

Occupational Stress and Mental Health of Employees of a Petrochemical Company before and after Privatization

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Abstract

Background: Many countries make many of their governmental sectors private. This transition, however, may affect their employees in numerous ways.

Objective: To determine the level of occupational stress and mental health of employees of a petrochemical company in Isfahan, Central Iran, before and 3 months after privatization.

Methods: Out of the 700 employees of the studied company, using a stratified random sampling technique, 140 persons were selected. We used Steinmetz occupational stress and GHQ-28 questionnaires to determine the level of stress and mental health status of participants.

Results: The reliability of the questionnaires used was acceptable (Chronbach alpha coefficients: 0.85 and 0.86, respectively). Job stress level was significantly increased 3 months after privatization; the mean±SD job stress score before and after privatization were 22.9±10.43 and 28.3±12.25, respectively ($p<0.001$). The mean±SD mental health score after privatization (17.57±11.63) was also significantly ($p<0.001$) higher than that before the privatization (13.8±6.0). There was a significant ($p<0.001$) positive correlation between the mental health status score and job score ($r=0.476$).

Conclusion: After privatization, the job stress of employees increased significantly. This increase was associated with a decrease in mental health. To lessen the side effects of privatization, the process should be performed cautiously.

Keywords: Psychological health; occupational stress; mental health; privatization

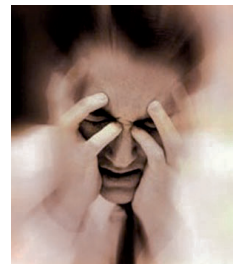
Introduction

Nowadays, stress is an inseparable part of daily life in industrialized communities. Many authors have pointed out that organizational changes can be viewed as the greatest source of stress on the job and perhaps, on employees' life. Kotter mentioned that while each change is important, the core problem of organizational changes is neither the strategy, structure, culture, nor the sys-

tem. Rather, the real problem arises when deciding how to help employees adapt to the changes. Schabracq and Cooper believe that employees' stress rises because their positions and technical skills may be changed. When employees cannot make the necessary technical adjustments, a sense of uncertainty arises about the future, which in turn, creates stress. This uncertainty can affect both the employees' job commitment and job satisfaction.

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TAKE-HOME MESSAGE

- After privatization, the job stress of employees increases significantly. This increase is associated with a decrease in mental health.
- Privatization is a gradual process and affects employees over time. While some employees perceive the changes positive, others are not satisfied.
- To lessen the side-effects of privatization, organizations should support their employees sufficiently to enable them to adapt themselves to the changes, through allowing their employees to participate in making decisions concerning the functional changes in the system to prevent or reduce the subsequent job stress.

Trust is a cornerstone of cooperative relationship among people. Once an organization begins changing, its employees may face threats to their jobs, roles, positions, and resources. These threats can lower the employees' trust in their organization as a whole which can be negatively reflected in employees' attitudes toward their work. When individuals contemplate the stress of organizational change, their perceptions, choice of reactions, and working attitudes all strongly influence whether the change will be successful and if the newly-reconstituted organization will function efficiently or not.¹

Stress is a general and global phenomenon encompassing man's psychological, physical, familial, and social dimensions. Researchers have made great efforts studying the effects of this stress on mental and physical health of employees to better understand its nature and thus, to improve the mental health and the conse-

quent increase in job efficiency.

Today, in view of the complexity and ever-increasing changes of the society as well as the improvement of technology, stress has become a serious threat to human so that it has severely affected the physical and mental health of employees.

Since stress and its effects on human are differently treated in different cultures and considering the current trend in privatization of governmental sectors in Iran, we conducted this study to determine the level of job stress and mental health status among employees of a petrochemical company in Isfahan, Central Iran, after its management was taken over by a non-governmental private system.

Materials and Methods

We studied a petrochemical company in Isfahan, Central Iran. It had 700 (670 men and 30 women) employees. Using a random sampling method stratified based on the site of work, 140 employees were selected and asked to complete the Steinmetz job stress questionnaire and GHQ-28 questionnaire.

The Steinmetz questionnaire was developed in 1977 to measure the job stress. It consisted of 36 items concerning stressful situations at work. In 1995, Yaqoobi reported the reliability of the Persian version of this questionnaire as 0.69–0.72.

The 28-item GHQ questionnaire was used to assess the employees' mental health status concerning physical signs, anxiety, disorder in social function and depression. Various studies indicate a high reliability for the Persian version of this questionnaire too. In 1995, Yagoobi found an overall reliability coefficient of 0.88 for the whole test and a reliability coefficient of 0.50–0.81 for its subtests.

