your degree of agreement with the statement. The response options are: (1) Very much unlike me, (2) Unlike me, (3) Neutral, (4) Like me and (5) Very much like me”.

7- Instructions for the Oxford Happiness Questionnaire

Instructions were as follow: “Below are a number of statements about happiness. Would you please indicate how much you agree or disagree with each by entering a number alongside it according to the following code: (1) Strongly disagree, (2) Moderately disagree, (3) Slightly disagree, (4) Slightly agree, (5) Moderately agree, (6) Strongly agree. You will need to read the statements carefully because some are phrased positively and others negatively. Don’t take too long over individual questions; there are no ‘right’ or ‘wrong’ answers and no trick questions. The first answer that comes into your head is probably the right one for you. If you find some of the questions difficult, please give the answer that is true for you in general or for most of the time”.

8- Instructions for the Adult Trait Hope Scale

Instructions for the scale were: “Read each item carefully. Using the scale shown below, please select the number that best describes YOU and put that number in the blank provided. The response options are: (1) Definitely False, (2) Mostly False, (3) Mostly True and (4) Definitely False”.

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9- Instructions for the Life Orientation Test

The Life Orientation Test has the following instructions: “Indicate whether or not each of the items represents your feelings by writing a number in the blank space according to the following code: (0) Strongly disagree, (1) Disagree, (2) Neutral, (3) Agree, (4) Strongly agree”.

10- Instructions for WHO Measure of Mental Health

The following instructions were given: “Kindly tick the response which is true for you by putting a circle around the “Yes” or “No” alternatives following the question. Your answer will be kept strictly confidential”.

11- Instructions for the Beck Depression Inventory

Following instructions were given for the Beck depression Inventory: “On this questionnaire, there are groups of statements. Please read each group of statements carefully. Then pick out the one statement in each group, which best describes the way you have been feeling in the past week including today. Circle the number beside the statement you picked; if several statements in the group seem to apply equally well, circle each one. Be sure to read all the statements in each group before making your choice”.

12- Instructions for the Self-Rating of Perceived Health Status

The instructions given for this scale were: “Imagine anyone in excellent health and rate your health status on the following rating scale ranging from Extremely Healthy (10) to Extremely Unhealthy (0)”. 
SCORING AND STATISTICAL ANALYSES

Scoring for all the tests was done with the help of scoring keys as per all the instructions given in the scoring manuals of the test. The raw scores were then tabulated and subjected to various statistical analyses.

Keeping in view the objectives of the study, means, standard deviations, and t-ratios were calculated. A 2x2 Analysis of Variance was employed with gender and culture as the independent variables. Correlations were computed and Stepwise Multiple Regression Analysis was done to identify the predictors of adolescent stress and coping dimensions. Regression Analyses were run separately for the two cultures and gender groups.