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The present issue of the journal of Indian health psychology includes twelve research articles, a short communication and four book reviews. All the articles are empirical and related to psycho-social aspects of health. The first article by Divya Merciline and O.S. Ravindran explores the relationship between personality characteristics and psychological distress among nursing students. The next article also deals with subjective well-being, social support, hope, stress and coping of mothers of mentally challenged children (caregivers) and normal children (non-caregivers). Kriti Saluja and Tejinder Kaur observed that caregiving mothers perceived less subjective well-being, social support, in comparison to non-caregiving mothers whereas it may be seen that caregiving mothers perceived considerably more hope, stress and used more coping strategies in comparison to non-caregiving mothers. Narendra Singh and Karnika Gupta assessed Emotional Intelligence across demographic variables such as gender, age, residential status, educational levels and field of study.

The next article by A. Velayudhan, Priyanka and Justine K. James examined adjustment and depression among wives of alcoholics and non-alcoholics. They reported that there is a linear relationship between adjustment and depression. Wives of alcoholics are poorly adjusted than non-alcoholics, moreover the level of depression is high in wives of alcoholics. The following study enlisted in the current issue by Fauzia Nazam examined gender differences in the various dimensions of holistic health. The next article in the list examined Positive and Negative Affect in Depressed and Normal Adults. Bharati Roy in her research article aimed to determine the mood states and pattern of adjustment among male alcoholic patients. She found that alcoholics exhibit higher level of anxiety, stress, guilt feeling and extraversion than normal group. They differ significantly from normal group on adjustment. Teenu Nandal, Nov Rattan Sharma and Amrita Yadava’s article makes an effort to explore the relationship between religiosity and holistic health.

The next article by Rita Rani Talukdar and Joysree Das aimed to study Positive mental health among the persons with high blood pressure. The next investigation in the present issue studied the relationship of emotional autonomy.
with psycho-social adjustment among youth in a sample of 250 adolescents of 18-21 years (125 males and 125 females). The results revealed a negative relationship between autonomy and psycho-social adjustment indices. The next article by Ankit Prakash, Sheema Aleem, Samina Bano and Naved Iqbal was undertaken with the purpose to see the Stress and Psychological Hardiness and the possible relationship between the two variables among the Parents of physically challenged children. Jaroslava Dosedlová, Zuzana Slováèková and Helena Klimusová studied Health-Supportive Behaviour, Subjective Health and Life Style of University Students. The present issue includes a short communication by O.S. Ravindran Management of Auditory Hallucinations By Cognitive – Behavioural Therapy. This issues has three book reviews of books on different aspects of health and well-being.

Editors are grateful to all the investigators/authors of the research articles, referees and book reviewer for their valuable inputs.
1. A Study of Personality Characteristics and Psychological Distress among Nursing Students
   Divya Merciline and O.S. Ravindran

2. A Study of Subjective Well-being, Social Support, Hope, Stress and Coping among the Mothers of Mentally Challenged Children (Caregivers) and Normal Children (Non-caregivers).
   Kriti Saluja and Tejinder Kaur

3. Assessment of Emotional Intelligence Across Demographic Variables
   Narendra Singh and Karnika Gupta

4. Adjustment and Depression among Wives of Alcoholics and Non-alcoholics
   A. Velayudhan, Priyanka M.S. and Justine K. James

5. Holistic Health among Male and Female Teachers
   Fauzia Nazam

6. Positive and Negative Affect in Depressed and Normal Adults
   Mohammad Anas and Deoshree Akhouri

7. Mood States and Pattern of Adjustment Among Male Alcoholics
   Bharati Roy

8. A Correlational Study of Religiosity and Health
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A STUDY OF PERSONALITY CHARACTERISTICS AND PSYCHOLOGICAL DISTRESS AMONG NURSING STUDENTS

Divya Merciline* and O.S. Ravindran**

ABSTRACT

The purpose of the study was to find out the personality characteristics and to identify the presence of depression, anxiety and stress among undergraduate nursing students of both first and final year. The sample for the present study consisted of 100 subjects (16 males and 84 females). They were assessed by the following tools: General Health Questionnaire (GHQ-12), NEO Five Factor Inventory (NEO-FFI), and Depression Anxiety and Stress Questionnaire (DASS). Results were discussed using percentages and t-test. Results indicated that the first year students have experienced higher level of distress than the final year students.

Key Words: Students, Personality and Stress.

Personality is that which makes us what we are and it makes us different from others. It is seen as a complex pattern of deeply embedded psychological characteristics that are expressed automatically in almost every area of psychological functioning. In the words of Ryckman (2004), personality is defined as a dynamic and organised set of characteristics possessed by a person that uniquely influences his or her cognitions, motivations and behaviours in various situations.

There are various models of personality such as biological, psycho-dynamic, interpersonal, cognitive, trait and factorial perspectives. Among which, the five factor model is the most prominent current model of personality which was...
derived from the analyses of various personality inventories, not words from the dictionary (Costa and McCrae, 1992). It postulates five largely independent and relatively broadly designed personality dimensions such as, neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. Among the different models of personality, the Big Five Model is extensively researched with students (Rubinstein, 2005; Bidjerano et al., 2007 & White et al., 2009).

Personality traits such as neurotic and extrovert can put students at risk of developing stress and other related psycho-pathology (Abbaszadeh et al., 2010). There is a growing concern regarding the mental health of college students among mental health professionals (Council Report, Royal College of Psychiatrists London, 2003). It was found that depression and anxiety are the two most widespread mental health problems seen in college students (Oliver et al., 1999). The stress experienced by students can lead to poor academic performance, depression and serious health problems (Dyrbye et al., 2006). Andrews et al., (2004) studied the relation of depression and anxiety to life stress and achievement in students. The results showed that 9% of previously symptom-free students became depressed, and 20% became anxious at a clinically significant level. Stress is another distressing symptom among students. Stress is a universal phenomenon and the student nurses are also not spared. They experience significant stress during their training period and this may contribute to sickness, absence and attrition (Galbraith & Brown, 2011). Keeping in view of the above, the present study was carried out to find out the personality characteristics and the presence of distressing symptoms (depression, anxiety and stress) among undergraduate nursing students of both first and final year. The specific objectives were: (1) to find out the personality characteristics of the first and final year nursing students. (2) to compare the personality characteristics and the levels of depression, anxiety and stress between the first and final year students.

METHOD

Sample

The sample for the present study comprised of 100 subjects (16 males and 84 females) who were all students of first and final year undergraduate nursing programme in a private nursing college at Porur, Chennai, in the age range of 18-24 years. By using the General Health Questionnaire (GHQ-12) as a screening device, 100 students were identified. Purposive sampling technique was used. Fifty per cent of the students were in the age group of below 19 years and the remaining 50% belonged to 20 years and above. The inclusion criteria were: a) first and final year undergraduate nursing students of both gender. b) Individuals who obtain a score of 5 and above on the GHQ. The exclusion criteria were: a) students who are unwilling to participate in the study. b) Students with chronic medical problems/physical handicaps.
Tools

1. **Socio-demographic Data Sheet:** A socio-demographic data sheet was developed to collect the socio-demographic details of the participants.

2. **General Health Questionnaire (GHQ):** The GHQ-12 (Goldberg, 1972) was designed to assess for the presence of psychiatric distress related to general medical illness. There are four versions of GHQ and in the present study, GHQ-12 was used to screen the students. The GHQ has been widely used in the Indian setting and its reliability and validity have been established.

3. **NEO-Five Factor Inventory (NEO-FFI):** The NEO-FFI is a 60 item version of Form S of the Revised NEO-Personality Inventory that provides a brief, comprehensive measure of the five domains of personality (Costa and McCrae, 1992). It consists of five 12 item scales which assess the five major domains of personality (neuroticism, extraversion, openness, agreeableness and conscientiousness). Each item is rated on a 5-point scale and higher scores indicate higher incidence of the personality trait. Regarding reliability, the internal consistency co-efficient for the NEO-FFI was ranging from 0.68 to 0.86; short term test-retest reliability was ranging from 0.75 to 0.83.

4. **Depression Anxiety and Stress Scale (DASS):** The DASS, developed by Lovibond and Lovibond (1995), is a 21-item instrument measuring current symptoms of depression, anxiety, and stress over the past week. Each of the three scales consists of 7 items in which the respondents are expected to rate each of the statement on a four point scale ranging from 0-3. The range of possible scores for each scale is 0-21. The scores for depression, anxiety and stress are calculated by summing the scores for the relevant items. Internal consistency of the DASS subscales was high with Cronbach’s alphas of 0.94, 0.88, and 0.93 for depression, anxiety, and stress respectively.

Procedure

After obtaining prior permission from the Institutional Ethics Committee, the students were contacted. They were explained about the nature of the study and then written informed consent was obtained from them. The General Health Questionnaire (GHQ-12) was administered to find out the psychological distress. Those who obtained a score of 5 and above were included in the present study. Thus 100 students were selected from the first and final year. The tools were administered in a group of 10 students each and a total of 10 sessions were conducted. The time taken for each session was approximately 45 minutes. Instructions were read out and explained and queries about how to answer the items were addressed.
RESULT AND DISCUSSION

The data was coded for computer analysis. Obtained data was analysed using percentages and t-test. Majority of the sample were from nuclear family (78%) and another 22% were from joint family. Regarding gender, only 16% were males and the majority (84%) of them were females. Most of the students were from sub-urban background (53%), 36% from urban area and the rest (11%) belonged to rural background.

Table 1: Significance of Difference between Mean Scores of the two groups on Personality Characteristics (N=50 in each group)

<table>
<thead>
<tr>
<th>Factors</th>
<th>I year</th>
<th></th>
<th>IV year</th>
<th></th>
<th>t-value</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neuroticism</td>
<td>57.06</td>
<td>5.83</td>
<td>55.84</td>
<td>4.85</td>
<td>1.60</td>
<td>NS</td>
</tr>
<tr>
<td>Extraversion</td>
<td>51.14</td>
<td>6.73</td>
<td>53.08</td>
<td>8.24</td>
<td>1.29</td>
<td>NS</td>
</tr>
<tr>
<td>Openness</td>
<td>45.10</td>
<td>6.14</td>
<td>42.70</td>
<td>5.74</td>
<td>2.02</td>
<td>0.01**</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>35.64</td>
<td>8.77</td>
<td>37.42</td>
<td>8.80</td>
<td>1.01</td>
<td>NS</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>36.66</td>
<td>7.53</td>
<td>41.22</td>
<td>7.39</td>
<td>3.06</td>
<td>0.01**</td>
</tr>
</tbody>
</table>

NS= Not Significant

The above table shows the mean scores and standard deviations of the two groups on the personality characteristics as assessed by NEO-FFI. On neuroticism, both the groups were found to be sensitive, emotional and prone to experience feelings that are upsetting. With regard to extraversion, both the groups were found to be moderate in activity and enthusiasm. They used to enjoy the company of others but they also value privacy. On the openness factor, the first year students were found to be practical, but willing to consider new ways of doing things while the final year students were found to be down-to-earth and traditional. Both the groups were found to be hardheaded, skeptical, proud and competitive on the factor of agreeableness. On conscientiousness, both the groups were found to be easy going, not well organised and careless at times.

Table 2: Percentage Distribution of Levels of Depression, Anxiety and Stress among First year and Final Year Students

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Normal (%)</th>
<th>Mild (%)</th>
<th>Moderate (%)</th>
<th>Severe (%)</th>
<th>Extremely Severe (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>First Year</td>
<td>Final Year</td>
<td>First Year</td>
<td>Final Year</td>
<td>First Year</td>
</tr>
<tr>
<td>Depression</td>
<td>28</td>
<td>48</td>
<td>10</td>
<td>14</td>
<td>34</td>
</tr>
<tr>
<td>Anxiety</td>
<td>14</td>
<td>34</td>
<td>2</td>
<td>8</td>
<td>26</td>
</tr>
<tr>
<td>Stress</td>
<td>32</td>
<td>70</td>
<td>32</td>
<td>22</td>
<td>28</td>
</tr>
</tbody>
</table>

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The percentage distribution of the levels of depression, anxiety and stress on DASS are shown in Table 2. With regard to first year students, 10%, 2% and 32% had mild levels of depression, anxiety and stress respectively. Moderate level of depression, anxiety and stress were seen in 34%, 26% and 28% respectively. Twenty-six per cent reported both depression and anxiety in the severe level. Extremely severe level of anxiety was seen in 32% of the students. Regarding final year students, 14%, 8% and 22% had mild levels of depression, anxiety and stress respectively. Moderate level of depression, anxiety and stress was seen in 20%, 26% and 6% respectively. Severe level of depression, anxiety and stress was seen in 12%, 14% and 2% respectively. The percentage of students showing severe level of stress was comparatively less.

Table 3: Significance of Difference between Mean Scores of the two groups on DASS (N=50 in each group)

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>I year</th>
<th>IV year</th>
<th>t-value</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>18.02</td>
<td>8.44</td>
<td>10.84</td>
<td>8.60</td>
</tr>
<tr>
<td>Anxiety</td>
<td>17.10</td>
<td>8.94</td>
<td>12.66</td>
<td>9.04</td>
</tr>
<tr>
<td>Stress</td>
<td>16.74</td>
<td>5.87</td>
<td>11.64</td>
<td>6.46</td>
</tr>
</tbody>
</table>

**Significant at 0.01 level**

The above table shows the mean scores and standard deviations of the two groups on depression, anxiety and stress as measured by DASS. The first year students have significantly higher level of depression, anxiety and stress than the final year students.

Personality is determined by the interaction of both genetic and environmental factors. Eysenck & Eysenck (1975) conceptualised that personality dimensions as ‘constitutional’ (genetic, neurological and biochemical) which are the basis for the measurement of different dimensions of personality and the personality develops from childhood through adolescence.

Adolescence is the period between childhood and adulthood characterised by biological and psychological changes. The students also pass through this crucial period which is considered as a period of storm and stress.

The present study was carried out to find out the personality characteristics and the presence of depression, anxiety and stress among nursing students.

There are different models of personality among which the Big Five model proposed by Costa and McCrae (1992) is extensively researched among college students (Rubinstein 2005; Bidjerano et al 2007; White et al 2009). There are five factors of personality namely neuroticism, extraversion, openness, agreeableness and conscientiousness. For the present study, the first and final year students of nursing were studied to find out their personality characteristics.
They were found to be high in neuroticism, average in extraversion and openness but low on the factors of agreeableness and conscientiousness. Similar findings were reported by Kikuchi et al. (1999); Belsi et al. (2011); Singh & Duggal (2009); Lievens et al. (2002) and Chibnall et al. (2009).

It is observed that students undergo tremendous stress during various stages of their course. Studies among students reported that psychological distress and personality influence academic performance and adjustment (Aktekin et al., 2001; Warbah et al., 2007). Moreover, the presence of depressive and anxiety symptoms also pose a significant challenge for student adjustments on college campuses. Depression and anxiety are the most widespread mental health problems seen in college students (Oliver et al., 1999). In the present study, first year students experienced significant amount of anxiety and depressive symptoms followed by stress than the final year students. Similar findings were reported by (Jones & Johnston, 1997).

Stress is a psychological and physical strain or tension generated by physical, emotional, social, economic or occupational circumstances, events or experiences that are difficult to manage. The stress experienced by students can lead to poor academic performance, depression and serious health problems (Dyrbye et al., 2006). In the present study, first year students experienced high level of stress than the final year students and the academic factors were cited most high in stress intensity. Similar findings were reported by Bush et al. (1985) and Jimenez et al. (2010). It is concluded that psychological distress is seen more among the first year students than the final year students.

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White, S., et al. (2009). Examination of previously Homeschooled College students with the big five model of personality. The National Home Education Research Institute, 25(1), 1-7.
A STUDY OF SUBJECTIVE WELL-BEING, SOCIAL SUPPORT, HOPE, STRESS AND COPING AMONG THE MOTHERS OF MENTALLY CHALLENGED CHILDREN (CAREGIVERS) AND NORMAL CHILDREN (NON-CAREGIVERS).

Kriti Saluja * and Tejinder Kaur**

ABSTRACT

The consequences of a mental disability does not only affect the child but also affects the family, and the community at large, in many ways. A caregiver/mother is one who provides basic care to a child who is mentally challenged. Researchers have shown that mothers of a mentally challenged child are often at increased risk for depression and illness. In the present investigation, a sample of 200 mothers was taken. Among them, 100 mothers had normal children (non-caregiving mothers) and 100 mothers were of mentally challenged children (caregiving mothers). Five tests namely Subjective Well-Being Scale, Multidimensional Scale of Perceived Social Support, Hope Scale, Caregiver's Stress Test, Coping Response Inventory were administered to assess the mother's (caregiving and non-caregiving) perceived subjective well-being, perceived social support, feeling of hope, stress and coping mechanisms. For analysis, mean, SD, standard error of difference and t-ratio were calculated. Significant differences was seen between the caregiving mothers and non-caregiving mothers. It was observed that non-caregiving mothers perceived higher subjective well-being and social support than caregiving mothers because of the fact that they were more satisfied by their role in the development of the child and received more support from friends, family and relatives than caregiving mothers. It was also observed that caregiving mothers

* Clinical Psychologist, India.
** Associate Professor, Department of Psychology, University of Rajasthan, Jaipur, Rajasthan, India.
perceived considerably more stress and hope in comparison to non-caregiving mothers because caregiving mothers were much more worried about the future of their child, they often got disappointed by the performance of their child. Hence, they (caregiving mothers) used more of coping strategies.

Key Words: Caregiving mothers, Non-caregiving mothers, Mentally challenged children, Subjective Well-being, Perceived social support, Feeling of hope, Stress and Coping.

It is a well-known fact that a mental disability leads to a wide range of social, psychological, emotional and physical problems in the life of an individual. The affects of the problem often not only affects the person himself but also affects the family and the community at large in many ways.

Childhood coupled with disability of any kind makes it much more difficult for the victim as well as the parents, as they are encountering a range of unpleasant reactions. Studies indicate that when parents identify disabilities in their children they usually encounter a range of mixed attitudes, emotional reactions and feelings toward their children. Parents may feel inadequate simply because they have a child who is not perfect. Parents progress through six emotional stages upon discovering their child’s exceptionality viz. disbelief, guilt, rejection, shame, denial and a feeling of helplessness (McDowell, 1976).

A caregiver/mother is one who provides basic care to a person who has a chronic medical condition. A chronic condition is an illness that lasts for a long period of time or is not curable. More time is required when the care receiver has multiple disabilities. Caring for a person with disabilities can be physically demanding, especially for older mothers, who make up half of all caregivers. One third of all mothers describe their own health as fair to poor. A major source of worry for the mothers is that they would not live as long as the person for whom they are caring.

Mothers often need help in caring for the disabled care receiver. Sometimes other family members or friends and neighbours are able to help, but many mothers do most or all of the care giving for a loved one alone. Research has shown that mothers often are at increased risk of depression and illness. This is especially true if they do not receive enough support from family, friends and the community.

Majumdar, Pereira and Fernandes (2005) studied the stress perceived by parents of intellectual disabilities and normal children. This study was conducted in the Child Guidance Clinic at the Institute of Psychiatry and Human Behaviour, Goa. The study sample, comprising 180 subjects, who were categorised as: Group A: 60 parents (30 mothers and 30 fathers) of profoundly mentally retarded children; Group B: 60 parents (30 mothers and 30 fathers) of mildly mentally retarded children; Group C: 60 parents (30 mothers and 30 fathers) of children with normal intelligence, which served as the control
Parents in Group A had a significantly higher frequency of stressors and level of anxiety as compared to those in Groups B and C. A positive correlation was found between the level of anxiety and stressors. It was concluded that demographic variables had an impact on parents in groups A and B as compared to those in group C. Multifaceted factors had made these parents more vulnerable to stress than parents in the controlled group.

Lunsky (2008) studied the impact of stress and social support on the mental health of individuals with intellectual disabilities. People with Intellectual Disabilities (ID) are at increased risk for mental health problems than the general population. The reasons for this are both biological and social. Current treatment for mental health problems tends to be reactive in nature with less emphasis on how mental health problems can be prevented. A better understanding of the social contributors to mental health in individuals with ID should lead to the prevention of mental health problems in this particularly vulnerable population. Two promising areas, i.e. stress and social support were highlighted for further research.

Kneebone and Martin (2010) studied coping in caregivers of people with dementia. The research suggested that a general tendency towards problem solving and acceptance styles of coping was likely to be advantageous to caregivers of people with dementia.

Thus, the above studies indicate that there is a lot of difference between how life is perceived by caregivers and non-caregivers on many psychological variables which thus affect their lives tremendously.

**Objectives**

The following objective the present study was to compare subjective well-being, social support, hope, stress and coping among the caregiving and non-caregiving mothers.

**Hypotheses**

It was hypothesised that:

- There will be a significant difference between the level of subjective well-being and its dimensions between the caregiving mothers and non-caregiving mothers.
- There will be a significant difference between the level of social support and its dimensions between the caregiving mothers and non-caregiving mothers.
- There will be a significant difference between the level of hope between the caregiving mothers and non-caregiving mothers.
- There will be a significant difference between the level of stress and its dimensions between the caregiving mothers and non-caregiving mothers.
• There will be a significant difference between the level of coping and its dimensions among the caregiving mothers and non-caregiving mothers.

METHOD

Sample
The total sample of 200 mothers was selected on the availability basis. Among them 100 mothers had of normal children (non-caregiving mothers) and 100 mothers had mentally challenged children (caregiving mothers).

Tools

(i) **Subjective Well-Being Scale** (Hingar, Mathur and Bhardwaj, 2008) Consisted of 42 items measuring 7 dimensions, namely positive affect, negative affect, family life satisfaction, social support, financial security, health and energy and sense of accomplishment. A 5 point scale is used to seek the response, were a higher score indicated higher perceived well-being on the particular dimension of well-being. The scale has a content validity of 0.93.

(ii) **Multidimensional Scale of Perceived Social Support** (Zimet, Dahlem, Zimet and Farley, 1988) Consisted of 12 items and responses were obtained on a 7 point scale to measure perceived social support from 3 sources (friends, family, and significant others).

(iii) **Hope Scale** (Claire, 2004) consisted of 8 items and responses were obtained on a 4 point scale.

(iv) **Caregivers Stress Test** (Lund and Wright, 1996) consisted of 24 items, each of which was rated by the respondents on a 4 point scale. It measured stress in terms of 5 different areas namely time dependency, development, physical health, social relationship and emotional health responses.

(v) **Coping Response Inventory** (Moos, 1993) - having 8 subscales wherein first four subscale measures approach coping and the rest four subscales measure avoidance coping, is used and scores are yielded in terms of 4 point scale.

Procedure
Rapport was established with the caregiver and non-caregiver mothers. Subjective Well-Being Scale, Multidimensional Scale of Perceived Social Support, Hope Scale, Caregiver’s Stress Test and Coping Response Inventory were administered and scoring was done according to the respective manuals.

RESULTS AND DISCUSSION
For analysis of the obtained data Mean, SD, SED, and ‘t’-ratio were calculated and interpretation was drawn.
Table 1: Mean, SD, t-ratio and Significance Level between Caregiving Mothers of Mentally Challenged (MC) and Non-caregiving Mothers of Normal Children (NC) in Subjective Well-being and its dimensions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Dimensions</th>
<th>Category</th>
<th>N</th>
<th>MEAN</th>
<th>SD</th>
<th>SED</th>
<th>t</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td>CAREGIVERS (MC)</td>
<td>100</td>
<td>21.96</td>
<td>4.15</td>
<td>.57</td>
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<td></td>
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<td>NONCAREGIVERS (NC)</td>
<td>100</td>
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<td>-2.98*</td>
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<td>PA</td>
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<td>CAREGIVERS (MC)</td>
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<td>19.2</td>
<td>3.84</td>
<td>.52</td>
<td>-2.13*</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>100</td>
<td>18.73</td>
<td>3.54</td>
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<td></td>
</tr>
<tr>
<td>Subjective Well-being</td>
<td>FLS</td>
<td>CAREGIVERS (MC)</td>
<td>100</td>
<td>21.41</td>
<td>5.12</td>
<td>.64</td>
<td>-2.13*</td>
</tr>
<tr>
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<td>NONCAREGIVERS (NC)</td>
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<td>22.78</td>
<td>3.88</td>
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<tr>
<td></td>
<td>SS</td>
<td>CAREGIVERS (MC)</td>
<td>100</td>
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<td>13.81</td>
<td>1.42</td>
<td>-2.79*</td>
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<td>23.98</td>
<td>3.61</td>
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<td></td>
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<td></td>
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<td>3.00</td>
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<td>.60</td>
<td>-2.79*</td>
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<td>22.20</td>
<td>3.99</td>
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<tr>
<td></td>
<td>SWB</td>
<td>CAREGIVERS (MC)</td>
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<td>20.78</td>
<td>2.60</td>
<td>-3.86*</td>
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<td>NONCAREGIVERS (NC)</td>
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<td>154.87</td>
<td>15.71</td>
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</tbody>
</table>

*< 0.01, **< 0.05
Table 1 illustrates mean, SD, SED, ‘t’-ratio and level of significance among Caregiving Mothers of Mentally Challenged children (MC) (N=100) and Non-caregiving Mothers of Normal Children (NC) (N=100) on subjective well-being scale.

While observing the first dimension of subjective well-being i.e Positive Affect (PA), it may be observed that non-caregiving mothers were more positive towards life events in comparison to caregiving mothers. In the next dimension i.e. Negative Affect (NA), more negativity was observed in caregiving mothers in comparison to non-caregiving mothers. In Family Life Satisfaction (FLS) dimension of subjective well-being, non-caregiving mothers were found to have more family life support in comparison to caregiving mothers. It was found that in Financial Security (FS) dimension, non-caregiving mothers were perceived to have more financial security as compared to caregiving mothers. On the dimension Health and Energy (HE), it was observed that non-caregiving mothers perceived more health and energy in their lives as compared to caregiving mothers. It may be observed on the last dimension that Sense of Accomplishment (SA) was more in non-caregiving mothers in comparison to caregiving mothers.

Finally on observing the total scores of subjective well-being, where the $t$-ratio came out to be -3.86 which is significant at 0.01 level, It may be concluded that there was a significant difference between subjective well-being of caregiving and non-caregiving mothers showing that mothers of mentally challenged (caregiver) were less optimistic, had less family life satisfaction, social support, financial security, health and energy, and sense of accomplishment and perceived more negative effect in their lives.

Table 2: Mean, SD, ‘t’-ratio and Significance Level between Caregiving Mothers (MC) and Non-caregiving Mothers (NC) in Social Support and its dimensions.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Dimensions</th>
<th>Category</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>SED</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social</td>
<td>FRNDS</td>
<td>Caregivers (MC)</td>
<td>100</td>
<td>18.85</td>
<td>6.07</td>
<td>.78</td>
<td>-4.19</td>
<td>.000*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Noncaregivers (NC)</td>
<td>100</td>
<td>22.15</td>
<td>5.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FMLY</td>
<td>Caregivers (MC)</td>
<td>100</td>
<td>20.97</td>
<td>4.91</td>
<td>.72</td>
<td>-2.91</td>
<td>.004*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Noncaregivers (NC)</td>
<td>100</td>
<td>23.07</td>
<td>5.27</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SO</td>
<td>Caregivers (MC)</td>
<td>100</td>
<td>21.19</td>
<td>5.86</td>
<td>.81</td>
<td>-2.81</td>
<td>.005*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Noncaregivers (NC)</td>
<td>100</td>
<td>23.49</td>
<td>5.70</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Support (T)</td>
<td>Caregivers (MC)</td>
<td>100</td>
<td>61.01</td>
<td>13.49</td>
<td>2.02</td>
<td>-3.79</td>
<td>.000*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Noncaregivers (NC)</td>
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<td>68.71</td>
<td>15.15</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*: <0.01, **: <0.05

Table 2 illustrates mean, SD, SED, ‘t’-ratio and level of significance between Caregiving Mothers (MC) (N=100) and Non-caregiving Mothers (NC) (N=100) on multidimensional scale of perceived social support.

While observing the first dimension of social support i.e. friends (FRNDS), it may be observed that non-caregiving mothers had more support from friends.
in their daily life in comparison to caregiving mothers. The next dimension \textit{i.e.} family (FMLY), according to the table better family support was given to non-caregiving mothers than caregiving mothers. Similarly, it was also observed that social support from Significant Others (SO) \textit{i.e.} from the other known members of the society, was less perceived by caregiving mothers than non-caregiving mothers.

Finally on observing the total scores of social support, where the t-ratio came out to be -3.79 which was significant at 0.01 level, it may be concluded that there was significant difference between social support of caregiving mothers (mentally challenged children) and non-caregiving mothers (normal children) showing that even today, the society is unjust towards caregiving mothers. The associates of mentally challenged are still not welcomed at ease by the society. Hence, letting caregivers of mentally challenged to suffer at their own expenses.

\textbf{Table 3: Mean, SD, t-ratio and Significance Level between Caregiving Mothers (MC) and Non-caregiving Mothers (NC) in Hope}

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>N</th>
<th>MEAN</th>
<th>SD</th>
<th>SED</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Caregivers (MC)</td>
<td>100</td>
<td>27.06</td>
<td>3.10</td>
<td>4.09</td>
<td>3.05</td>
<td>.003*</td>
</tr>
<tr>
<td></td>
<td>Noncaregivers (NC)</td>
<td>100</td>
<td>25.81</td>
<td>2.67</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3 illustrates mean, SD, SED, \textit{t}-ratio and level of significance between Caregiving Mothers (MC)(N=100) and Non-caregiving Mothers (NC)(N=100) on hope scale.

On observing the total score of hope, where the \textit{t}-ratio came out to be 3.05, the result obtained was significant at 0.01 levels. Hence, it may be concluded that caregiving mothers (mentally challenged children) were more hopeful towards life than non-caregiving mothers (normal children). May be because they always thought about the improvement in the performance of their child whereas non-caregiving mothers didn’t had to pay any special attention. These findings had revealed hope as a dynamic process that helped caregiving mothers to reframe their lives in view of the experience of having a child with special needs.

Table 4 illustrates mean, SD, SED, \textit{t}-ratio and level of significance between Caregiving Mothers (MC)(N=100) and Non-caregiving Mothers (NC)(N=100) on caregiver’s stress test.

While observing the first dimension of stress \textit{i.e.} Time Dependency (TD), it may be observed that caregiving mothers experienced more stress as compared to non-caregiving mothers. This is because caregiving mothers had to devote more time to their children and hence could not get enough rest. In the next dimension, development (DEV), more stress was observed in caregiving mothers as compared to non-caregiving mothers. Mothers of mentally challenged children (caregiving mothers) experienced emotional and mental burnout in development of a mentally challenged child.
Table 4: Mean, SD, t-Ratio and Significance Level between Caregiving Mothers (MC) and Non-caregiving Mothers (NC) in Stress and its dimensions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Dimensions</th>
<th>Category</th>
<th>N</th>
<th>MEAN</th>
<th>SD</th>
<th>SED</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
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<td>Stress</td>
<td>TD</td>
<td>Caregivers (MC)</td>
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<td>4.14</td>
<td>.51</td>
<td>10.35</td>
<td>.000*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Noncaregivers (NC)</td>
<td>100</td>
<td>8.98</td>
<td>3.02</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>DEV</td>
<td>Caregivers (MC)</td>
<td>100</td>
<td>9.20</td>
<td>5.18</td>
<td>.70</td>
<td>5.79</td>
<td>.000*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Noncaregivers (NC)</td>
<td>100</td>
<td>5.10</td>
<td>4.80</td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td>PH</td>
<td>Caregivers (MC)</td>
<td>100</td>
<td>7.30</td>
<td>4.19</td>
<td>.52</td>
<td>4.79</td>
<td>.000*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Noncaregivers (NC)</td>
<td>100</td>
<td>6.19</td>
<td>3.15</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>SR</td>
<td>Caregivers (MC)</td>
<td>100</td>
<td>8.18</td>
<td>4.58</td>
<td>.63</td>
<td>4.41</td>
<td>.000*</td>
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<td></td>
<td></td>
<td>Noncaregivers (NC)</td>
<td>100</td>
<td>5.37</td>
<td>4.39</td>
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<tr>
<td></td>
<td>EH</td>
<td>Caregivers (MC)</td>
<td>100</td>
<td>6.64</td>
<td>4.92</td>
<td>.61</td>
<td>4.41</td>
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<td></td>
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<td>3.69</td>
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<tr>
<td>Stress (T)</td>
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<td>Caregivers (MC)</td>
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<td>2.08</td>
<td>7.68</td>
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<td></td>
<td>Noncaregivers (NC)</td>
<td>100</td>
<td>29.56</td>
<td>13.17</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

*< 0.01, **< 0.05

In the next dimension, Physical Health (PH), higher stress level was observed in caregiving mothers as in non-caregiving mothers. Caregiving mothers were too stressed carrying physical activities which involves nursing their mentally challenged children. Hence it lead to increased stress levels. The next dimension, Social Relationships (SR), shows that caregiving mothers suffered partially alone due to lack of social relationships hence, leading to low self-esteem. The last dimension where Emotional Health (EH) was concerned, caregiving mothers experience anxiety or severe depression, felt caught in the middle by providing care to children and elderly members and thus became emotionally unstable leading to increased stress levels.

