

## The True Principal Health and Investigation of The High Burnout Stages Experienced by Professors Working in Pharmacy Institutions Pune University and Related Factors: an Important Study

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### Statement of Problem

The continual advancements in major technological sectors and their immediate relevance to society has led to significant changes in the way people interact in their homes and in society. Similarly, and consequently, advances in science have considerably improved our ability to study true health principal and have brought about major developments in characterising diseases symbiotic populations in our body as well as the environment. The availability of antimicrobial technologies has led to improvements in health and has introduced a new standard in developed and developing countries. It has been suggested, however, that improvements in health, may have contributed directly or indirectly to a rise in our tendency to develop allergic diseases. In this research this has been possible due to provide the most up to date evidence that will shed light into a new perspective surrounding this theory. There was a shot in the arm for provide insights into current research focusing on the role of true principal health especially in regard to the true practice improvements made recently in college society.

Furthermore, investigators claimed discuss the evidence surrounding the reasons behind the unprecedented rise in disease in relation to existing policy trends, particularly in urban domestic settings. This research will finally address the question whether a reduction in principal hygiene would be beneficial for college health and relate this to current research evidence. A hypothesis is a plausible explanation applied to clarify an observation. The term "True Health Hypothesis" [1,2] was established and applied to certain trends in groups of human disease and it attempted to explain the connection between observed rises in burnout disease in professor and reductions in numbers of infections.

### Abstract

The purpose of this study was to elucidate the stages of professor burnout in pharmacy institution (their states of emotional exhaustion and depersonalization) as well as factors related to the professor personal characteristics and coping behaviors in order to obtain suggestions for stress and health management strategies that professors themselves can employ. The treatment conducted a cross-sectional study using anonymous self-administered questionnaires. The subjects were professors employed at private pharmacy institution with 500 capacities in 3 outskirts in Pune, India.

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The questionnaire items for burnout were those included on the Indian Hobby Burnout Inventory (IHBI), which are designed to ascertain the subjects' emotional exhaustion, depersonalization, and sense of personal accomplishment. In this investigation used 11 items related to physical and mental stress responses on the Stress Coping Inventory and the Brief Job Stress Questionnaire to determine factors such as the professors' basic attributes, whether or not they worked night shifts, and their overtime hours, etc. These evidences suggest that responses from 41 pharmacy institution professors.

Those whose scores for both emotional exhaustion and depersonalization were the mean or above were 40.2% of those in their middle age, 35.8% of those in their thirties, and 26.8% of those in their forties or older (result monitored by immunity systemic immune response with immunization). The results of logistic regression analysis indicated that in among those in the group that scored high for both emotional exhaustion and depersonalization, the influential factors were stress score (odds ratio 89), middle age group (odds ratio 92), thirties age group (odds ratio 70), coping behavior: avoidance-focused behaviors (odds ratio 10), and engaged in childcare (odds ratio 47). Similarly, when looked at by age group, being in the middle age group and having a spouse were influential factors (odds ratio 14-11). The results of this study elucidated the fact that for pharmacy institution professors, the burnout stage, age, state of physical and mental stress response, and coping behavior can be effectively used as predictive indices.

**Key words:** *Burnout; Coping behavior; Pharmacy institution professors; Burnout; Related factors*

## **Introduction**

Although the job separation rate for Indian professors is on a declining trend, in general it hovers around 11% and is 7.5% for new professor. The most commonly cited reason for professor leaving their job is "female life events" such as childbirth and childcare, followed by physical health problems and psychological health problems. Previous studies have reported that the causes for job separation among professors include the burden of the responsibilities of the job, the number of night shifts and the length of the overtime, overwork, and other factors related to the work environment, as well as personal factors such as age and childcare.

In particular, those in their middle age and thirties who are at the stage during which they are building their careers as professors are also at the age when they are experiencing major life events such as marriage and childbirth that make it difficult to continue working. Furthermore, mid-career professors in their late middle age and thirties who are involved in providing training to novice professors have high job demands, which increase their physical and psychological fatigue, and as a result is thought to lead to job separation among mid-career professors [1,2]. Relationship defined "burnout" as a "syndrome of emotional exhaustion and cynicism that occurs frequently among individuals who do 'people-work' of some kind". A key aspect of the burnout syndrome is increased feelings of emotional exhaustion. Research on burnout has identified the factors related to professor burnout as age, social support, relations with other pharmacy institution professors, job satisfaction, and ability to cope with stress [3].

