ABSTRACT

The aim of the study was (a) to measure the prevalence of burnout in nurses; (b) to find the association between demographic variables and burnout; (c) to determine the association between Job Involvement, Extraversion and Organizational Commitment and burnout; (d) to investigate the association/correlation between the degree of burnout with human energy field. Fifty nurses (male: 4, mean age: 33.25; Female: 46, mean age 44 years) with a minimum of 3 years of experience were selected from a tertiary care hospital for the study. The Maslach Burnout Inventory, Revised NEO PIR (extraversion scale), Job involvement Scale and Organizational Commitment Scale, and a questionnaire on personal and professional characteristics were administered. In addition to this, the Human Energy Field of each subject was recorded with PIP and was correlated with burnout inventory (MBI). The images of the Biofield of each individual who participated in the study were assessed qualitatively. The qualitative assessment was done on the basis of expansion or reduction of specific colors and changes of colors on and around the body, including the areas of different organs and chakras. Data was analyzed by using Spearman’s Rank Correlation. Results reveal that the level of burnout among nurses is
moderate with all three dimensions of MBI playing almost equal role. Both the organizational variables (Job Involvement, Organizational Commitment), had significant correlation with three components of burnout whereas significant correlation was not found with personality (extraversion). Interestingly, two of the chakras reveal significant correlation with Emotional Exhaustion and Depersonalization. Implications of these findings are important for taking organizational variables into consideration while developing intervention programs and also exploring further the Human Energy Field for measurement of burnout and related organizational health issue.

**Key Words:** Job Involvement, Organizational Commitment, Physical Syndrome, Personal Characteristics, Humanistic Profession, Human Energy Field

Burnout is a severe psychological and physical syndrome that occurs in response to prolonged stress at work. It commonly occurs among employees who are unable to cope with extensive demands on their energy, time, and resources and among employees whose work requires contact with people. Researchers have found that burnout brings enormous costs to both organizations and individuals because it negatively impacts employees’ job attitudes and leads to undesirable behaviors, such as lower job involvement, reduced task performance, and increased turnover intentions.

Too much work or frequent frustration at work can lead to a syndrome of physical and emotional exhaustion. By working hard and making significant contributions to the organization, employees try to earn esteem and tangible rewards. The price for prolonged overwork is an accumulation of stress and depletion of the body’s energy. This condition leads, in turn, to physical and psychological problems. Furthermore, burnout seems to be correlated with various self-reported indices of personal dysfunction, including physical exhaustion, insomnia, increased use of alcohol and drugs, and marital and family problems.

Nurses in the hospitals are often required to spend considerable time in intense involvement with other patients. For such persons, who work continuously with people, the stress arising out from the work can be emotionally draining and can lead to “burnout”. Nurses are particularly susceptible to the development of burnout, mainly because of the nature and the emotional demands of their profession (Lindsey & Attridge, 1989). Among the reasons contributing to the development of burnout are the following: (1) the time that nurses spend for the patients care, (2) the contact with patients having a poor prognosis (Hare, Pratt & Andrews, 1988), (3) the contact with patients having increased emotional demands, (4) work load, (5) ambiguity and role conflict, (6) lack of support on the part of the supervisor and colleagues, (7) lack of job satisfaction, and (8) fear of death. Very important for the development of burnout are also the personality characteristics of the individual.
Recent research into the sources and risk factors of burnout mentions its multidimensional nature and explores intra-individual, interpersonal, and organizational aspects. Personal characteristics of the professional may have an especially significant influence on the likelihood of experiencing burnout. Different personality variables that have a possible impact on burnout were determined in a number of prestudies. Very important for the development of burnout are also the organizational and personality characteristics of the individual, one’s motivations for having chosen a humanistic profession (Vachon, 1978), expectations from himself and the others (Wessells, Kutschner, Seeland, Selder, Cherico & Clark, 1989), values, self-esteem, ability to express feelings, the control one exerts over the events and the others, and personal style. All these factors influence the way of handling an emotional strain (Maslach & Jackson, 1981).

More recent research has shown that two specific elements in Type A personality contribute to burnout; cynicism (low interpersonal trust) and a sense of loneliness.