Finally on observing the total scores of stress, where the t-ratio came out to be 4.41 which is significant at 0.01 level, it may be concluded that there was significant difference between stress levels of caregiving and non-caregiving mothers. Mothers of mentally challenged children (caregiving mothers) had to deal with certain behaviours by care receivers to be particularly stressful including aggression, combative nature, wandering and incontinence.

Table 5 illustrates mean, SD, SED, t’-ratio and level of significance among Caregiving Mothers (MC)(N=100) and Non-caregiving Mothers (NC)(N=100) on coping response inventory.

In the second dimension i.e. Positive Reappraisal (PR), it was observed that non-caregiving mothers possessed the traits to see the brighter side to every situation as compared to caregiving mothers. In the third dimension, i.e. Seeking Guidance (SG), significant difference was observed between caregiving mothers and non-caregiving mothers. It was found that caregiving mothers preferred
more to seek guidance from others as compared to non-caregiving mothers. The fourth dimension *i.e.* Problem Solving (PS), caregiving mothers used problem solving strategy significantly more to cope with the stressful situations as compared to non-caregiving mothers. The fifth dimension *i.e.* Cognitive Appraisal (CA), lead us to interpret that caregiving mothers overcame the stressful situations by avoiding the long-term thought process as compared to non-caregiving mothers.

In the sixth dimension *i.e.* Acceptance Resignation (AR), it was seen that caregiving mothers avoid the situations where they had to accept resignation. Hence, they were less able to adopt this strategy as compared to non-caregiving mothers. In the seventh dimension *i.e.* Seeking Rewards (SR), non-caregiving mothers coped with their situation by expecting less rewards from their children as compared to caregiving mothers who have higher expectations. The eighth Dimension Emotional Discharge (ED) is where caregiving mothers showed higher emotional discharge as compared to non-caregiving mothers and hence coped less with the situation. In the first dimension Logical Analysis (LA), no significant difference was observed. Hence, with total scores, *t*-ratio of 4.45 and significance at 0.01 level, caregiving mothers (mothers of mentally challenged children) adopted more of approach and avoidance strategies of coping as compared to non-caregiving mothers (mothers of normal children).

### Table 5: Mean, SD, *t*-Ratio and Significance Level between Caregiving Mothers (MC) and Non-caregiving Mothers (NC) in Coping and its dimensions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Dimensions</th>
<th>Category</th>
<th>N</th>
<th>MEAN</th>
<th>SD</th>
<th>SED</th>
<th>t</th>
<th>Sig.</th>
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<td>.35</td>
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<td>.142</td>
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</tr>
<tr>
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<td>PR</td>
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<td></td>
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<td>3.50</td>
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<td>5.34</td>
<td>.000*</td>
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<td>.43</td>
<td>3.56</td>
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<td>3.63</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>SR</td>
<td>Caregivers (MC)</td>
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<td>12.83</td>
<td>2.77</td>
<td>.46</td>
<td>4.41</td>
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<td></td>
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<tr>
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<td>.38</td>
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<td>.009*</td>
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<td></td>
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<td>12.85</td>
<td>1.60</td>
<td>4.45</td>
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<td></td>
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<td>81.17</td>
<td>9.68</td>
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</tbody>
</table>

*< 0.01, **< 0.05
The present results find support from the findings of Kausar et al. (2003) who focused their study on exploring and understanding the experiences of hope in families of children with disabilities. The findings revealed hope as a dynamic process that helped parents to reframe their lives in view of the experience of having a child with special needs. Findings also supported the recent research that having a child with disability contributed to personal and spiritual growth, family stability, and personal hopefulness. Thus, hope has been identified as a positive transformation and dynamic process that helped parents to reframe their lives in view of their experience with children with disabilities.

Feinberg et al. (2004) conducted a study on 50 states of Columbia to analyse Family Caregiver Support. It was found that there was both an increasing availability of publicly funded caregiver support services, as well as a great unevenness of services and service options for family caregivers across the states and within states.

Moen et al. (1995) conducted a research on caregiving and women’s well-being. This study was conducted at Cornell University. It was found, using ordinary least square regression, that the effects of caregiving on women’s emotional health were moderated by their previous psychological well-being. Other moderators were previous social integration (in the form of religiosity and multiple-role involvements) and other nonfamily roles (workers and volunteer) currently occupied.

**CONCLUSION**

It may be concluded that caregiving mothers perceived less subjective well-being, social support, in comparison to non-caregiving mothers whereas it may be seen that caregiving mothers perceived considerably more hope, stress and used more coping strategies in comparison to non-caregiving mothers.

**Implications**

Non-caregiving mothers perceived higher subjective well-being and social support than caregiving mothers because of the fact that they were more satisfied by their role in the development of the child and received more support from friends, family and relatives than caregiving mothers. It was also observed that caregiving mothers perceived considerably more stress and hope in comparison to non-caregiving mothers because caregiving mothers were much more worried about the future of their child, they often got disappointed by the performance of their child. Hence, they (caregiving mothers) used more of coping strategies. Hence intervention therapies may be given to caregiving mothers in order to regain their self confidence and boost up their morale.
REFERENCES


ASSESSMENT OF EMOTIONAL INTELLIGENCE ACROSS DEMOGRAPHIC VARIABLES

Narendra Singh* and Karnika Gupta**

ABSTRACT

The study investigated the effect of demographic determinants on Emotional Intelligence (EI) of University students. The EI scale developed by Bhattacharya and associates with some modifications was introduced on a sample of 200 respondents pursuing PG, MPhil and PhD courses. Descriptive statistics and test instruments: t-test and F-test facilitated the objectives. It is found that higher education students are more goal oriented and facilitates emotions but make it difficult to overcome interpersonal conflict may be due to their less experience. Further, results corroborated urban residents and male students with higher EI, but mean scores also differed on certain EI components in favour of their counterparts. No clear-cut trend became visible on educational qualifications yet some EI dimensions privileged the research students and others favoured students of PG for their elevated EI. Commerce academics ranked high on ‘management of negative emotions’, ‘appraisal of positive emotions’ and ‘emotional facilitation and goal-orientation’. Science academics obtained high EI on interpersonal dimensions but students from Arts faculty exhibited low EI on all the components. The results on family income originated uniform on all EI dimensions where students from high-status families were found having high EI.

Key Words: Emotional Intelligence, Gender, Age, Residential Status, Educational Levels and Field of Study

* Professor, Department of Commerce, Kurukshetra University, Kurukshetra – 136119 (Haryana), India. Email – Profnsingh@gmail.com Contact No. : 91 + 98961 23947

** Research Fellow (UGC), Department of Commerce, Kurukshetra University, Kurukshetra – 136119, (Haryana), India, Email – karnikagupta7@gmail.com, Contact No. : 91 + 92537 65375
Health, now a days, is viewed in more optimistic terms, rather than simply absence of disease. It is quite possible for a person to be free of disease but still not enjoy a vigorous satisfying life. Researches have shown that clinical psychology for years have mainly focused on diagnosis and treatment of psychopathology, but eliminating excess negative does not produce happiness, it produce emptiness (Lewis, 2006). Henry Sigerist, in 1941, defined health in positive terms “Health is…….. not simply the absence of disease: it is something positive, a joyful attitude towards life, and a cheerful acceptance of responsibilities that life put upon the individual.” Now Psychology has shifted its intellectual energy to the study of positive aspects of human experience as a challenge against the disease model of Psychology, shifting the focus from understanding and remedy of human problem and diseases to what makes life productive, fulfilling happy and worth living.

Recently, researches have focused on understanding, explaining and enhancing happiness and subjective well-being, and accurately predicting factors that influence such states. Well-being and Happiness refers to both positive feelings such as joy or serenity, and to positive states such as those involving flow or absorption. But one of the most fundamental problem in research in this field is uncertainty about which factors are the causes and which are the consequences. However, most the variables identified as the causes are also descried as the consequences such as social support, life events, spiriyuality, personality, intelligence.

Emotional intelligence is a significant predictor of life satisfaction and health (Petrides, Pita and Kokkinaki, 2007; Extrema, Duran and Rey, 2007 and Hooda, Sharma and Yadava, 2008; Kong, Zhao and You, 2012).

Emotional Intelligence is attaining attention of researchers for elaborating the competencies of individuals that works beyond the traditional concept of academic intelligence. In the words of Singh (2006), academic intelligence which is measured as Intelligent Quotient (IQ) is related to the thinking part (the head) and emotional intelligence which is gauged with Emotional Quotient (EQ) is engaged with the feelings (the heart). For achieving success, the two must be synchronised and the thinking should be directed together with bright and breezy emotions. Goleman (1995) and Singh (2006) maintain that solely EQ factor explains 80% of one’s success in life; the nominal balance is the IQ which ultimately function with EQ. For this reason, emotional intelligence has received much attention in understanding and predicting individuals’ performance at home, education, occupation and society. The work of Mayer et al. (1999); Bar-On (2000) and Goleman (1995; 2001) provides some guiding principles concerning implementation and development of EI, which can improve individual’s performance level. Here a point is worth mentioning that if EI strongly affects performance, there must be factors which influence EI too. Singh (2006)
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recommends that EQ ripens with maturity, with increasing age and with experiences through which a person progresses from childhood to the upper age. Some studies obtain that EQ varies with gender (Katyal and Awasthi, 2005; Bindu and Thomos, 2006) and some other are recently added in literature to show the influence of some demographic factors such as living place, income and academic curriculum on EI (Kumar and Muniandy, 2012; Marzuki et al., 2012; Nasir and Iqbal, 2012; S Rao, 2012). The present paper also endeavours to reveal how emotional intelligence varies with certain demographic characteristics of individuals. Higher education students are targeted as they are near to begin their carrier, and it is the level of EQ in their personality which can predict their success rate. The next section, in this way, demonstrates the concept of EI and the means of measuring it.

**Emotional Intelligence**

Emotional Intelligence was defined differently by academics. Goleman (1995) described EI as a skill of self-control, zeal, persistence and the ability to motivate oneself. Mayer et al. (1999) viewed EI as a set of individual abilities: to perceive accurately, to appraise and express emotions, to access and generate feelings when they facilitate thought, to understand emotions and emotional knowledge, and to regulate emotions to promote emotional and intellectual growth. According to Bar-On (1997), emotional intelligence get reflected in one’s ability to deal with daily environment challenges and help predict one’s success in life including professional and personal pursuits. In a later study, the same author described it as an array of emotional and social knowledge and abilities that influence one’s overall capability to effectively cope with environmental demands (Bar-On, 2000). In this way, as the work began on EI, various authors viewed and worded it differently and now it can be understood that it is an umbrella term that captures a range of both interpersonal and intrapersonal skills. Interpersonal skills consist of a person’s aptitude to understand the feeling of others. Intrapersonal, on the other hand, comprise of the abilities to understand one’s own emotions. To measure these interpersonal and intrapersonal abilities of individuals i.e. EI, researchers have developed various standardised instruments and scales.

Times ago, Mayer et al. (1999) developed and tested Multi-Branch Emotional Intelligence Scale (MEIS) based on Mental Ability Model as a measure of EI with twelve sub-scales. Schutte et al. (1998) too targeted the Mental Ability Model and constructed his Self Report Emotional Intelligence Test (SREIT). Quite the reverse, Bar-On (1997) introduced Bar-On Emotional Quotient Inventory on the basis of Mixed Model. After that Mayer-Salovey – Caruso Emotional Intelligence Test (MSCEIT) was designed to overcome the problems associated with previously prevailing MEIS scale (Pant and Prakash, 2004). The Emotional Competency Inventory (ECI) is another multi-rater instrument based on a series
of behavioural indicators of emotional intelligence. Some other scales that are
developed includes: Emotional Intelligence Appraisal (EIA); Work Profile
Questionnaire Emotional Intelligence Version (WPQEI) and The Levels of
Emotional Awareness Scale (LEAS). Hence, a variety of instruments are developed
to measure EI.

Further, authors have also provided some different ideas and views. 
Bhattacharya et al. (2004) and Pant and Prakash (2004), by highlighting the
importance of cultural context in EI, mention that cultural aspects may be
important as it provides beliefs about emotional states, a vocabulary for
discriminating them and a set of socially acceptable attributes. In the light of this
fact, Bhattacharya and his associates developed a 40 item; psychometrically
valid scale and identified its factor structure in India. The scale is divided into
five factors: Appraisal of Negative Emotions, Appraisal of Positive Emotions,
Interpersonal Conflict and Difficulties, Interpersonal Skills and Flexibility, and
Emotional Facilitation and Goal Orientation. In their publication, they mentioned
that the scale is based on Mental Ability Model and both intrapersonal (self-
referential) and interpersonal in nature. The first two factors are ‘self-referential’
as these measure the ability to recognise and control one’s own emotions and
understand what these emotions are telling them. The third and forth factors are
interpersonal meant for forms of EI which are necessary for building trust,
creating a sense of identity and efficacy, cooperating and solving problems with
others and participating productively in a group. The present study employs the
same scale for measurement of EI with some preferred modifications according
to student sample.

The studies have demonstrated that individuals with high emotional intelligence
are more productive, better motivated, self-controlled and more satisfied than
those who are not emotionally intelligent. Thus, emotional intelligence became a
hot topic of research in Industry to find out its relationship with job satisfaction,
productivity and work performance (Zeidner et al., 2004; Hosseinian et al.,
2008). Some researchers correlated EI with leadership behaviour and team work
(Kailash et al., 2004; Jayan, 2006). The work of Harrod and Scheer (2005) and
Jorfi et al. (2011) highlighted the effect of demographic and cultural variables
on EI. Some studies, among demographic features, specifically concentrated on
gender differences (Katyal and Awasthi, 2005; Bindu and Thomos, 2006). Health
related studies too emphasised on inclusion of emotional intelligence (Extremerra
and Fernandez-Berrocal, 2006). However, the present literature review is limited
to only those studies which match with the present purpose of identifying the
influence of socio-demographic influencers on EI.

Harrod and Scheer (2005) conducted a study on a sample of 200 adolescents
of Midwestern States, USA. A significant positive correlation of emotional
intelligence was found with level of education and household income. Male and
female students differed significantly on the measure of EI. Age and location of residence showed no significant association. However, a positive correlation has also been obtained between mother’s education, household income and EI.

Katyal and Awasti (2005) explored gender differences in emotional intelligence among adolescents of Chandigarh. The findings revealed that majority of boys, girls and the total sample had good level of emotional intelligence. Girls were found having higher emotional intelligence than boys but due to insignificant results they concluded that the above finding may not be conclusive but may suggestive of the trend.

Aremu et al. (2006) investigated the relationship among emotional intelligence, parental involvement and academic achievement. Sample of 500 secondary school students was drawn from Ibadan, Oyo state, Nigeria. Significant positive relationship was obtained between emotional intelligence and academic achievement inferring that EI assertively contribute to one’s academic success in life.

Adeyemo (2008) examined demographic characteristics and emotional intelligence among workers in some selected organisations in Oyo State, Nigeria. Female workers were obtained with high emotional intelligence. Age, marital status and educational qualifications did not reveal any significant relationship with EI.

Waddar and Aminabhavi (2010) investigated emotional intelligence of post graduate students who stayed at home or in hostels. Two hundred post graduate students from different departments of Karnataka University were selected in sample. The findings revealed that students differed significantly according to their stay in homes or in hostels. Some of the demographic variables such as age, gender, order of birth and caste significantly contributed in making students’ emotional intelligence.

Jorfi et al. (2011) examined the relationship between demographic factors, emotional intelligence, communication effectiveness, motivation and job satisfaction. They concluded that emotional intelligence was the most important factor in sustaining communication effectiveness and job satisfaction. The demographic variables: age, gender, job position, educational level and work experience also had positive relationship with EI.

Kumar and Muniandy (2012) while studying polytechnic teachers in Malaysia observed no significant difference between male and female lecturers, however female lecturers’ level of EI was slightly high compared to male lecturers. Age group greater than 40 recorded the highest score with significance. Occupational level and academic qualifications were found positively correlated with EI. Working experience of respondents’ as a Lecturer showed a significant difference in between groups, but the prior working experience (other than lecturer) revealed no reliable mean difference.

Marzuki et al. (2012) investigated demographic differences in emotional intelligence among students selected from 10 public universities in Malaysia.
findings revealed that majority of male-female showed low scores in emotional intelligence; however, no significant difference was obtained. Rural areas and small towns’ residents significantly differed from people belonging to cities and had low emotional intelligence. Also, students from full boarding schools and majority of students who took science and technical courses had high emotional intelligence levels than students from arts orientation with statistically reliable differences.

Nasir and Iqbal (2012) studied 595 randomly selected students for their emotional intelligence chosen from three public universities in Islamabad. The research instrument was divided into two sections. The first section obtained demographic information and the second section included a validated version of Bar-On Emotional Quotient Inventory to measure emotional intelligence. Age, mother’s education and father’s education appeared as significant predictors of emotional intelligence. On the other hand, gender and locality did not show any significant result.

S Rao (2012) studied the effect of emotional intelligence on the sample of 561 MBA students in Bangalore. Convenience sampling technique was used to select the colleges. The EI inventory was composed of 20 statements. Analysis showed no significant difference in EI scores of male and female students and students belonging to nuclear and joint families. The educational level, place of stay and family income did not affect EI levels as statistically the results were insignificant.

**Objectives**

Emotional Intelligence as a factor is seen contributing to the overall success of human being in work, education and social life. Therefore the present study is centred towards exploring the factors that drive this intelligence (EI). Specifically, the study is designed to achieve the following objective.

1. To investigate Emotional Intelligence of students across demography.

**METHOD**

**Tools**

(i) *Personal Data Sheet*: Personal Data Sheet consisted of information regarding socio-demographical variables such as age, gender, residential status, educational level etc. Socio-demographic variables: gender, residential place and field of study were measured on a nominal scale while educational level and family income are ordinal measures.

(ii) *Emotional Intelligence (EI) Scale*: EI scale developed by Bhattacharya and his associates was used to assess the emotional intelligence of the subjects. Originally, the scale contained forty items but to exercise it on students’ sample, two items which seemed specifically related to
workplace EI were not included. For simplification, some of items are little changed and worded in a manner that students can easily understand them and mark their response appropriately. The second part dealt with socio-demographic variables which are analysed as determinants of students’ emotional intelligence. EI is measured on five point scale ranging from never true to always true. Never true is scored as ‘1’ and always true as ‘5’. This scoring is reversed for the negative worded items. The Cronbach alpha reliability coefficient (α = 0.803) indicates a high level of internal consistency among the scale items.

Sample

The sample comprised 200 higher education students doing PG, MPhil and PhD in the faculty of Science, Commerce and Arts from Kurukshetra University. Science students exceedingly participated (% = 51.5) and filled the questionnaire handled to them while the least percentage was obtained for students from Commerce faculty (% = 20.5); 56 others (% = 28) originated from Arts background. A high sample percentage belonged to urban background (N = 123; % = 61.5) and majority of the students were female (N = 114; % = 57).

RESULT AND DISCUSSION

Descriptive statistics and inferential statistics both are utilised. Mean comparison as an average measure and standard deviation as a measure of dispersion is used. In case of variables with two categories (e.g. gender) t-test is performed and for variables more than two categories, one way analysis of variance with Scheffe post hoc multiple comparisons is applied as tests of significance. The analysis is run with the help of Statistical Package for Social Sciences (SPSS-Version 16).

During the stage of analysis, two of the EI items became useless because of inconsistent responses and were removed. Thus, the analysis is completed on 36 statements of EI measure. The present analysis is run on overall EI vis-à-vis on each EI factor. The corresponding statements of each factor as given by Bhattacharya et al. (2004) are added into their measurement indices namely: management of negative emotions, appraisal of positive emotions, overcoming interpersonal conflict and difficulty, interpersonal skill and flexibility and emotional facilitation and goal orientation. The factor “appraisal of negative emotions” is renamed as “management of negative emotions” and “interpersonal conflict and difficulty” is designated as “overcoming interpersonal conflict and difficulty”. The labels are little changed for the factors because the earlier description seemed misrepresenting the core meaning of emotional intelligence measure. Both the factors were previously worded in anti-EI direction, but the authors are of the view that as we are attempting to measure emotional intelligence not
reverse of it, the anti-EI indication seems inappropriate. Thus, in the first factor the word “appraisal” is changed with “management” and a prefix “overcoming” is added before the name of third factor. All the EI factors with their role and across students’ demographic features are defined.

EI of Students across Demography

The findings of emotional intelligence and its components on each socio-demographic variable is assessed and defined in this section. The results are described according to percentage, mean and inferential statistics and then the likely reasons of any specific finding are hypothesised. Previous studies are also contacted to obtain their agreement or disagreement about the present results.

Gender and EI: Table 1 reveals that majority of the sample respondents are female students (N = 114; % = 57) and presents gender mean across overall EI and its components. The overall EI index demonstrates males as high emotionally intelligent from their female counterparts ($\mu_{\text{Male}} = 131.72 > \mu_{\text{Female}} = 128.13$). The results contradicts Katyal and Awasti (2005); Shanwal (2005); Adeyemo (2008) and Kumar and Muniandy (2012). They all have obtained that emotional intelligence of females are superior to their male counterparts. However, the difference is statistically insignificant ($t = 1.683; p > 0.05$) and this also go against the finding of Harrod and Scheer (2005) for their significant results. In spite of this, the results may differ on separate EI dimensions and are also explained next in the line.

Table 1: Emotional Intelligence across Gender

<table>
<thead>
<tr>
<th>EI and its Components</th>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>S. D.</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management of Negative Emotions</td>
<td>Male</td>
<td>86</td>
<td>37.48</td>
<td>7.814</td>
<td>3.878</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>114</td>
<td>32.93</td>
<td>8.493</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appraisal of Positive Emotions</td>
<td>Male</td>
<td>86</td>
<td>35.69</td>
<td>5.890</td>
<td>-1.476</td>
<td>0.142</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>114</td>
<td>36.82</td>
<td>4.923</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overcoming Interpersonal Conflict and Difficulties</td>
<td>Male</td>
<td>86</td>
<td>16.01</td>
<td>3.376</td>
<td>3.191</td>
<td>0.002</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>114</td>
<td>14.44</td>
<td>3.507</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpersonal Skill and Flexibility</td>
<td>Male</td>
<td>86</td>
<td>22.41</td>
<td>3.539</td>
<td>-1.665</td>
<td>0.098</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>114</td>
<td>23.29</td>
<td>3.837</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional Facilitation and Goal-Oriented</td>
<td>Male</td>
<td>86</td>
<td>20.14</td>
<td>3.354</td>
<td>-1.773</td>
<td>0.078</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>114</td>
<td>20.92</td>
<td>2.869</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall EI</td>
<td>Male</td>
<td>86</td>
<td>131.72</td>
<td>16.289</td>
<td>1.683</td>
<td>0.094</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>114</td>
<td>128.13</td>
<td>13.823</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Management of Negative Emotions: A mean comparison confirms that males give little value to negative emotions in their life and remain consistent even in adverse situations. As female mean is less than male mean ($\mu_{\text{Female}} = 32.93 < \mu_{\text{Male}} = 37.48$), it is concluded that they are more emotionally disturbed, not able to manage negative emotions and feel helplessness in bad moods. The
highly significant t-value ($t = 3.878; p < 0.01$) further clarifies that this difference is statistically reliable. The reason may be the difference in the nature of males and females. Females are more able to freely express their emotions. When women experience something bad, their mind tends to stay with those feelings. Quite the opposite, men experience these feelings for a moment, can easily turn out from them and switch to other work areas soon.

**Appraisal of Positive Emotions:** The mean value for this component goes in favour of female respondents as they have obtained high mean compared to male students ($\mu_{Female} = 36.82 > \mu_{Male} = 35.69$). The insignificant $t$-value however shows that the mean difference is not statistically significant ($t = -1.476; p > 0.05$). The likely reason for the finding is about the female high sense and sensations of others feelings. Men mostly think from their conscious mind which is based on logic, reasons, rules and regulations and most often ignore emotions over them. Females on the other hand, put into practice the subconscious mind, the essence of which is emotions based. That’s the reason they exhibit emotional empathy more highly than men and the positive emotions too.

**Overcoming Interpersonal Conflicts and Difficulties:** A significant gender difference is obtained for this factor ($t = 3.191; p < 0.01$). Calculated mean values reveal that male sense to control interpersonal conflict and difficulty is more, as their mean is higher than female segment. The reason may be attributed to more transactions that male experience as they remain occupied with out of home jobs in comparison to female, who confined themselves either at home or when in office, to less touring jobs. This enables the male to easily handle such conflict and difficulties.

**Interpersonal Skill and Flexibility:** Descriptive analysis on this dimension finds that although female mean is slightly high than male mean ($\mu_{Female} = 23.29 > \mu_{Male} = 22.41$), statistically this difference has not so much importance as $t$-value is insignificant ($t = -1.665; p > 0.05$). Women slightly have an edge over men may be because of their superiority in emotional empathy. Women can better feel the others’ feelings and thus are able to make and maintain good relationships with others. The kind of empathy fosters affinity and sympathy in them and they sense in few moments about others’ feeling and reactions.

**Emotional Facilitation and Goal-Orientation:** Female students’ mean is again slightly high over male students ($\mu_{Female} = 20.92 > \mu_{Male} = 20.14$). This explains women ability to understand others and their focus on their surroundings originate a quality of selflessness in them. Strengthening by this element in their personality they experience more stronger, satisfying and healthy relationships. All this facilitate them and contribute to their goal-orientation. But insignificant $t$-value confirms no noteworthy mean difference as it is less than the tabulated ($t = -1.773; p > 0.05$).
Residential Status and EI: According to residential status, 77 students (% = 38.5) belong to rural areas while 123 students (% = 61.5) belong to urban living places. Urban-rural comparison for EI is presented in table 2 in which the result goes in favour of students from urban living places, however with insignificance. Harrod and Scheer (2005) and Marzuki et al. (2012) are supported for the statistically insignificant results and low emotional intelligence for rural residents. Shanwal (2005) however is contradicted for findings in favour of rural individuals. The results acquired on the components of EI are described separately.

### Table 2: Emotional Intelligence according to Residential Level

<table>
<thead>
<tr>
<th>EI and its Components</th>
<th>Residential N</th>
<th>Mean</th>
<th>S.D.</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management of Negative Emotions</td>
<td>Rural</td>
<td>77</td>
<td>36.57</td>
<td>7.512</td>
<td>2.244</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>123</td>
<td>32.83</td>
<td>8.921</td>
<td></td>
</tr>
<tr>
<td>Appraisal of Positive Emotions</td>
<td>Rural</td>
<td>77</td>
<td>34.87</td>
<td>5.959</td>
<td>-3.104</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>123</td>
<td>37.24</td>
<td>4.778</td>
<td></td>
</tr>
<tr>
<td>Overcoming Interpersonal Conflict and</td>
<td>Rural</td>
<td>77</td>
<td>15.71</td>
<td>3.284</td>
<td>1.912</td>
</tr>
<tr>
<td>Difficulties</td>
<td>Urban</td>
<td>123</td>
<td>14.74</td>
<td>3.639</td>
<td></td>
</tr>
<tr>
<td>Interpersonal Skill and Flexibility</td>
<td>Rural</td>
<td>77</td>
<td>21.95</td>
<td>3.182</td>
<td>-2.942</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>123</td>
<td>23.51</td>
<td>3.926</td>
<td></td>
</tr>
<tr>
<td>Emotional Facilitation and Goal-Orientation</td>
<td>Rural</td>
<td>77</td>
<td>20.03</td>
<td>3.660</td>
<td>-2.031</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>123</td>
<td>20.93</td>
<td>2.654</td>
<td></td>
</tr>
<tr>
<td>Overall EI</td>
<td>Rural</td>
<td>77</td>
<td>129.13</td>
<td>16.090</td>
<td>0.169</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>123</td>
<td>130.02</td>
<td>14.333</td>
<td></td>
</tr>
</tbody>
</table>

**Management of Negative Emotions:** Mean comparison on first component shows that students who belong to rural areas are able to manage their negative emotions more firmly than students living in urban areas ($\mu_{\text{Rural}} = 36.57 > \mu_{\text{Urban}} = 33.83$). Statistically also, this difference is significant at 5% probability level ($t = 2.244; P < 0.05$). The reason for the finding may be attributed to differences in family structure to which the students belong. In rural areas, most people live in joint families but in urban places, majority of the families are nuclear. While living in a joint family, a child develops mutual trust and more able to share and express feelings, so able to manage their negative feelings as well. Students who live in urban areas may be living in nuclear families and usually get less time and concentration of their parents and may feel isolated. This deprives them from the opportunity to express their thoughts, sorrows and feelings which lead them into stress and depression.

**Appraisal of Positive Emotions:** As against the results on first factor, here students who reside in urban places have an edge over students who reside in rural areas. Urban students obtain high average than their rural counterparts ($\mu_{\text{Urban}} = 37.24 > \mu_{\text{Rural}} = 34.87$) and the difference in mean is also significant.
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A child in urban environment progresses with freedom and openness in ideas and opinions. A more open mind understands and reflects imaginative ideas; then an individual obtains a position to consider all possibilities in a positive manner. That’s why urban students are highly appraising the positive emotions.

**Overcoming Interpersonal Conflicts and Difficulties:** As can be seen from the mean values of next factor, ($\mu_{\text{Rural}} = 15.71 > \mu_{\text{Urban}} = 14.74$); students from rural background are able to conquer interpersonal conflict and difficulties. This mean difference, however, is not significant on 5% significance level but can be expressed significant at 10% significance. The reason may again be the same of students’ origination from different family structures. Individuals face different system, cultures and working in the kind of families which may shape their emotional values too.

**Interpersonal Skills and Flexibility:** The mean difference among rural-urban categories, for this factor is significant at 1% probability level ($t = -2.942; p < 0.01$). As urban students scored high mean on this dimension they are ahead of rural students ($\mu_{\text{Urban}} = 23.51 > \mu_{\text{Rural}} = 21.95$). Students from urban cities may better apply interpersonal emotional skills and maintain flexibility in relationships by availing more amenities available in urban areas besides through various activities as joining of clubs, recreational activities and use of latest computer technology such as internet. However, for an effective communication, rural students need both skills and infrastructure for social interactions and development of interpersonal relationships.

**Emotional Facilitation and Goal-Oriented:** Urban students are again significantly high regarding their ability in managing emotions to facilitate them towards their goal-orientation ($\mu_{\text{Urban}} = 20.93 > \mu_{\text{Rural}} =20.03; t = -2.031; p < 0.05$). This difference may be explained on the similar ground of more opportunities, social activities, learning facilities and information technology facilities which can be utilised more in cities in comparison with rural places.