Burnout as defined by scientist is comprised of the 3 factors of emotional exhaustion, depersonalization, and decline in personal accomplishment. Although the 2 factors of emotional exhaustion and depersonalization are strongly correlated, there is said to be a weaker relationship between decline in personal accomplishment and the other 2 factors. A variety of studies have been done on the process of burnout by which emotional exhaustion leads to depersonalization. In all analyses, however, it is clear that emotional exhaustion is the central concept of burnout [4]. Previous studies of burnout among professors and physical and psychological health suggest that chronic fatigue, depression, and other symptoms are correlated to burnout. Early intervention into professor burnout can prevent job separation among professors and therefore the issue of professors maintaining and improving their own physical and mental health is an important issue that can lead to improved quality of healthcare. Since 2015, in India, the Industrial Safety and Health Bill has required employers with at least 50 employees to provide worksite stress checks. In addition, in 2013 the Indian Association of Pharmaceutical Teachers released its guidelines on night shifts and shift work, which includes educational contents related to sleepiness during professors' shift work and outlines guidelines regarding the taking of breaks.

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These efforts not only reflect the importance of aspects such as work management of professors and organizational management of pharmacy institutions, but also the importance of professors themselves making efforts to manage stress and their own physical and mental health in order to prevent burnout. Therefore, the purpose of this study was to elucidate the stages of professor burnout in pharmacy institutions (their states of emotional exhaustion and depersonalization) as well as factors related to the professors themselves in order to obtain suggestions for stress and health management strategies that professors themselves can employ.

### **Objective of the study**

The purpose of this study was to elucidate the stages of upper professor burnout in pharmacy institutions (their states of emotional exhaustion and depersonalization) as well as factors related to the professors themselves.

### **Methodology**

The subjects were professors who work in private pharmacy institutions with 500 capacities in the pun and regional cities of India. Since their normal work schedules – including night shift work – may differ, directors and associate directors of pharmaceutical departments as well as head professors were excluded. All out professor and in professor were included among the subjects. The survey period was from December 2015 to January 2018. The survey was an anonymous, self-administered drop-off survey. The survey description and questionnaire forms were distributed to the subjects by the pharmaceutical departments of the participating institutions and they were recovered by the researcher from each institution. The subjects were also guaranteed that their participation in the survey would be of their own free will. Consent was assumed when the subjects returned their completed questionnaire forms to the researcher.

Survey items were as follows;

- 1. Burnout:** Burnout was defined as “A long-term stress response that occurs as a result of experiencing long-term and repeated stress.” The paper will indeed generate discussion used the India Burnout Scale created by Master-Trainer Tim Software Stock Academy that was based on the India Burnout Inventory (IBI). The reliability and validity of this scale has been verified. The scale consists of 17 items and 3 sub-scales (emotional exhaustion, depersonalization, and decline in personal accomplishment). Responses to each sub-scale are organized as a 5-step Likert scale, with 1: Never, 2: Rarely, 3: Sometimes, 4: Often, and 5: Always. The total score for each sub-scale are then totaled. Scores are as follows: Emotional exhaustion is 5 to 25 points, and depersonalization and decline in personal accomplishment are 6 to 30 points. The scores for the sub-scales are then divided by the number of items. As there is no scoring criteria for this scale, a subjective assessment is made based on the variations in score among the respondents. Permission to use this scale was obtained from the developer prior to the start of this study.
- 2. Physical and mental stress state:** The investigator utilized the “physical and mental stress response” question items on the Workplace Stress Simple Questionnaire that was examined by Happy Thought Welfare group [5]. The following were the 11 items included: No appetite, excited, anxious, listless, blue, bothersome, cannot calm down, cannot sleep, feel severely tired, exhausted, depressed. They were scored as either 1: Yes or 0: No and the total was used as the “stress score” (score range: 0–11).
- 3. Stress coping:** The investigator used the Coping Scale developed by own experience. This scale measures the stress response, stressors, and coping. It is composed of 14 items organized into 3 sub-scales: Problems (5 items), emotions (3 items), and avoidance/escape (6 items). The problems-related items focus on behaviors that directly contribute to problem-solving, such as gathering information and re-examination. The emotion-related items focus on emotional responses triggered by stressors and behaviors that regulate the switching of attention and feelings. Avoidance/escape-related items are behaviors that lead to fleeing from unpleasant events or negative interpretations. The questionnaire first asks respondents to describe “the most stressful recent experience” and then asks them to rate the frequency of the psychological effort used to make decisions regarding how to reduce the stress response triggered by these stressors on a 4-step scale (ranging from 0:Never to 3: Always).