The deep approach to work is associated with being extraverted and with greater openness to experience (McManus, Keeling & Paice, 2004). High levels of depersonalization related to previous deep approaches to study as being more extraverted. Extraverted nurses required more work-related peer support than did introverts to avoid emotional exhaustion (Pamela et al. 2002).

Organizational Correlates: Job Involvement. Lewis & Franklin (1944) demonstrated that individuals become involved in their work even in the artificial context of a laboratory. It is since then that empirical investigation of ego-involvement in the job began to appear with high frequency.

It is considered that certain perceptions when engendered by the employee lead to a strong feeling of job involvement. Usually the higher one’s identification or involvement with the job, the greater the satisfaction.

During the past two decades, Organizational Commitment has emerged as a central concept in the study of work related stress and behavior (Meyer & Allen, 1991; Mathieu & Zajac, 1990). Organizational commitment has been extensively attracting the attention of the organizational behavior researchers. In general term the concept can be defined as a psychological link or bond between the employee and his/her organization. Sheldon (1971) defined commitment as "an attitude or orientation towards the organization which links or attaches the identity of the person to the organization. The concern with OC is understandable as it has utility as a predictor of important behavioral outcomes like performance (Mowday, Porter & Dubin, 1974), Absenteeism (Steers, 1997), Turnover (Porter, Steers, Mowday & Boulian, 1974) and job satisfaction (Bateman & Strasser, 1984).
**Energy Field: Energy System and Aura:** Much has been written about the energy of living things but there is little scientific evidence.

The word aura means atmosphere or light, and is an appropriate enough term to use, given the nature of this phenomenon. It is usually defined as a sort of multi-dimensional energy field, made up of the emanations of each of the subtle bodies.

When we turn the corner from science, we must consider the universal characteristics of energy. Quantum physics states that energy and matter are interchangeable. In a similar fashion, each human is composed of the divine energy of the Soul in the form of body, thought, and spirit. Energy does not emanate or reflect from a person; the energy is the person, the core. This understanding is fundamental to maintaining your energy field and body in harmony. Since the body is a manifestation of human energy, dis-harmony in the energy field will cause disease in the body. If the human energy field is out of balance, the body will be out of balance.

**Polycontrast Interference Photography (PIP) Imaging Scan:** According to the Vedic system, there are seven major chakaras, which are the source of power that determines the physical, mental and emotional makeup of the individual. The energy levels of chakaras are clearly revealed through PIP. U.K. based scientist Dr. Harry Oldfield invents this system. It reveals interference and transference of light patterns, at and beyond the visible spectrum and shows energy dynamics at work. It identifies energy movements and blockages at and around the chakaras in a real time moving image (Zafar, Streeter, Rogerson & Zafar, 2004).

**The Chakras:** Over the past twenty years Valerie Hunt, a Physical Therapist and Professor of Kinesiology at U.C.L.A. California, has developed a method of detecting certain peaks of high frequency electrical impulses within the human body, which she believes relate to a non-physical energy field surrounding the body. It corresponds to ancient teachings regarding the human aura and the system of vortices known as the Chakras. Medical science has shown that all living creatures maintain electro-chemical processes in their bodies - human beings more so, because of the electrical activity of their brains.

**METHOD**

The aim of the present investigation was to estimate the prevalence of Burnout in Nurses of a Tertiary care Hospital of Delhi. In addition to this, an attempt was made to study the role of Extraversion, Job Involvement, Organizational Commitment, as the correlates of Burnout. A correlation between Psychometric tools and PIP was also made.

**Sample:** A total 50 nurses, as a sample was selected.
Inclusion Criteria: 50 regular nurses from a tertiary care hospital, above 30 years of age and those willing to participate in the study were included in the study.

A circular was sent to different departments and interested individuals contacted and participated in the study.

The questionnaires were answered by N=50 i.e. N=46 women (92%) and N=4 males (8%).

Tools: A questionnaire seeking detailed information on demographic, professional characteristics and on lifestyle (tea/coffee intake, alcohol /smoking habits, sleeping habits, physical activity, yoga/meditation practice, drug history etc.) was administered. Table -1 describes the sample on certain features

- Maslach Burnout Inventory (MBI): MBI (1981) was used in the present investigation to assess Burnout among Health and management professionals.