**Field of Study and EI:** It is evident from table 3A that taken as a whole (overall EI), students who belong to commerce background are emotionally intelligent ($\mu_{\text{Commerce}} = 133.95$) followed by science and arts academics ($\mu_{\text{Science}} = 129.73 > \mu_{\text{Arts}} = 126.45$). The result is very near to significance ($F = 3.024; p = 0.051$) and is said to match with Marzuki et al. (2012) as they have obtained that students who took science courses showed high emotional intelligence compared to arts courses.
Table 3A: Emotional Intelligence as per Field of Study

<table>
<thead>
<tr>
<th>EI and its Components</th>
<th>Field of Study</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Management of Negative Emotions</td>
<td>Science</td>
<td>103</td>
<td>34.65</td>
<td>8.75</td>
<td>0.583</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Commerce</td>
<td>41</td>
<td>36.15</td>
<td>9.15</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Arts</td>
<td>56</td>
<td>34.39</td>
<td>7.53</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Appraisal of Positive Emotions</td>
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<td>3.351</td>
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<td>Arts</td>
<td>56</td>
<td>35.45</td>
<td>7.62</td>
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<tr>
<td></td>
<td>Overcoming Interpersonal Conflict and Difficulties</td>
<td>Science</td>
<td>103</td>
<td>15.33</td>
<td>3.41</td>
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<td>Emotional Facilitation and Goal-Orientiation</td>
<td>Science</td>
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<td>Arts</td>
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Table 3B: Scheffe Post Hoc Multiple Comparisons of Field of Study

<table>
<thead>
<tr>
<th>Components of EI</th>
<th>(I) Field of Study</th>
<th>(J) Field of Study</th>
<th>Paired Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appraisal of Positive Emotions</td>
<td>Science</td>
<td>Commerce</td>
<td>-2.093</td>
<td>0.981</td>
<td>0.105</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>Science</td>
<td>0.631</td>
<td>0.882</td>
<td>0.774</td>
</tr>
<tr>
<td></td>
<td>Commerce</td>
<td>Arts</td>
<td>2.093</td>
<td>0.981</td>
<td>0.105</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>Science</td>
<td>-0.631</td>
<td>0.882</td>
<td>0.774</td>
</tr>
<tr>
<td></td>
<td>Commerce</td>
<td>Arts</td>
<td>-2.724</td>
<td>1.092</td>
<td>0.047</td>
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<td>Emotional Facilitation and Goal-Orientiation</td>
<td>Science</td>
<td>Commerce</td>
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<td>0.555</td>
<td>0.002</td>
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<td></td>
<td>Arts</td>
<td>Science</td>
<td>0.179</td>
<td>0.499</td>
<td>0.937</td>
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<td>Commerce</td>
<td>Arts</td>
<td>2.141</td>
<td>0.618</td>
<td>0.003</td>
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<tr>
<td></td>
<td>Arts</td>
<td>Science</td>
<td>-0.179</td>
<td>0.499</td>
<td>0.937</td>
</tr>
<tr>
<td></td>
<td>Commerce</td>
<td>Arts</td>
<td>-2.141</td>
<td>0.618</td>
<td>0.003</td>
</tr>
<tr>
<td>Emotional Facilitation and Goal-Orientiation</td>
<td>Science</td>
<td>Commerce</td>
<td>-4.223</td>
<td>2.742</td>
<td>0.308</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>Science</td>
<td>3.282</td>
<td>2.466</td>
<td>0.414</td>
</tr>
<tr>
<td></td>
<td>Commerce</td>
<td>Arts</td>
<td>4.223</td>
<td>2.742</td>
<td>0.308</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>Science</td>
<td>7.505</td>
<td>3.052</td>
<td>0.051</td>
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<tr>
<td></td>
<td>Commerce</td>
<td>Arts</td>
<td>-3.282</td>
<td>2.466</td>
<td>0.414</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>Science</td>
<td>-7.505</td>
<td>3.052</td>
<td>0.051</td>
</tr>
</tbody>
</table>

Vol. 8, No. 1, September, 2013
Management of Negative Emotions: Although, the mean differences in between science, commerce and arts categories are highly insignificant (F = 0.583; p > 0.05) but calculated mean scores present a unique scenario. Students from commerce background are high on the factor with highest mean score ($\mu = 36.15$) revealing that they can more appropriately manage their negative emotions as compared to students studying science and arts courses. The probable reason of elevated EI of commerce group is the changing dimensions and parameters upon which the businesses were conducted previously. Now, EI has a unique place and there are courses about how this intelligence can be enhanced.

Appraisal of Positive Emotions: The result on this factor again complements the previous result of high mean score of commerce academics than their correspondents ($\mu_{\text{Commerce}} = 38.17 > \mu_{\text{Science}} = 36.08 > \mu_{\text{Arts}} = 35.45$). Noteworthy mean differences are also obtained at a 5% significance level. Scheffe post-hoc multiple comparisons (table 3B) further clarify this significant difference on the ground of noteworthy mean difference between students of arts and commerce courses (Mean Difference = 2.72; p < 0.05). An explanation of this result can be obtained on the similar ground as defined in the earlier point.

Overcoming Interpersonal Conflict and Difficulties: As can be seen by the insignificant ANOVA value (F = 0.44; p > 0.05) the mean differences are not statistically generalisable but science oriented students are ahead of their two counterparts. Conflict arises because different people have different perspectives regarding any topic of discussion. The factor which is contributing to high mean score of science academics is the value they give to logical and scientific reasoning to overcome the conflicting situations and difficulties.

Interpersonal Skill and Flexibility: Once again, students from science background are scoring high mean compared to their other two equivalents ($\mu_{\text{Science}} = 23.44 > \mu_{\text{Commerce}} = 22.68 > \mu_{\text{Arts}} = 22.11$). As they follow more logic as compared to arts and commerce academics, they are high on interpersonal dimensions of emotional intelligence.

Emotional Facilitation and Goal Orientation: The result on this factor once again goes in favour of students from commerce background; followed by science and arts academics. ($\mu_{\text{Commerce}} = 22.20 > \mu_{\text{Science}} = 20.23 > \mu_{\text{Arts}} = 20.05$). This mean difference is also found statistically significant at 1 % significance level (F = 7.456; p < 0.01). According to post-hoc test among the three categories (table 3B), the mean difference for science and commerce courses and commerce and arts courses students are considerable, leading the whole result towards significance. The subjects which are taught to commerce students divert their mind only in one direction of achieving the enterprise goals and managing all the inputs and resources to this direction. Perhaps, this subjective approach is reflecting in this finding.
Educational Level and EI: In terms of educational level, the maximum students are in the course of post-graduation (N = 113); 39 are doing M.Phil and 48 others are the doctoral candidates. Although, the mean differences are not significant ($F = 1.426; p > 0.05$) but as measured by the overall EI index, the students at M.Phil level are found with high mean value ($\mu = 132.85$). Therefore, there is said to be an inverted U relationship between academic level and EI which disagree with Harrod and Scheer (2005) and Jorfhi et al. (2011) for significant positive results on EI in relation with educational qualifications.

### Table 4A: Emotional Intelligence with Educational Level

<table>
<thead>
<tr>
<th>EI and its Components</th>
<th>Education Levels</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management of Negative Emotions</td>
<td>PG</td>
<td>113</td>
<td>34.37</td>
<td>7.39</td>
<td>2.882</td>
<td>0.058</td>
</tr>
<tr>
<td></td>
<td>M.Phil</td>
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<td>37.74</td>
<td>7.91</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>PhD</td>
<td>48</td>
<td>33.77</td>
<td>10.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appraisal of Positive Emotions</td>
<td>PG</td>
<td>113</td>
<td>36.90</td>
<td>5.19</td>
<td>3.419</td>
<td>0.035</td>
</tr>
<tr>
<td></td>
<td>M.Phil</td>
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<td>36.82</td>
<td>5.63</td>
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<tr>
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<td>PhD</td>
<td>48</td>
<td>34.58</td>
<td>5.32</td>
<td></td>
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<tr>
<td>Overcoming Interpersonal Conflict and Difficulties</td>
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<td>3.75</td>
<td>0.850</td>
<td>0.429</td>
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<td></td>
<td>M.Phil</td>
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<td>14.69</td>
<td>2.96</td>
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<td>PhD</td>
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<td>15.65</td>
<td>3.42</td>
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<td>Interpersonal Skill and Flexibility</td>
<td>PG</td>
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<td>23.09</td>
<td>4.14</td>
<td>0.315</td>
<td>0.730</td>
</tr>
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<td>M.Phil</td>
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<td>22.59</td>
<td>3.08</td>
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<tr>
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<td>PhD</td>
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<td>22.75</td>
<td>3.20</td>
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</tr>
<tr>
<td>Emotional Facilitation and Goal-Orientation</td>
<td>PG</td>
<td>113</td>
<td>20.41</td>
<td>3.16</td>
<td>0.549</td>
<td>0.579</td>
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<tr>
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<td>M.Phil</td>
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<td>3.61</td>
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</tr>
<tr>
<td></td>
<td>PhD</td>
<td>48</td>
<td>20.67</td>
<td>2.48</td>
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<tr>
<td>Overall EI</td>
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<td>113</td>
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<td>132.85</td>
<td>15.39</td>
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<td></td>
<td>PhD</td>
<td>48</td>
<td>127.68</td>
<td>17.15</td>
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### Table 4B: Scheffe Multiple Comparisons of Educational Level

<table>
<thead>
<tr>
<th>Component of EI</th>
<th>Educational Level (I)</th>
<th>Paired Comparison (J)</th>
<th>Mean (I-J) Difference</th>
<th>Std. Error</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appraisal of Positive Emotions</td>
<td>PG</td>
<td>M.Phil</td>
<td>0.082</td>
<td>0.986</td>
<td>0.997</td>
</tr>
<tr>
<td></td>
<td>PG</td>
<td>PhD</td>
<td>2.319</td>
<td>0.915</td>
<td>0.042</td>
</tr>
<tr>
<td></td>
<td>M.Phil</td>
<td>PG</td>
<td>-0.082</td>
<td>0.986</td>
<td>0.997</td>
</tr>
<tr>
<td></td>
<td>M.Phil</td>
<td>PhD</td>
<td>2.237</td>
<td>1.145</td>
<td>0.151</td>
</tr>
<tr>
<td></td>
<td>PhD</td>
<td>PG</td>
<td>-2.319</td>
<td>0.915</td>
<td>0.042</td>
</tr>
<tr>
<td></td>
<td>PhD</td>
<td>M.Phil</td>
<td>-2.237</td>
<td>1.145</td>
<td>0.151</td>
</tr>
</tbody>
</table>

Management of Negative Emotions: An inverted U relationship is again attained for the factor but with insignificance ($F = 2.882; p > 0.05$). The PhD scholars are showing the least mean value. This is not the education which
causes negativity but is the adverse external environment which we often fail to realise. The unfortunate conditions and unhealthier competition promote negative feelings of helplessness and powerlessness in students and demote their optimism, positivity and self-confidence. On the high level of study, the expectations of individual from himself/herself and the associated expectations of others from him/her become prominent. Many problems are faced in the process of enduring these expectations which generates the negative feelings of fear, distress, disappointment and guilt in them. Then, they did not act on desire but because of duty, force and obligation. That’s why although it may be expected that the persons who are in the process of high education must be capable of managing their negative emotions but there also remains a dark side because of bad experiences of life.

Appraisal of Positive Emotions: It is obvious from table 4A that there is a significant negative relationship between appraisal of positive emotions and educational level. The students at post-graduation level are highly apparent in positive emotions. The reason may be their tension free mind and a good informal circle of friends and fellows. In the company of good friends, people always experience a lot of positive emotions such as joy, happiness, pleasure and satisfaction. On the opposite side, the impact of negative emotions may be too trembling that may overcome the time of positivity for students at higher courses (such as PhD) because of tension for their job and future.

Overcoming Interpersonal Conflict and Difficulties: By the way of mean values it can be concluded that these are the doctoral candidates who are able to overcome and govern any conflicts and difficulties they experience while transacting interpersonally ($\mu = 15.65$). The reason may be their high age as compared to other groups. Their maturity develops this ability in them.

Interpersonal Skill and Flexibility: In trouble-free words, it is demonstrated that the mean differences for the factor have not much importance as obtained insignificant ($F = 0.315; p > 0.05$). Slightly different mean values, however reveals that the mean score of post-graduation level students is high than their other two counterparts. As the factor measures students’ good relationships with their friends and teachers and their ability to change their views if are found wrong. The result is reinforced with the previous explanation as students at this level may be living an informal life with their friends and associates and may have flexibility in thoughts at this age.

Emotional Facilitation and Goal-Orientation: The results on the factor are attained not significant ($F = 0.549; p > 0.05$) but students of M.Phil scored high mean, followed by PhD scholars and post-graduate students. M.Phil and PhD, both are the research degrees and scholars have to individually face their research problem which enables them to become goal oriented. Further while collecting data and other related research tasks they have to approach so many different people which require both patience and articulation that attain facilitation.
Economic Status and EI: Consistent with table 5A, maximum number of students belong to families that are average in economic status (N = 79; % = 39.5) and symmetrically distributed in the other two (low-High) categories. The students from families with high economic status are exceedingly high in their emotional intelligence as their mean score is very high on the measure of overall EI index ($\mu = 136.25$). These mean differences are also highly significant ($F = 8.903; p < 0.05$). Scheffe post-hoc multiple comparisons further explains significant mean differences between low-high and average-high paired groups. The finding of positive correlation between economic status and emotional intelligence by Harrod and Scheer (2005) is highly supported here.

**Table 5A: Emotional Intelligence in relation to Economic Status**

<table>
<thead>
<tr>
<th>EI and its Components</th>
<th>Income Levels</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>F-Value</th>
<th>Sig.</th>
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</thead>
<tbody>
<tr>
<td>Management of Negative Emotions</td>
<td>Low</td>
<td>61</td>
<td>33.75</td>
<td>8.44</td>
<td>7.968</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>79</td>
<td>33.09</td>
<td>9.29</td>
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<td></td>
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<td></td>
<td>High</td>
<td>60</td>
<td>38.40</td>
<td>6.21</td>
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<tr>
<td>Appraisal of Positive Emotions</td>
<td>Low</td>
<td>61</td>
<td>36.13</td>
<td>5.72</td>
<td>4.710</td>
<td>0.010</td>
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<td></td>
<td>Average</td>
<td>79</td>
<td>35.23</td>
<td>5.76</td>
<td></td>
<td></td>
</tr>
<tr>
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<td>High</td>
<td>60</td>
<td>37.98</td>
<td>3.99</td>
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<td></td>
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<tr>
<td>Overcoming Interpersonal Conflict and Difficulties</td>
<td>Low</td>
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<td>14.31</td>
<td>3.26</td>
<td>2.322</td>
<td>0.101</td>
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<tr>
<td></td>
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<td>15.42</td>
<td>3.43</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>60</td>
<td>15.53</td>
<td>3.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpersonal Skill and Flexibility</td>
<td>Low</td>
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<td>23.10</td>
<td>4.88</td>
<td>1.594</td>
<td>0.206</td>
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<td>Average</td>
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<td>22.35</td>
<td>3.13</td>
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</tr>
<tr>
<td></td>
<td>High</td>
<td>60</td>
<td>23.45</td>
<td>3.00</td>
<td></td>
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</tr>
<tr>
<td>Emotional Facilitation and Goal-Orientation</td>
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<td>20.30</td>
<td>3.37</td>
<td>0.541</td>
<td>0.583</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>79</td>
<td>20.58</td>
<td>2.88</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>High</td>
<td>60</td>
<td>20.88</td>
<td>3.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall EI</td>
<td>Low</td>
<td>61</td>
<td>127.10</td>
<td>15.14</td>
<td>8.903</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>79</td>
<td>126.67</td>
<td>15.44</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>60</td>
<td>136.25</td>
<td>12.16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Management of Negative Emotions: The results on the factor reveals that low status and average status families differ slightly in mean but the mean of students from high status families is significantly excessive than the other two groups ($\mu = 38.40; F = 7.968; p < 0.01$). According to post-hoc test in table 5B, the significant difference is between low-high and average-high status families, because of which, the F-value is also reflecting as significant. The likely reason on the part of high-status group is their reach to the resources and means which can pull them out from the moments of despondency. Due to available financial and other means, they may enjoy many alternatives and can easily get rid off from the adverse circumstances.
Table 5B: Post-hoc Multiple Comparison of Economic Status and EI

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>I (Economic Status)</th>
<th>J (Paired Comparison)</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management of Negative Emotions</td>
<td>Low Income</td>
<td>Average</td>
<td>.67</td>
<td>1.399</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>High</td>
<td>-4.65</td>
<td>1.493</td>
<td>0.009</td>
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<tr>
<td></td>
<td>Average</td>
<td>Low</td>
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<td>1.399</td>
<td>0.893</td>
</tr>
<tr>
<td></td>
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<td>High</td>
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<td>1.406</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>High Income</td>
<td>Low</td>
<td>4.65</td>
<td>1.493</td>
<td>0.009</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Average</td>
<td>5.31</td>
<td>1.406</td>
<td>0.001</td>
</tr>
<tr>
<td>Appraisal of Positive Emotions</td>
<td>Low Income</td>
<td>Average</td>
<td>.90</td>
<td>.900</td>
<td>0.605</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High</td>
<td>-1.85</td>
<td>.960</td>
<td>0.158</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>Low</td>
<td>-.90</td>
<td>.900</td>
<td>0.605</td>
</tr>
<tr>
<td></td>
<td>Income</td>
<td>High</td>
<td>-2.76</td>
<td>.904</td>
<td>0.011</td>
</tr>
<tr>
<td></td>
<td>High Income</td>
<td>Low</td>
<td>1.85</td>
<td>.960</td>
<td>0.158</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Average</td>
<td>2.76</td>
<td>.904</td>
<td>0.011</td>
</tr>
<tr>
<td>Overall EI</td>
<td>Low Income</td>
<td>Average</td>
<td>.43</td>
<td>2.461</td>
<td>0.985</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High</td>
<td>-9.15</td>
<td>2.625</td>
<td>0.003</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>Low</td>
<td>-.43</td>
<td>2.461</td>
<td>0.985</td>
</tr>
<tr>
<td></td>
<td>Income</td>
<td>High</td>
<td>-9.58</td>
<td>2.472</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>High Income</td>
<td>Low</td>
<td>9.15</td>
<td>2.625</td>
<td>0.003</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Average</td>
<td>9.58</td>
<td>2.472</td>
<td>0.001</td>
</tr>
</tbody>
</table>

**Appraisal of Positive Emotions**: The outcome on the factor again reflects the previous finding. High status group is intensely appraising the positive emotions ($\mu = 37.98$), may be because of their easy accessibility to resources besides social circle and network. They get opportunities to share their feelings with others and have the means to fully exploit the opportunities of life.

**Overcoming Interpersonal Conflicts and Difficulties**: The insignificant $F$-value ($F = 2.322; p < 0.05$) demonstrates no noteworthy mean differences between the three income categories but a little high mean again favours the high earning group ($\mu = 15.53$). Students from this category are more able to overcome the problems and difficulties in interpersonal relationships; again may be because of their financial standing and support. Today, relations are based on materialism and money is a mechanism by which the undesirable situations can be dealt with.

**Interpersonal Skill and Flexibility**: If viewed from the mean perspective, there comes out to be direct relationship between economic status and interpersonal skills and flexibility ($\mu_{\text{High}} = 23.45 > \mu_{\text{Average}} = 22.35 > \mu_{\text{Low}} = 23.10$). The $F$ value however exclaims that the difference between these mean values are not of much concern due to insignificance ($F = 1.594; p > 0.05$). The matter with the low status group is the scarcity and deficiency of resources. All in all,
financial satisfaction again promotes the skills in wealthier people with which they can maintain warm and healthy relationships with others.

**Emotional Facilitation and Goal-Orientation:** The mean difference for this factor again come out as insignificant (F = 0.541; p > 0.05) but high economic status group is again favoured as they are also able to deflect their emotions in the direction of their goal accomplishment. They have again got slightly high mean from the other two categories (μ = 20.88). The base for the finding is constant. When students from high earning class are able to manage the negative emotions and highly appraising the positive ones, the task of facilitating these emotions to achieve their goals are appropriately done. Their head and heart both endeavour for the same and work only in one direction without any controversy.

**CONCLUSION**

The study contains measurement of emotional intelligence and its dimensions. On average, the level of students’ emotional intelligence is satisfactory but they are struggling in overcoming conflict and difficulties in interpersonal relationships. As they will be the future makers and caretakers of society and country, they need to enhance the emotional skill of maintaining healthy relationships with others. Summarising the results, it is concluded that on the substantive EI dimensions, the level of EI vary according to students’ socio-demographic profile. The results on family income are only found consistent on all five EI dimensions where students from high-status families originate with high EI. Commerce academics remain high on ‘management of negative emotions’, ‘appraisal of positive emotions’ and ‘emotional facilitation and goal-orientation’. Students from science background are high on two interpersonal EI components and students from Arts background remained low on all the measures. Educational level showed no clear cut trend. Consistent with residential status and gender, urban residents and male students achieved high EI levels but mean scores significantly differed on various EI components in favour of their rural and female counterparts respectively and these are the areas for further research. Thus, it can be implied that Emotional Intelligence vary across socio-demographical variables. So, relationship of EI with various dimensions of health may also vary across the demographical groups. Therefore, different intervention programmes to enhance EI and health should be designed accordingly.

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*Journal of Indian Health Psychology*
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ADJUSTMENT AND DEPRESSION AMONG WIVES OF ALCOHOLICS AND NON-ALCOHOLICS

A. Velayudhan*, Priyanka M.S.** and Justine K. James ***

ABSTRACT

The goals of this study were to find out (i) the difference in Adjustment among wives of Alcoholics and Non-alcoholics, (ii) the difference in Depression among wives of Alcoholics and Non-alcoholics and (iii) the relationship between Adjustment and Depression. The study was done on 120 wives of which 60 are wives of Alcoholics and 60 are wives of Non-alcoholics. Indian adaptation of Bell’s Adjustment Inventory by Dr. Lalitha Sharma was used to assess the Adjustment (Family Adjustment, Social Adjustment, Emotional Adjustment and Health Adjustment) and Beck’s Depression Inventory by Aaron T Beck was used to assess the Depression. The results indicated a significant difference between wives of Alcoholics and Non-alcoholics in each areas of Adjustment (Family Adjustment, Social Adjustment, Emotional Adjustment and Health Adjustment) and in Depression. The results also showed that there was a linear relationship between Adjustment and Depression. Wives of Alcoholics were poorly adjusted than Non-alcoholics. The level of Depression is high in Wives of Alcoholics and it is found that there is a relationship between Depression and Adjustment.

Key Words: Alcoholism, Adjustment, Family Adjustment, Social Adjustment, Emotional Adjustment, Health Adjustment, Depression.
According to the World Health Organisation (WHO) there are at least 140 million alcoholics in the world, and the majority of them are not treated. Heavy drinking is associated with psycho-socio-occupational impairment (Shepherd and Brickley, 1996; Pickworth et al., 1997; Hunt, 1993). Substance use disorders affect not only the identified client but significant others as well. Large proportion of young children are exposed to illicit drugs primarily through use of these drugs by family members (James et al., 2003; Bevan and Higgins, 2002; Dawson et al., 2006) and India is not different from others in alcoholism and related family problems (D’costa et al, 2007). The evolution of the research and professional literature on wives of alcoholics covers a continuum of theories from a psychoanalytic orientation regarding the psychopathology of wives, to a sociological approach describing the stress encountered while living with alcoholic, to a focus on family systems and interaction patterns within the alcoholic family. Alcohol consumption of spouse severely affects mental health of women and the women who experienced partner violence due to alcoholism are at increased risk of not receiving needed mental health care (Lipsky and Caetano, 2007).

Alcoholic families have more family conflict (Aekplakorn and Kongsakon, 2007) and less marital satisfaction than non-alcoholic families (Nicola et al,1994). Marital quality is found to be varied as a function of current heavy drinking and alcohol dependence such that members of couples in which neither spouse drank heavily reported better marital quality than other couples (McLeod, 2007). The nature of family interactions was related to both alcoholism type and alcohol consumption. The marital interaction of alcoholism types could be differentiated on the basis of the frequency and sequential structure of negative exchanges (Jacob et al, 2001). Alcoholic families were characterised by poor communication patterns, lack of mutual warmth and support, spouse abuse and poor role functioning. The spouses of alcoholics expressed greater dissatisfaction in all areas of family functioning. (Suman and Nagalakshmi, 1995)

Interpersonal Violence is also found to be high among alcoholics (Weisman and Taylor, 1994). Hostility of couples with an anti-social alcoholic husband had higher levels of hostile behaviour regardless of wives’ alcoholism status (Floyd et al, 2006). Wives of alcoholics as a group had higher levels of conflict, perceived more danger and experienced more apprehension in relating with their spouses. Alcoholics and couples with marital conflict did not differ and both groups of problem couples showed greater relationship distress than non-conflicted couples on measures of marital stability, change desired, interpersonal violence homicides and positive communication behaviours (Farrell and Birchley, 2007; Greenfield et al,1998; Stanley, 2008). Causal effect of alcohol on aggression is a well studied fact (Chermack and Taylor, 1995; Wells and Graham,1998). Alcohol consumption does not increase aggression in all persons and in all situations (Giancola, Saucier and Gussler-Burkhardt, 2003). Aggressive personality
traits are also found to be effective predictor of aggressive behaviour of alcoholics (Giancola and Zeichner, 1995; Parrott and Zeichner, 2002). These kind of stressful marriages and relationships are stronger predictor of divorce (Farrell et al, 2006).

Apart from the disruption in family health, while focusing on wives of alcoholics, unhealthy psycho-social status could be found out. Alcoholic’s wives are found to be codependent and having lower coping resources and social support (Pameela, 2002). Alcohol abuse is associated with Major Depressive Disorder (MDD) of Adolescence (Deykin et al, 1987; Lutz and Snow, 2002). Suicidal ideation and attempt in cannabis dependent were 2.5 to 2.9 times more than their non-cannabis-dependent cotwin. Early onset cannabis use may predispose to suicide attempt (Lynskey et al, 2004). Pfaff et al (2007) found that people who use alcohol less frequently but in greater quantities (i.e. binge drinking) are more likely to have a history of suicide attempts.

Depression ranks high among the mental disorders often comorbid with alcoholism, but not since alcohol is a depressant (Kranzler et al, 1997). Husband’s alcoholic problems can influence wives depressive symptoms (Homish et al, 2006). Both depression and alcohol problems may be different expressions of an underlying risk factor (such as difficulty with emotion regulation, poor family relationships, etc.), a shared comorbid condition, or a shared genetic diathesis (Nurnberger et al, 2002).

The current study focuses mainly on variation in Depression and Adjustment among Wives of Alcoholics and Non-alcoholics which may throw light on need for counselling and training for wives of alcoholics for a stable marital life. The advance practice nurses have the opportunity to successfully intervene with individuals and their family with alcohol dependence, depression and their comorbidity. These complex health conditions need to be screened for, treated and evaluated to ensure positive outcomes for the individual and their family system (Fowler and Tracey, 2006). Omer et al (2005) found that participation of the family in the treatment process as group members and by assuming a supportive role are assets in terms of preventing relapse and extending clean time and also very important for solving conflicts that give rise to abuse of alcohol or substances. As this study also investigates the relationship that Adjustment has on Depression this will help to rule out the particular area of Adjustment which is contributing more to Depression. The hypotheses developed are:

\[ H1: \text{Adjustment would be a significant predictor of Depression among Wives.} \]

\[ H2: \text{There would be a significant difference between Wives of Alcoholics and Non-alcoholics in their Family Adjustment, Social Adjustment, Emotional Adjustment, Health Adjustment, Depression.} \]
METHOD

Sample

The sample size of the present study is 120 consisting 60 Wives of Alcoholics and 60 Wives of Non-alcoholics. The Wives of Non-alcoholics are selected randomly from various hospitals of Thrissur District, Kerala. Wives of alcoholics are selected based on following criteria: The subjects included are having a minimum education of SSLC and the wives of occasional drinkers are not included.

Tools

Indian Adaptation of Bell’s Adjustment Inventory was developed by Dr. Lalitha Sharma (1987) consists of 80 items which covers all the four areas (Family Adjustment, Social Adjustment, Emotional Adjustment and Health Adjustment) exclusively. All the items are of Yes/No format. Test retest reliability on a sample of 120 employees in government services (both males and females) within a time interval of two weeks was 0.77, 0.88, 0.72 and 0.81 for Family Adjustment, Social Adjustment, Emotional Adjustment and Health Adjustment respectively. The test has been validated against MMI. The correlation between general adjustment and the total score of the five component scores (Occupational Adjustment is no considered in the present study) of the present inventory have been obtained. These are found to vary between 0.69 and 0.73.

Beck’s Depression Inventory (BDI) developed by Aaron T Beck (Beck et al, 1961) is a 21-item test presented in multiple choice format which purports to measure presence and degree of depression in adolescents and adults. Each of the 21-items of BDI attempts to assess a specific symptom or attitude “which appears to be specific to depressed patients and which are consistent with descriptions of the depression contained in the psychiatric literature. The reliability figures here were above 0.90. Internal consistency demonstrated a correlation coefficient of 0.86 for the test items. Content validity would seem to be quite high since the BDI appears to evaluate a wide variety of symptoms and attitudes associated with depression. Concurrent validity demonstrated a correlation of 0.77 between the inventory and psychiatric rating using university students as subjects. Beck reports similar studies in which coefficients of 0.65 and 0.67 were obtained in comparing results of the BDI with psychiatric ratings of patients (Ambrosini et al, 1991).

Procedure

Tools were administered individually after establishing working rapport with the participants. Response sheets were scored as per the instructions given in the respective manuals.
RESULTS AND DISCUSSIONS

The data was analysed using two statistical measures: Stepwise Linear Regression Analysis was used to test the causal relationship between Adjustment and Depression. The data collected was analysed using the Mean, Standard Deviation and the ‘t’ test to test the significant difference in each areas of Adjustment and Depression among Wives of Alcoholics and Non-alcoholics.

Stepwise linear regression results for each of the four Adjustment variables with depression are presented in Table 1. Result reveals a significant model $[F(3,116)= 62.13]$ for prediction of Depression based on Adjustment. The model explains 60% of the variation in Depression with the Family Adjustment, Emotional Adjustment and Health Adjustment. Therefore the Hypothesis, “There would be significant relationship between Adjustment and Depression”, is accepted. Beta coefficient of Family Adjustment (0.52), Emotional Adjustment (0.27) and Health Adjustment (0.16) are found to be significant at 0.01 level. The literature reveals that family adjustment is associated with mental health (Waring and Patton, 1984), somatic health (Chowanec and Binik, 1989), and Depression (Stravynski, Tremblay and Verreault, 1995). Marital adjustment is also an important predictor of family functioning (Deal, 1996). Present study, similar to the earlier studies, also reports that Family Adjustment and Emotional Adjustment are the important factors which significantly contribute to Depression. Thus the regression equation can be given as

$$\text{Depression} = 3.19 + .52(\text{F.A.}) + .27(\text{E.A.}) + .16 (\text{H.A.})$$

Table 1: Regression results for Adjustment Variables and Depression

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>B</th>
<th>S. E</th>
<th>$B$</th>
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<td>Step 1</td>
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<td></td>
</tr>
<tr>
<td>Family Adjustment</td>
<td>.716</td>
<td>.060</td>
<td>.739 **</td>
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<tr>
<td>Family Adjustment</td>
<td>.517</td>
<td>.078</td>
<td>.533 **</td>
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<tr>
<td>Emotional Adjustment</td>
<td>.385</td>
<td>.103</td>
<td>.301 **</td>
</tr>
<tr>
<td>Step 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Adjustment</td>
<td>.500</td>
<td>.076</td>
<td>.516 **</td>
</tr>
<tr>
<td>Emotional Adjustment</td>
<td>.347</td>
<td>.102</td>
<td>.271 **</td>
</tr>
<tr>
<td>Health Adjustment</td>
<td>.324</td>
<td>.125</td>
<td>.156 **</td>
</tr>
</tbody>
</table>

$R^2 = .54$ for step 1; $R^2 = .58$ for step 2; $R^2 = .60$ for step 3. N=120. **p<0.05

The Alcoholics uses a style of communication characterised by responsibility avoidance, when interacting with wife and interaction among them is marked by an inability to function as a unit for mutual benefit (Gorad, 2004). Family Adjustment, one of the important contributor to depression of wives, is found to be higher for wives of Non-alcoholics ($t= 12.41, P <0.01$). Therefore the Hypothesis, “There would be significant difference between Wives of Alcoholics...
A. Velayudhan, Priyanka M.S. and Justine K. James

and Non-alcoholics in their Family Adjustment”, is accepted. Alcoholic families were characterised by poor communication patterns, lack of mutual warmth and support, spouse abuse and poor role functioning. The Spouses of Alcoholics expressed greater dissatisfaction in all the areas of family functioning, than the Non-alcoholics. Non-alcoholic families were characterised by free and open communication, mutual warmth and satisfaction and sharing of responsibilities (Suman and Nagalakshmi, 1995).

