Psychoemotional State of Nurses at the Stage of Adaptation to Occupational Activities

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Abstract
We have assessed psychoemotional state of 40 nurses working at the pediatric city hospital by using self-assessment anxiety tests, psychoemotional state tests, and test questionnaires, including a chronic fatigue test. The results suggest that elevated situational anxiety, the onset of “occupational burnout”, and low mood were characteristic of occupational adaptation in nurses. The CFS index generally showed that physiological discomfort, emotional disorders, reduced motivation, and changed social interaction patterns predominated in most of the nurses. The predominance of the symptoms in question could be indicative of breakdowns in regulatory mechanisms, which were characteristic of “burnout”. We have concluded that psychoemotional strains were the factors that contributed heavily to “occupational burnout” and chronic fatigue. We suggest that means of psychophysical correction that include relaxation exercises should be adopted as a part of the workflow and the work condition should be optimized, which we see as the means of preventing psychosomatic disorders in nurses.

Keywords
Nurses; Fatigue; Psychoemotional Stress; Anxiety; Relaxation; Professional Burnout

Introduction
Morphofunctional rearrangements in the human body, which often occur amid physical and emotional strains, characterize adaptation to any complex occupational activities. It is a fact that working a nurse causes intense fatigue and psychoemotional strains, and contributes to the onset of psychosomatic disorders, emotional exhaustion, and “occupational burnout” [1]. Authors [2] name the three components of “burnout”: emotional exhaustion, depersonalization (involving cynicism), and reduction of occupational accomplishment. Emotional exhaustion is a feeling of emotional emptiness and tiredness caused by doing the job; depersonalization is a set of personality changes that lead to a cynical attitude to work and patients; and reduced occupational accomplishment is a false feeling of incompetence and occupational unsuccessfulness.

Variegated work functions that nurses perform are related to loads on principal functional body systems that provide stamina and good psychoemotional state, as well as the ability to tolerate stresses [3]. Homeostatic disorders caused by long-term stresses lead to maladaptive symptoms [4]. Stresses are often accompanied with anxiety and depression [5] that also contribute to somatic disorders, complications, and worsened prognoses [6]; as well as memory and attention impairments [7].

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Research data on psychoemotional changes that occur in nurses necessitate adoption of means for the prevention of occupational disorders and improvement of work conditions. Despite that fact that nurses are the principal administrators of medical aid, still there are no detailed data on occupational adaptation of nurses.

It was the goal of this research to assess psychoemotional state of nurses who worked at the pediatric ward at the stage of occupational adaptation.

Methods and Subjects

The subjects were 40 nurses working at the pediatric city hospital. The average age of the subjects was 34.8 ± 2.1; their average length of employment was 12 ± 3.7 years. The pediatric hospital treated children of various age groups for chronic or acute diseases. The nurses worked irregular hours and performed various functions occupationally. E.g., pediatric ward nurses worked on a daily basis, except Saturdays and Sundays, from 8:00 a.m. till 5:00 p.m., or 5:00 p.m. till 8:00 a.m., and 24 hours a day on Saturday, Sundays, and holidays.

Complex and intense activities done by the nurses involved assuming responsibility for health and lives of patients, frequent attention switchovers, prompt reactions, independent decision-making in urgent situations, and communications with large amounts of patients and their families. Complication risks and communication with patients fearing medical manipulations were the causes of psychoemotional strains in nurses employed in invasive surgeries.

The research was conducted on voluntary informed consent, subject to the Protocol approved by the Ethical Board of the Russian Academy of Sciences.

The following methods were used to assess the psychoemotional state of the subjects:

The wellbeing-activity-mood self-assessment test, based on the V. A. Doskin questionnaire [8]. The results were rated on a point scale. The Spielberger [9] state-trait anxiety inventory and The Job Satisfaction, with the results rated in points. The Chronic Fatigue Assessment test based on the A. B. Leonova questionnaire [10] consisting of 36 questions. The chronic fatigue syndrome (CFS) index was assessed from the total of the points scored.

The “occupational burnout” test based on the V. V. Boiko questionnaire [11]. The test assessed three stages of “burnout”: strain, resistance, and exhaustion, as well as the intensity of the specific symptoms at each of the three stages.

Statistical processing of the results was done by MSExcel and STATISTIKA (V.6) suite.

The significance of differences was assessed by means of Student’s t-criterion, while accepting the critical importance value for the verification of statistical hypotheses to be 0.05. The results were also tested for the Student’s normal distribution.

Results

The analysis of the results suggested that “occupational burnout” had already formed in 12 nurses, it was through its formative stage in one nurse, and no “burnout” was found in two nurses aged 50 and 56. No “burnout” in older nurses could be attributed to the fact that they had been through their occupational formation stage and had developed fully-fledged occupational self-preservation mechanisms.

The strain stage was found in three nurses, with anxiety and depression being the leading symptoms. The resistance stage was found in five nurses, which manifested itself in emotional overreactions, emotional and moral disorientation, emotional thriftiness, and occupational reduction. The exhaustion stage was found in four nurses, the symptoms being emotional deficit, emotional detachedness, psychosomatic and psychovisgerative disorders.