In the current study, using the Cronbach's alpha coefficient, the reliability of the Persian version of Steinmetz ques-

tionnaire measured 0.85, and the reliability of Persian version of GHQ-28 was 0.86.

The questionnaires were completed at two occasions—three months prior to the privatization and three months after the privatization of the company was announced.

Results

Of 140 studied employees, 62 (44.2%) aged <35 yrs; 40 (25.5%) were between 35 and 40; and 38 (27.1%) were >40 yrs. The service time of most of them (n=110; 78.5%) was <15 yrs; 13 (9.2%) served for 15–20 yrs; and 17 (12.1%) had a service time of >20 yrs. Most (109; 77.8%) of the studied employees were married. The level of education of the studied employees is presented in Table 1.

Job stress level, as measured by Steinmetz's questionnaire, was significantly increased after privatization; the mean±SD job stress score before and three months after privatization were 22.9±10.43 and 28.3±12.25, respectively ($p<0.001$). The mean±SD mental health score after privatization (17.57±11.63) was also significantly ($p<0.001$) higher than that before the privatization (13.8±6.0) which means that employees enjoyed a better mental health before the privatization. There was a significant ($p<0.001$) positive correlation between the mental health status score and job score ($r=0.476$).

Discussion

We found that after privatization, the job stress of employees increased significantly. This increase was associated with a decrease in mental health. Our findings are consistent with many researches.²⁻⁶

A recent study conducted in Thailand concluded that the organizational change has a significant association with more psychological stress which in turn, resulted in poor job performance.²

Table 1: Level of education in the studied employees

Level	n (%)
Elementary school	14 (10)
Guidance school	28 (20)
High school	63 (45)
University	35 (25)

Another study on four healthcare providers revealed that organizational changes do not affect the employees suddenly; the process is rather gradual and continuous and affects employees over time.³ Furthermore, while some employees perceived the changes positive, others were not satisfied with the alterations and the process of implementing the changes.

Our findings were also consistent with results of another study which revealed that organizational restructuring had consistent negative effects on employees' level of job security, organizational commitment, perceptions of time pressure and psychological well-being.⁴ Effects on job satisfaction, physical health, and perceptions of role ambiguity were less consistently noted.⁴

Devin⁶ studied the employees of a large healthcare provider in Canada and concluded that the employees surviving the downsizing had a higher degree of delay and also a higher degree of stress due to less control exercised over their jobs. Consequently, they enjoyed less job satisfaction and living standards and worse general health.⁶ It seems that due to the uncertain nature of job status, or the fact that the employees may be dismissed or transferred, they feel job insecurity and have fear losing their jobs. Fear can pass

to other employees and trigger a chain reaction that ultimately leads to the widespread fear in employees of losing their jobs which causes increased job stress.⁶

We found that the studied employees enjoyed a better mental health before privatization. These findings are consistent with many studies.^{3,7,8}

One study showed that both insecure re-employment and unemployment after privatization result in increases in psychiatric disorders and consultations with a general practitioner and that constant unemployment is linked to chronic diseases.⁸

In this respect, International Labor Organization (2002) discussing safety and job health, reported that privatization, organizational restructuring and increasing the number of small business units increase unemployment, stress, alcoholism, job insecurity and prolongation of work hours, all of which lead to psychic trauma at work and private life. Moreover, it has been shown that stress and its related diseases lead to an increase in the incidence rate of indigestion, heart disease and mental disorders.

We showed that there is a close correlation between job stress and employees' mental health after privatization. These observations have been also reported earlier. In a study on mental health of Chinese nurses in Hong Kong,⁹ the authors concluded that the degree of stress which nurses experienced at work was positively and significantly correlated with their mental health and that the level of anxiety and depression were significantly correlated with the degree of stress at work.⁹ Another study showed that there was a causal interrelationship between work characteristics and mental health.¹⁰

We believe that to lessen the side-effects of privatization, organizations should support their employees sufficiently to enable them to adapt themselves to the

changes, through allowing their employees to participate in making decisions concerning the functional changes in the system to prevent or reduce the subsequent job stress. Participation of employees helps them accept the changes and allows them to present their opinions and point of views about the changes in the system which ultimately enables them to adapt themselves to the new system.

More comprehensive comparative studies on privatization (particularly the psychic effects on employees) in countries where privatization of governmental sector is in their agenda, should be conducted to minimize the adverse effects of this process on employees, in particular, and on the system, at large.

Conflict of Interest: None declared.

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