Wives of individuals with drug and alcohol dependence are found to be having lower coping resources and social support (Pameela, 2002). Generally the alcoholics may create problems in the family and marital life. Drinking habit of husband is positively correlated to verbal aggression (O’Farrell et al, 2000) and these kind of behaviour tend to decrease the social support towards their family. Results of present study also support these findings. Social adjustment of wives of alcoholics are found to be lower than that of wives of Non-alcoholics ($t=11.83, P <0.01$). Therefore the Hypothesis “There would be significant difference between Wives of Alcoholics and Non-alcoholics in their Social Adjustment” is accepted.

Table 2: ‘t’ test results for Adjustment and Depression of Wives of Alcoholics and Non-alcoholics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Adjustment</td>
<td>Alcoholics</td>
<td>60</td>
<td>9.00</td>
<td>1.47</td>
<td>12.41 **</td>
</tr>
<tr>
<td></td>
<td>Non alcoholic</td>
<td>60</td>
<td>4.93</td>
<td>2.06</td>
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<tr>
<td>Social Adjustment</td>
<td>Alcoholics</td>
<td>60</td>
<td>7.23</td>
<td>2.28</td>
<td>11.83**</td>
</tr>
<tr>
<td></td>
<td>Non alcoholic</td>
<td>60</td>
<td>3.06</td>
<td>1.49</td>
<td></td>
</tr>
<tr>
<td>Emotional Adjustment</td>
<td>Alcoholics</td>
<td>60</td>
<td>5.43</td>
<td>1.77</td>
<td>9.98**</td>
</tr>
<tr>
<td></td>
<td>Non alcoholic</td>
<td>60</td>
<td>2.67</td>
<td>1.20</td>
<td></td>
</tr>
<tr>
<td>Health Adjustment</td>
<td>Alcoholics</td>
<td>60</td>
<td>3.23</td>
<td>0.99</td>
<td>3.81**</td>
</tr>
<tr>
<td></td>
<td>Non alcoholic</td>
<td>60</td>
<td>2.40</td>
<td>1.36</td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>Alcoholics</td>
<td>60</td>
<td>10.17</td>
<td>1.82</td>
<td>12.61**</td>
</tr>
<tr>
<td></td>
<td>Non alcoholic</td>
<td>60</td>
<td>6.20</td>
<td>1.61</td>
<td></td>
</tr>
</tbody>
</table>

$**P<0.01; \ df=118.$

Results ($t=9.98, P <0.01$) indicate a significant difference in Emotional Adjustment of Wives of Alcoholics and Wives of Non-alcoholics. Stanley (2008) found out that the Wives of Alcoholics as a group had higher levels of conflict, perceived more danger and experienced more apprehension in relating with their spouses, than the subjects of the reference group. Thus Wives of Alcoholics may have many internal conflicts within them which may affect their emotional stability. Thus the hypothesis “There would be significant difference between Wives of Alcoholics and Non-alcoholics in their Emotional Adjustment” is accepted.
The ‘t’ value of 3.81 is significant at 0.01 level for the Health Adjustment among Wives of Alcoholics and Non-alcoholics is significantly different. Thus the Hypothesis, “There would be significant difference between Wives of Alcoholics and Non-alcoholics in their Health Adjustment” is accepted. Research suggesting that alcohol use, intoxication, or both may be related to spousal violence (Leonard et al., 1985). Repeated physical assaults may directly increase risk of injuries or some chronic diseases, such as chronic pain, osteoarthritis, and severe headaches (Campbell, 1997; Plichta, 1997; Coker, 2000). Health care professional are less informed about these problems and their response to health problems related interpersonal violence is not satisfactory (Tower, 2007). Decreased mental health is related to several chronic physical problems (Nicolaidis, Curry, McFarland and Gerrity, 2004). The mental health of wives of alcoholics are found to be poor (Golding, 1999), which is an important factor for adequate adjustment.

Wives of Alcoholics are found to be more depressed than Wives of Non-alcoholics (t= 12.61, \( P < 0.01 \)). Thus the Hypothesis, “There would be significant difference between Wives of Alcoholics and Non-alcoholics in their Depression” is accepted. Research shows that Family Violence was associated with depressive symptoms or with at least six chronic physical symptoms (Nicolaidis, Curry, McFarland and Gerrity, 2004). Alcohol abuse of husbands’ can directly cause depressive symptoms in the wives and both husbands’ and wives’ marital alcohol problems were associated with wives’ depressive symptoms (Homish, Leonard and Bodkin, 2006). The Wives of Alcoholics may be more Sensitive, Anxious and Worried. This may affect the emotional stability which may in turn affects the areas of decision-making, responsibility, interaction patterns, sleep, etc. The spouses of alcoholics expressed greater dissatisfaction in all areas of family functioning. (Suman and Nagalakshmi, 1995). The problems in these areas will easily contribute to depression.

**CONCLUSIONS**

A linear relationship between Depression and Adjustment was found and also it reveals that Family Adjustment, Emotional Adjustment and Health Adjustment are significantly contributing to Depression than Social Adjustment. Wives of Non-alcoholics is found to be more adjusted in all areas of Adjustment (Family Adjustment, Social Adjustment, Emotional Adjustment and Health Adjustment) than Wives of Alcoholics. Depression is also high in Wives of Alcoholics and less in Wives of Non-alcoholics.

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*Journal of Indian Health Psychology*


ABSTRACT

Holistic health is actually an approach to living, a life style transformation, change that one can make in everyday living rather than focusing on specific part of the body. The ancient approach of holistic health considers the whole body and aim to rise its functioning to the maximum level. Holistic Health Scale (HHS) developed by Husain (2009) was used in the present study to measure holistic health of male and female teachers of Aligarh Muslim University (AMU). One hundred eighty teachers (90 female, 90 male teachers) were drawn from the different faculties. Main findings of the study were as follows: Male and female teachers did not differ significantly on seven dimensions of holistic health, namely, economic, emotional, environmental, mental, physical, social, and societal and they did differ significantly on spiritual domain. Female teachers scored higher than male teachers, though not significantly, on the overall scores obtained on Holistic Health.

Key Words: Holistic Health, Gender differences and Teacher

Since the advent of 21st century, health and well-being have become the key issues of the contemporary developing society and has attracted greater amount of research (Dalal & Misra, 2006; Nadidoo & Wills, 2000). The concept of health implies both biological/physical as well as psychological factors contribution to health. The WHO defines health as ‘a state of complete physical, mental, social and spiritual well-being and not merely an absence of disease (WHO, 1980).’ The WHO definition of health is very closely related to the various treaties of Indian science. The traditional system of Indian medicine defined health as a state of delight or feeling of spiritual, physical and mental...
well-being (Raina, 1990; Rao, 1983; Sharma, 1981). Birren and Jarit (1985) and Thoresen (1984) define health as “an absence of objective signs indicating that body is not functioning properly such as indices of high blood pressure and subjective symptoms of disease or injury such as pains or nausea”. But now a days the understanding of health has widen beyond physical well-being and have also covered psychological well-being of individual because body and mind are not two entities. Very recently the well-being of soul has added to the concept of health. So, health means complete well-being of body-mind and soul. Bricher (2005) has defined health as “a dynamic state of well-being characterised by a physical and mental potential which satisfies the demands of life commensurate with age, culture and personal responsibility.” The word dynamic suggests that health is not a static state of an individual’s well-being but it may change; and physical and mental potentials are the characteristics of health and these potentials enable the person to fulfil the demands that life make with age, according to the culture and the demands of personal responsibilities.

Gender is related to how one is perceived and expected to think and act, as women and men, because of the way society is organised, and not because of their biological differences. Viewing health through a gender lens necessitates steps to improve women’s access, affordability and appropriateness to the health services. Health services for women tend to focus on their reproductive functions, neglecting the needs of women outside the reproductive ages. A lack of female medical personnel is sometimes a barrier for women to utilise healthcare services. Poor women find themselves without access to healthcare more often than men from the same social group, even in rich countries like the United States. In many developing countries, women complain about lack of privacy, confidentiality and information about options and services available. Women’s higher mental and physical morbidity have also been hypothesised as being caused by their gender sensitivity to physical cues and to the social acceptability of sick roles for women. On the other hand, emotional and cognitive capacities of females themselves may also limit their access to healthcare than do males.

Husain and Khan (2012) defined health in terms of acronym HEALTH. Their model proposes that health which is caused by multiple factors and produces multiple effects. This model maintains the health something that one achieves thought attention to physical and psychological factors. Based on the six aspects of health, they suggest the definition of health in relation to physical factors, namely, hobbies, exercise and aerobics psychological factors, namely, lifestyle, thinking and happiness. Health may be defined as endeavour to realise on individual’s physical and psychological factors that leads to managing and attaining health. Psychological health is influenced by the physical health – related factors. That is, those individual who are involved in exercise and aerobic will probably have good life style, positive, thinking and happiness in
Holistic health among male and female teachers

their life (i.e. psychological health). WHO considers four dimensions of health, namely physical, mental, social and spiritual. It means that WHO has given more emphasis on the individual’s physical, mental, social and spiritual well-being. Husain (2009) considers that an individual health also depends much on his contribution to the society and environment and how much he is able to manage his emotion according to situation is also very important. Consequently, he added four more domains of health and developed a Holistic Health Scale (HHS) which measure health in a more holistic way. These four additional dimensions are societal, spiritual, emotional and economic health.

Holistic health is actually an approach to living, a life style transformation, changes that one can make in everyday living. Rather than focusing on a specific part of the body the ancient approaches of holistic health consider the whole body and aim to raise its functioning to the maximum level possible. Is there one true definition of holistic health? The term holistic health or holistic healing comes from the word whole, meaning complete. There is no one universal definition for holistic health, but there seems to be a common thread that runs through all of the definitions of holistic health that the author has researched. That is, to look at the self from a whole (holistic) perspective and to understand the different dimensions of health.

Domains of Holistic Health

Social Health: The World Health Organisation first introduced the idea of social health in 1947. WHO considers social health as an important factor in individual’s health. The concept of social health is less intuitively familiar than that of physical or mental health. Formal consideration of social health was stimulated in 1947 by its inclusion in the world health organisation’s definition of health and by the resulting emphasis on treatment of patients as social beings that live in a complex social context. Social health can refer both to a characteristic of a society, and of individuals. This definition is broad, it incorporates elements of personality and social skills reflect social norms and bear a close relationship to concepts such as “well-being” adjustment and social functioning. Social health has also become relevant with the increasing evidence that those who are well integrated into their communities level to live longer and recover faster from disease. Conversely, social isolation has been shown to be a risk factor for illness. Therefore, social health may be defined in terms of social adjustment and social support – or the ability to perform normal roles in society. Gender is related to how one is perceived and expected to think and act, as women and men, because of the way society is organised, and not because of their biological differences. Viewing health through a gender lens necessitates steps to improve women’s access, affordability and appropriateness to the health services. Health services for women tend to focus on their reproductive
functions, neglecting the needs of women outside the reproductive ages. A lack
of female medical personnel is sometimes a barrier for women to utilise healthcare
dservices. Poor women find themselves without access to healthcare more often
than men from the same social group, even in rich countries like the United
States. In many developing countries, women complain about lack of privacy,
confidence and information about options and services available. Women’s
higher mental and physical morbidity have also been hypothesised as being
caused by their gender sensitivity to physical cues and to the social acceptability
of sick roles for women. On the other hand, emotional and cognitive capacities
of females themselves may also limit their access to healthcare than do males.

There are important gender differences in perceived control and in self-
esteeem, with women reporting lower levels of both resources than men (Mirowsky
and Ross, 1989; Turner and Roszell, 1994); although women do report higher
levels of social support (Umberson, Chen, Hopkins and Slaten, 1996).

Societal health refers to how much an individual contribute to the society
to make it healthy and to the health of others.

Mental Health: Mental health is an important but elusive concept that still
has no single definition acceptable to everyone. Psychiatrist and psychologist,
have been dissatisfied with this way of looking at mental health. It is now
recognised by World Health Organisation (WHO) that health is a positive term.
On the basis of preliminary report of of White House Conference, The highest
degree of mental health might therefore, be described as that which permits an
individual to realise the greatest success which his capabilities will permit with
maximum of satisfaction to herself and the social order with minimum friction
and tension. WHO proposed that mental health is a “State of well-being in which
individuals realises his or her own capabilities, can cope with the normal stressful
life, can work productively and fruitfully, and is able to make a contribution to
his or her community (WHO, 2001). This definition includes three central ideas
for the enhancement of the mental health. First, mental health is an integral part
of health. Second, mental health is more than mere absence of mental illness,
and finally, mental health is intimately associated with physical health and
behaviour.

Mental health in the positive sense is a foundation for well being and
effective functioning for an individual and for community. It is more than a
mere absence of mental illness. It includes emotional, psychological, social and
even also spiritual well-being. The Indian concept of mental health deals with
three ‘Gunas’ which determine the personality and the mental health of the
individual. They are: Sattav, Rajas, Tamas. Ideal mental health means maximum
possible equipoise in three gunas of psyche.

Robichaud, Dugas and Conway (2003) found that women reported more
worry than men on two measures of the tendency to worry, as well as more
worries about lack of confidence issues.
Physical Health: Physical health is good bodily health, and is the result of regular exercise proper diet and nutrition and proper rest after physical recovery. Physical health can be more readily defined and measured. Concepts such as “physical fitness” involve physical activity to achieve physical goals but may also require this to be achieved in complex and coordinated ways that inevitably involve higher mental functions. Positive physical health may encompass being better than normal i.e. above average. Physical health in childhood, adolescence, adulthood and old age may very positive physical health may also encompass the capacity for resilience when the person encounters threats, including those of injury illness and disability, both physical and mental. The factors contributing to physical health included genetic make up, life style and choices, socio-economic factors and environmental factors. Like those of positive mental health, these concepts need to be better operationalised and measured so they are not just recognised by the absence of indicators of pathology.

There are gender differences in exposure to various lifestyle behaviours, with men more likely than women to smoke, consume alcohol, have an unbalanced diet and to be overweight, while women are more likely than men to be physically inactive (Denton & Walters, 1999; Ross & Bird, 1994).

Spiritual Health: A healthy spirit means so many different things to different people. Spirituality is unique to each individual. Spirituality is an integration of all aspect of health a way of knowing the self, a feeling of wholeness and a sense of something which provide strength and hope. Spiritual health is a component of an individual’s well-being. In one words of Husain (2008), “Spiritual health characterises the growth of a believer in the fruit of the spirit which is love joy peace, gentleness, goodness, faith meekness, temperance, righteousness and truth.” Spiritual health includes all the efforts spent in achieving optimal physical health. Spiritual health is achieved when a person finds a balance between life values, goals, belief systems and their relationship within themselves and with others ability to core meaning fully for others and self. Spiritual health as a dimension of holistic health has not been adequately defined, researched grounded in theory, or integrated into the health education curriculum (Hawks, 1994). Mental health research and practitioners have neglected spirituality, preferring to look at the effect of organised religion (Longo & Peterson, 2002). Kolander and Chondler (1990) state that spiritual health is “…the source of an all overarching umbrella covering all of the other aspects of health, representing the essence of who and what the individual is (Quoted in Hawks 1994).

Peterson, Hertting, Hagberg and Theorell (2005) have defined spiritual well-being as a science of relatedness or connectedness to others a provision for meaning and purpose in life, the fostering of well-being and having a belief in the relationship with a power higher than the self. Spiritual health has been defined variously because the researchers have suggested different parameters and measurable factors.
Cloniger, Pryzbeck, Svrakic, Dragan, and Wetzel (1994) evaluated transcendence and personality traits in 1,388 individuals and reported that women had 18% higher self-transcendence scores as compared to men. With regards to the growing literature on health and religion/spirituality, research has suggested there may be gender-based differences.

Emotional Health: People who are emotionally healthy are in control of their emotions and their behaviour. They are able to handle life’s inevitable challenges, building strong relationships and lead productive fulfilling lives. When bad things happen, they are able to bounce back and move on. Unfortunately, too many people take their mental and emotional health for granted focusing on it only when they develop problems. But just as it requires efforts to build or maintain physical health, so, it is with mental and emotional health.

It has been hypothesised that men tend to experience types of strain that are likely to lead them to feel other-directed emotions (e.g., anger) in response to strain, which in turn, cause them to engage in other-directed forms of deviant acts (e.g., interpersonal aggression). On the other hand, women’s strains are likely to generate self-directed emotions (e.g., depression and anxiety) that tend to lead to self-directed deviant (e.g., drug use) or no deviant, legitimate coping behaviours (e.g., ignoring the problem or religious coping). Also, women are less likely to respond to strain and emotional distress with deviant coping than men because of gender differences in conditioning factors, such as self-esteem and self-efficacy.

Environmental Health: Environmental health is the branch of public health that is concerned with all aspects of the natural and built environment that may affect human health. Other terms that concern or refer to the discipline of environmental health include environmental public health and environment health and protection. WHO defines environment health as: “those aspects of the human health and disease that are determined by factors in the environment. It also refers to the theory and practice of assessing and controlling factors in the environment that can potentially affect health.” Environment health is a very large and growing concern for those living a holistic lifestyle and more so every day as the state of the environment continues to decline rapidly. The concern is justified by the fact that not only do toxins in the environment threaten nature and our planet itself, but they also have a profound impact on mental, physical and spiritual health. Many of the chronic mental and physical health are the result of the toxins in the environment. Cancer, respiratory disease, asthma, depression, arthritis, anxiety, hyper activity, cardiovascular disease, hormonal problems, nervous system disorder, kidney disease etc. all are directly linked to environmental toxins.

Economic Health: It refers to how much an individual is financially healthy, accordingly he/she will avail health policy, health services and quality of medical care.
Research Objectives

The main objective of the present study was to examine gender differences in the various dimensions of holistic health as well as the composite score on the holistic health scale.

METHOD

Sample

The sample consisted of 180 teachers working in the different faculties of Aligarh Muslim University, Aligarh. Of these, there were 90 female and 90 male teachers.

Tool

Holistic Health Scale (HHS) developed by Husain (2009) was used to measure the health of participants. The HHS comprised 80 items with a five point Likert scale. This scale measures eight dimensions of health, namely, mental, physical, spiritual, emotional, social, societal, environmental and economic health. Cronbach coefficient Alpha of HHS was found to be 0.946. Cronbach coefficients Alpha for the male and female participants were found to be 0.938 and 0.9 respectively. Cronbach coefficients Alpha for the economic health domain 0.61, emotional health domain 0.61, environmental health domain 0.65, mental health domain 0.74, physical health domain 0.78, social health domain 0.59, societal health domain 0.84 and spiritual health domain 0.75 were found to be highly reliable.

Procedure

The data was collected individually from male and female teachers of AMU, Aligarh. Before handing over the HHS, assurance was given to them that information collected from them will be used only for research purpose and will be kept confidential. Scoring of each questionnaire was done manually.

RESULTS AND DISCUSSION

The mean and standard deviations of the male and female respondents on the various dimensions of holistic health and the composite health scores were computed. The significance of difference between the means of the male and female groups were analyses by applying $t$-test.

From Table 1, it can be seen that significant differences were not found between the mean scores of male and female teachers on economic, emotional, environmental, mental, physical, social, and societal domains of holistic health. It can be seen that significant difference was not found between the mean scores of male and female teachers on composite scores of all eight domains of holistic health.
Table 1: Significance of difference between the mean scores of male (n=90) and female(n=90) teachers on various domain of holistic health

<table>
<thead>
<tr>
<th>Groups</th>
<th>Domain</th>
<th>Mean</th>
<th>SD</th>
<th>t value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>Economic</td>
<td>37.75</td>
<td>3.78</td>
<td>0.83</td>
<td>&gt;.05</td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td>37.26</td>
<td>4.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>Emotional</td>
<td>36.200</td>
<td>3.8312</td>
<td>1.789</td>
<td>&gt;.05</td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td>35.244</td>
<td>3.159</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>Environmental</td>
<td>39.433</td>
<td>3.926</td>
<td>.4353</td>
<td>&gt;.05</td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td>39.167</td>
<td>4.353</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>Mental</td>
<td>37.555</td>
<td>5.95</td>
<td>.842</td>
<td>&gt;.05</td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td>36.877</td>
<td>4.777</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>Physical</td>
<td>34.844</td>
<td>4.401</td>
<td>1.795</td>
<td>&gt;.05</td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td>36.011</td>
<td>4.317</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>Social</td>
<td>37.589</td>
<td>4.030</td>
<td>1.110</td>
<td>&gt;.05</td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td>36.900</td>
<td>4.292</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>Social</td>
<td>39.644</td>
<td>4.133</td>
<td>-.182</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td>39.755</td>
<td>4.040</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>Spiritual</td>
<td>39.766</td>
<td>3.711</td>
<td>2.428</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td>38.255</td>
<td>4.592</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>Composite</td>
<td>302.944</td>
<td>24.5811</td>
<td>1.017</td>
<td>&gt;.05</td>
</tr>
<tr>
<td>Male</td>
<td>Score</td>
<td>299.488</td>
<td>20.872</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It may be concluded from the above results that there are no significant differences between the male and female teachers with respect to seven dimension of holistic health. This may be attributed to the fact that the sample was drawn from Aligarh Muslim University. So far as the University culture is concerned equal treatment is given to both male and female teachers in the workplace. Unlike other places of the work where sometimes female folks are subjected to exploitation and harassment, Aligarh Muslim University has work atmosphere which is conducive to women. All kinds of cooperation and healthy atmosphere are provided to them so that they do not face any stressful situation at the workplace. Consequently, they are free of stress and tensions and lead a hassle free life.

The results showed that significance difference did not exist between the mean scores of male and female teachers on mental health domain of holistic health. Teachers who are mentally healthy have a sense of commitment and ability to deal with stress, a sense of meaning and purpose in mental activities and their relationship. Male as well as female teachers have flexibility to learn new things and adopt the change, maintain balance between work and play, rest and activity etc. and the ability to build and maintain the fulfilling relationships.

However, Table 1 indicated significant differences between the mean score of male and female teachers on spiritual domain of holistic health, where the mean score of female teachers is higher than males. This indicates that female
teachers hold spiritual beliefs more firmly than males and use that to understand life phenomenon. Also they are more likely to engage in spiritual practices than do male therefore scoring more on spiritual health.

Thus, the present investigation reveals that there are no significant gender differences in holistic health, except in the domain of Spiritual health where females had better health than males.

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Journal of Indian Health Psychology


POSITIVE AND NEGATIVE AFFECT IN DEPRESSED AND NORMAL ADULTS

Mohammad Anas* and Deoshree Akhouri**

ABSTRACT

Depression is one of the major problems among adolescents as well as in adulthood. Depression is a form of mood or affective disorder because it is primarily concerned with change in mood. Negative affectivity is a common component to depression and low positive affectivity is related to depression. In the present study a sample of 30 normal subjects and 30 depressed patients were administered Positive and Negative Affect-Schedule (PANAS) to measure the two affects; Positive Affect (PA) and Negative Affect (NA) Results indicated that depressed patients scored significantly higher on Negative Affect, whereas normal adults scored higher on Positive Affect.

Key Words: Depression, Positive and Negative Affect

Depression is probably the most common psychological disorder that has received most attention. Depression is a form of mood or affective disorder because it is primarily concerned with change in mood. Some are of normal fluctuation and other meet the definition of clinical problem. As a result such persons perceive that they have little or no control over what happens to them. We often hear that someone whom we thought happy and well settled suddenly starts talking about ending his life. Such person exhibits a disturbance in mood. When the thought of suicide is a result of failure in a business deal, the person would then be described as being emotionally disturbed. Mood disorders are disorders of emotion of sufficient intensity and duration which require immediate psychological and medical attention. Every one becomes sad grieved and deprived

* Department of Psychology, Aligarh Muslim University, Aligarh.
** Assistant Professor, Department of Psychiatry, J.N.M.C.H. Aligarh Muslim University, Aligarh.
at one time or other time in life. These feelings occur during cloudy weather, due to death in the family, losing a job or honours, failure in relationship or major financial loss. However, these are temporary phases which represent a short term response to stress and in due course of time, one usually overcomes these feelings. This is normal depression that most people feel occasionally. This is often transitory and time bound and often dissipates over a period of genuine introspection. But when this feeling of sadness continues to last and one does not get pleasure from daily activities and feels continuously sad it results in depression. Depression must be taken seriously because of high rates of suicide associated with it. In depressive illness the symptoms last for two week if it is not treated it may last for five months or sometimes years.

Forty per cent of older individuals who have chronic health problems or are confined in a hospital are depressed (Rapp, Parisis & Walsh, 1988). Moreover, people with a dementia disorder and Alzheimer’s may also be depressed. In addition 30% of patients with dementia of Alzheimer’s type who are estimated to have a super imposed major depressive disorder, have some symptoms of depression that interferes with their lives (Burns, 1990). Depression is much more than blues, clinical depression can affect every aspect of life such as work, home, family, friends, etc. Depression may be a reaction to other illness such as cancer, heart attack, etc. Finally, depression may be caused by an illness itself such as stroke where neurological changes have occurred. One in four women and one in six males will suffer from depression at same point in their life. Men and women sometimes show depression differently. Men are more likely to experience irritability, sleep problem, fatigue etc. whereas women tend to have overt sadness and feeling of worthlessness and guilt when depressed. Depressed prone people often set rigid perfectionist goals for themselves that are impossible to attain. Their negative expectations are so strong that even if they experience success in specific tasks they anticipate failure the next time. They screen out successful experiences that are not consistent with their negative self-concept. The thought content of depressed individuals centres on a sense of irreversible loss, which results in emotional states of sadness, disappointment and apathy. When a psychiatrist makes a diagnosis of a patient’s depressive illness, he or she may use a number of terms such as bipolar, clinical, endogenous major depression, melancholic, seasonal, affective or unipolar disorder to describe the patient’s state.

Beck challenged the notion that depression result from anger inward. Instead, he focuses on the content of the depressive’s negative thinking and biased interpretation of events (De Rubeis & Beck, 1988). In an earlier study, Beck (1963) found cognitive errors in the dream content of depressive clients. Beck (1987) writes about the cognitive triad as a pattern that triggers depression. Beck Depression Inventory (BDI) was design as a standardised device to assess
the depth of depression. The items are based on observation of symptoms and basic belief of depressed people.

**Positive and Negative Affect States (PANAS)**

Researchers have proposed the existence of two broad mood factors—Positive and negative affect (Clark & Watson, 1991; Watson & Clark, 1988; Watson, & Tellegen, 1985). Earlier evidence demonstrates that two broad mood factors—Positive affect and Negative affect are the dominant dimensions in self-report mood (Watson & Tellegen, 1985). Although their names might suggest that they are the opposite poles of the same dimension, positive and negative affect are in fact highly distinctive dimensions that can be meaningfully represented as orthogonal (uncontrolled) factors. Both mood factors can be measured either as a state or as a trait. Our focus will be on the trait, which Tellegen (1985) has termed Negative Affectivity (NA) and Positive Affectivity (PA).

Negative Affect (NA) is a general factor of subjective distress and subsumes a broad range of negative mood states, including fear, anxiety, hostility, scorn, and disgust. Mood states related to depression such as sadness and loneliness also have substantial loading on this factor. At the trait level, NA is a broad and pervasive predisposition to experience negative emotions that have a further influence on cognition, self concept and world view (Watson & Clark, 1984). In contrast, PA is a dimension reflecting ones level of pleasurable engagement with the environment. High PA is composed of terms reflecting ones enthusiasm, energy level, mental alertness interest, joy and determination, whereas low PA is best defined by descriptors reflecting lethargy and fatigue. It is noteworthy that states of sadness and loneliness also have relatively strong loadings on the low end of this factors (Watson & Tellegen, 1988), whereas trait PA is a corresponding predisposition conducive to positive emotional experiences. It reflects a generalised sense of well-being and competence, and of effective interpersonal engagement. Watson *et al.* (1988) found that several available PA and NA scales lacked psychometric soundness. Thus, Watson *et al* developed a brief and easy way to measure these emotions, which is called *positive affect* and *negative affect schedule* (PANAS).

**Depression and PANAS**

The cognitive model of depression states that certain negative cognition can maintain state of depression. There is good evidence that in clinically depressed group mood affects the relative accessibility of positive and negative cognition. Thus, negative cognitions appear to produce depression, and conversely depression increases the probability of just these cognitions which will cause further depression. Thus, this reciprocal relationship between depression and cognition may found the basis of vicious cycle which will perpetuates and intensify depression. Moreover, positive and negative mood state affects memory and is an important dimension of cognitive vulnerability to depression.
The State of Mind-Model (SOM model) proposed by Schwartz and Garamoni (1986) provided a framework for assessing the balance between self-reported positive and negative affects in a sample of 30 clinically depressed patients and 30 healthy control subjects. The SOM Model proposed that healthy functioning is characterized by optimal balance of positive (P) and negative (N) cognitions or affects. \[P1 (P+N)\] and that psychopathology is marked by deviation from the balance.

Emotions based theories of psychopathology proposed that depression is characterized by increased Negative affect and decreased Positive affect. This model has been supported by various studies. Tellegen (1985) specially tested this model by factor analyzing measures of anxiety, depression, NA and PA. The results were generally consistent with the model. As expected, the NA and PA scales each defined a factor. The anxiety and depression scales had significant loadings on both factors; however, the anxiety scales loaded more strongly on the NA factor, whereas the depression scale was a much better marker of low PA.

Blumberg and Izard (1986) used self report mood scales to predict scores on measures of depression and anxiety. Several of the negative emotion scales (most notably sadness and fear) contributed to the prediction of both measures, but the positive emotion scales (joy & interest) added significantly only to the prediction of depression. The mood data therefore suggest that PA may be an important factor in differentiating anxiety from depression (Tellegen, 1985; Watson & Tellegen, 1985).

Bouman and Luteijn (1986) examined three groups of patients (a) Major depressives, (b) Dysthymics, and (c) No depressives. Scores on a number of mood and personality scales were factor analysed, and two factors were extracted and interpreted as NA and PA. Consistent with the model outlined earlier. The major depressives has significantly lower PA scores than dysphonic patients, who were, in turn, lower on PA than the no depressive group. The later data don’t permit any comparison between anxiety and depression.

Watson, Clark and Carey (1988) provide the most comprehensive test of the model to data. They examined the relation of trait PA and NA scores to symptoms and diagnosis of depression and anxiety in a clinical patient population. They predicted that NA scores would be significantly correlated with anxiety and depression. Whereas, PA scores would be associated only with later (depression).

Clark and Watson (1991) predicts that individuals diagnosed with depression were expected to show significantly lower scores on positive affect than patients with anxiety disorders based on an expected narrowing of affective space under conditions of uncertainty. Those in the anxiety group were predicted to show significant inverse correlation between PA and NA. The depressed group
was predicted to have a low, non-significant correlation between PA and NA leading to a third prediction; that the inter correlation between PA and NA would be more strongly linked in persons suffering from an anxiety disorders in comparison to those with a depressive disorders.

According to Williams, Peeters and Zautra (2004) anxiety and depression differ both in level and in the relationship between PA and NA. Depressed participants also showed higher NA than their anxious counterparts, also the groups differed in affective relationship.

The study of positive and negative affect has some important applied outcomes. For example, some researchers have suggested that the PANAS may be a useful instrument in applied and research situations where the differentiation of anxiety and depression is important (Watson, Clark, & Carey, 1988; Laurent et al., 2004).

The present investigators have not come across a single study where difference between depressed patients and normal adults was examined on positive and negative effects.

**Objective**

To examine difference between the mean scores of depressed patients and normal adults on Positive and Negative Affects.

**Hypotheses**

There will be no significant difference between depressed patients and normal adults on Positive and Negative Affects.

**METHOD**

**Sample**

The sample for the present study comprised of 60 participants. Of these, there were 30 normal subjects and 30 depressed patients. Depressed patients were diagnosed by the psychiatrists and they were drawn from the OPD of the Psychiatry Department, JNMC, A.M.U., Aligarh. The participants were male and female in the age range of 21-40 years in both the groups.

**Tool**

In the present study, the investigators used the following tool to measure positive and negative affect of the individuals.

