

Job Stress and Burnout Syndrome in a Sample of Rural Health Workers, Behvarzes, in Tehran, Iran

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Objective: In the last 30 years, ever since the PHC network in Iran has been established, the job duties of Behvarzes (Mental Health Workers in rural areas) have been constantly increasing. The aim of this study was to determine the burnout level, mental health status and the severity of occupational stress among Behvarzes.

Methods: All Behvarzes (227) working in areas covered by Iran University of Medical Sciences were considered for participation in the study. Maslach Burnout Inventory, GHQ-12, and Stainmentz questionnaires were used.

Results: The completed questionnaires were returned by 93% of the subjects. The mean score of job stress was in the first percentile (42.8 ± 27.16). 17.6% of the study subjects had moderate to severe level of burnout; 12.3%, 5.3% and 43% of the subjects had abnormal scores on emotional exhaustion, depersonalization and personal subscales respectively; and 28.3% of the cases were suspected to have mental disorders by GHQ.

Discussion: In spite of increasing assigned jobs to Behvarzes, job stress and burnout are not seriously distressful. Providing more desirable personal accomplishment for Behvarzes by reducing job ambiguity/conflict, participating in planning new programs, and improving interaction with health authorities may help them to overcome their job related pressure and increasing workload.

Keywords: Health personnel, Mental health, Occupational health, Primary health care, Professional Burnout

Iran J Psychiatry 2011; 6: 70-74

Burnout is a state of mental exhaustion that affects human service professionals, (public service, volunteer, medical, human social service, educational organizations). This syndrome was described in 1970 by Freudenberg as a chronic emotional and interpersonal job related stressors (1).

Job-related 'burnout' has been identified as an occupational hazard for various professionals involved in people-oriented services (2).

As a stressor, "burnout" leading to physical and emotional discomfort and negative attitude towards the profession while on duty, decreased job performance and commitment and lower career satisfaction, which can lead to worse quality of care when health professionals are affected (2-5).

Burnout can produce stress-related health problems, low morale and physical exhaustion, insomnia, increased use of alcohol and drugs, and increased family problems (6). The determinants of burnout are multiple and complex. The model of burnout focuses on the mismatch between the person and the work in

terms of workload, reward, community, fairness and values (7).

One of the service provider professionals who provide health and treatment services are health staff who are working in the Primary Health Care (PHC) network. Rural Health Workers are called Behvarz in PHC network of Iran. They are working in Rural Health Clinics called "Health House". In towns and villages, Rural/Urban, the Health Center managed by general practitioners, performs its functions (deliver of primary health care) through a large number of Health Houses (HHs) and Behvarzes.

Some of the more important tasks of well-established HHs are as follows: 1. educating the community on health matters; 2. family health; 3. prenatal, natal and postnatal care; 4. care of children under 5; care of school age children; 6. family planning services; 7. immunization; 8. home visits for follow-up of drop-out cases; 9. case-finding and referral (tuberculosis, malaria, leprosy, respiratory infection, diarrheal disease); 10. environmental health activities such as

inspection of prepared and stored food, sanitation, disposal of solid wastes, chlorination of drinking water; 11. collecting and recording information (8).

Behvarzes are trained at Behvarz School for 2 years to be qualified to work in HHs. Overall Behvarzes have a key role in maintaining and promoting health in rural areas.

"Iranian PHC system was launched in 1979 by designing a new health system to make a radical change in the infra-structure of the country's health system"(8).

In September of 1978, in Almeata conference, participation of representatives of 134 countries, encouraged nations to act imminently to provide mental health for their societies. The first national program on mental health was developed in 1986. The three-first pilot studies were carried out in Shareza (1988) and Sharekord (1989) and Savojbolagh (1990) and yielded remarkable results which provided enough evidence for national program of integration of mental health into PHC as the ninth element of PHC tasks [9].

Currently, 94% of rural areas of Iran are covered by PHC network [8]. At the beginning, Behvarzes were in charge of 17-20 specific tasks in 1979 which concentrated more on environmental health and prevention of communicable diseases. Currently, 55 defined duties are assigned to Behvarzes. During the last 10 years, more non-communicable diseases such as prevention of disaster, industrial health, mental health and others have been integrated into PHC; and more duties such as prevention of suicide, domestic violence and addiction are waiting to be integrated.