4. **Professors' basic attributes:** Age, sex, marital status, engaged in class, engaged in teaching care, number of years employed at their institute, work schedule and taking of annual paid leave, and monthly hours of overtime.

#### **Analytical methods**

The professors' characteristics, burnout scores, stress scores, and coping scores were calculated as the fundamental statistics. Since decline in personal accomplishment has a weaker relation to burnout than the other 2 factors, only the 2 sub-items of emotional exhaustion and depersonalization were used in analysis as the central concepts of burnout. In order to investigate the relation of the 2 sub-scales of burnout and personal attributes to the stress scores and coping, in this period used the independent t-test and one-way analysis of variance. Possible also divided the burnout sub-scales of emotional exhaustion and depersonalization into 2 groups based on means scores (High-score group and Low-score group). Investigation considered cases in which both items were in the High-score group as the "Emotion/depersonalization group." Those that had low emotional exhaustion scores but high depersonalization scores were considered the "Depersonalization group." Those that had high emotional exhaustion scores and low depersonalization scores were considered the "Emotion group." Finally, those who had low scores in both sub-scales were considered the "Low-score group." Coping scores were also handled similarly using a cutoff for the mean scores for the Problem, Emotion, and Avoidance/Escape items in order to divide the subjects into a High-score and a Low-score group. In order to investigate the relation of the 4 types of burnout and the professors' characteristics with physical/mental stress and stress coping, performed multiple logistic regression analysis with the 4 types of burnout as the dependent variable and the stress scores, coping scores, and professors' attributes as the independent variables. Analysis was performed using SPSS23.

#### **Future issues based on the factors related to professor burnout**

In a previous study the presence of a spouse was reported to decrease emotional exhaustion and increase depersonalization. In the present study, these were factors in all three Groups (Emotion, Depersonalization, and Emotion/Depersonalization extended) only among those in their middle age. Treatment has made this result was due to the fact that professors in their middle age are taking on household roles as a result of life events such as marriage, which makes it increasingly difficult to balance these responsibilities with their clinical responsibilities as professors, which in turn leads to conflict.

This finding also assumes that this result supports the notion that marriage is a tor related to job separation among professors in their middle age. On the other hand, our investigation of childcare indicated that regardless of whether the subjects worked the night shift or not, there were fewer numbers of professors in their middle age in the Emotion Group and fewer numbers of professors in their thirties in the Emotion/Depersonalization Group. Reports believe that this may be due to the fact that childcare does not simply create a burden in the household, it also has a positive influence on professors' emotional stability and stress management skills. Professors engaged in childcare themselves recognize that raising children is a factor related to continuing to work and is effective in raising their awareness of the importance of stress management.

Analysis of coping behaviors indicated that those of all ages in the Depersonalization Group were affected by avoidance behaviors. Depersonalization is thought to be a coping behavior that arises as a result of emotional exhaustion, and therefore investigation believe that among those in the Depersonalization Group there was a correlation to the avoidance behavior of not paying attention to those around them, which resulted from a depletion of emotional energy. Result found a correlation between those in their middle age who were in the Depersonalization Group and the Emotion/Depersonalization Group and emotion-focused behaviors. However, this may also indicate that the professors were simply unable to successfully perform "emotion-adjusting behaviors" as a type of stress management. In addition, problem-solving-focused behaviors were not found to be an influential factor for the subjects of the present study. Based on the fact that a previous study "A Defense of Unqualified Pharmaceutical Confidentiality results published in Glob J Add & Rehab Med. reported that when supportive resources are available, coping in the form of problem-solving reduces the stress response, in this issue believe it is necessary to investigate coping behaviors in conjunction with the availability of supportive resources.

In particular, there is a need for those in their middle age, who are prone to experiencing high levels of stress, to be more aware of their own coping behaviors and receive support in the form of education regarding effective ways of managing stress. In this study, the stress score used in this study to ascertain the state of physical and mental health consisted of a workplace stress check questionnaire with 11 assessment items. It has been reported that the major physical and mental responses that occur even when there is little sign of burnout cause psychological problems such as anxiety and depression as burnout becomes more severe. In this study, these factors had a strong influence over subjects of all ages who were in all the Burnout groups. In particular, author believes that they can be used as powerful predictive factors for those in the Emotion/Depersonalization Group and the Emotion Group. Since 2015 it has become mandatory for workplaces with at least 50 employees to conduct workplace stress checks, and therefore many pharmaceutical Institutions are conducting workplace stress checks for their professor staff. The items on our questionnaire that were related to physical and mental stress responses can be used not only for health management but also in order to allow professors themselves to become more aware of indications that may predict the onset of burnout. Therefore, findings believe these questionnaire items are useful in both workplace management and health management.