**Positive and Negative Affect-Schedule (PANAS)**

PANAS was used to measure a broad range of affective states of adolescents. It was developed by Watson, Clark and Tellegen (1988). It is used to measure the two affects: Positive affect (PA) and negative affect (NA). It is a self-report scale with twenty items which are to be rated on a 5-point Likert scale ranging from very slightly or not at all to extreme. For scoring, a score of
I was given to the response “very slightly or not at all”; 2 to “a little”; 3 to “moderately”, 4 to “quite a bit” and 5 to “extremely”. The items were related to 20 specific affects (10 items separately for PA and 10 for NA). PA includes (1, 3, 5, 9, 10, 12, 14, 16, 17 and 19) Active, alert, attentive, determined, enthusiastic, excited, inspired, interested, proud, strong. NA includes (items 2, 4, 6, 7, 8, 11, 13, 15, 18 and 20) Afraid, scared, nervous, jittery, irritable, hostile, guilty, ashamed, upset, distress. Sum of these items indicates high and low on emotional well-being respectively. The internal consistency of PANAS has been determined by cronbach’s alpha coefficient. The alpha reliabilities for both scales are high generally ranging from .83 to .90 for PA and from .85 to .90 for NA. Convergent construct validity of this schedule is high, ranging from .90 to .95 for PA and from .92 to .95 or NA.

Procedure

Permission from Chairman Department of Psychiatry of JNMC was obtained. PANAS was administered to 30 clinically depressed male and female patients identified by the psychiatrist and to 30 normal participants. Participants were assured that their responses will be kept confidential.

RESULT AND DISCUSSION

The means and standard deviations of the Positive and Negative affect scores of the two groups were computed. The significance of difference between the scores of the two groups were analysed by computing t-test.

Table 1: Significance of difference between the mean scores of Depressed and Normal adults on Positive Affect of Depressed (n=30) and Normal (n=30) respondents

<table>
<thead>
<tr>
<th>Variable</th>
<th>Groups</th>
<th>Mean</th>
<th>SD</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Affect</td>
<td>Depressed</td>
<td>22.20</td>
<td>7.53</td>
<td>7.92*</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>35.43</td>
<td>5.84</td>
<td></td>
</tr>
<tr>
<td>Negative Affect</td>
<td>Depressed</td>
<td>34.93</td>
<td>6.20</td>
<td>12.15*</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>17.30</td>
<td>5.76</td>
<td></td>
</tr>
</tbody>
</table>

*p<01

Table 1 shows that significant difference was found between depressed and non-depressed participants on positive affect (t=7.92, p < .01). Normal adults scored significantly higher than depressed patients. Further significant difference were observed between the mean scores of depressed and normal adults (t=12.15, p< .01). Depressed patients scored significantly higher than normal adults. Thus, the hypothesis which stated that there will be no significant difference between depressed patients and normal adults on Positive and Negative Affect is rejected.
Normal adults scored significantly higher than depressed patients on positive affect. This finding suggest that positive affect among normal adults may produce profitable outcome in the enhancement of learning and to the amelioration of psychological distress. Whereas depressed patients scored significantly higher on Negative affect than their counterparts. The findings of the present study can be supported by the prediction made by Clark and Watson (1991). They predict that individuals diagnosed with depression were expected to show significantly lower scores on positive affect than patients with anxiety disorders.

**Implications**

Results suggest that the study may be fruitful with respect to treatment outcome and interventions. Intervention for depressive group can be chalk out by reducing negative affect and increasing positive affect through some supportive strategies such as prayer and reading scripture.

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Mood States and Pattern of Adjustment Among Male Alcoholics

ABSTRACT

The purpose of the present study was to determine the mood states and pattern of adjustment among male Alcoholic patients. A test of Eight State Questionnaire and Hindi adaptation of Bell’s adjustment inventory by Mohsin and Shamshad (1970) was administered on 30 alcoholic and 30 normal persons. Significant differences have been found between the scores of alcoholic and normal control group on the different dimensions of eight state questionnaires and Bell adjustment inventory. Result showed that Alcoholics exhibit higher level of anxiety, stress, guilt feeling and extraversion than normal group. They differ significantly from normal group on all the four areas (Home, Health, Emotional, Social) and Overall adjustment.

Key Words: Alcoholic, Mood States and Adjustment.

Alcohol is a central nervous system depressant Alcohol abuse is likely to result in serious withdrawal symptoms. Chronic use has many negative psycho-social effects and can result in organic brain disorders, such as Korsakoff’s syndrome. A physiological predisposition to alcohol addiction may be genetically transmitted in some people. The predisposition may be a tolerance for alcohol or a peak-valley effect in which the person experiences extremes of euphoria and dysphasia related to drinking. There is no evidence for an alcoholic personality, but many alcoholics are impulsive, depressed or passive; and drinking seems to

* Professor of Psychology, Ranchi University, Jharkhand Address:- University Department of Psychology, Arts block – C. Morabadi, Ranchi University, Ranchi – 834 008 (Jharkhand); E mail: bharatiroy.roy15@gmail.com
help them solve or avoid problems. Some people may abuse alcohol because they learn it decrease the effects of stress and reduces tension.


Several researchers reported that alcohol not only affects physical health of a person, it also causes considerable damage to their mental health and thought process. Alcoholism typically begins in adolescent and may be associated with medical, social and legal sequel. Studies reported that the great majority of alcoholics are men and women who are married and living with their families, still hold responsible job.

A number of studies have been reported in recent years on psychological changes following prolonged intake of such substances (Leroi, Sheppared and Lyket, 2002; Mukamal and Rim, 2001). Numerous studies have found that the comorbid conditions of depression and alcohol abuse tend to persist overtime (Peirce, Frone, Russell Cooper & Muder, 2000 & Vaillant & Mukamal, 2001). A large number of studies have been devoted to the study of personality characteristics and cognitive impairment of alcoholic and drug users. However, little work had been done on adjustment problems and mood states or emotional states of alcoholic and drug addict. The present study is an attempt to find out the effects of prolonged use of alcohol on emotional state and adjustment of individuals.

**METHOD**

**Sample**

The sample consisted of sixty subjects, thirty alcoholics and thirty normal controls. Alcoholics were taken from Disha Drug De-Addiction Centre, Patna, a non-government organisation sponsored by the Ministry of Social Justice and Empowerment (Government of India). Those drug addicts who reported to drug-addiction centre for detoxification and willing to participate in the study had been included in the study. All the subjects were male, age ranged from thirty to fifty years. Most of them belonged to married group. The control group consisted of thirty persons who never had drug of any kind. They were comparable in age education and socio-economic status with the group of alcoholics.

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Tools

(i) Eight State Questionnaire (8SQ):- For measuring mood states of the normal as well as alcoholics, it was decided to use Hindi version of Eight State Questionnaire by Kapoor and Bhargava, constructed and standardised by Curran and Cattell (1975). This Questionnaire measures eight mood states of the respondents i.e. anxiety, stress, depression, regression, fatigue, guilt extraversion and arousal.

(ii) Hindi Adaptation of Bell’s Adjustment Inventory by Mohsin and Shamshad (1970):- The inventory consists of 135 items measuring adjustment in four different areas: home, health, social and emotional, separately as well as it yields a composite score for overall adjustment. High scores indicate poor adjustment and low scores healthy adjustment.

Procedure

Each subject was tested individually in a separate room by the investigator. In case of alcoholic group the tests were administered at least six hours after alcohol taken. This was done to ensure that the effects of the alcohol intake are kept at minimum during the testing period. Administration of tests during withdrawal period was complete by avoided.

RESULT AND DISCUSSION

In order to fulfil the objective of the study the scores obtained were analysed with mean, SD and t values. The obtained data along with statistical treatment has been shown in table 1 and 2. It was evident from the Table – 1 that two groups viz. alcoholic and normal control differed significantly on anxiety dimension of mood states. The alcoholic groups indicate higher anxiety level as compared to normal control group. The t – value obtained was 4.45 and was significant on or beyond one per cent level of confidence.

Table 1: Comparisons of Alcoholic and Normal Control group on Eight State Questionnaire

<table>
<thead>
<tr>
<th>Dimensions of mood states</th>
<th>Alcoholic (N = 30)</th>
<th>Normal (N = 30)</th>
<th>t - value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Anxiety</td>
<td>26.6</td>
<td>4.09</td>
<td>17.5</td>
</tr>
<tr>
<td>Stress</td>
<td>27.5</td>
<td>3.62</td>
<td>16.8</td>
</tr>
<tr>
<td>Depression</td>
<td>18.6</td>
<td>3.41</td>
<td>12.8</td>
</tr>
<tr>
<td>Regression</td>
<td>8.8</td>
<td>5.44</td>
<td>5.1</td>
</tr>
<tr>
<td>Fatigue</td>
<td>18.6</td>
<td>3.41</td>
<td>15.0</td>
</tr>
<tr>
<td>Guilt</td>
<td>14.6</td>
<td>2.65</td>
<td>4.5</td>
</tr>
<tr>
<td>Extraversion</td>
<td>19.2</td>
<td>3.84</td>
<td>14.5</td>
</tr>
<tr>
<td>Arousal</td>
<td>17.0</td>
<td>3.35</td>
<td>14.05</td>
</tr>
</tbody>
</table>

*Significant at 0.05 level ** Significant at 0.01 level NS:- Not Significant
It was found that, two groups (alcoholic and normal control) differed significantly on stress scores. The obtained $t$-value (4.59), was significant at 0.01 level of confidence. Alcoholic with a mean score of 14.6, had more guilt than the normal group (4.5), the $t$-value was significant at 0.01 level. Vinay (1985) reported that alcoholics expressed more guilt, loneliness and depression than the normal persons.

The mean depression score of alcoholic was 18.6 where as mean depression score of normal group was 12.8. The $t$-value (2.15) was significant at 0.05 level. Several studies have shown that alcoholic suffer from acute depression (Rado, 1958; Khaytiem and Khatzain, 1984).

The mean extraversion scores of alcoholic were higher (Mean 19.2) as compared to normal control groups (Mean 14.5). The $t$ – value (2.27) was significant at 0.05 level. The study supported by several investigators. Jones (1975) found that males who became problem drinkers were impulsive, extroverted and overemphasised their masculinity. Rangaswami (1983) and Segal (1983) reported that alcoholics were impulsive and extrovert as compared to normal person. Alcoholics did not differ significantly on the mood state of regression, fatigue and arousal, differences in mean scores were not statistically significant.

### Table 2: Comparisons of Alcoholic and Normal Control group on the mean scores of Bell Adjustment Inventory

<table>
<thead>
<tr>
<th>Area of Adjustment</th>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home</td>
<td>Alcoholic</td>
<td>30</td>
<td>10.76</td>
<td>4.95</td>
<td>6.09**</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>30</td>
<td>5.03</td>
<td>1.50</td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td>Alcoholic</td>
<td>30</td>
<td>6.85</td>
<td>4.10</td>
<td>1.95 NS</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>30</td>
<td>5.25</td>
<td>1.85</td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>Alcoholic</td>
<td>30</td>
<td>12.40</td>
<td>4.16</td>
<td>6.03**</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>30</td>
<td>7.15</td>
<td>2.25</td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>Alcoholic</td>
<td>30</td>
<td>12.15</td>
<td>2.82</td>
<td>5.52**</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>30</td>
<td>8.62</td>
<td>2.15</td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>Alcoholic</td>
<td>30</td>
<td>35.62</td>
<td>12.82</td>
<td>3.83**</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>30</td>
<td>25.88</td>
<td>5.40</td>
<td></td>
</tr>
</tbody>
</table>

** Significant at 0.01 level     NS: - Not Significant

A glance at Table 2 indicates that alcoholics differ significantly from normal control on all the four areas (home, health, emotional and social) of adjustment, the $t$-value being significant at 0.01 level. The mean scores of alcoholics was particularly higher in the emotional area indicating presence of anxiety, depression and nervousness. This finding confirms the contention that maladjustment appear as a common characteristics in most problem drinkers (Coleman, 1976).
CONCLUSION

1. Alcoholics differ significantly with normal control group on mood states of anxiety, stress, guilt, depression and extraversion. Alcoholics exhibit higher level of anxiety, stress, guilt, feeling and depression. They were more extrovert than normal group.

2. Alcoholics showed more problems in all areas (Home, Health, Educational and Overall) of adjustment.

REFERENCES


A CORRELATIONAL STUDY OF RELIGIOSITY AND HEALTH

Teenu Nandal*, Nov Rattan Sharma** and Amrita Yadava***

ABSTRACT

Religious belief and practices can be a powerful source for maintaining good health. Religious and non-religious people tend to experience equal amount of difficulties and situational pressure but religiosity may help people to deal better with negative life events and stress. The present study is also an effort to explore the relationship between religiosity and holistic health. The sample of the study includes 400 adults of four major religions of India (Hinduism, Islam, Sikhism, and Christianity) between the age ranges from 40 to 60 years with a mean age of 49.6 years. The participants were assessed with Religiosity Scale (Bhushan, 1970) and Holistic Health Scale (Hussain, 2009). The data were analysed by using Pearson’s Product Moment method of correlation. The results of total group explain positive and significant associations on economic, emotional, environmental, societal and spiritual health dimensions. The Hindu sample shows positive and significant correlation with environmental, societal and spiritual health. In Muslims group, significant positive and negative associations can be seen on economic and environmental health respectively. Significant and positive associations can also be seen on economic, environmental, mental, societal and spiritual health in Sikh group. On the other hand, the Christian group does not show significant associations with different health dimension except spiritual one. Multiple regression analysis indicates that religiosity came out as significant contributor in case of spiritual health in total,

* Lecturer, Department of Psychology, Govt. College, Meham.
** Professor, Department of Psychology, M.D. University, Rohtak.
*** Professor, Department of Psychology, M.D. University, Rohtak.
Hindu and Sikh groups and where as in mental and societal health for Sikh group.

Key Words: Religiosity, Holistic Health

Interest in the religion-health connection has grown markedly in recent years. Even more recently, the suggestion that religion might influence mental or physical health and outcome was greeted with skepticism and even hostility by many medical researchers. It evoked images of faith healers among the general public. These issues have also captured the attention of the media and the imagination of the general public. But, in academic circles, this interest is being fueled by energetic and innovative research programmes in several fields, including sociology, psychology, health behaviour and health. Now a days, things begun to change. Literally, large number of papers have been published on the relationship of religion and health in the medical and psychological academic literature. Increasing international attention is now being paid to keep people well and healthy. Health has become the centre of attention for researchers in all areas.

Health is a process of expanding consciousness that synthesises disease and non-disease, and is recognised by patterns of person-environment interaction. An understanding of pattern is basic to an understanding of health, and involves the movement from looking at parts to looking at the whole. Pattern is defined as information that depicts the whole, and gives an understanding of the meaning of relationships. It comes down to look at human health as the health of the whole individual rather than the well-being of parts. The term holistic health look at the ‘self’ from a whole (holistic) perspective and understand the mind, body and spirit connection and also the importance of balancing all aspects of one’s life. In other words, holistic health means having total balance of mind, body and spirit. Mind, body and spirit work together to bring “health and wealth.” They cannot truly be separated. Health does not exist in isolation and may be influenced by a complex of environmental, social, economical, cultural, religious and personal factors ultimately related to each other. The religious factors like rituals, religiosity, spirituality, religious belief etc. are inseparable from individual’s psyche. These religious factors are an integral part of the human experience and his perception of the world. Research has supported the notion that they have a colossal effect on all aspects of individual’s health.

Religious belief and practices can be a powerful source for affecting the health. Religious and non religious people tend to experience equal amount of difficulties and situational pressure but religious belief and religiosity may help people to deal better with negative life events and -their attendant stress (Schafer & King, 1990). Researchers in different areas have focused their attention to the relation between religiosity and their possibilities for different health issues. Review of literature indicates that variables like religiosity are influencing people’s each aspect of life.

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Religion serves as a pervasive and potentially effective method of coping for persons with mental illness (Tepper, Rogers, Coleman & Malony, 2001) warranting its integration into psychiatric and psychological practice. Religion and spirituality are two methods of meaning making that impact a person’s ability to cope, tolerate, and accept disease and pain. Koenig (2009) has argued that religious beliefs provide a sense of meaning and purpose during difficult life circumstances that assist with psychological integration; they usually promote a positive world view that is optimistic and hopeful; they provide role models in sacred writings that facilitate acceptance of suffering; they give people a sense of indirect control over circumstances, reducing the need for personal control; and they offer a community of support, both human and divine, to help reduce isolation and loneliness. According to Green and Elliot (2010) people who identify as religious tend to report better health and happiness, regardless of religious affiliation, religious activities, work and family, social support, or financial status. Very importantly, people with liberal religious beliefs tend to be healthier but less happy than people with fundamentalist beliefs.

Researchers in different areas have focused their attention to the relation between religion and their possibilities for different health issues. Review of literature further indicates that variables like religion, religious beliefs and practices are influencing people’s each aspect of life. Religiousness plays an important role in preventing suicidal thought and ideation in older people (Nisbet, Duberstein & Conwell, 2000) stabilising the lives of the disabled, providing meaning for the experience of disability and assistance with coping (Treloar, 2002) protecting against experimental substance use, lowering the probability of having suicidal thoughts or having attempted it (Nonnemaker, McNeely & Blum, 2003) and lowering depression (Braam, Hein, Deeg, Twisk, Beekman & Tilburg, 2004). A meta-analysis by Ano and Vasconcelles (2005) observed significant association between positive forms of religious coping and lower overall levels of anxiety, while negative religious coping methods were associated with increased anxiety symptoms. Hasanovic and Pajevic (2010) concluded that religious moral beliefs help in overcoming postwar psycho-social problems and socialisation of the personality, leading to the improvement in mental health. Abdel-Khalek and Lester (2012) revealed that participants who consider themselves as religious experienced greater well-being.

The increasing significance of religiosity in the promotion and development of both material and immaterial benefits at individual, local, regional, national and global levels has been recognised and accepted well. A great need of deep systematic investigation regarding the association of these variables to various health indicators on Indian population was realised to draw a better picture of their relationship may be drawn. The present study is an endeavour in the same direction.
Objectives

- To examine the relationship between religiosity and holistic health of the adult participants.
- To examine the predictability of religiosity for holistic health of the adult participants.

Hypotheses

Following hypotheses were formulated:
- There would be significant positive relationship between religiosity and holistic health of the adult participants.
- Religiosity would significantly predict holistic health of the adult participants.

METHOD

Sample

The study was conducted on a sample from National Capital Regions (NCR) of 400 married adults belonging four major Indian religions. (Hinduism, Islam, Sikhism, and Christianity). Hundred subjects from each religion were selected for the study. They were selected on the basis of non-random purposive sampling procedure. The age range of the selected sample was 40 to 60 years with a mean age of 49.6 years. All the selected subjects were literate and able to understand (read and write) either of the languages (Hindi, English). All the subjects belonged to almost same class i.e. middle socio-economic status of urban area with mixed gender groups.

Design

The main aim of the present study is to investigate associations between religiosity and health. For this purpose, a correlational design was used. A correlational research can, however establish whether two variables tend to be related to each other or not. This approach makes it possible to look at a number of psychological variables related to health and this is the crucial factor as far as the purpose of the present study is concerned.

Measuring Tools

On the basis of objectives, following standard measures of religiosity and health were selected for the data collection:

1. **Personal Data Blank Sheet:** The purpose of this personal data sheet was to collect personal and background information of the respondents. The sheet consists of information regarding the subjects’ name, age, annual income, gender, religion, educational qualifications, employment status, marital status and background (urban, rural, metro).
2. **Religiosity Scale:** Hindi version of Bhushan’s (1970) scale was used to measure religiosity of the subjects. It is primarily a group test, although, it can be used for individual testing as well. It is a 5-Points Likert type scale. Against each item five response categories have been provided. As the number of items in the scale are 36 (25 items were positive and 11 were negative). The items cover all the major dimensions of religiosity. In content and form, the items were made common for the different religions like Hinduism, Islam, Christianity and Sikhism. The scale contained items related to faith in all powerful and virtuous God and common forms of religious practices and beliefs. It also included the items to elicit degree of emotional involvement of the subjects in giving expression of his/her faith in God and religious acts. The test-retest reliability of the scale is 0.78. The content, predictive and concurrent validity coefficients were also reported to be satisfactorily high.

3. **Holistic Health Scale (HHS):** Holistic Health Scale (HHS) developed by Hussain (2009) was used to measure the health status of participants. It comprised of 80 items with a 5 point Likert scale ranging from strongly agree to strongly disagree. Against each item, subject was instructed to select one out of five alternatives. This scale measures eight dimensions of health i.e. mental, physical, spiritual, emotional, social, societal, environmental and economic health. Some of the items of the scale are positive in nature and some are of negative. Cronbach coefficients alpha of HHS was found to be 0.946. Cronbach coefficients alpha for the male and female participants were found to be 0.938 and 0.9 respectively. A small description of these eight dimensions is given below:

   (a) **Economic Health:** It refers how a person perceives and experiences his health economically. It reveals if one cares about health care costs, concerned about planning and budgeting for the quality health care etc.

   (b) **Emotional Health:** Emotional health refers to awareness, sensitivity, and acceptance of feelings and the ability to successfully express and manage one’s feelings. It is the ability to recognise emotions appropriately.

   (c) **Environmental Health:** It refers to the practice of assessing and controlling factors in the environment that can potentially affect health. It comprises those aspects of human health, including quality of life, that are determined by physical, chemical, biological, social and psycho-social factors in the environment.

   (d) **Mental Health:** It refers to a state of emotional and psychological well-being in which an individual is able to use his/her cognitive
and emotional capabilities, function in society, and meet the ordinary demands of everyday life.

(e) Physical Health: Physical health refers simply freedom from disease. The physical dimension of health concentrates on prevention of illness and encourages exercise; healthy diet; and knowledgeable, appropriate use of the health care system. Physical health requires individuals to take personal responsibility for actions and choices that affect their health status.

(f) Social Health: Social health refers acting in harmony with nature, family, and others in the community. The pursuit of social health may involve actions to protect or preserve the environment or contribute to the health and well-being of the community by performing volunteer work.

(g) Societal Health: It explains that health is linked to everything in the society that surrounds an individual. It explores how one contributes to the community at large, follows norms and traditions in the society, and cooperates with the society.

(h) Spiritual Health: Spiritual health refers to find meaning in life and acting purposefully in a manner that is consistent with one’s deeply held values and beliefs. It includes spiritual aspect of person, personal and social harmony, sense of belongings etc.

Procedure

For data collection, all the participants were individually contacted on their respective places. A cordial rapport was established with all the participants by talking with them generally about their life. After establishment of healthy rapport, they were provided with the response sheets in mixed order. Respondents were asked to read the instructions carefully and requested to attempt all the items. Sufficient time was given to the participants for each tool to read and fill. A rest of fifteen minutes was given to the participants after each test to prevent them from fatigue. After completion of the measuring tools, response sheets were taken back from the participants and they were thanked for their valuable time and cooperation. The data were analysed with the help of appropriate statistical tools (Pearson correlation and multiple regressions) to reach logical understanding of findings.

RESULTS AND DISCUSSION

The primary aim of the present study was to find out religiosity as correlates of health on a sample of 400 adults. The correlations among components of health and religiosity are observed by applying Pearson correlation with the help of SPSS 16.0 version. The statistical treatments were done for total groups and religion group basis separately.
Religiosity and Holistic Health

Holistic health has eight units devoted to economic, emotional, environmental, physical, mental, social, societal and spiritual health. The following table consists of index of correlation among these eight units of holistic health and religiosity.

Table 1: Coefficient of correlation between Religiosity and Holistic Health of adult participants.

<table>
<thead>
<tr>
<th></th>
<th>Economic Health</th>
<th>Emotional Health</th>
<th>Environmental Health</th>
<th>Mental Health</th>
<th>Physical Health</th>
<th>Social Health</th>
<th>Societal Health</th>
<th>Spiritual Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hindu</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n=100</td>
<td>.153</td>
<td>.156</td>
<td>.178*</td>
<td>.033</td>
<td>.129</td>
<td>.124</td>
<td>.171*</td>
<td>.398**</td>
</tr>
<tr>
<td>Muslim</td>
<td>.203*</td>
<td>.042</td>
<td>-.166*</td>
<td>-.063</td>
<td>-.063</td>
<td>-.11</td>
<td>-.113</td>
<td>.157</td>
</tr>
<tr>
<td>n=100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sikh</td>
<td>.197*</td>
<td>.075</td>
<td>.210*</td>
<td>.269**</td>
<td>-.023</td>
<td>.028</td>
<td>.262**</td>
<td>.261**</td>
</tr>
<tr>
<td>n=100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christian</td>
<td>.111</td>
<td>.155</td>
<td>.058</td>
<td>.006</td>
<td>.073</td>
<td>.127</td>
<td>.082</td>
<td>.170*</td>
</tr>
<tr>
<td>n=100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.140**</td>
<td>.127**</td>
<td>.091*</td>
<td>.081</td>
<td>-.004</td>
<td>.069</td>
<td>.120**</td>
<td>.260**</td>
</tr>
</tbody>
</table>

N=400

*p<.05, **p<.01 (one tailed)

(a) **Religiosity and Economic Health**: The coefficient of correlation between religiosity and economic health is found to be positive in total group. In religion groups, this correlation is found positive and significant in Muslim and Sikh groups. It is non-significant in Hindu and Christian groups however, the direction of association between the two variables is also positive.

(b) **Religiosity and Emotional Health**: The coefficient of correlation between religiosity and emotional health is found to be positive and significant in total sample group. In religion groups, this correlation is found positive but non-significant in all religion (Hindu, Muslim, Sikh, Christian) groups.

(c) **Religiosity and Environmental Health**: The coefficient of correlation between religiosity and environmental health is found to be positive and significant in total sample group. In religion groups, this correlation is found positive and significant in Hindu and Sikh groups and negative and significant in Muslim group. It is non-significant positive in Christian group.

(d) **Religiosity and Mental Health**: The coefficient of correlation between religiosity and emotional health is found to be non-significant in total sample. In religion groups, this correlation is found positive and significant in Sikh group and non-significant in rest of the three groups (Hindu, Muslim and Christian).
(e) **Religiosity and Physical Health:** The correlation between religiosity and physical health is found to be positively non-significant in all the groups.

(f) **Religiosity and Social Health:** The correlation between religiosity and social health is found to be non-significant in total and four religion groups (Hindu, Muslim, Sikh and Christian).

(g) **Religiosity and Societal Health:** The coefficient of correlation between religiosity and societal health is found to be positive and significant in total sample. In religion groups, this correlation is found to be positive and significant in Hindu and Sikh groups. It is found non-significant in Muslim and Christian groups.

(h) **Religiosity and Spiritual Health:** The coefficient of correlation between religiosity and spiritual health is found to be positive and significant in all the five groups except muslim group.

The table 1 express that different health dimensions have almost significant associations in different groups irrespective of religion. The result of total group explains that the subjects express positive and significant associations on economic, emotional, environmental, societal and spiritual health. The Hindu sample show positive significant correlation with environmental, societal and spiritual health. In Muslim group, significant positive and negative associations can be seen on economic and environmental health respectively. Economic, environmental, mental, societal and spiritual health can be seen as significant and positive in Sikh group. On the other hand, the Christian group showed not much significant associations with different health dimension except spiritual one. The over all picture of the associations explain that there are strong significant correlations between religiosity and different health dimensions in total and religion groups. Research also proves that religiosity and health interaction is a healing tool in people’s life.

The findings of the present study are in line with those research is in this area that signify the importance of religious variables in health enhancement. Recent studies have shown a statistically significant relationship between religious involvement, better mental health, and greater social support. Micozzi (2006) found that almost 80% of those who are religious have significantly greater well-being, hope and optimism than those who are less religious. In a sample of 424 Kuwaiti adult personnel (219 men, 205 women) Abdel-Khalek (2008) indicated that self-ratings of religiosity were significantly and positively correlated with the self-ratings of physical health, mental health, happiness, the Love of Life, and the Satisfaction with Life among men and women. Religiosity is a protective factor which has an impact on all of the three dimensions of health status, among others, it goes together with a longer lifetime, better indicators of health status indicators and quality of life, less anxiety, depression and suicide,
In another study, Pikó and Kovács (2009) investigated the relationship between religiosity and psychological health among adolescents. Regarding religiosity, religious affiliation, religiousness (subjective level of religiosity) and religious participation were assessed. Among health status indicators, occurrence of depressive symptomatology, level of satisfaction with life and self-perceived health were determined. It is found that youth’s religiosity had the least effect on depressive symptomatology, whereas youth defined themselves as religious and those who actually participated at religious events perceived their own health better and they were more satisfied with their life. Girls tended to belong more to a religious community and their religiosity was more associated with life satisfaction and self-perceived health.

In a recent study, Lucchetti, Lucchetti, Peres, Moreira-Almeida and Koenig (2012) aimed to analyse the association between religious attendance, self-reported religiousness, depression, and several health factors in 170 older adults from a Brazilian outpatient setting. A comprehensive assessment was conducted including socio-demographic characteristics, religious attendance, self-reported religiousness, functional status, depression, pain, hospitalisation, and mental status. After adjusting for socio-demographics, (a) higher self-reported religiousness was associated with lower prevalence of smoking, less depressive symptoms, and less hospitalisation and (b) higher religious attendance was only associated with less depressive symptoms. Religiousness seems to play a role in depression, smoking, and hospitalisation in older adults from a Brazilian outpatient setting. Self-reported religiousness was associated with more health characteristics than religious attendance.

It can be concluded, from the overall results and review on the relationship of religiosity and health, that religiosity play an important role in participants’ life. One of the mechanisms melted in religion is through health-focused behaviour and lifestyle practices. It indicates that religious participation may lead to better health outcomes by limiting potentially negative risk-related behaviours while promoting positive health-related behaviours. Therefore, the formulated hypothesis that there would be a significant positive relationship between religiosity and holistic health of the adult participants irrespective of their religion is majorly accepted with the full attainment of respective objective.

**Multiple Regressions**

Stepwise multiple regression procedure was used to examine the extent to which the selected study variable predicts the holistic health of the adult participants. However, in the previous part the investigation; have been determined but the level of associations between/amongst the study variables simple correlations do not provide the predictive power of the variables. Thus, multiple regression technique was applied to check the predictability of the variables.
As per the pattern followed for the Pearson correlational analysis, here in multiple regression also total sample (N=400) was further divided on the basis of religion of the adult participants. The regression analysis was done for entire sample (N=400). The sole purpose of doing separated regression analysis was to see the significant predictors of holistic health in accordance to group affiliation. In the present study there was one predictor variable (independent variable) and one major criterion variable (dependent variables) of holistic health. The predictor variable was religiosity and the criterion variable was holistic health. It is relevant to add that holistic health has eight (mental, physical, spiritual, emotional, social, societal, environmental and economic health) dimensions. Multiple regression was applied by using SPSS 16 version and the list shows only the significant predictors.

Table 2: Significant Predictors of Holistic Health of the Adult Participants in Total and four Religious Groups

<table>
<thead>
<tr>
<th>Holistic Health</th>
<th>Hindu (n=100)</th>
<th>Muslim (n=100)</th>
<th>Sikh (n=100)</th>
<th>Christian (n=100)</th>
<th>Total (n=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economical</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Emotional</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Environmental</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Mental</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Physical</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Social</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Societal</td>
<td>None</td>
<td>None</td>
<td>Religiosity</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Spiritual</td>
<td>Religious</td>
<td>Religiosity</td>
<td>None</td>
<td>None</td>
<td>Religious</td>
</tr>
</tbody>
</table>

The analysis of components of the holistic health in the total group indicates (table 2) that the predictor meet the criteria and the significant factor came out to be religiosity only on spiritual health. It indicates that religiosity significantly contributes to spiritual health, in total sample. It implies that spiritual health is significantly predicted by religiosity. The result of the regression analysis of rest of the components of the holistic health revealed that predictor does not meet the criteria. It indicates that economic, emotional, environmental, mental, physical, social, and societal health was not predicted by the predictor. It implies that the identified predictor do not contribute significantly to determine these factors of holistic health in the total group.

The analysis of components of the holistic health in the religious group indicates (table 2) that the predictor meet the criteria and the significant factor came out to be religiosity only on spiritual health in the Hindu group. It indicates that spiritual health is significantly predicted by religiosity. The result of the regression analysis of rest of the components of the holistic health revealed that predictor does not meet the criteria.
Regarding the Sikh group, the predictor meets the criteria and the significant factor came out to be religiosity on mental, societal, and spiritual health. It indicates that religiosity significantly contributes mental, societal, and spiritual health in the Sikh group. The results of regression analysis indicate (table 2) that rest of the components of the holistic health does not meet the criteria of significance.