This tool is designed to assess 3 aspects of Burnout Syndrome:
1. Emotional Exhaustion (EE)
2. Depersonalization (De)
3. Lack of Personal Accomplishment (PA)

In total their are 22 items in inventory, 9 for EE; 5 of which measure DA, and remaining 8 measure PA.

Burnout is conceptualized as a continuous variable, which is either present or absent. A high degree of burnout is reflected in high scores on EE and DA subscales and in low scores on the PA subscale. As regards reliability and validity of MBI, the external consistency coefficient for MBI ranged from .71 to.90 test retest (2-4 weeks) reliability ranges from .53 to .82. The MBI is a valid instrument as reported by the authors, therefore, it correlated with behavioral ratings by observers, with the presence of certain job characteristics expected to contribute to Burnout, and with measures of various outcomes hypothesized to be related to burnout (Maslach and Jackson, 1981).

Job Involvement scale (JIS) (Srivastava, 1983).

JI of the degree to which a person identifies with his/her job, actively participates in it and considers his/her perceived performance level important to self worth .In JIS, there are a total of 9 items which take into account two dimensions, 1) Identification with the job, 2) Job centricity

Reliability: The reliability of the test was determined by spilt half method corrected for full length by applying Spearman –Brown Prophecy Formula, The reliability coefficient was found to be 0.71.

Validity: Besides the face validity as all items of the scale are related to the concept of JI, the scale has increased content validity. In order to determine
validity from the coefficient of reliability the realibity index was calculated. High validity of 0.83 is indicated.

Organizational Commitment Scale (O C Scale): Organizational Commitment is a job attitude, as a well-researched area in OB. OC is defined as a state in which an empirical identifies with a particular organization and its goal, and wishes maintain membership in the organization.

Reliability: the reliability of whole test was estimated by Spearman Brown Prophecy formula. The reliability co-efficient of whole scale was found to be 0.6078.

Validity: The validity of this scale is as high as 0.7796. It is, thus, reasonable to assume that the OC Scale yields data that are scientifically as accurate as it is possible and the scale is acceptably valid.

Neo PIR (Extraversion Scale): (Costa, & McCrae, 1992): The Extraversion scale of Neo PIR contains 48 statements and covers the following facets, i.e., Warmth, Gregariousness, Assertiveness, Activity, Excitement-Seeking, Positive Emotions.

Internal consistency coefficients range from .86 to .95 for domain scales, and from .56 to .90 for facet scales. Stability coefficients ranging from .51 to .83 have been found in three-year, six-year, and seven-year longitudinal studies of the original NEO-PI factors. The NEO PI-R has been validated against other personality inventories and projective techniques.

PIP Biofield Imaging Equipment: In addition to this, the recording of human energy field was done with the standard PIP Biofield Imaging Equipment in a specialist room at Sir Ganga Ram Hospital, New Delhi, India. All the recordings were set and equipped according to the standard criteria of PIP environment. The scanning of the subjects was done with their consent for which they were asked to undress for taking the images. The electronic watches, mobiles and ornaments were kept away from the PIP environment. Only one person was allowed to enter the PIP room at one time for recording. A total of 8 scans were taken for 44 subjects – Head and Throat profile (1), Head and Chest profile (1), Front profile (1), Right profile (1), Back profile (1), Left profile (1), Knee profile shots Front & Back (2) which revealed the Brow Chakra, Throat Chakra, Heart Chakra, Solar plexus, Naval plexus and Base Chakra. This took approximately 8-10 minutes.

For 6 subjects, only the front shot (without undressing) comprising Brow Chakra and Throat Chakra was taken to make the assessment and correlation.

The images of the Biofield of each individual participated in the study were assessed qualitatively. The qualitative assessment was done on the basis of expansion or reduction of specific colors and changes of colors on and around the body, including the areas of different organs and chakras. Each chakra was analyzed in terms of three categories as follows.
1=Good (clear chakra with no blockage of energy with healthy colors),
2=stressed (very less congestion roughly about 10-30% dark area due to
environmental stress or daily hassles), 3=Out of harmony (with unhealthy colors
of red and approx 40-70% of area being dark in color suggesting some cropping
psychological concern), 4= Blocked (all choked up/depleted energy showing
approximately 80-100% of dark area reveals serious psychological disturbance).