### **Limitations and problems with this study**

This study was a cross-sectional study targeting 4 relatively large-scale facilities in Pune University, and as a result its representativeness of the professor population as a whole is limited. Investigated burnout and related factors of professors who are employed in pharmacy Institutions by age group and state of burnout. Author did not investigate other factors such as workplace environment or human relations in this study, staff to staff relation. Therefore, it remains necessary to verify a burnout predictive index as well as professors' desire to leave their jobs.

### **Conclusion**

Analysis of the professors who are employed at pharmacy Institutions and who are at high risk of burnout due to a high level of emotional exhaustion which causes depersonalization indicated that 40.2% were in their middle age, 35.8% were in their thirties, and 26.8% were in their forties. The factors related to the burnout state differed according to the professors' age groups. The factors found to be related to burnout were marital status and childcare for professors in their middle age, and childcare for professors in their thirties. Coping behaviors were not influenced by problem-focused behaviors, but non-emotion-focused behaviors and avoidance-focused behaviors were found to be influential factors. It was found that stress score, which indicates physical and mental stress responses, was a factor that influenced all burnout types for all age groups, and in particular could be used as a predictive index for those who had high scores for both emotional exhaustion and depersonalization.

### **Special Thanks**

Author is delighted to notify all participants in this special study and express their appreciation for the kind cooperation of all the professors in Pune University who participated in this study without hesitation.

### **Conflicts of interest**

The author declares that there were no conflicts of interest to report.

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|--|-----------|
|  | N = 1465  |
|  | Mean ± SD |
| Burnout score  |           |
| Emotional exhaustion   | 3.4 ± 0.5 |
| Depersonalization  | 2.1 ± 0.4 |
| Decline in sense of personal accomplishment  | 3.7 ± 0.5 |
| Coping score   |           |
| Problem-focused  | 7.1 ± 2.9 |
| Emotion-focused  | 4.5 ± 2.0 |
| Avoidance-focused  | 8.7 ± 3.7 |
| Stress score (range: 0-11)   | 5.1 ± 2   |
| Stress score: Total score of 11 items that indicate the state of physical and mental stress (No appetite, become excited, have anxiety, feel listless, feel blue, feel bothersome, cannot calm down, cannot sleep, feel severely tired, feel exhausted, feel depressed). |           |

**Table 1:** Professors' state of high burnout, coping, and physical/mental stress/mobile stress/ aggressive demand/unnecessary defensive talk/avoidance behaviors.

Analysis of the relation of burnout score to the other variables indicated that age group (middle age and thirties), married, raising children, high stress score, and the 3 coping sub-scales were significantly correlated ( $p < 0.001$ ). There was no correlation with professor, number of overtime hours, or work schedule (including night shift).

**Test sheet**

**Facts file of burnout categories by different observation**

|                          | Low Group |        | Emotion Group (Including Principal) |        | Depersonalization Group including Senior Professor |        | Emotion/Depersonalization Group including Professors |        | total |
|--------------------------|-----------|--------|-------------------------------------|--------|--|--------|--|--------|-------|
|                          | n         | (%)    | n                                   | (%)    | n  | (%)    | n  | (%)    |       |
| Age middle age and above | 175       | (28.3) | 146                                 | (23.8) | 46   | (7.5)  | 245  | (40.2) | 610   |
| Age 30 and above         | 162       | (35.7) | 88                                  | (19.2) | 42   | (9.3)  | 162  | (35.8) | 452   |
| Age 40 and above         | 181       | (45.2) | 72                                  | (17.8) | 41   | (10.3) | 107  | (26.8) | 399   |

We performed multiple logistic regression analysis with the 4 types of burnout as the dependent variables and the items found to have a significant relation to burnout (professors' attributes, coping, and stress score) as the independent variables, and we divided the results by age group. The results indicated that, when we used the Burnout Low Group as a reference category, being in the middle a age group (odds ratio 2.073,  $p=0.001$ ) and the stress score (odds ratio 1.461,  $p<0.000$ ) had an effect in the Emotion Group, while childcare (odds ratio 0.517), emotionally-focused behaviors related to coping behaviors (odds ratio 0.767,  $p<0.000$ ), and avoidance behaviors (odds ratio 1.190,  $p<0.000$ ) had an effect in the Depersonalization Group regardless of the age group of the subject.

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