Taking into consideration the results of regression analysis in Muslim and Christian groups, the identified predictor do not contribute significantly to determine these factors (economic, emotional, environmental, mental, physical, social, societal and spiritual) of holistic health.

Overall picture of the total sample reveals that religiosity came as significant contributor in case of spiritual health. In case of religious groups, religiosity came as significant contributor in case of spiritual health (Hindu, Sikh), mental health (Sikh), and societal health (Sikh). The regression analysis also revealed that the contribution of the identified predictor was positive. In Muslim and Christian groups, the identified predictor does not contribute significantly to determine factors of holistic health.

Researchers have started to acknowledge the positive contribution of religiosity in to health. Individuals coping with cancer, heart disease, terminal illnesses as well as survivors of strife, war and mass destruction have all experienced and acknowledged ways in which religion has contributed towards their mental health and well-being, mental illness and recovery. Earlier research supports that religiousness is an important factor in case of health and well-being in older people. A study by Nisbet, Duberstein, and Conwell (2000) using logistic regressions as a method of data analysis found that church attendance could reduce the likelihood of the elderly participants to commit suicide. In comparison, elderly people who did not engage in any religious activities at all were four times higher than those who took part in religious activities daily to commit suicide. The relationships did not alter even controlling for other confounding factors, such as socio demographic characteristics and social contact.

Rippentrop, Altmairer, Chen, Found and Keffala (2005) conducted research with a group of 122 chronically ill patients suffering from musculoskeletal pain as study sample to investigate the relationship between religiousness and religion-related spirituality on the one hand and physical and mental health on the other. Hierarchical regression analyses revealed that there were apparently significant linkages between patients’ religiousness and spirituality and their mental health as well as physical health. In this study, religious coping, forgiveness, daily spiritual experiences, religious support and self-rated of religious/spiritual intensity were significantly related to the mental health status of the patients. In the light of this research the hypothesis that religiosity would significantly predict the health of the adult participants is partially accepted.
In the light of these researches, it is not important that you are male or female, it is also unimportant that which religious practices you are following or you are going to temple, mosque, gurudwara or church. The important is that you are a religious person, you perform certain religious rituals in your daily life and you do have spiritual kind of living, such acts jointly as well as independently are likely to contribute to your some of the health factors positively. In this way the objectives were attained and respective hypotheses were testified.

Implications

The present research is a successful step in the field of health as it validates the correlates of positive aspects of health. It is planned in such a way that it would prove to be a valuable source for psychologists, health workers as well as normal people of society for better understanding of the relationship of health variables. The present research indicates that religion is influencing almost all dimensions of health and must be taken into consideration to help common man to be benefitted by its positive effects. Religiosity could prove to be a framework for over all health of the individual. Efforts should be made to use religion as a tool to improve health, in particular and life in general.

REFERENCES


ABSTRACT

People with good mental health feel comfortable about themselves. They are not bowled over their fears, guilt, anger, love, jealousy or worries. They have a tolerant easy-going attitude towards themselves as well as others. They can laugh at themselves. Mentally healthy people have positive attitude towards their own group and other people. They are able to give love and to consider the interest of others. They have satisfying and lasting personal relationship with others. The present study was to determine the difference between high blood pressure and low blood pressure persons with reference to their mental health and also to find out the sex differences in this regard. Person’s age ranging from 35 years to 55 years was taken as sample and the total sample size was 80. Within these 20 high blood pressure male, 20 high blood pressure female, 20 low blood pressure male and 20 low blood pressure female were selected from Agartala in Tripura. Mental health inventory by Dr. Jagdish and Dr. A.K. Srivastava was administered to measure the mental health level. Two-Way-ANOVA was used to analyze the data. To find out the intergroup mean differences, Scheffe’s test of multiple comparisons was used. Results indicated that, low blood pressure persons were found to have more positive mental health as compared to high blood pressure persons. And low blood pressure females were found to have more positive mental health as compared to other blood pressure persons.

Key Words: Positive mental health, High blood pressure and Low blood pressure

Mental health describes either a level of cognitive or emotional well-being or an absence of a mental disorder. From perspectives of the discipline of
positive psychology or holism mental health may include an individual’s ability to enjoy life and procure a balance between life activities and efforts to achieve psychological resilience. Mental health is an expression of emotions and signifies a successful adaptation to a range of demands. Mentally Healthy people neither underestimate nor overestimate their abilities. They easily accept their own self-respect, and they feel and show respect to others. They feel able to deal with most odd situation that comes their way. They enjoy their life and get satisfaction from simple everyday pleasure. They like and trust others and take it for granted that others will like and trust them. They recognise the difference among people but respect these differences. They do not push the people around nor do they allow themselves to be pushed around. They feel happy among the group; they considered themselves as they are part of the group. They feel a sense of responsibility to their friends, neighbours, co-workers and others. Willin (1949) has described the major characteristics of a mentally healthy person as- happy in spite of his sort-coming, independent in actions and decisions, self-confident, fairly relax with himself and others, aware of the feelings of others and eager to attend new and challenging tasks happily. Bernard (1969) stated that mentally healthy individuals are adjusted to themselves and the world at large with a Maximum of effectiveness, satisfaction, cheerful and socially consider behaviour and the ability of facing and accepting their realities of life.

The World Health Organisation defines mental health as “a state of well-being in which the individual realises his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community”. It was previously stated that there was no one “official” definition of mental health. Cultural differences, subjective assessments, and competing professional theories all affect how “mental health” is defined. There are different types of mental health problems, some of which are common, such as depression and anxiety disorders, and some not so common, such as schizophrenia and Bipolar disorder.

Most recently, the field of Global Mental Health has emerged, which has been defined as ‘the area of study, research and practice that places a priority on improving mental health and achieving equity in mental health for all people worldwide’.

The importance of maintaining a good mental health is crucial to living a long and healthy life. Good mental health can enhance one’s life, while poor mental health can prevent someone from living a normal life. According to Richards, Campania, and Muse-Burke (2010) “There is growing evidence that is showing emotional abilities are associated with prosocial behaviours such as stress management and physical health”. It was also concluded in their research that people who lack emotional expression lead to misfit behaviours. These behaviours are a direct reflection of their mental health. Self-destructive acts
may take place to suppress emotions. Some of these acts include drug and alcohol abuse, physical fights or vandalism. Also without emotional support, mental health is at risk. According to a study done by Strine, Chapman, Balluz, and, Mokdad (2008) “Inadequate social and emotional support is a major barrier to health relevant to the practice of psychiatry and medicine, because it is associated with adverse health behaviours, dissatisfaction with life, and disability”. By receiving emotional support your health can increase and prevent mental health disorders. Support systems are a valuable asset and those whom do not have social and emotional support are more likely to lead to disorders. This support can lead to “an increase personal competence, perceived control, sense of stability, and recognition of self-worth and can have a positive effect on quality of life” (Strine, Chapman, Balluz and Mokdad, 2008).

Present study aimed to search the differences between High blood pressure and Low blood pressure person with reference to their mental health level and also to know the sex differences in this regard.

Objectives

(i) To search the differences between persons with High blood pressure and Low blood pressure with regards to their mental health level.

(ii) To find out the sex differences between High blood pressure and Low blood pressure persons in relation to their mental health level.

METHOD

Sample

Sample of the study consisted of 40 high blood pressure participants identified by the physician and 40 low blood pressure persons Classified as 20 male and 20 female each. All the subject were selected from Agartala (Tripura). The age of the subjects ranges from 35 years to 55 years selected from more or less similar socio-economic status.

Tool

Mental health inventory by Jagdish and Srivastava was used to measure the mental health level. The inventory consists of statements having four options. Out of these 4 options subject has to choose only one alternative response. In this test, some statements are positive and some statements are negative. For positive statement score 4 is awarded for always, 3 for often, 2 for sometimes and 1 for never and whereas 1, 2, 3, 4 scores for always, often, sometimes and never respectively in case of negative statements. The reliability of the scale determine by split half method. It ranges from .71 to .75. The validity coefficient of the scale is .54.
Procedure

Initially all the selected subjects were called in a small group of five individuals. Rapport was established by talking informally. The selected tool was administered one by one with small interval. All the instructions regarding the tool was given according to instructions led down by the author of the test. After completion of testing all the field copies of response sheets were collected and subjected for scoring and further statistical calculation.

The data were treated statistically. The mean, SD, and Two way ANOVA, Scheffe test were obtained and presented in tables.

RESULTS AND DISCUSSION

Present study intended to search the differences between the 4 classified groups i.e. high blood pressure male, high blood pressure female, low blood pressure male and low blood pressure female. This study consists of 80 subjects. Classified as 40 high blood pressure and 40 low blood pressure. In the present study, an attempt has been made to search the mental health level of the subjects. As regarding mental health measure when treated by descriptive statistics the following values are obtained. It is shown below in table 1.

<table>
<thead>
<tr>
<th>Table 1: Mental Health Scores of the Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Four classified Groups</strong></td>
</tr>
<tr>
<td>----------------------------</td>
</tr>
<tr>
<td>High B P Male A&lt;sub&gt;1&lt;/sub&gt;B&lt;sub&gt;1&lt;/sub&gt;</td>
</tr>
<tr>
<td>High B P Female A&lt;sub&gt;1&lt;/sub&gt;B&lt;sub&gt;2&lt;/sub&gt;</td>
</tr>
<tr>
<td>Low B P Male A&lt;sub&gt;2&lt;/sub&gt;B&lt;sub&gt;1&lt;/sub&gt;</td>
</tr>
<tr>
<td>Low B P Female A&lt;sub&gt;2&lt;/sub&gt;B&lt;sub&gt;2&lt;/sub&gt;</td>
</tr>
</tbody>
</table>

Observation of the table 1 indicates that the mean value of the four classified group seems to differ from each other. The difference between High blood pressure and low blood pressure subject seems to be very high but merely on the basis of mean observation it would not be clear whether these difference are really significant or not. Therefore to solve this problem the data was further treated by inferential statistics i.e. Two-Way-ANOVA.

The result of the two-way-ANOVA is given in the following table.

<table>
<thead>
<tr>
<th>Table 2: Summary of TWO-WAY-ANOVA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Source of variation</strong></td>
</tr>
<tr>
<td>-------------------------</td>
</tr>
<tr>
<td>A</td>
</tr>
<tr>
<td>B</td>
</tr>
<tr>
<td>A x B</td>
</tr>
<tr>
<td>Within</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
The summary table of two-way-ANOVA suggests that main effect A (High B P/Low B P person) is significant at 0.01 level (F=90.86, df=1 and 76, p<.01). This result suggest that High B P and Low B P persons differ significantly from each other. Whereas main effect B (sex) means male and female could produce significant (F=31.44, df=1 and 76, p<0.01) it suggest that they differ from each other significantly. And interaction effect AXB could not produce significant effect. Whereas non-significant AXB suggest that main effect A and B functioning independently. They are not inter-related. The ANOVA result suggests only difference between four classified groups. It doesn’t suggest which particular or specific group differs from each other. In order to search the inter-group mean differences when the mental health data treated by Scheffe’s test of multiple comparison the following results are obtained.

Table 3: Intergroup Mean differences among four classified groups on Mental health measure

<table>
<thead>
<tr>
<th></th>
<th>A₁B₁ high B P</th>
<th>A₁B₂ high B P</th>
<th>A₂B₁ Low B P</th>
<th>A₂B₂ Low B P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>x 3172.9*</td>
<td>18705.62**</td>
<td>49140.1**</td>
<td>49140.1**</td>
</tr>
<tr>
<td>Female</td>
<td>3240.02*</td>
<td>22848.4**</td>
<td>72009.22**</td>
<td>X</td>
</tr>
</tbody>
</table>

Above table shows intergroup comparison. Inspection of the table reveals that when High BP males are compared with other three groups it shows significant difference. Here high BP female are significant at 0.05 level, high BP male have good mental health. The second comparison was between high BP female and low BP male and female, in this case high BP female significantly differ from each other. The last comparison was low BP male with low BP female, here low BP female have good mental health in comparison to low BP male. To find out all the statistical analysis results indicated that, low blood pressure persons are found to have more positive mental health as compared to high blood pressure persons. And low blood pressure female persons are found to have more positive mental health as compared to other blood pressure persons.

CONCLUSION

- Persons with low blood pressure were found to have good positive mental health as compared to high blood pressure persons. They have a tolerant easy-going attitude towards themselves as well as others.
- The group of females with low blood pressure were found to have positive mental health as compared to males. This could be because of emotional support from other family members and better coping skills.
REFERENCES


Relationship of Psycho-social Adjustment with Autonomy

Suninder Tung* and Rupan Dhillon**

ABSTRACT

Adolescence is the most crucial time period for transformations and transitions in family relations and self-conceptions. Some theorists have suggested that this period necessitates an attenuation of the adolescent’s attachments to parents and a gradual increase in emotional distance from them. Autonomy is self-regulation where the dependencies on parents are relinquished and individuation is strived for by the youth. Achieving autonomy is associated with psycho-social adjustment of the adolescence. Adolescents look forward to greater freedom and this brings about a positive outlook. However, strong feelings of emotional autonomy from parents leave the youth in a rather vulnerable position, a situation that causes low self-esteem and influences their psycho-social adjustment. On the basis of existing literature, an effort is made to study the relationship of emotional autonomy with psycho-social adjustment among youth. A sample of 250 adolescents (18-21 years) was randomly selected (125 males and 125 females). The tests of emotional autonomy and psycho-social adjustments were administered. For analysis Pearson product moment correlation and t-test (to study the gender) differences was applied. The results revealed a negative relationship between autonomy and psycho-social adjustment indices.

Key Words: Psycho-social adjustment and Autonomy

Adolescence is a crucial period in the life span of an individual. It is derived from the latin word “adolescere” meaning to “grow up”, to grow into maturity.

* Professor, Department of Psychology, Guru Nanak Dev University, Amritsar.
** Assistant Professor, Department of Psychology, Guru Nanak Dev University, Amritsar.
It is no longer considered as a period of storm and stress as in popular portrayals, however it is considered as a transitional period because of the cognitive, biological and social changes that occur (Feldman & Elliot, 1990). Lerner and Galambos (1998) have described adolescence as a phase of life from 12 to 22 years, beginning in biology and ending in society. It is a transitional and a developmental period in which there is a redefinition and reorganisation of family relations.

The concept of autonomy has captured the interest of many developmental psychologists and figures prominently in the work of behavioural scientists working in the field of adolescent development. There has been a continuous effort by researchers in defining, explaining and exploring the multi-dimensional characteristics associated with adolescent emotional autonomy. Emotional autonomy has variedly been defined by researchers as detachment, separation-individuation, psycho-social-maturity, self-regulation, self-control, self-efficacy, self-determination, decision-making and independence. The diversity indicates the multidimensional nature of the concept.

During the transition from childhood to adulthood, the task of development of autonomy has been considered as important. Emotional autonomy in Layman’s language, means the ability to have significant control over one’s life, to be able to take decisions and to relinquish the dependency on others. Autonomy is derived from “autos” (self) and nomos (rule), signifying self regulation, \textit{i.e.} giving direction to one’s life. Autonomy is a psycho-social issue which shows its presence in every stage of life.

This process of separation was called detachment by psycho-analytic theorists and was considered normal, healthy emotional development process. Blos (1967) focused less on severance of emotional ties between adolescent and parent and more on the process by which youngsters relinquish childish dependencies on, and conceptualisations of their parents. It is through the process of gaining emotional autonomy that adolescents come to rely on their internal resources and take responsibility for their actions—that is to become mature, competent people.

Using Blos’s perspective on individuation as framework, Steinberg and Silverberg (1986) defined four dimensions of emotional autonomy in the scale developed by them: two cognitive components, perception of parents as people and parental deidealisation and two affective components, non-dependency on parents and individuation. They argued that the development of emotional autonomy, as measured by emotional autonomy scale, is adaptive because emotional distance from parents is needed for adolescents to begin to rely on their internal resources.

Achieving autonomy is associated with psycho-social adjustment of the adolescence. Emotional autonomy from parents when it is accompanied by a
weakened parent adolescent relationship may bode poorly for adolescent psychological development and adjustment. Fuhrman and Holmbeck (1995) also proposed, in contrast to Steinberg’s prediction, that under conditions of family stress, parent adolescent conflict and low cohesion the feelings of emotional autonomy could be beneficial and adaptive.

Recent formulations of healthy adolescent parent relationships recognise the importance of both autonomy and of relatedness in fostering psychological growth and adaptive functioning. Studies conducted by Barber (1997), Herman, Dornbusch, Heron and Herting (1997), Ryan and Lynch (1989) state that positive relations exist between parental attachments and psychological well being. As a theoretical framework to the above researchers, attachment theory by Bowlby (1988) provides one explanation for how parental relatedness and fostering of autonomy in authoritative home environments rear children who are high on both self-esteem and well-being. Parra and Oliva (2009) suggest that adolescents too high on emotional autonomy is associated with negative family relationships. Adolescents may develop problem behaviours too if they are detached from parental relationships and are high on emotional autonomy (Sandhu and Kaur, 2012).

According to Ryan and Lynch (1989), emotional autonomy is uncorrelated with measures of global self esteem. Strong feelings of emotional autonomy from parents leave young adolescents in a rather vulnerable position, a situation that causes low self esteem and influences their psycho-social adjustment.

In context to above literature, an effort has been made to study the relationship of emotional autonomy with psycho-social adjustment.

Sample

A sample of 250 adolescents was randomly taken from various colleges of Amritsar city. There are 125 males and 125 females. The age group of the sample was 18-21 years. The mean age for females was 19.04 years and standard deviation of 0.64. The mean age for males was 19.05 years and standard deviation was 0.78.

Tools

1. *Emotional Autonomy Scale* (Steinberg and Silverberg, 1986): This measure of emotional autonomy was developed by Steinberg and Silverberg keeping in mind Blos’s perspective on individuation as a guiding framework. There are four components of emotional autonomy: two relatively more cognitive components: Perceives parents as people and deidealisation and two relatively more affective components: non-dependency on parents and Individuation. The items were based on the contemporary perspective that de-emphasises the storm and stress of adolescent detachment, rebellion and conflict but lays more stress
on the processes of individuation. A total of 20 items constitute the test and are presented in declarative statements. Adolescents were asked to indicate their degree of agreement with each item on a four point scale ranging from strongly agree to strongly disagree. The maximum score is of 80 and minimum score is 20. The internal consistency as determined by Cronbach’s alpha is .75.

2. **Adjustment Inventory (Mittal, 1974)**: This inventory provides separate measures of adjustment in four areas: Home adjustment, Social adjustment, Health and emotional adjustment, School/College adjustment. There are 80 items, distributed equally amongst the four areas of adjustment. The respondents are required to record their responses in three categories, yes, no or ?. A high score indicates superior adjustment while a low score indicates poor adjustment. Maximum score is of 240 and the minimum is 80. Scores in four areas can be studied separately to find out in which area the adjustment is high and in which it is low. The reliability of the inventory after making use of Spearman Brown correction is .94 as suggested by the test maker. The corrected split half reliability coefficients of the four areas of the inventory are as follows: Home adjustment, .64; Social adjustment, .44; Health adjustment, .80; and School adjustment, .74 as given by the author.

3. **Self Esteem Inventory (SEI) (Coopersmith, 1987)**: The SEI has designed to measure the evaluation attitudes towards the self in social, academic and personal areas of experience. For this study the adult form has been used which has been adapted from the school short form. This form has 25 items and the subject is required to tick the items which are defining his personality. The scoring is done according to the scoring key provided by the test maker. The obtained internal consistency coefficients are .81 for grade 5, .86 for grade 9 and .80 for grade 12. The coefficients indicate adequate internal consistency.

4. **P.G.I Well-Being Scale (Verma et. al.,1986)**: It is a subjective scale to know about the well-being and mental health of individuals. It can be used for all educational levels and can be administered to groups as well as individuals. It takes about 5 to 8 mins to complete it as it has only 20 items. The total score is calculated by counting the number of marked items. The inter rater reliability of the test is .86, test retest reliability of the test is .80 as suggested by the test maker. Internal consistency of the items (E 1/3 value) is satisfactory. Validity of the test states that the correlation with other tests and with the original scale is significant.
RESULTS AND DISCUSSION

To study the relationship between different variables Pearson Product Moment Correlation used.

Table 1: Relationship of Emotional Autonomy with Self-Esteem
Well-Being and Adjustment for Males

<table>
<thead>
<tr>
<th>Variables</th>
<th>Deidealisation</th>
<th>Perceives parents as people</th>
<th>Non-dependency on parents</th>
<th>Individuation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-esteem</td>
<td>-.07</td>
<td>-.07</td>
<td>-.05</td>
<td>-.29</td>
</tr>
<tr>
<td>Well-being</td>
<td>-.07</td>
<td>-.03</td>
<td>.06</td>
<td>-.06</td>
</tr>
<tr>
<td>Home Adjustment</td>
<td>-.09</td>
<td>-.22</td>
<td>-.06</td>
<td>-.23</td>
</tr>
<tr>
<td>Social Adjustment</td>
<td>-.05</td>
<td>-.12</td>
<td>.10</td>
<td>-.10</td>
</tr>
<tr>
<td>Health Adjustment</td>
<td>-.08</td>
<td>-.17</td>
<td>-.01</td>
<td>-.13</td>
</tr>
<tr>
<td>School Adjustment</td>
<td>.06</td>
<td>-.01</td>
<td>.02</td>
<td>-.08</td>
</tr>
</tbody>
</table>

Value of $r$ significant at .05 Level .17 and at .01 Level .23

In case of males (Table 1), significant negative correlations are also observed between self-esteem and individuation ($r = -0.29$) dimension. Negative correlations are also observed between perceives parents as people ($r = -0.22$), individuation ($r = -0.23$) and home adjustment. Similar, negative correlation is also observed between perceives parents as people and health adjustment ($r = -0.17$). Thus it can be suggested that male adolescents in the process of gaining emotional autonomy suggest lower self-esteem. Their adjustive capacities are also effected negatively. Ryan and Lynch (1989) have related individuation and higher emotional autonomy negatively to self-esteem and self-evaluation. Detaching themselves from the closed home environment to a different social world makes them apprehensive about the things to some extent and this apprehension probably reduces their self esteem.

In case of females (Table 2), the inter correlation matrix suggests negative correlations of well-being with deidealisation ($r = -0.34$) and non-dependency ($r = -0.24$) dimensions. Negative correlations are also observed for self-esteem variable and deidealisation ($r = -0.27$) and individuation ($r = -0.25$) dimensions. This is suggestive of the idea that females in the process of gaining emotional autonomy tend to have lower self-esteem and well-being. The adjustment dimensions of home ($r = -0.26$) and health ($r = -0.18$) have significant negative correlations with deidealisation dimension. Perceives parents as people dimension has negative correlations with home ($r = -0.20$), social ($r = -0.23$), health ($r = -0.21$) and school ($r = -0.17$) adjustment dimensions. Non-Dependency correlates
negatively with home adjustment ($r = -0.22$) and individuation correlates negatively with home ($r = -0.31$), social ($r = -0.19$), health ($r = -0.26$) and school dimensions ($r = -0.24$). The above negative correlations suggest that emotional autonomy influences the adjustive capacity of the adolescents negatively. For females emotional proximity with parents is a positive factor for their adjustment. However, detaching themselves and becoming non-dependent individuals will influence their psycho-social adjustments (Schultheiss and Bluestein 1994).

### Table 2: Relationship of Emotional Autonomy with Self-Esteem
Well-Being and Adjustment for females

<table>
<thead>
<tr>
<th>Variables</th>
<th>Deidealisation</th>
<th>Perceives parents as people</th>
<th>Non-dependency on parents</th>
<th>Individuation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-esteem</td>
<td>-0.27</td>
<td>-0.16</td>
<td>-0.12</td>
<td>-0.25</td>
</tr>
<tr>
<td>Well-being</td>
<td>-0.34</td>
<td>-0.02</td>
<td>-0.24</td>
<td>-0.11</td>
</tr>
<tr>
<td>Home</td>
<td>-0.26</td>
<td>-0.20</td>
<td>-0.22</td>
<td>-0.31</td>
</tr>
<tr>
<td>Social Adjustment</td>
<td>-0.08</td>
<td>-0.23</td>
<td>-0.02</td>
<td>-0.19</td>
</tr>
<tr>
<td>Health Adjustment</td>
<td>-0.18</td>
<td>-0.21</td>
<td>0.05</td>
<td>-0.26</td>
</tr>
<tr>
<td>School Adjustment</td>
<td>-0.07</td>
<td>-0.17</td>
<td>-0.00</td>
<td>-0.24</td>
</tr>
</tbody>
</table>

Value of $r$ significant at .05 Level .17 and at .01 Level .23

### Table 3: Means, Standard Deviations and t-Ratios for Male and Female adolescents on different variables

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Variables</th>
<th>Males</th>
<th>Females</th>
<th>t-ratios</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>$SD$</td>
<td>Mean</td>
</tr>
<tr>
<td>1</td>
<td>Deidealisation</td>
<td>11.50</td>
<td>2.70</td>
<td>12.09</td>
</tr>
<tr>
<td>2</td>
<td>Perceives parents as people</td>
<td>12.78</td>
<td>2.73</td>
<td>12.82</td>
</tr>
<tr>
<td>3</td>
<td>Non Dependency</td>
<td>9.52</td>
<td>2.26</td>
<td>9.60</td>
</tr>
<tr>
<td>4</td>
<td>Individuation</td>
<td>13.66</td>
<td>2.32</td>
<td>13.23</td>
</tr>
<tr>
<td>5</td>
<td>Self-esteem</td>
<td>14.99</td>
<td>3.87</td>
<td>14.20</td>
</tr>
<tr>
<td>6</td>
<td>Well-being</td>
<td>12.94</td>
<td>3.74</td>
<td>11.55</td>
</tr>
<tr>
<td>7</td>
<td>Home Adjustment</td>
<td>49.20</td>
<td>5.41</td>
<td>49.38</td>
</tr>
<tr>
<td>8</td>
<td>Social Adjustment</td>
<td>47.62</td>
<td>5.51</td>
<td>49.20</td>
</tr>
<tr>
<td>9</td>
<td>Health Adjustment</td>
<td>48.23</td>
<td>5.80</td>
<td>45.30</td>
</tr>
<tr>
<td>10</td>
<td>School Adjustment</td>
<td>45.05</td>
<td>6.33</td>
<td>45.56</td>
</tr>
</tbody>
</table>

** significant at 0.01 level;  * significant at 0.05 level

For analysis of gender differences on the variables under study, $t$-test was applied (Table 3). Deidealisation dimension is the only dimension of the emotional autonomy scale on which males and females significantly differed ($t$ (250) =
1.96, p < 0.05). The results are suggestive of higher mean scores for females (‘X = 12.09) as compared to males (X = 11.50). The higher scores on the deidealisation dimension for females suggests greater emotional and cognitive maturity which may help them to relinquish the childish images of their parents. These results are contrary to the widespread stereotypes that autonomy is salient and develops more rapidly among boys than girls. A perusal of the table indicates significant differences for males and females on the well-being scale (t = 3.08, p < 0.01) with the mean scores higher for males ((X = 12.94) than females ((X =11.55). This suggests that males enjoy good well being and mental life satisfaction. They are more energetic and have a more positive outlook towards life.

There are no significant differences observed on the self-esteem scale. The adjustment scale indicates significant differences on social dimension (t (250) = 2.43, p < 0.05) and health dimension (t (250) = 4.06, p < 0.01). The mean scores suggest higher scores for females on home ((X =49.38), social ((X =49.20) and school adjustment ((X =45.56) dimensions whereas males score higher on the emotional dimension ((X =48.23). The significant scores suggest that females in their late adolescent years are able to have better psycho-social adjustments. Good home adjustment enhances their adjustment in social environment. Similar results were reported by Steinberg et. al. (1992). Males on the other hand outscore on the health dimension. They enjoy a good physical health and stay in a good shape with regards to their health.

Considered together the present results indicate that emotional autonomy influences the adjustive capacity of the adolescents negatively. Gender differences were observed only on deidealisation, well-being, and two dimensions of adjustment (health and social).

REFERENCES


STRESS AND PSYCHOLOGICAL HARDINESS OF PARENTS OF PHYSICALLY CHALLENGED CHILDREN

Ankit Prakash*, Sheema Aleem**, Samina Bano*** and Naved Iqbal****

ABSTRACT

Families and carers of people with disabilities face significant difficulties in their life. Although giving care to the child is part of the responsibility of the parents, the situation becomes entirely different when the child is diagnosed with a disability and may rely on long-term dependence on daily living. It is because parents have to manage their children's health problem as well as the requirements of everyday living. Hardiness has been shown to be associated with the individual's use of active, problem-focused coping strategies for dealing with stressful event. The present research was undertaken with the purpose to see the Stress and Psychological Hardiness and the possible relationship between the two variables among the Parents of physically challenged children. The study was conducted on 60 parents taken on purposive basis from Delhi. Thirty parents were those who have normal children and 30 parents who have children living with disabilities. Parenting stress index-short form and Psychological Hardiness scale were used to assess both variables in the study. Psychological hardiness had three components, i.e., commitment, control and challenge. Results indicated that parents of physically challenged children experienced more stress than the parents of normal children. Parents of physically challenged children also scored higher than parents of normal children on commitment, challenge and total

* Post- Doctoral Fellow, Department of Psychology, J.M.I, New Delhi.
** Assistant Professor, Department of Psychology, J.M.I, New Delhi.
*** Assistant Professor, Department of Psychology, J.M.I, New Delhi.
**** Professor, Department of Psychology, J.M.I, New Delhi.
hardiness. However, significant difference was not found between the two groups in control component of psychological hardiness. Significant positive relationship was found between parental stress and total hardiness.

**Key Words:** Stress; Psychological Hardiness; Parents and Physically Challenged Children

The presence of a chronic disease or a congenital defect in a child certainly makes it more difficult for any parent to carry out his parental role. The dependence of all infants and young children increases in the case of a physically handicapped infant and young child. This increased dependence quite often provokes in the parents severe feelings of hostility with wishes to be rid of this added burden. This is immediately followed by intense feelings of guilt, and thus a vicious cycle is set in motion. An estimated 10% of the world’s population experiences some form of disability or impairment (WHO action plan, 2006-2011). The number of people with disabilities is increasing due to population growth, emergence of chronic diseases and medical advances that preserve and prolong life, creating overwhelming demands for health and rehabilitation services (Srivastava & Khan, 2008). In South-east Asia, the prevalence of disability ranges from 1.5-21.3% of the total population, depending on definition and severity of disability (Mont, 2007).

Gupta, Mehrotra & Mehrotra, Hidangmayum & Khadi (2012) found high level of stress among the parents of disabled. Parents with a child with disability face a series of specific tasks arising from the child’s health condition. Numerous studies have shown that specific physical demands and experience of disappointment because of health problems of the child cause stress in parents (Barnett, Clements, Kaplan-Estrin, & Fialka, 2003; Florian, & Findler, 2001; Hauser-Cram, Warfield, Shonkoff, & Krauss, 2001; Lin, 2000). Stress of care giving and raising a child with disability is seen as a combination of increased needs for the child care and emotional reactions caused by the child’s condition (Margalit & Kleitman, 2006). One of the most difficult problems for a family is the birth of a child with physical impairment or the development of a disability during early childhood (Rosman, 1988).

Although, giving care to the child is part of the responsibility of the parents, the situation becomes entirely different when the child is diagnosed a disability and may rely on long term dependence on daily living (Raina, O’Donell, Rosenbaum, Brehaut, Walter, Russell, Swinton, Zhu and Wood, 2005). It is because parents have to manage their children’s chronic health problems as well as the requirements of everyday living. For example, parents of children with muscular dystrophy, especially mothers, experience significant chronic emotional stress which influences the overall management of the illness, and offering lifelong care on the children’s day to day living would lead to parental strain (Chen,
Parents of children with physical disability experience disability related caregiving stress and stigma due to being affiliated with their children living with physical disability, which may negatively impact their mental health. Caregiving is a dynamic and dyadic process in which the children’s adaptation to the disability and outcome of treatment would be significantly related to the quality of caregiving and interactions; and these would in turn depend on the caregiver’s adjustment to the child’s disability condition and the resulting parental stress (Knussen & Sloper, 1992; Lessenberry & Rehfeldt, 2004; Oyebode, 2003). A study by Green (2003) showed that stigma perceptions held by mothers of children with disability would increase maternal distress. In an earlier study Goffman (1963) also reported that stigma not only affects those who have that stigmatizing attributes but also other people who are affiliated with them, such as their parents and friends.