Figure 1: The Wellbeing-Activity-Mood Self-Assessment Results Before and after a shift

*Note: Significant Differences From the Initial Values

The wellbeing-activity-mood test results (see Fig. 1) suggested that nurses had highest wellbeing, activity, and mood before a shift. The results obtained after shifts...
showed that there was a tendency to a decrease in wellbeing from $5.8 \pm 0.6$ to $5.6 \pm 0.3$, and a decrease in mood from $6.1 \pm 0.1$ to $5.6 \pm 0.2$, while the activity results remained practically unchanged. More pronounced changes in wellbeing and mood were found in nurses working 24-hour shifts towards the end of a shift.

The analysis of Spielberger self-assessment results found high personal anxiety in most of the nurses, as well as an increase in situational anxiety from $48.6 \pm 2.9$ to $52.2 \pm 3.6$ after a shift (see Figure 2).

**Figure 2: Anxiety in Nurses**

![Anxiety in Nurses](image)

The longer a nurse was in employment, the lower anxiety level she had. Example: nurses who had been in employed for less than five years and those employed in invasive manipulations had the highest anxiety values.

Authors [12] also found that nurses had higher anxiety levels, more intense depression, irritability, and chronic fatigue than medical college students.

Chronic fatigue assessment results showed that three nurses had an advanced stage chronic fatigue and five had an incipient stage chronic fatigue. Incipient fatigue considerably impairs work capacity, advanced fatigue prevents sufferers from doing even the works they know well, and grave fatigue may lead to a complete occupational failure.

The CFS index generally showed that physiological discomfort, emotional disorders, reduced motivation, and changed social interaction patterns predominated in most of the nurses. The predominance of the symptoms in question could be indicative of breakdowns in regulatory mechanisms, which were characteristic of “burnout.”

The work satisfaction test results suggested that nurses were not quite satisfied with their jobs, the average group result being $33.8 \pm 3.2$. Those nurses who were satisfied with their jobs tended to feel dissatisfied with the work conditions. The negative factors named by nurses were too long workdays, unclear career prospects, and low salaries that seemed inadequate to their demanding jobs.

The research by Y. Kikuchi [13] also found that demanding jobs and low wages could also lead to depressive states in nurses.

All in all, our data on changes in psychoemotional states of nurses have proved that prophylactic and corrective sessions need to be adopted in order to prevent psychosomatic manifestations of occupational maladaptation.

**Discussion**

The very nature of changes in psychoemotional states of the subjects indicated that their work conditions were far from being healthy, with frequent stressful situations and prompt decision-making in urgent situations being the essential adverse factors.

According to the data provided by [12], stress was more commonly found in nurses than in medical college students. Emotional stresses can have a strong impact on health, including cancers [14]. Stresses can have far-reaching negative effects not only the physical level, but the cellular level also, e.g., by affecting cerebral neurons [15]. The researchers [16] found depressive states in 1/3 of all nurse managers, attributing them to psychologically adverse work conditions.

Our subjects complained of sleep disturbance, frequent headaches, fatigue, overreactions to patients and coworkers, reluctance to go to work, with “occupational burnout” symptoms found in 13 subjects. Elevated psychoemotional strain in nurses manifested itself in high personal anxiety figures and an increase in situational anxiety values after a shift, with selfassessed psychoemotional state being higher in nurses than in medical college female students, the latter being attributable to grown occupational confidence of the nurses.

Psychophysical adaptation is a critical factor in occupational adaptation. Based on peculiarities of adaptation to a specific job, one can develop adaptation control programs to help employees maintain good health and optimal work capacity. Adaptation optimization must include a set of measures for correction of etiological factors causing isolated disorders indicative of maladaptation.

Our research results and literature data necessitate measures to prevent occupational diseases in nurses. Psychophysical relaxation exercises provide the best...
preventive effect [17]. Example, M. Ando [18] found that practicing meditation with nurses to help them realize their selves and their activities improved their psychoemotional state and enhanced their stress tolerance.

It is common knowledge that positive emotions eliminate previously experienced negative ones. Physiologically justified methods for the correction of psychofunctional state, including decent remunerations, work conditions optimization, relaxation techniques, and functional state self-regulation [17] can contribute to solving the problem. Adoption of those methods may help employees enhance their compensatory body reserve while receiving the same amounts of physical and psychoemotional load at work as before. E.g., reducing high anxiety levels could alleviate emotional and psychophysiological strains and, consequently, decrease energy and functional consumption.

Conclusion

Our data show that nurses experience pronounced psychoemotional strains as they are through the stage of occupational adaptation, and they tend to develop symptoms of “occupational burnout” due to longer employments and no psychophysical health care. We recommend that means of psychophysiological correction and decent remuneration packages should be adopted as a part of workflow in order to prevent psychosomatic disorders in nurses.

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Conflict of Interest

None Declared.

References


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