It is suspected that during the past thirty years, the increasing duties have imposed so much mental and physical pressure on Behvarzes that made them incapable of performing their assigned duties.

Therefore, the current study has been designed to determine the burnout level, mental health status and the severity of occupational stress among Behvarzes who are working in district of western part of Tehran covered by Iran University of Medical Sciences.

Materials and Method

Participants and setting

All Behvarzes (227 subjects) working in the western part of Tehran province, were eligible to participate in this study. This study was cross sectional; therefore, we included all Behvarzes, without using sampling methods. The study was conducted between October 2009 and March 2010. The data were gathered by self-administered questionnaires which were provided to Behvarzes by mail. The study was approved by The Medical School Ethics Committee of Iran University of Medical Sciences approved.

Instruments

The following questionnaires were completed by the participants.

Demographic Questionnaire: included items about their background characteristics.

Maslach Burnout Inventory (MBI): it was developed by Maslach and Jackson, and has three domains of emotional exhaustion (EE) depersonalization (DP) and personal accomplishment (PA) (2). Burnout was defined according to the original Maslach high-degree definition of burnout syndrome: the combination of high emotional exhaustion (≥ 27 points), high depersonalization (≥ 10 points), and low personal accomplishment (≤ 33 points). High levels of EE and DP and low levels of PA indicate increased risk of burnout. This instrument has been found to be reliable, valid, and easy to administer among health workers [5] with a reliability coefficient of 86% in the Iranian population (10).

General Health Questionnaire-12: Psychological symptoms were measured using the GHQ-12. This instrument showed a high sensitivity and specificity in the previous validation studies (11). In this study, we used Goldenberg's original scoring method. In this method, response category score is 0 and 0 for the first and second levels, and 1 and 1 for the third and fourth levels of each question. The final score of the questionnaire ranged from 0 to 12.

Subjects with a score of ≤ 4 were considered normal and >4 considered as suspected of having a mental disorder (11).

Stainmentz questionnaire: The Stainmentz Scale is a 36-question Likert-type instrument that measures work related stress. Answer to each item has five point scale ranging from 0 to 4 (0= never, 1= seldom, 2= sometimes, 3= frequently, and 4=always) (12). Past administrations of the Stainmentz Occupational Stress Scale have yielded a 0.90 reliability coefficient, and have also shown to be a valid measure of occupational stress [13]. In our study internal reliability consistency had a cronbach's α of 0.94.

Statistical analysis

Data were analyzed using the SPSS for windows, version 15.0. Univariate analysis between categorical variables was assessed by chi-square test. We used student t-test to compare means between the two groups. All statistical tests were two-tail, with a significance level of 0.05.

The association between overall burnout status and some nominal variables such as sex, martial status (single/ married), and level of education (less than diploma/ diploma and above), was assessed by chi-square test.

Total score of the three subscales of burnout (Emotional exhaustion, depersonalization and personal accomplishment) was compared between some socio demographic factors (such as sex, martial status, education) using independent sample t-test.

A high score on the subscales of emotional exhaustion and cynicism and a low score on the personal accomplishment scale reflect severe burnout; and the Behvarzes with a high score on either emotional exhaustion or cynicism subscales were considered as having a moderate degree of burnout (5). According to

this, we divided subjects in to two groups of severe or moderate, and without burn-out.

Results

The questionnaires were distributed among 227 registered Behvarzes working in HHs covered by Iran University of Medical sciences; 212 completed questionnaires were returned (response rate 93%). Demographic characteristics of subjects are shown in Table 1.

Mental health: 201 (95%) of the study subjects answered all the 12 items of GHQ-12; out of which 144 (71%) had a score 4 and less (within the normal range for mental health), and 57 (28.4%) were suspected (GHQ score >4) to have mental disorders (82.1% female and 17.9% male, (without significant difference); 18.5% of the study subjects had a history of visiting a psychiatrist.

Job stress: 153 subjects (72.1%) responded to this questionnaire. The mean score was 42.8 (\pm 27.16) ranging from 1 to 134. The mean score for female and male subjects was 43.42 (\pm 26.6) and 41.98(\pm 28.6) respectively, with no significant difference. It is shown that up to 75% of subjects had a score of 62 or lower. The first quartile for this score was 23.