A growing body of evidence suggests that the personality trait of hardiness helps to buffer exposure to extreme stress. In the late 1970s Kobasa (1979) introduced the concept of psychological hardiness and suggested that hardiness moderates the relationship between stressful life events and illness. Personality hardiness has emerged as a composite of the interrelated attitudes of commitment, control, and challenge that provides the existential courage (Maddi, 2004) and motivation needed in turning stressful circumstances from potential disasters into growth opportunities (Maddi, 2002, 2004; Maddi, Harvey, Khoshaba, Lu, Persico, & Brow, 2006). Those who are strong on commitment attitude, get involved rather than withdraw, perceiving this as the best way to turn the stressful experience into something that seems noteworthy. Those strong in the control attitude believe that through effort, they can more often than not influence what is going on around them rather than perceiving themselves as powerless in the face of circumstances. Those strong in the challenge attitude believe that fulfillment is to be found not in easy comfort, security, and routine but rather in the continual growth in wisdom through what is learned from the negative and positive experiences of an active life. As existential courage, hardiness is a sign of mental health and has expanded the emphasis of positive psychology beyond mere happiness (Maddi, 2006). Hardy individuals are also more confident and better able to use active coping and social support, thus helping them deal with the distress they do experience (e.g., Florian, Mikulincer, & Taubman, 1995).

There is empirical evidence that hardiness is associated with greater well-being and that increased well-being is achieved through the use of active-coping responses (Allred & Smith, 1989; Berwick, 1992; Maddi, 1987, 1999; Maddi & Khoshaba, 1996; Maddi, Wadhwa, & Haier, 1996; Nakano, 1990; Narsavage & Weaver, 1994; Rhodewalt & Agustsdottir, 1989; Rush, Schoael, & Barnard, 1995). Studies have also shown that hardy people appraise stressful conditions as less threatening and more manageable and use more effective coping skills.
than their less hardy peers (Maddi, 1999; Zakin, Solomon, & Neriya, 2003). Summarising the results of more than two decades of research about hardiness, led Kobasa to suggest that hardy individuals have a clear sense of direction, an active approach in stressful situations, and a sense of confidence and control that mitigate the intensity of possible threats and dangers (Zakin et al., 2003).

Rationale

Since the parents of physically challenged have to take extra care of their child then the parents of normal children as they have to manage their children’s health problem as well as the requirements of everyday living and because of this extra burden they need extra energy to meet the challenges of life. Hardiness has been shown to be associated with the individual’s use of active, problem-focused coping strategies for dealing with stressful events. Keeping in view the significance of Psychological Hardiness in the life of an individual the present study was undertaken to examine the level of Parental stress and level of Psychological hardness among the Parents of physically challenged Children. Besides that the study was also intended to examine the association between Stress and Psychological Hardiness.

METHOD

Sample

Total 60 Parents were taken purposively from the different places of Delhi. Out of 60 parents, 30 were the Parents of physically challenged (with imputed hands / legs or suffering from polio) whereas the remaining 30 were the parents of normal children (at par with the physically challenged in terms of socio economic and educational status). The parents of physically challenged were contacted on various hospitals of Delhi whereas the parents of Normal children were contacted at their homes.

Design

A two group design was used in the present study.

Tools

Two different tools were used in this study to examine the level of psychological hardiness and Stress among the parents of physically challenged and normal Children.

Parenting Stress Index – Short Form (Abidin, 1995): The PSI-SF is a self-reported questionnaire that yields an overall parenting stress viz. the norms for children in the range of one month to 12 years are developed by the author. The items of parenting stress (Abidin, 1995) is not designed to assess the stress that parents experience related to other life roles and life events. The PSI was originally used with parents who have at least fifth grade reading levels. There are three factors/subscales which are assessed by the PSI-SF as described as:

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Parental Distress (PD) measures an impaired sense of competence in the parenting role, lack of social support, role restriction, depression and conflict with one’s spouse i.e. parents perception of their own behaviour including perceived competence, marital conflict, social support and limitation in their life as a results of parents demands. Parents- Child Dysfunctional Interaction (PCDI) examines the failure of the child to meet parents’ expectation, interactions with their child which is not reinforcing. Difficult Child (DC) taps into characteristics of the child that makes him/her easy or difficult to be managed by parents. This subscale indicates the parents’ perception of their child’s temperament, non-compliance, demandingness and defiance.

The PSI-SF (Abidin, 1995) consist of 36 items that are rated on a five point scale. Score anchored from ‘strongly agree’ with five score to strongly disagree with a score of one with higher scores indicating greater stress. Based on the total stress score the respondent stress on parenting was classified Low level of stress if scores were < 55; Normal level of stress if scores were 56-85; High level of stress if scores were 86-90; Clinically significant stress if scores were >90.

On pretesting the coefficient of reliability by using split half method was found to be 0.93 which was significant. This questionnaire requires only 15 minutes for answering all the items.

Singh Psychological Hardiness Scale (SPHS): For accessing the extent of psychological hardiness among the adolescents Singh Psychological Hardiness Scale (SPHS) by Singh (2007) was used. In developing SPHS, 16-16 items from each of the three components of hardiness, that is, commitment, control and challenge were taken. Thus, a total of 16x3 (48 items) were taken. The entire set of 48 items was submitted to a group of judges, that is, 7 college teachers of psychology and 7 college teachers of sociology with a request to suggest and vagueness, ambiguity or dual meaning coming from any item. Keeping in view their common suggestion regarding any particular item, some minor modifications were done. Subsequently, the test having 48 items was administered to a sample of 100 subjects and item- total correlations were competed for checking the validity of the items. This process of items analysis identified 18 items to be yielding very low item-total correlations. As such they were dropped from final inclusion and the test in its final form had only 30 items. Items nos. 1, 4, 7, 10, 13, 16, 19, 23, 25, 28 measured commitment; items nos. 2, 5, 8, 11, 14, 17, 20, 23, 26, 29 measured control and items nos. 3, 6, 9, 12, 15, 18, 21, 24, 27, and 30 measured challenge.

Every item was rated on five response options: strongly agree, agree, neutral, disagree and strongly disagree by the respondents. All items except item no. 17, 21, 25 and 28 were given a score of 5, 4, 3, 2 and 1 for the above five categories of responses respectively. Since these items (17, 21, 25, 28) are
negative, they were given a score of 1, 2, 3, 4 and 5 for the above five categories of responses respectively. Subsequently, the scores earned by the respondent on each item were added to yield a total score. Higher the scores, higher is the magnitude of psychological hardiness. Lower score indicates lower psychological hardiness. The maximum possible score on SPHS 150.

The test-retest reliability of the test was found to be 0.862 and the internal consistency reliability as indicated by the coefficient Alpha was found to be 0.792 content validity for three components of psychological hardiness, that is commitment, control and challenge were 0.762, 0.682 and 0.784 respectively. The overall coefficient of concordance was 0.74.

**Procedure**

The parents of both physically challenged and normal adolescents were contacted and after explaining the purpose of the study and assuring the confidentiality regarding result of the study the data was collected on Parenting stress Index and Psychological Hardiness scale. The obtained data were analysed with the help of $t$-test and correlation by using SPSS-16.

**RESULTS AND DISCUSSION**

The results obtained are presented in the following tables:

**Table 1 : Comparison between two groups on stress and various dimensions of hardiness**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental Stress</td>
<td>Parents of Physically challenged</td>
<td>30</td>
<td>101.30</td>
<td>7.54</td>
<td>10.406**</td>
</tr>
<tr>
<td></td>
<td>Parents of Normal Children</td>
<td>30</td>
<td>79.36</td>
<td>8.73</td>
<td></td>
</tr>
<tr>
<td>Psychological</td>
<td>Parents of Physically challenged</td>
<td>30</td>
<td>121.27</td>
<td>7.70</td>
<td>2.49*</td>
</tr>
<tr>
<td>Hardiness (Total)</td>
<td>Parents of Normal Children</td>
<td>30</td>
<td>116.37</td>
<td>7.52</td>
<td></td>
</tr>
<tr>
<td>Commitment</td>
<td>Parents of Physically challenged</td>
<td>30</td>
<td>41.80</td>
<td>3.27</td>
<td>2.608*</td>
</tr>
<tr>
<td></td>
<td>Parents of Normal Children</td>
<td>30</td>
<td>39.56</td>
<td>3.35</td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>Parents of Physically challenged</td>
<td>30</td>
<td>39.73</td>
<td>4.41</td>
<td>.796</td>
</tr>
<tr>
<td></td>
<td>Parents of Normal Children</td>
<td>30</td>
<td>38.90</td>
<td>3.66</td>
<td></td>
</tr>
<tr>
<td>Challenge</td>
<td>Parents of Physically challenged</td>
<td>30</td>
<td>40.10</td>
<td>4.46</td>
<td>2.009*</td>
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<tr>
<td></td>
<td>Parents of Normal Children</td>
<td>30</td>
<td>37.90</td>
<td>4.00</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at p < 0.05
**Significant at p < 0.01
Table 1 showed significant difference between parents of physically challenged and parents of comparison group on parenting stress, psychological hardiness (total), commitment and challenge. However, significant difference was not found between two groups on control dimension of psychological hardiness.

From the results given in the table 1 it was found that the parents of physically challenged children had more Parental Stress than the parents of normal children as the mean scores on Parental Stress were found to be 101.30 and 79.36 respectively for the parents of physically challenged and normal children. The difference between the two scores was found statistically significant beyond .05 level of confidence. From the above findings, it appeared that the parents of physically challenged were by and large in stress may be because of the impairment of their child and the extra burden that endorsed upon them. In addition to usual demands imposed by the parenthood, families with a child with developmental difficulties face a series of specific tasks arising from the child’s health condition. Keteelars (2008), Peshawaria, Menon, Ganguly, Roy, Pillay, and Gupta, (1995) stated that there were gender differences in facilitating and inhibiting factors that affect coping in parents of children with intellectual disability in India. Mothers are under more pressure to balance childcare needs and household chores. Physical support was a relief to them. The presence of mental retardation in the family creates additional needs on the family resources and its perception of the events. Unmet needs tangible or intangible however creates psychological stress (Kumar, 2008). The mothers might have also experienced various degrees of psychological distress due to parental reaction towards the irreversity of the intellectual disability, social stigma, and anticipation of future and caring demands (Al Kuwari, 2007).

From the results given in the Table 1 it was also found that the parents of physically challenged children had better psychological Hardiness than the parents of normal adolescents as the obtained mean scores orthopedically and normal adolescents were 121.27 and 116.37 respectively. The obtained data on Psychological Hardiness were also analysed on the basis of its three dimensions. On looking at the table it appeared that the two groups also differ significantly on Commitment and Challenge. On the said two dimensions the parents of physically challenged children were found to be better on the Psychological hardiness as the mean scores for the two groups were 41.80 and 39.56 for Commitment and 40.10 and 37.90 for the Challenge on dimensions of Psychological Hardiness. According to Kobasa (1979) Commitment refers to the tendency to involve oneself in the activities in life and have a genuine interest in and curiosity about the activities, things and other people, while challenge refers to the belief that changes in life are opportunities for personal growth. Dimension of control is defined as a tendency to believe and act as if one can influence the life events through one’s own effort. Therefore, it can be said that the parents
of physically challenged were more committed and likes challenges more than the parents of normal children. However, on the dimension namely control no significant difference at .05 level was found between the two groups. The obtained results can be understood in the light of the facts that Parents of physically challenged have to develop more advanced cognitive abilities than the parents of normal children, specifically more refined abilities to think about the perspectives of their child and to understood times as it relates to his/her future and life, these abilities also contribute to understanding of resilience. As compared to parents of normal children they develop and demonstrate more resilience when they suffer from some sort of distress. Previous research findings have provided support for this hypothesis and indicate that, in comparison to less hardy individuals who are more likely to engage in distancing, avoidance, and emotionally focused coping, individuals who score high on hardiness measures are more likely to engage in problem-focused, active, and support-seeking coping strategies (Pollock, 1989; Williams, Wiebe, & Smith, 1992). These latter coping strategies, in comparison to emotionally focused coping (e.g., distancing) have typically been regarded as adaptive, since individuals engaging in problem-focused coping generally demonstrate fewer indications of distress and maladjustment (Breslin, O’Keefe, Burrell, Ratcliff-Crain, & Baum, 1995; Cooper, Russell, & George (1988); Cooper, Russell, Skinner, Frone, & Mudar, 1992; Evans, & Dunn (1995). Beasley, Thompson and Davidson (2003) approved the moderating role of hardiness in life negative events effects on women’s psychological health and the role of hardiness in reducing the effects of emotion-focused coping in distress scales, for men and women (Beasley, Thompson, and Davidson, 2003).

Table 2: Correlation between Parental Stress & Psychological Hardiness and its three components for the total sample (N=60)

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental Stress &amp; Psychological Hardiness</td>
<td>.275*</td>
</tr>
<tr>
<td>Parental Stress &amp; Commitment</td>
<td>.178</td>
</tr>
<tr>
<td>Parental Stress &amp; Control</td>
<td>.099</td>
</tr>
<tr>
<td>Parental Stress &amp; Challenge</td>
<td>.303*</td>
</tr>
</tbody>
</table>

* Significant at .05 level

Table 2 showed significant positive relationship between parental stress and total hardiness and parental stress and challenge whereas correlation was not found significant between parental stress and other two components of psychological hardiness.

The results given in the Table 2 indicated that the scores on Parental Stress and Psychological Hardiness and Parental Stress and Challenge were correlated with each other significantly as obtained value of $r$ was .275 and .303 respectively. From the results it was obvious that those who were high on parental stress were also found high on psychological hardiness. In other words, it can be said...
that higher will be Parental Stress higher will be the Psychological Hardiness. Initially used to examine the relationship between health and stress (Jennings & Staggers, 1994), Kobasa’s (1979a, 1979b) preliminary findings revealed that individuals who experienced high levels of stress, but remained healthy had a different personality structure than individuals who experienced high levels of stress and became ill.

In sum, the parents of physically challenged children had more parenting stress than the parents of normal children. Whereas, the parents of physically challenged had better psychological hardiness then the parents of normal adolescents.

REFERENCES


*Journal of Indian Health Psychology*
HEALTH-SUPPORTIVE BEHAVIOUR, SUBJECITIVE HEALTH AND LIFE STYLE OF UNIVERSITY STUDENTS

Jaroslava Dosedlová*, Zuzana Slováèková**, and Helena Klimusová***

ABSTRACT

The aim of the project was to identify and describe different life style types of university students based on their health-related behaviour, to compare different life style type profiles, and to relate them to chosen personality variables. The aim of the second research phase was to verify whether the preferred life style affects the health state of respondents. The health was measured in terms of sickness frequency during the last year and also in terms of number of health complains. These relations were studied on population of contemporary university students of various majors (N=4292). By the means of cluster analysis, six types of life style based on health-related behaviour were identified. Two of these life style types (40% of respondents) can unambiguously be labelled health-supportive. From the subsequent analyses of variance, information about personality characteristics which are associated with different life style types was derived. Differences in the health state of representatives of individual life style types were examined by the means of Chi-square tests.

Key Words: Health-supportive behaviour; Life style; Health and Personality traits

* Institute of Psychology, Faculty of Arts, Masaryk University, Brno.
** Institute of Psychology, Charles University, Prague.
*** Institute of Psychology, Palacky University, Olomouc.

1. The present study aims to elaborate a part of the research project supported by GAÈR “Determinants of life satisfaction and health of university students: body concept, health-supportive behaviour and selected personality characteristics no. 406/05/0564.
We are a part of the Euro-American culture which has become more and more individualised during the 20th century. Our awareness of our own personalities has changed. Identity and self-value, self-actualisation, private life, and individualised life-style have evolved into important values (Baumeister, 1991). Ideally, the period of matured adolescence transition to young adulthood creates the space for fixation of responsible behaviour focused on one’s own person and society. On the other hand, so-called ‘modern societies’ are pushed to admit increasing percentage of social risk factors which are examined by our research (drug abuse, obesity, eating-disorders, health-threatening behaviour, increase of psychosomatic and neurotic symptoms, insufficient focus on prevention …).

Behaviour connected to the health is in the meantime more and more accepted as a determining factor of the health support and illness prevention. Together with behavioural factors it explains half of premature deaths from 10 most frequent reasons (Gruman, Follick, 1998 cit. according to Steptoe, Wardle, 2004). Contemporary researchers insists more and more on prevention of health difficulties as healthy life style. This topic is growingly important and intersects many scientific branches, where psychology is no exception. Wide population studies realised in 40s and 60s of the 20th century proved connection between health state of respondents and how many health-supportive behaviour they practice in their everyday lives (e.g. Belloc, Breslow, 1972). These works were to some measure inspiration of our research intention, where we would like among others to find out how contemporary university students take care of their health and how their life style affects their health.

The main goal of our research is to identify and describe different life style types of university students based on their health-related behaviour, to compare different life style type profiles, and to relate them to chosen personality variables. The research is exploratory; it intends to help clarify the relationship between health-supportive behaviour, well-being, and some personality characteristics.

The aim of the second research phase was to verify whether the preferred life style affects the health state of respondents. The health was measured in terms of sickness frequency during the last year and also in terms of number of health complaints.

**METHOD**

**Research Sample**

The research group consisted of students from three universities (Charles University in Prague, Masaryk University in Brno, and Palacky University in Olomouc). Extensive data collection was conducted in the fourth quarter of 2005. All together 19,211 students from five types of faculties (Faculty of Arts, Faculty of Medicine, Faculty of Economy, Faculty of Science, Faculty of physical culture) were addressed by mass email. The email correspondence
included a request for cooperation and a link to the grant project web page where it was possible to fill in the electronic version of the entire assessment package. There were 4,501 students who participated in the questionnaire study. It means that the rate of return was 23.43%. A total of 4,501 students, ages ranging from 15 to 62, filled in the questionnaire. Due to homogenisation of the sample, only data from 18 to 29 year-old students were included in the subsequent procedure. The final number of participants was reduced to 4,292, consisting of 1,286 males and 3,004 females (two individuals did not indicate their gender).

**Tools**

**Body concept and health-related behaviour questionnaire**

This questionnaire is a modification of Body Attitude questionnaire (Mrazek, Bychovskaja & Fialová, 1996) and Figure’s Schematic Silhouette Scale (Stunckard, 1983). In 96 items, it tracks health state, various aspects of health-related behaviour (sleep patterns, nutrition, addictive substances use, weight control, etc.), loads of physical activity, relationship to the body, and body concept. Most items were answered on a five point scale; some questions elicited free answers. Only the questionnaire section which describes health supportive behaviour has been chosen for the scope of the study. The section includes 40 items.

**NEO Five – Personality Factor Inventory**

In order to study personality factors, NEO Five-Factor Personality Inventory was administered. It was adapted by M. Hrebickova and T. Urbanek (Testcentrum, Praha 2001); the adaptation was based on a lexical analysis from the original version NEO Five-Factor Inventory by P.T. Costa & R.R. McCrae. The inventory includes 60 items which load five basic factors (Extraversion, Agreeableness, Conscientiousness, Neuroticism, Openness to Experience). Participants rated the extent to which the statements refer to themselves on a five point Likert scale anchored by Not similar to me at all (0) and Always like me (5).

**Life Satisfaction Measure**

We measured a level of life satisfaction by the Satisfaction with Life Scale (Pavot & Diener, 1993) which consists of five items. Participants were requested to express their agreement or disagreement with each item on a five-point Likert scale anchored by Completely disagree (1) and Completely agree (5). A total summed score was used for analysis. For five items of the Life satisfaction scale the total summed score range from 5 to 25 points. High scores on the scale mean high life satisfaction.

**General Perceived Self-Efficacy Scale (GSE) (Jerusalem & Schwarzer, 1992)**

Bandura’s self-efficacy is the belief that people have the capability to influence events that affect their lives. In order to find the level of this measure, the
questionnaire by Jerusalem and Schwarzer translated to Czech by Krivohlavy was administered. The questionnaire includes 10 items. Participants were asked to rate their agreement with items on a four-point scale anchored by Not matching at all (1) and Matching exactly (4). A high score presumes a high level of perceived self-efficacy.

**RESULTS AND INTERPRETATION**

A typology based on 40 items of health-related behaviour would be too difficult to interpret. To facilitate the interpretation, data were reduced to 11 factors by the Principal Component Analysis with the oblique rotation Promax \( (\text{Kappa} = 4) \). These new variables were used in the cluster analysis ( -Means clustering) to reveal 6 life style types. Analysis of variance was used to assess whether respondents with different life style types differ from each other in an average level of life satisfaction, self-efficacy, and in five dimensions of Big Five. Differences in the health state of individual life style representants were examined by the means of Chi-square tests. Analytical software SPSS was used to compute the results.

**Factor analysis of items in Body image and health-related behaviour Questionnaire**

By the principal component analysis of the Body Concept and Health-related Behaviour Questionnaire items with oblique rotation Promax, the 40 variables were reduced to 11 factors. The detailed results of the factor analysis will be send on request.

The eleven extracted factors are listed below:

1. **Physical Activity** (physical performance enhancement, active body shaping, exercise with equipment, a number of hours spent doing physical activity, competitive sport, and sport done on regular basis)
2. **Hygiene and Attention to Appearance** (regular hygiene, clean clothes, deodorant use, checking in the mirror)
3. **Weight and Figure Care** (dieting, passive methods of body shaping, solarium use, weight control, and preventive vitamin intake)
4. **Proper Daily Regimen** (enough sleep, regular eating, rest, time spent outside, nutritious foods, daily liquid intake)
5. **Smoking, Alcohol and Drugs**
6. **Coping with Health Problems by Daily Regimen Regulation** (limited intake of medicines)
7. **Positive Body Image** (positive acceptance of one’s body in the mirror, pleasant experiences of physical contact)
8. **Attention to Health Problems, Prevention** (awareness level of possible causes of health problems)
9. **Massage, Sauna, Alternative Approaches** (kinesiology, homeopathy, reflexive therapy, the Silva method, etc.)

10. **Regular Appointments with a Doctor** (preventive medical and dental examination, motivation for seeing a doctor)

11. **Hiding of One’s Own Body** (avoidance of physical contact and one’s own discomfort with nakedness)

**Typology of University Student’s Life Style**

In cluster analysis (mean method), different life style types were identified by using 11 health-related factors listed above (the factor scores estimated by the regression method were used in the cluster analysis). We examined solutions for 3-8 clusters. The solution for 6 clusters of people appeared to be the clearest to interpret.

**Cluster 1 (N = 536) – “Sportsmen Hedonists”** - spend a lot of time per week doing physical activity; pay little attention to proper daily regimen, health, and appearance; elevated consumption of cigarettes, alcohol and other addictive substances

**Cluster 2 (N = 719) – “Perfect Students”** - above-average levels in all studied characteristics (regular physical activity; care for body and weight; emphasis on prevention; attempting a proper daily regimen)

**Cluster 3 (N = 869) – “Conscious”** – physical activity is natural for them; care about own regimen, by which they attempt to influence their health problems; pay attention to their health state; relatively critical to their body, but they accept it and do not avoid physical contacts

**Cluster 4 (N = 445) – “Blissfully Ignorant”** - neglect care of themselves; do not have a positive attitude towards their bodies; do not abuse addictive substances

**Cluster 5 (N = 754) – “Party Crowd”** - take care of hygiene and appearance; do not spend time doing physical activity; do not care for their health; above-average in alcohol and addictive substances use

**Cluster 6 (N = 966) – “Hypochondriacs”** - more attentive to their own bodies (including hygiene and caring for appearance) and possible health problems; frequent appointments with practitioners; do not smoke and do not drink alcohol

A number of participants belonging to one life style group with relation to gender are shown in Table 1. The proportion of men and women differs significantly ($\chi^2 = 731, 6; \text{df} = 5; \text{Cramer V} = 0,413; p<0,001$)

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*Journal of Indian Health Psychology*
Basic characteristics of life styles emerge from Figure 1

Fig. 1: Types of life style (clusters 1-6)
Table 1: Life style types with respect to gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Life Style Type</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sportsmen Hedonists</td>
<td>Perfect Students</td>
</tr>
<tr>
<td>males</td>
<td>number</td>
<td>320</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>24.9%</td>
</tr>
<tr>
<td>females</td>
<td>number</td>
<td>216</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>7.2%</td>
</tr>
<tr>
<td>total</td>
<td>number</td>
<td>536</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>12.5%</td>
</tr>
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</table>

Life Style Types and Personality Characteristics

Analyses of variance were conducted to investigated whether people with different life styles differ in subjectively experienced levels of self-efficacy, life satisfaction, and in 5 dimensions of Big Five (Extraversion, Agreeableness, Conscientiousness, Neuroticism, Openness to Experience). Participants differ significantly at the .01 significance level in all studied variables. The post-hoc comparisons (Scheffe’s tests) were conducted with the significance levels set at 0.01. Even though the differences in Openness to Experience and Agreeableness were statistically significant, they were mostly negligible. Therefore, they were not taken into account for results interpretation.

Differences between life style types based on personality characteristics are listed in Table 2. The group sizes in the table are slightly different from the cluster sizes because not all of the respondents completed personality questionnaires.

Based on our data, we can enrich the basic characteristics of life style types with the following information about the personality of group members.

Cluster 1 (N = 536; 12.5% of the sample) “Sportsmen Hedonists”

Participants who belong to Cluster 1 are mostly men (24.9% males, 7.2% females of the sample) spending a lot of time doing physical activity. The motivation for exercise is not perceived as a care for their own health and appearance, but more likely as the experience of their own performance and enjoyment of peer contact. This suggestion is supported by a high score in extraversion. These people mostly perceive their bodies in the context of their own performance and satisfaction in physical activity. On the contrary, they give their bodies almost no attention in other settings. Somatic changes are not sensed and health problems are ignored. They ask for medical help only when their health limits them in normal functioning.
Table 2: Relationship between personality characteristics and life style types

<table>
<thead>
<tr>
<th>Personality characteristics</th>
<th>Life style types</th>
<th>N</th>
<th>Average</th>
<th>SD</th>
<th>F</th>
<th>Sig. (*)</th>
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<tr>
<td>Neuroticism</td>
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<td>32.84</td>
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<td>Conscious</td>
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<td>Life satisfaction</td>
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<td>4.108</td>
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<td>18.37</td>
<td>4.093</td>
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</table>

(*) the star denotes the 0.1% significance level
The level of neuroticism is low and life satisfaction belongs to the average. They experience inner peace. Moreover, current fashion trends and social norms do not grab them. Low conscientiousness contrasting with high self-efficacy appears to be characteristic for this group. It is possible to picture them as quite self-confident people who trust their own abilities and do not bother much with daily obligations and needs.

**Cluster 2 (N = 719; 16.8% of the whole sample) “Perfect students”**

The majority of participants in Cluster 2 are women (19.9% females and 9.4% males of the sample). They strive for all-encompassing perfection. Utilising all available resources, even alternative ones, they care thoroughly for their appearance. They work actively on physical exercise and watch their weight. They desire a figure resembling the current ideal of beauty. They do not avoid presenting their bodies. They pay special attention to daily regimen. Regulation of their daily regimen solves minor health issues. Since they are quite sensitive to their bodies, this intervention is often successful. Higher levels of self-efficacy of the respondents’ group are consistent with this evidence. They undergo preventive examinations frequently. In the event of more serious health problems, they do not hesitate to see a professional practitioner.

In comparison with respondents from other groups, these students are the most satisfied with themselves as well as with their lives. When interpreting results in this group in particular, we must consider the possible influence of social desirability and general tendency to agree.

**Cluster 3 (N = 869; 20.3% of the whole sample) “Conscious”**

The gender distribution of Cluster 3 is balanced (22.3% males and 19.4% females of the sample). The group is described by natural self-care on a daily basis. Good health is highly important. They approach health responsibly and support it with a proper daily regimen. Even though their appearance does not play the main role, they do not neglect it. They often participate in physical activities because they are aware of its positive effects on health.

Considering personality characteristics, we can point out the lowest neuroticism compared to all other investigated groups. The lowest level of neuroticism is probably reflected in satisfying physical contact with others, and not feeling ashamed of their own bodies, even though they do not have a completely positive relationship with it. Typically, they score high in self-efficacy, conscientiousness, and extraversion. In conclusion, high life satisfaction is not surprising in this group.

**Cluster 4 (N = 445; 10.4% of the whole sample) “Blissful Ignorants”**

This least frequent group is predominantly male (21.9% males and 5.4% females of the sample). Participants of this group reject some traditional values of our culture (tidiness, care for appearance, reasonable daily regimen etc.).
They avoid physical activity. Compared to other groups, they take the poorest care for their hygiene and appearance. Negative relationships to their bodies and introvert tendency are manifested in a stronger tendency towards physical contact rejection. They do not seek out the company of others. Therefore, their opportunity to abuse socially accepted addictive substances (tobacco, alcohol) decreases. They do not disregard health annoyances; however, those are not sufficient reason to make an appointment with the doctor.

Above-mentioned features correspond with a low level of conscientiousness as well as self-efficacy. Neuroticism rates belong to the average. Deflection of traditionally accepted values and inner self-dissatisfaction lead to an over-all lower life-satisfaction.

**Cluster 5 (N = 754; 17.6% of the whole sample) “Party Crowd”**

Currently, daily regimen and health are not of important values for 14.5% males and 18.9% females. In comparison with other groups, they spent the least amount of time doing physical activity and they neglect daily regimen. This may be associated with a lower level of conscientiousness of the whole cluster. Compared to “Blissful Ignorants”, they are attentive to their appearance and hygiene. They are aware of physical discomfort - however, they do not search for causes or attempt to better their situation. Furthermore, they seek fast relief carried by medicament-alleviation/reduction of symptoms. They arrange an appointment with the doctor only in extreme cases. In comparison with other groups, they report the highest alcohol consumption as well as use of other addictive substances (tobacco, drugs). Since they score high levels of neuroticism and low self-efficacy, substances often represent escape strategies while coping with stress. Similar to “Blissful Ignorants”, the life satisfaction of this group is relatively low.

**Cluster 6 (N = 966; 22.5% of the whole sample) “Hypochondriacs”**

Women are predominant in the last and the biggest group (7% males and 29.2% females). In regard with this fact, conscientiousness is one of Cluster 6’s key personality characteristics. They care attentively to their appearance and tidiness. They intentionally insulate themselves from the negative influence of addictive substances. This group indicates the lowest consumption of alcohol, tobacco, and other drugs.

They perceive their bodies positively. Mainly introvert tendencies suggest higher sensitivity to bodily processes. However, this higher sensitivity is not accompanied by health supporting activities. Moreover, due to higher levels of neuroticism, they do not feel in control of their own bodies. Therefore, they do not aim to influence their health actively (regulation of daily regimen to the current state, spending more time in motion). Contrary, they solve even trifles by seeing a doctor and relying on his/her competency. Their tendency to pass
responsibility for their own health on to someone else may spring from their low level of self-efficacy (the lowest of all groups).

**Tab. 3 Sickness of respondents connected to their life style**

For the evaluation of health state of respondents we created categorical variable “sickness”. Its individual categories were given by the number of days in the last year, when the respondents were ill:

- healthy - 0 – 3 days
- normally ill - 4 – 14 days
- more ill - 15 – 21 days
- much ill - 22 days and more.

Differences between representants of life style individual types are in this variable statistically important ($c^2 = 131, 416; \text{df} 15; p<0,001$). The results are in Table 3.