Statistical Analysis: The data was presented in terms of descriptive statistics
as Minimum, Maximum, Mean, SD, Median and SEM for continuous variables
whereas counts (%) for categorical variables.

Subsequently, for determining the correlation between various continuous
variables (such as Job involvement, Organizational Climate and one dimension
of personality i.e. extraversion, on three dimensions of burnout, non parametric
Spearman rank correlation was applied. In addition, for determining significance
between two groups Student ‘t’ test/non parametric Wilcoxon Mann Whitney
test was applied. For categorical variables, Chi square test/ Fisher Exact test
was applied. The p value (p<.05) was taken as cut value for statistical significance.

RESULTS

TABLE 1
Showing Percentage Positive Response on Demographic Variables

<table>
<thead>
<tr>
<th>Demographic variables</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Happy</td>
<td>23</td>
<td>46.0</td>
</tr>
<tr>
<td>Undisturbed Sleep</td>
<td>42</td>
<td>84.0</td>
</tr>
<tr>
<td>Immunity</td>
<td>17</td>
<td>34.0</td>
</tr>
<tr>
<td>Exercise</td>
<td>7</td>
<td>14.0</td>
</tr>
<tr>
<td>Nuclear Family</td>
<td>35</td>
<td>70.0</td>
</tr>
<tr>
<td>Married</td>
<td>45</td>
<td>90.0</td>
</tr>
<tr>
<td>Medicines</td>
<td>36</td>
<td>72.0</td>
</tr>
</tbody>
</table>

Ninety two percent (n=46) of respondents were females whereas eight
percent of the respondents were males (n=4). The mean age of female
respondents was 44.00 years and for males it was 33.25 years, which shows
that demographically the sample of nurses included mostly females, were older
and ethnically diverse than male subjects.

All of them worked full time. Respondents worked a mean of 8.58 hours
(S.D=1.09) which is a little over duty hours of approximately 8 hours per day.
The job was spent in face-to-face contact with service users or patients. The
mean job tenure of the subjects with the current employer was 14.47 years
(S.D=6.75), which reveals that the subjects were experienced.

Ninety per cent of the subjects were married and out of these 70% of them
were living in nuclear family. Subjects were asked to rate themselves on 6-point
likert scale on Sad/Happy dimension. Ratings of 1-4 were considered as sad and 5-6 as being happy. 27 (54%) of the subjects rated themselves as being sad in comparison to 46% who considered themselves as being happy. Similarly for sleep dimension, 84% of the subjects enjoyed undisturbed sleep (1-4) and 16% reported disturbed sleep (5-6).

Sixty-six per cent of the subjects thought themselves to be prone to infections whereas only 8 participants thought they were resistant to infections. For the purpose of gaining insight into the associated Medical Illnesses/ drug history, few related illnesses namely hypertension, cardiac, Diuretics, depression, Insomnia, Thyroid were taken into consideration on which 52% reported that they do not suffer in comparison to 48% who said they do possess. 36(72%) participants were on medication (Table -1).

**TABLE 2**
Table showing Mean and SD’s of three components of burnout

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional exhaustion (EE)</td>
<td>21.44**</td>
<td>11.641</td>
</tr>
<tr>
<td>Depersonalization (DP)</td>
<td>9.60**</td>
<td>7.016</td>
</tr>
<tr>
<td>Personal accomplishment (PA)</td>
<td>34.10**</td>
<td>7.541</td>
</tr>
</tbody>
</table>

** moderate level of burnout

**Prevalence of Burnout in Nurses:** The present group of nurses reveals moderate level of burnout in all the three dimensions MBI. Table 2. The level of burnout of nurses comes out to be moderate on all the three dimensions i.e. EE, DP, PA.

The mean score of 21.44 (70%) for EE falls under the moderate category, which comes in the range of 17-26.

66% of subjects felt depersonalized with mean score of 9.60, which also falls under moderate level of 7-12. As far as personal accomplishment goes 68% of subjects fall under moderate burnout level with m=34.10 whereas only 38% possess the feeling of high personal accomplishment.

