Stressful Life Events
and Tension Headache

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ABSTRACT
Greater number of stressful life events are found to be associated with the
onset of psychiatric and psychosomatic disorders. The present study aimed
at investigating the quantum of stressful life events prior to the onset of
tension headache. Presumptive Stressful Life Events Scale was administered
on a sample of 30 persons with tension headache, drawn from the psychiatric
facilities at Agra. For comparison purposes, the scale was also administered
on a control group of 30 participants drawn from general population. The
analysis of data through chi-square revealed significantly higher stressful
life events in the persons with tension headache.

INTRODUCTION
The cumulative exposure to a number of aggravating daily hassles or situations
regarded as stressful over a long time period may have detrimental health
effects. There is no doubt about the personal significance of major life events
and their potential impact on health. Extreme stressors can create both acute
and prolonged psychological distress and bodily ailments. According to Selye
(1956) stress operates in three phases: alarm, resistance and exhaustion.
When the organism’s resistance breaks down, an ensuing long period of
exhaustion can manifest itself in illness. However, a strong linear relationship
cannot be expected since illness is obviously caused by many factors (stress
being only one of them) contributing to pathogenesis in one way or another.

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Headache is a clinical syndrome affecting over 90% of the population at some time during their life, resulting in it being considered a major public health issue. Tension type headache is experienced by about 40% of the population (Mannix, 2001). International Headache Society (1988) identified thirteen different categories of headache. The second category deals with tension type headache which is further specified as episodic and chronic.

Tension-type headache has received a number of labels over the years—muscle contraction headache, psychogenic headache, depression headache, stress headache, conversion headache, psychomyogenic headache and the like which reflect the varied views and confusion about its etiology. Tension-type sufferers are now grouped on the basis of chronicity (episodic vs chronic), as this has been found to have a direct bearing on outcome and the presence of identifiable muscle involvement.

Stress as conceptualised by Selye (1956) is a broad and general concept like “anxiety” describing the organism’s total reaction to life events. It is assumed that such events serve as predisposing and/or precipitating factors for the subsequent illness. Hom, Holroyd, Hursey & Reazin (1986) and Levor, Cohen, Nalibott, McArthur & Heuser (1986) indicated that less severe and more frequent stressful events contribute to headache attacks. Hom et al. (1986) observed that tension headache sufferers report a greater frequency of such events than headache-free control subjects.

In this context, the present study aimed at investigating the quantum of stressful life events prior to one year of the onset of tension headache and in lifetime.

**METHOD**

**Sample**

A sample of 30 persons with tension headache diagnosed by a consultant psychiatrist was drawn from psychiatric facilities at Agra. A control group of 30 normal participants was also drawn form general population. The sample characteristics are displayed in Table 1.

**Tool**

*Presumptive Stressful Life Events Scale (PSLE scale)* by Singh et al. (1984) contains 51 events which are to be explored for their presence in lifetime and in past one year.

**Procedure**

The scale was individually administrered to each participant.
TABLE-1

Sample Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Study Group (n=30)</th>
<th>Control Group (n=30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (in years)</td>
<td>35.74 ±6.23</td>
<td>35.82 ± 7.29</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>53.33% (16)</td>
<td>43.33% (13)</td>
</tr>
<tr>
<td>Female</td>
<td>46.66% (14)</td>
<td>56.66% (17)</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>70% (21)</td>
<td>63.33% (19)</td>
</tr>
<tr>
<td>Unmarried</td>
<td>23.33% (7)</td>
<td>33.33% (10)</td>
</tr>
<tr>
<td>Others</td>
<td>6.66% (2)</td>
<td>3.33% (1)</td>
</tr>
<tr>
<td>Socio-economic Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>63.33% (19)</td>
<td>56.6% (17)</td>
</tr>
<tr>
<td>Middle</td>
<td>23.33% (7)</td>
<td>30% (9)</td>
</tr>
<tr>
<td>High</td>
<td>13.33% (4)</td>
<td>13.33% (4)</td>
</tr>
</tbody>
</table>

RESULTS AND DISCUSSION

The frequency of stressful life events, as experienced by the subjects of the two groups has been shown in Table 2.

TABLE-2

Frequencies of Stressful Life Events

<table>
<thead>
<tr>
<th></th>
<th>Life time (Total no. of events =51)</th>
<th>Past one year (Total no. of events =51)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study Group (n=30)</td>
<td>19</td>
<td>12</td>
</tr>
<tr>
<td>Control Group (n=30)</td>
<td>07</td>
<td>02</td>
</tr>
<tr>
<td>Chi-Square</td>
<td>5.54*</td>
<td>5.78*</td>
</tr>
</tbody>
</table>

* p < .05.

The results clearly indicate the presence of significantly higher life events in persons with tension headache both in past one year and lifetime.

Most individuals who experience stress do not develop illness. Stressful life changes are unusually temporary. However, presence of other risk factors can interact to produce illness. Three major pathways have been delineated that link the stressful life events to ill-health. The main pathway is physiological. That is, stressful events produce physiological changes in immune parameters, endocrine and cardiovascular reactivity. Endocrine and cardiovascular reactivity as expressed in blood pressure and heart rate is
considered a stress based co-determinant of cardiovascular disease. The other pathway is represented by health compromising behaviours. People under stress might want to relieve their tension by consuming more tobacco, illicit drugs and so on. A third pathway pertains to all kinds of negative affect often associated with experiencing stress. Constant rumination, worrying, anxiety, depression and anger are health compromising in the long run. Studies have shown that optimism is related to good health, whereas depression can be a precursor of sickness (Carver, 2001).

Weidner (2001) observed that the amount of physiological reactivity is not exclusively governed by the stress experience. Rather it is moderated by genes, personality, age, gender as well as other factors. Magee and Saper (1981) stated that the individuals with tension headache respond to stressful situation with increased activation of particular muscle groups. Because of continued stress, there is sustained muscle contraction and vasoconstriction which results in tension headache. The personality of the individuals with tension headache is characterised by rigidity, obsession, anxiety, repressed hostility and introversion (Rangaswami, 1982).

The observation, greater stressful life events in tension headache is in expected direction which confirms earlier observations (Hom et al. 1986; and Levor et al. 1986). Further research should focus on the nature of stressor and disease.

Thus the present work indicates that stressful life events contribute significantly to the onset of tension headache in predisposed individuals.

REFERENCES