Table 3: Sickness measure of individual life style types²

<table>
<thead>
<tr>
<th>Types of Life Style</th>
<th>Sickness</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>healthy</td>
<td>normally ill</td>
</tr>
<tr>
<td>Perfect</td>
<td>98</td>
<td>346</td>
</tr>
<tr>
<td>Students</td>
<td>13.6%</td>
<td>48.1%</td>
</tr>
<tr>
<td>Conscious</td>
<td>145</td>
<td>479</td>
</tr>
<tr>
<td></td>
<td>16.7%</td>
<td>55.1%</td>
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<tr>
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<td>133</td>
<td>259</td>
</tr>
<tr>
<td>Hedonists</td>
<td>24.8%</td>
<td>48.3%</td>
</tr>
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<td>Hypochondriacs</td>
<td>116</td>
<td>457</td>
</tr>
<tr>
<td></td>
<td>12.0%</td>
<td>47.3%</td>
</tr>
<tr>
<td>Blissfully</td>
<td>98</td>
<td>201</td>
</tr>
<tr>
<td>Ignorant</td>
<td>22.4%</td>
<td>46.0%</td>
</tr>
<tr>
<td>Party</td>
<td>89</td>
<td>330</td>
</tr>
<tr>
<td>Crowd</td>
<td><strong>11.8%</strong></td>
<td><strong>43.8%</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>679</td>
<td>2072</td>
</tr>
<tr>
<td></td>
<td>15.9%</td>
<td>48.4%</td>
</tr>
</tbody>
</table>

According to the values in this table, almost 16% of all participating students find themselves healthy and in the last year they were ill at most 3 days. There is highest representation of “Sportsmen Hedonists” (24.8%) in this category and surprisingly also of “Blissfully Ignorant” (22.4%). What more, the difference in the representation of these two types of life style compared to others is relatively

² Fields marked by dark grey emphasise values showing better health state (high frequency in categories of healthy and normally ill, low frequency in categories more ill and much ill). Light grey colour by contrast emphasises results connected to worse health state (high frequency in categories of much ill, in contrast with low frequency in categories of normal ill and healthy). Values in bold emphasise higher or lower representation in given category ever.
significant. We know that the representatives of “Sportsmen Hedonists” and “Blissfully Ignorant” have the lowest ability to pay attention to their bodies (Slováèková, Dosedlová, Klimusová, 2008). “Sportsmen Hedonists” of all types also pay lowest attention to their health problems. This result can be understood probably as a reflection of their lower ability to identify health problems and to accept the role of ill person. The “Party Crowds” (11.8%) and “Hypochondriacs” (12%) are the least frequent types among the healthy students.

Almost half of respondents (48.4%) shows so called normal sickness in the last year. They were not ill more than two weeks in total. In this category there is definitely highest share of “Conscious” (55.1%). The least represented category among normally ill are again “Party Crowds” (43.8%). Except these marginal cases, the representation of other types of life styles in this category is relatively equal.

Fewer than one fifth of research sample (19.6 %) belongs to the category with higher illness level (2–3 weeks in the last year). The most frequent types here and also among the most ill students (more than three weeks last year) are the “Party Crowds” (22.4 % of them) and “Hypochondriacs” (21.5% of them). On the contrary, the lowest numbers of frequently ill students can be found among “Sportsmen Hedonists” (10.1%) and “Conscious” (11.0%). These two types are significantly underrepresented among the most ill students, while number of all other types in this category is more or less comparable.

Based on these results we can state that in terms of illness frequency during the last year, the most healthy students are among the “Conscious” and “Sportsmen Hedonists”. The Party Crowd and the Hypochondriacs were on the contrary the most frequently ill students.

Besides exploring the total sickness measure, we also focused on specific healthy problems that respondents complain about. The whole set of health problems was divided into 3 groups of complains:

\[ f_1 \] – overall exhaustion and weakness
\[ f_2 \] – digestion problems and nausea
\[ f_3 \] – headaches and back pain.

Within each of these three groups, respondents could reach score from 0 to 2, where 0 means they do not suffer from this problem at all, and on the contrary 2 means they suffer from both of the problems. Differences between individual types of life style were again statistically significant. Results including the values of Chi-square tests for individual factors are summarised in Table 4.

It can be inferred from the table that the representants of life style “Conscious” and also “Sportsmen Hedonists” show the least health complaints at all three factors.

Definitely most health problems complain are made by “Party Crowds” who have the highest levels of overall exhaustion and weakness and digestion problems.
High level of health complaints can be found also at “Hypochondriacs”, particularly in overall weakness and digestion problems and headaches and back pain (the highest levels of all types).

Students with life styles of “Blissfully Ignorant” and “Perfect Students” reach average levels of health complaints, compared to others types. Number of “Blissfully Ignorant” in category of absence of digestion problems and pains slightly exceeds the numbers of representants of “Perfect Students”. The “Perfect Students” compared to “Blissfully Ignorant” suffer less from overall exhaustion and weakness.

Tab. 4: Health complaints of individual life style representants

<table>
<thead>
<tr>
<th>Types of life Style</th>
<th>Health Complaints $- F_1$ Overall Exhaustion and Weakness</th>
<th>Health Complaints $- F_2$ digestion Problems</th>
<th>Health Complaints $- F_3$ headaches and Backpain and Nausea</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.00 1.00 2.00</td>
<td>0.00 1.00 2.00</td>
<td>0.00 1.00 2.00</td>
</tr>
<tr>
<td>Perfect Students</td>
<td>507 154 58</td>
<td>529 152 38</td>
<td>412 239 68</td>
</tr>
<tr>
<td>Conscious Students</td>
<td>643 173 53</td>
<td>698 140 31</td>
<td>563 265 41</td>
</tr>
<tr>
<td></td>
<td>74.0% 19.9% 6.1%</td>
<td>80.3% 16.1% 3.6%</td>
<td>64.8% 30.5% 4.7%</td>
</tr>
<tr>
<td>Sportsmen Hedonists</td>
<td>417 79 40</td>
<td>417 100 19</td>
<td>342 167 27</td>
</tr>
<tr>
<td>Hypochondriacs</td>
<td>528 328 111</td>
<td>676 233 56</td>
<td>513 335 119</td>
</tr>
<tr>
<td></td>
<td>54.6% 33.9% 11.5%</td>
<td>69.9% 24.3% 5.8%</td>
<td>53.1% 34.6% 12.3%</td>
</tr>
<tr>
<td>Blissfully Ignorant</td>
<td>301 89 56</td>
<td>339 83 24</td>
<td>283 140 23</td>
</tr>
<tr>
<td>Party Crowd</td>
<td>388 236 130</td>
<td>509 181 64</td>
<td>363 309 82</td>
</tr>
<tr>
<td></td>
<td>51.5% 31.3% 17.2%</td>
<td>67.5% 24.0% 8.5%</td>
<td>48.1% 41.0% 10.9%</td>
</tr>
<tr>
<td>Total</td>
<td>2784 1059 448</td>
<td>3168 891 232</td>
<td>2476 1455 360</td>
</tr>
<tr>
<td></td>
<td>64.9% 24.7% 10.4%</td>
<td>73.8% 20.8% 5.4%</td>
<td>57.7% 33.9% 8.4%</td>
</tr>
<tr>
<td></td>
<td>$c^2$ df sig.</td>
<td>$c^2$ df sig.</td>
<td>$c^2$ df sig.</td>
</tr>
<tr>
<td></td>
<td>209.461 10 0.000</td>
<td>55.797 10 0.000</td>
<td>96.461 10 0.000</td>
</tr>
</tbody>
</table>

Correspondingly to the association of the life style and sickness frequency, the Sportsmen Hedonist and Conscious have also the lowest incidence of health problems; the highest incidence of the health complains can be found at the Party Crowd and Hypochondriacs. Despite we were not able to find any significant differences in the objective health state of respondents, there can be inferred a tendency to better subjective health state at Sportsmen Hedonists and Conscious and to worse subjective health state at Party Crowd and Hypochondriacs.

However, it is debatable if low values of health complaints indicate their actual absence or they are a sign of insufficient attention devoted to them. Taking into account our previous findings (Slováèková, Dosedlová, Klimusová, 2008), we assume that “Sportsmen Hedonists” may have lower level of physical...
awareness and insufficient vigilance to own body, and consequently to their health problems. As for the “Conscious”, these respondents can either be more resistant to illnesses due to their life style or they are able to recognise signs of illness in time, to adequately respond to them and to stop the progress of the illness in the very beginning or to reduce its intensity.

Our results for the “Hypochondriacs” group indicate generally known tendency to more frequent evidence of health complaints at individuals with higher level of neuroticism - which is one of the significant personality characteristics of the representants of this type (Slováèková, Dosedlová, Klimusová, 2008). Because we did not examined the objective health state of respondents in our study, we cannot make definite conclusions about relevance of their answers. It is possible that they really suffer from more health problems and they are ill more often, on the other hand it is also probable that they are more sensitive to their health state and to problems that rest of the population will not see as serious.

The “Party Crowd” is a group that shows highest levels of illness, overall weakness and headaches and back pain; they are familiar with digestion problems too. These data fully correspond with their life style, characterised by limited attention to daily regimen and short-termed approach to health problems solution.

The findings on life style of the “Perfect Students” are also very interesting. These students reach highest levels at almost all factors of behaviour associated to health (Slováèková, Dosedlová, Klimusová, 2008). If their proclamations fully matched the reality, their health state would be probably better than our results indicate. It can be inferred that the “Perfect Students” do not perceive their health state as significantly better compared to representants of other life styles. Possible explanation could be their tendency of overestimating their behaviour in socially desirable way. We may also consider possibility that these students perceive their health state as unsatisfactory, and therefore they strive for its improvement by exercising healthy life style. However, this explanation does not seem particularly probable.

Also in case of “Blissfully Ignorant” our findings did not match our original assumption. We consider them as group of students who apply only few health supportive habits, and we assumed this would influence their health state. Despite of this, these students list reach average or better levels on health complaints and illness measures. Similarly to “Sportsmen Hedonists”, these students do not have very developed ability to perceive changes and processes in their own bodies (Slováèková, Dosedlová, Klimusová, 2008). We can also speculate that their subjective statement reflects more the fact that they are not able to register and interpret possible health problem rather than their objectively good health state.
DISCUSSION AND CONCLUSION

The purpose of this study was to develop a typology of the life styles of current university students and investigate their relationship to certain personality characteristics and subjectively perceived health. Based on cluster analysis, we identified six types of life style based on health-related behaviour. From the subsequent analyses of variance, information about personality characteristics which are associated with different life style types was derived. A detailed description of six developed types of life style was obtained from data interpretation. Differences in the health state of representatives of individual life style types were then examined by the means of Chi-square tests.

Two of these life style types can unambiguously be labeled health-supportive (“Perfect Students” and “Conscious”) while the life style types of “Blissful Ignorants” and “Party Crowd” are the opposite extreme. At least some criteria of health-supportive behaviour are met by last two groups – “Sportsmen Hedonists” and “Hypochondriacs”. Representatives of these life style types, however, focus on only one of the investigated protective aspects of behaviour. “Sportsmen Hedonists” report frequent physical activity and “Hypochondriacs” are sensitive to their own bodies. Because of neglecting all other health-supportive behaviour, these two life style types do not seem to be very effective. In conclusion, approximately 40% of students acquired a healthy life style and have been successful in maintaining it.

A similar topic was investigated by Torgersen & Vollrath (2006). These authors abstracted eight types which emerge from a combination of three personality characteristics – extraversion, neuroticism, and constraint. They measured the influence of personality characteristics on risky health behaviour (substance abuse, risky sexual behaviour, irresponsible or dangerous driving, unhealthy food, obesity, and irregular daily regimen). Results pointed out the importance of some personality characteristics in regard to health-oriented behaviour.

Addictive substance abuse is associated with extraversion, lower self-control, and neuroticism. In our typology, the “Party Crowd” reports the highest consumption of addictive substances. They may be described as neurotic extraverts with low self-efficacy. We can consider content proximity of two variables – constraint and self-efficacy. We suppose that ability to feel in control of themselves is an important aspect of these two characteristics. For the purposes of this study, we dare to consider them equitable.

In terms of daily regimen (healthy food, regular sleep patterns, physical activity, etc.), self-control and low neuroticism appear to be protective personality characteristics. Self-efficacy and low neuroticism are characteristics combined in two groups in our study – “Perfect Students” and “Conscious”. In addition, these groups represent the healthiest life styles in general.

Von Ah et al. (2004) conducted a study that investigated the most important
health-supporting behaviour predictors of university students. They pointed out self-efficacy as a generally protective factor of health-supportive behaviour. According to their findings, self-efficacy reflects positively in all aspects of health-supporting behaviour except smoking. These conclusions are supported by the findings of the current study. All students who prefer one of the healthy life style types (“Conscious” or “Perfect Students”) are highly self-efficacious.

In the previous study (Dosedlová, Slováèková, Klimusová, 2006) we concluded that adherence to basic regimen habits is not directly connected with somatic health at university students. This conclusion was also confirmed by this study. Differences in the level of illness and number of health complains among the representatives of individual types were statistically significant but not always in assumed direction (e.g. low illness level was reported by “Blissfully Ignorant” whose life style do not include health-supportive behaviour). Positive impact of healthy life style on the health state of university students could not be confirmed.

Our research was conducted on population of healthy young individuals, so that is no surprise that their health state is generally good. Concerning the fact that many studies have proved relationship between healthy life style and health at adult population, we assume that importance of health-supportive behaviour and exercising of basic habits increases with age. Therefore, a prospective study verifying long-termed development of health state depending on preferred life style would be clearly contributive. Also our present results at least indicate possible connections between the type of life style and the health state of its representants.

We are aware that the life style is a complex variable; despite of this the life style measures cannot include all aspects that can play important role in connection with health. One of these aspects is the gender of an individual. Generally it is assumed that women are more responsible than men in their approach to health (e.g. Steptoe et al., 1994). Based on our results, we cannot clearly confirm this assumption. We can infer some conclusion from the proportional representation of men and women within individual life styles but these estimations are only preliminary due to the uneven proportion of men and women in our sample.

Crucial question that we have not taken into account in our study is a position of health in individual’s hierarchical system of values.

REFERENCES


ABSTRACT

Schizophrenia is a severe form of psychotic disorder and majority of patients with Schizophrenia are distressed by the presence of numerous delusions and hallucinations. The application of cognitive behavioural therapy for the management of persistent psychotic symptoms showed symptom improvement and found to be effective particularly in the management of auditory hallucinations. The present case report attempts to highlight the combined treatment of CBT and pharmacotherapy on a 38 years old female Schizophrenic patient who is distressed by the voices. Following cognitive behavioural management, there was marked improvement in the symptoms.

Key Words: Schizophrenia, CBT, Auditory hallucinations, Voices.

Schizophrenia is the most debilitating of psychiatric disorders leading to long-term impairment in personal, social and occupational functioning. Antipsychotic medications remain the first line of treatment for schizophrenia, but symptom improvement is dependent on adherence to long-term medication usage. About 40% of patients in any treatment setting continue to exhibit residual positive and negative symptoms. It is this group of people who could benefit from an effective psychological treatment such as cognitive behavioural therapy which is combined with pharmacotherapy. A number of randomized controlled trials (Sensky, et al., 2000; Turkington, et al., 2002) have supported the efficacy of CBT in treating drug-resistant psychotic symptoms in Schizophrenic patients.

* Associate Professor of Clinical Psychology, Sri Ramachandra University, Porur, Chennai, Email: nirmalaravindran20@gmail.com
Management of Auditory Hallucinations

Auditory hallucinations in the form of voices are the commonest Schizophrenic symptoms (Hamilton, 1984). Bentall (1990) reported that they are a result of the individual’s tendency to misattribute internal events such as thoughts to external sources. There is now great understanding of the development and maintenance of auditory hallucinations from the cognitive behavioural perspective. Evidence has developed from the case studies, randomised controlled trials and meta-analyses confirming the effectiveness of CBT in the management of persistent psychotic symptoms including the voices in people with Schizophrenia (Zimmermann, et al., 2005, Wykes, et al., 2008). The following are the various cognitive behavioural interventions used in the management of voices.

(a) **Walkman and Earplug:** The walkman and the earplug are some specific interventions aimed directly at blocking or reducing the voices. The walkman and earplug are usually introduced along the lines, “some people find this seems to block voices a bit like yours”. The advantage of offering these practical suggestions early on is that they provide the person not only with immediate respite from the voices but also the realisation that they have a certain amount of control over them.

(b) **The Personal Cassette/CD player:** Many people gain some immediate respite from their voices by using a cassette player with headphones. When the voices are very troublesome the volume may have to be turned up very loud. Listening to taped speech would be more effective than music in combating the voices. Aggressive pop music can provoke agitated behaviour and actually increases the voices (Nelson, 2005). The cassette player has its beneficial effect on auditory hallucinations in two ways. Firstly, auditory hallucinations are known to be adversely affected by stress, so if listening to the music is pleasurable and relaxing which may indirectly result in a reduction in the voices. Secondly, the cassette player diverts attention or awareness away from the voices.

**Other Strategies**

(a) **Subvocal Speech or Singing under One’s Breath:** Talking at loud can be an effective way of blocking auditory hallucinations but it may not be socially acceptable for the person to suddenly start talking to himself, for example, if he is standing alone in the bus stop. In order to avoid social embarrassment, he may be able to use sub vocal speech *i.e.*, talking quietly to himself so that no one else can hear. Singing under one’s breath is easier to understand and may be preferable to sub-vocal speech. The practical difficulty is that keeping up a flow of sub-vocal speech requires concentration and effort, so it is only suitable for use over short periods.
(b) **Restricting the time spent in listening to the voices:** The person attempts to limit the intrusiveness of their voices in their everyday lives by setting aside a set period in each day when they will listen or respond to them. Having set aside the time, they are better able to ignore or to refuse to listen to the voices at other times.

**CASE STUDY**

Mrs. J, 38 years old, housewife was referred by her psychiatrist for help in coping with her voices. She was diagnosed to have paranoid schizophrenia ten years ago and on regular medications till now. During the last two years, she is distressed by hearing multiple voices. They are sometimes male and sometimes female and she could not recognise them as anyone she knew. They commented about her activities among themselves (*e.g.*, she is preparing a tea) and call her as a prostitute. She has no idea where the voices came from and found out that they are irritating her very much. Sometimes she could not recognise what the voices were saying. She is very much upset about the voices that they are causing difficulties in her life and she strongly hold the belief that she is a prostitute. Analysis revealed that her voices are worse in the morning but ease in the afternoon when she tends to be active in her household chores. She was desperate for the voices to stop. Therapy lasted ten sessions spaced over two months and each session lasted for duration of 45 minutes. In the early stages of therapy, the first goal was, to block the voices or at least reduce their intensity. She was offered a walkman for stopping the voices when they were irritating her. It was found to be a very effective strategy once the voices had been sufficiently disempowered. At this stage, the patient realised that it was safe for her to try the walkman to stop the voices. She gained self-control after sometime and able to block the voices.

As she was distressed by the voices calling her as a prostitute, she was reassured that what the voices were saying was not true (you are not a prostitute) and the beneficial effects of this reassurance was only short lived. To modify her belief about prostitution, cost-benefit analysis was carried out to minimise or undermine the advantages and emphasise and reinforce the disadvantages (Beck, 1995). Having looked at the advantages and disadvantages of prostitution, disadvantages seem to outweigh the advantages and an alternative belief was introduced. She was educated about her belief (I’m a prostitute) that they are only ideas and not necessarily true. It was explained to her that most people experience unpleasant, unwanted thoughts and that their content is indistinguishable between people with mental disorders and the general population. At the end of 10th session, her belief about prostitution was partially modified and the intensity of the belief was also reduced.
DISCUSSION AND IMPLICATIONS

Auditory hallucinations are a common manifestation of schizophrenic illness causing significant distress and disability in people with schizophrenia. Cognitive behavioural therapy is found to be effective in symptom reduction especially for persistent psychotic symptoms (Pilling et al., 2002).

It can be concluded that cognitive behavioural therapy enables people with schizophrenia to use adaptive coping strategies and empower them to meet the challenges of voices.

REFERENCES

MENTAL HEALTH: RISKS AND RESOURCES

Editors: Deepti Hooda & NovRattan Sharma

Global Vision Publishing House, New Delhi
Rs 1200/- $ (US) 60, ISBN 978-81-8220-582-6, 2013, pp. 320

The edited book is the sincere output of collective efforts of many luminaries. The release of this book at a time when approximately 450 million people all over the world are suffering from mental/neurological and behavioural health related problems is a boon for people at large. All the credit goes to the editors of the book, who have skillfully interwoven the different manuscripts in a book form.

The book comprises of 15 articles primarily related to the issues of mental as well as physical health, which have strong conceptual, theoretical and empirical bases. Health is defined as not merely the absence of illness rather a culmination of mental, physical, social and spiritual well-being. The book opens up with an article on interpretation of mental health and its determinants. It raises the question of inadequacy of fully operationally and universally acceptable definition of mental health. In the 2nd article, the authors on the basis of available literature inferred that the positive strengths and capacities (i.e. resilience, meaningful life, humor, happiness, hope, optimism, self-efficacy, gratitude and forgiveness etc.) are the indicators of mental health. Citing several studies in the next article the authors advocate the role of interpersonal relationships in enhancing positive strengths such as happiness, hope, self-esteem etc. Swaha Bhattacharya in a study examined the role of environment in determining the physical as well as mental health of slum and non-slum dwellers of Kolkata city. The study reafﬁrms the need to provide
neat and clean environment to slum dwellers because of their poor physical and mental health.

The fast paced changes in technology and economy crisis have led to adverse effects on health. The authors in an article highlighted the role of positive oriented human resource strengths and physical capacities in improving the performance of employees. In an empirical study Anis Ahmad concludes that the private school teachers enjoy better mental health as compare to those of government school. The author attributes into the highly conducive organisational climate.

Modern era is an era of beauty & glamour where especially young ones are conscious about their body images resulting in the development of certain eating disorders such as anorexia and blumia nervosa etc. There may be environmental, social and interpersonal reasons for their development. Such disorders can be cured and prevented through certain interventions such as psycho-education, nutritional counseling and CBT etc.

Relaxation and biofeedback interventions have been proved to be effective in curing tension type headache and migraine as reported in an article. Alcohol addiction is a major problem which adversely affects the quality of life of addicts and can be cured through inpatient treatment programmes as reported by K. Jayashankar Reddy. Another most prevalent mental disorder among women is nonepileptic seizures which are mainly due to the troubles with in-laws as reported by the Barre and his colleagues. Cardiovascular disease has been discussed in detail in article 9. As we all know that a sound body has a sound mind. A huge number of people all over the world are suffering from CVD. It has been persuasively stated that along with medical regime positive emotional states act as a buffer in such illness.

The book has also accumulated those articles which have exclusively focused on the interventions such as Mindfulness Based Stress Reduction (MBSR), Vipassana and cognitive behaviour therapy (12th, 13th and 15th articles). These interventions are helpful not only in the cure and prevention of mental illnesses but also lead to a better well-being. For community health services peer education programme through life skills approach appears to be the most effective strategy (Article 8). Overall, the book has provided a bulk of information related to health, risks and resources which not only be a guiding source for researchers but for a common man too. The book is recommended for university as well as district libraries for enrichment of common masses.

Punam Midha
Professor,
Department of Psychology,
M.D.U Rohtak
Suicide can be defined as an act by which an individual tries to harm oneself which leads to the fatal outcome. Suicidal ideation comprises of suicidal thoughts or threats devoid of action which is more common than suicide attempts and completed suicides. The rationale of the book is to know the underlying causes of suicide occurrence around the world and also to know the techniques to prevent the suicidal attempters and completers.

The authors of the Paper I of this book focus on the viewpoint that it is the structure and system of the family that help contributing the cohesion and adaptability which prevent the suicidal attempts. Suicide as a stress factor in the family leads to the psychological and psychiatric problems, whereas strategies are required to overcome this barrier and to help the group and individual members. In a cry for the loss of the relative, researches support the fact that losses, separation, unstable and difficult relationship lead to the fear of being rejected and thus people seek this (suicide) a method to relieve it. The studies give support (acknowledge) to the relationship between the childhood sexual abuse, physical abuse or both and an increased risk for suicidal behaviour in adulthood.

The paper in the book explain suicide as Good death emphasising on three types in which a person gives consent for death *i.e.* voluntary, non voluntary and involuntary. The authors have also mentioned that people when approach death, they will experience disturbing emotions such as regret, sadness, fear and even anger and find themselves difficult copying these emotions. Suicidal behaviour is a preventable public health problem, although in itself, it is not a mental illness.
but the suicidal behaviour and its occurrence are highly associated with it resulting in major fatal.

The prior suicidal in the individuals, and in families, the emotional state, substance use disorder, cognitive factors, hopelessness and even environmental factors are highlighted in the form of myths and facts of suicidal behaviour in the book. The high correlation of suicide with negative emotions, emotion disregulation, depression and even suicidal ideation has been expressed with experimental attention. A good number of researches have been incorporated discussing impulsivity, aggression, rigidity, self defeating behaviour and self devaluation as risk factors with focus on the roles of family bonding, family support and cultural beliefs playing crucial roles in protective factors. The basis of theory of Planned Behaviour and interpersonal psychological interaction were observed in Malaysian & Indian sample in the suicidal ideation prediction. The results showed clear cultural differences but interpersonal need for perceived burdensome in Indian sample was found to be significantly apparent. The suicidal ideators have been found to have high stress in females than in males and rural area respondents were found to be high on stress than urban area. Resilience has also been found high in majority of individuals.

Research Suicidal ideation of police personnel across ranks was conducted and empirically discussed by authors stating that police department should arrange intervention programmes for employees with the motive to incorporate skill in them dealing with the occupational stressors and life challenges. The life skill programmes are highlighted as a solution for dealing with suicidal ideation in school students. The peer support programmes and behavioural reinforcements as life skill approaches are also to be inculcated as intervention programmes for adolescents.

The neurobiological basis of suicide due to the abnormality in prefrontal cortex and serotonergic system causing aggression and impulsiveness lead to suicide. School and family based interventions along with sensitisation of media could go along way in dealing with suicide. Morality of ethics is found to be expressed as an extricable related to the personal and social meaning and responses to suicide.

The authors in the book have focused on the view that a combined effort from Government, NGO, organizations and institutes is the need of the hour to tackle such social and health problems. Attention has to be paid on self/individual, family, friends, suicide survivors and also the stigma attached to suicide. India has reached to certain level where mental health professionals, agencies and psychiatrists & school professionals are coming forward but there is still a longway to go ahead.

Madhu Anand
Professor
Dept. of Psychology
M.D. University, Rohtak

Vol. 8, No. 1, September, 2013
As Yoga and meditation have grown and extended everywhere, this book, *Yoga and Meditational Psychotherapy*, with its collection of well researched papers exploring physiological and psychological benefits of yoga and meditation, fills a much needed slot. It emphasises how the two processes of yoga and meditation work at all levels of the body, mind and spirit. The book attempts to combine and integrate western psychotherapy with yoga and meditation—two seemingly diverse approaches and suggests that the two can be utilised in tandem.

In the first section of the book which deals with the psycho-physiological parameters of yoga psychotherapy, various research papers explore the benefits of yoga that go beyond the merely physical and offer access to subtle dimensions of human experience that are largely untouched by western psychotherapy. The various contributing authors, through extensive research, have succeeded in validating the utility of yogic practices in dealing with multiple population *viz.* HIV positive patients, mentally challenged, diabetics or those with psychological problems. Yoga is, thus, in a unique position in that it can possibly augment or improve the effectiveness of traditional therapy.

The middle section of the book deals with promotion, practice and research on yoga and health. The reader gets a comprehensive overview of various yogic ways and their therapeutic attributes. Different authors have very successfully brought home the point that yoga succeeds in improving not just physical health
but is successful in ameliorating mental health issues as well. Therefore, yoga is
a unique Indian contribution to the rest of the world and can be positioned as a
tool for promoting holistic health.

The third and final section of the book deals with meditation psychotherapy
and psychological well-being. The research papers in this section suggest that
meditation leads to physiological, behavioural and cognitive changes that have
potential therapeutic benefits as well. The efficacy of meditation in therapy is
due to a combination of relaxation, cognitive and attentional restructuring, self-
observation and insight. So meditation acts to de-stress the mind and promotes
psychological well-being and thereby improves quality of life.

The book serves to illustrate the important idea about the holistic fullness of
yoga and meditation and how they encompass the whole being in all states. This
volume is extremely well-thought, well-written and comprehensive. It puts yoga
and meditation into a much needed context as well as purposeful meaning. This
book will serve as an important resource for academicians and lay persons alike.
BOOK REVIEW

COUNTERING TERRORISM: PSYCHOLOGICAL STRATEGIES

Updesh Kumar & Manas K. Mandal

Sage Publications India Pvt Ltd, New Delhi


Terrorism has been a big concern of worry around the globe particularly in recent past. To ensure safety of humanity and security of the nation has been one of the greatest challenge before the governments. India is no exception and had suffered a lot on this account. However, terrorism may be one of the most disputed and controversial concepts from social, legal and political angles but there is a strong need to understand the underlying mechanism so that effective and productive programmes may be developed to combat its ill effects. The book entitled Countering Terrorism: Psychological Strategies is a well organised and timely planned volume. There are total eighteen chapters contributed by the area expert authors. Two major sections, each containing nine valuable chapters, are devoted to twin objectives i.e. understanding and countering the terrorism. Both the sections have been quite informative as well as illuminating for the readers.

Chapter one provides a detailed conceptual background on terrorism right from a sincere effort to define it by comparing with other forms of violence and with a trace in religion and other socio-cultural domains. Theoretical framework on aggression, being part of terrorism, has been presented in Second chapter with overview on different theories by citing empirical findings. Most of the relevant psychological theories critically examine the aggressive acts with a recommendation to mitigate human aggression.
Third chapter explores the socio-cultural roots of different types of terrorism with an examination of preparedness against terrorism by a focus on youth through inculcating positive characteristics of humanity, care and tolerance. Chapter four deals with the study of terrorism impact via affective, cognitive and social responses after an attack so that effective and comprehensive counter-terrorism programmes suitable to local factors may be developed. Chapter five put a scholarly effort in locating behavioural and personality profiles of terrorists with a vision to improve their understanding on them by using direct access model rather than relying on second or third hand informations. Next chapter describes the need and importance of understanding the role of collective identity and ideology prevailing in any given terrorist group which will further help to devise more effective counter-terrorism methods. Issues of leadership in the study of terrorism are very complex and people from democratic and non-democratic countries are bound to express differently. Seventh chapter delineate on the leadership puzzle by taking examples from various nations. Bioterrorism is the focal theme of the eighth chapter. Authors have highlighted the historical account of biological warfare along with its psychological impacts and consequences seen in Anthrax, Botulism, Plague, smallpox etc. The last chapter of the opening section evaluates the role of media in propagating terrorism since from the emergence of the ‘Theatre of Terror’, their nexus including internet usage particularly in recent years. Author has alarmed that media-oriented terrorism will be a threatful challenge for developing and developed nations if not tackled adequately at right time.

Second section of the book is the assembly of those nine chapters which mainly concentrate on the psychosocial avenues for countering the terrorism. Tenth chapter tries to answer the basic question regarding motives of terrorist with the help of seven puzzling tendencies of terrorist organisations. Chapter eleven explains the theory and evidences of the rational choice approach of criminology and help in enhancing the understanding of how terrorists select their targets. In next chapter, author has summarised the different web models in relevant tables to adjudge defensive and proactive counter information warfare. There is always a need to assess the risk in counter-terrorism by developing new and workable tools. Authors of chapter 13 observed that extensive research is needed to create reliable risk assessment tools to identify and explore relationship between behaviours and risk factors. Chapter 14 put light on the socio-political and emotional contexts of terrorism with advancement of strategies for reducing risks particularly in interviewing terrorist suspects. Fifteenth chapter devoted attention towards dissemination of education for common people to counter-terrorism. Author has recommended the application of cognitive immunisation interventions at micro as well as macro levels. Chapter 16 specially focuses on political aggression with prevalent examples from all over the world to work
efficiently on policy choices affecting terrorism. Second last chapter of the book elaborate upon the psychological significance of recruitment process across four fundamental principles. The last chapter talks about Psycho-spiritual basis of understanding, prevention and control of not only the violence but terrorism as well. Author has discussed some important subtopics before finally dealing with linkage of spirituality with prevention and control of terrorism. He is confident that peace and justice can be attained by imparting training and spirituals interventions.

Overall the book is an excellent piece of knowledge. However, it may have limitations for general readers but its specific compilation will be of great use for specific readers, researchers and at the most for the Governmental and social organisations which are working round the clock to combat with the terror related outcomes. The book has been published by an international publisher (Sage) which further enhances its worth. The editors of the volume also deserve heartfelt congratulations for their effortful investment. Each and every chapter has been uniformly and evenly structured. The book is worth to be recommended for readings in defense, military, criminology and related courses of psychology.

NovRattan Sharma
Professor of Psychology
Department of Psychology
M.D. University, Rohtak
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