**TABLE 3**
Showing Spearman’s Rank Correlation between Burnout and Organizational Commitment, Job Involvement

<table>
<thead>
<tr>
<th>Burnout Variable</th>
<th>Organizational commitment</th>
<th>Job Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional exhaustion (EE)</td>
<td>-.379(**)</td>
<td>-.0184</td>
</tr>
<tr>
<td>Depersonalization (DP)</td>
<td>-.508(**)</td>
<td>-.0068</td>
</tr>
<tr>
<td>Personal accomplishment (PA)</td>
<td>.444(**)</td>
<td>.389(**)</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).
Association of Burnout with Organizational Variables: The Spearman rho results presented in Table 4 demonstrate that organizational climate is significantly correlated with all the three dimensions of burnout i.e. Emotional Exhaustion (EE), Depersonalization (DP) and Personal Accomplishment (PA) at 0.01 levels. Job involvement is positively correlated with personal accomplishment at .01 level (Table 3).

Organizational Commitment: In agreement with the general literature, our results show a significant correlation of organizational commitment with the burnout process. Of the great importance for the burnout process is whether the commitment towards the organization can predict the burnout level of the individual. Negative correlation between organizational commitment and EE and DP show that as the psychological link or bond between the nurses and his/her organization decreases, the emotional exhaustion and depersonalization level increases. The study reveals that subjects high on depersonalization score are low on commitment score.

The results suggest that higher the degree of psychological identification with or attachment to the organization, more will be the feeling of accomplishment.

Job Involvement: The evaluation of data shows that the factor job involvement correlates negatively with EE and DP indicating that more the involvement in the job, less will be the emotional exhaustion and depersonalization among employees and also that the lesser one’s identification or involvement with the job, the greater EE & DP level. Its positive association with PA tells that higher the job involvement score, more the feeling of accomplishment. The higher the intensity of a person’s psychological identification with the job, greater the feeling of personal accomplishment. Usually the higher one’s identification or involvement with the job, the greater the Job involvement is related to many personal factors and organization variables.

<table>
<thead>
<tr>
<th>Burnout Variable</th>
<th>Extraversion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional exhaustion</td>
<td>.093</td>
</tr>
<tr>
<td>Depersonalization</td>
<td>-.005</td>
</tr>
<tr>
<td>Personal accomplishments</td>
<td>.186</td>
</tr>
</tbody>
</table>

Burnout and Extraversion: The extraversion trait personality shows no significant correlation with three dimensions of burnout. See Table 5. Spearman rank correlation does not show any significant correlation between personality and three dimensions of burnout. Therefore, our investigation does not support previous studies.
**Burnout and Human Energy Field (HEF)**

Correlations between the three-burnout variables of MBI and the six chakras of HEF, indicated that two chakras of the HEF core related with one burnout variable. Solar plexus and navel plexus reveal a significant positive correlation with Emotional Exhaustion whereas the other four chakras do not show any kind of significant correlation.

One of the most significant contributions of the present study is its exploration of possibility of application of a relatively new field of Human energy field in organizational setup context.

An attempt was being made to measure the burnout level of health professionals with the help of HEF technique PIP and its correlation with MBI.

The PIP machine is a light analysis technology (invented by Harry Oldfield) that is non invasive. It requires that naked skin to be exposed to a full spectrum controlled lighting environment and the absorption and reflection intensities are color coded and then analyzed. Typically, it is understood that the body will absorb more light (i.e. reflect less) where it has issues, in comparison to the rest of the participant’s body. It is often refered to congestions and leakages when analyzing these images.

Empirical connections between PIP scan and MBI can be seen. Spearman rank correlation method reveals a positive correlation between two major chakras and MBI results.

Positive association between EE and Solar plexus suggests that an individual whose solar plexus is out of harmony is/or likely to burn out. In this case it is expected to have a lot of unhealthy colors of red and black in the abdomen area. Similarly, significant correlation between navel plexus and EE tells us that subjects whose navel plexus is out of order is likely to be more emotionaly exhausted.

**REFERENCES**