Burnout of the subjects: The frequency of distribution in dimensions of Maslach burnout inventory is shown in Table 2. The mean score for the emotional exhaustion subscale was 14.46 (\pm 9.7) with a score of more than cutoff score in 12.3% of the respondents. The mean score of depersonalization/cynicism subscale was 2.20 (\pm 3.4) with a score of more than cutoff score in 5.3% of the subjects. The mean score of the personal accomplishment subscale was 33.82 (\pm 10.8) and 43% showed a high degree of inefficiency by achieving a score of less than cutoff score.

Among 175 study subjects who responded to the three questionnaires, 17.6% (31 subjects) had moderate to severe level of burnout. 16.6% (29 subjects) had moderate level (high scores in exhaustion and cynicism subscales) and only 1% (2 subjects) had severe level of burnout. The statistical analyses were carried out on the subjects with moderate and severe levels of burnout. It is shown that 29 (16.6%) of 175 respondents had moderate and severe burnout; of whom only 2 (1.08%) fulfilled the criteria for severe burnout (one 48 year-old married woman, and another 28 year – old married man).

Correlation between burnout and other variables: No significant association was found between marital status, education level, and gender with burnout level of the subjects.

In our study, work experience was one of the factors which had a significant association with burnout. The result showed an average work experience of 14.6 years (\pm 8.8) in the subjects with burnout versus 11.0 years (\pm 7.19) in subjects without burnout ($P=0.01$). Overall burnout level was significantly associated with mental health status. The mean score of GHQ for

Table 1: Demographic characteristics of Behvarzes

Variable	Number*	Percent
Sex		
Male	61	29.9
Female	143	70.1
Marital status		
Married	187	88.2
Single/divorced/widow	25	11.8
Educational level		
Pre high school	67	33.2
High school graduated	135	66.8
Previous visiting by psychiatrist		
Yes	34	18.5
No	150	81.5
Variable	Mean	Standard Deviation
Age (year)	35.1	7.2
Income per month (Rial)	4,321,000	575000
Years of employment	12.0	7.6
Number of children	1.6	1.1

*There was some missing data for variables

Table 2: Frequency distribution of dimensions, mean and standard deviation of burnout inventory scales

Dimension	Number	Percent	Mean	Standard deviation
Emotional Exhaustion				
Low	130	72.6	14.5	9.9
Moderate	27	15.1		
High	29	12.3		
Depersonalization				
Low	163	86.7	2.2	3.4
Moderate	15	8.0		
High	10	5.3		
Personal accomplishment				
Low	76	43.7	33.8	10.4
Moderate	33	19.0		
High	65	37.4		
Overall burnout				
Severe	2	1.1	29.0	16.6
Moderate	27	15.5		

subjects with and without burnout was 6.21 ± 3.56 and 2.45 ± 2.84 respectively ($P=0.001$).

There was a significant correlation between burnout level and job stress. The mean score for Steinmetz' test in Behvarzes with overall burnout (70.1 ± 20.5) was significantly more than the other Behvarzes without burnout (37.7 ± 24.8) ($P=0.001$).

The overall burnout syndrome was significantly correlated with abnormal mental health status (GHQ-12 > 4) ($P=0.001$).

Discussion

Currently, more than 94% of rural areas in Iran are covered by PHC network. It means that essential primary health care is delivered through PHC network by Behvarzes. Therefore, attending to physical and mental health of PHC staff is one of the important tasks of health officers and policy makers in Iran.

The main finding showed that 28.4% of the study subjects are suspected to be affected by a mental disorder; their stress level was low, and 17% of the cases suffered from burnout syndrome.

In the current study, the mean score of the burnout questionnaire was 42.8 (\pm 27.16) ranging from 1 to 134. Among them, 17.6% (31 subjects) had moderate to severe level of burnout, and 16.6% (29 subjects) had moderate level of burnout. Burnout had a significant correlation with job stress and having a mental disorder.

What is already known and possible explanation of the results

The prevalence of mental disorder among Behvarzes in this study correlated with the results of a population based study on the prevalence of mental disorder [14]; and it seems that it is rather higher among Behvarzes (28.4%) than the general population (21%).

Few studies have been carried out on the burnout of Behvarzes. This study has been conducted to evaluate the burnout, job stress and mental health condition of Behvarzes in west district of Tehran, the capital.

In spite of increasing trend of job assignment to Behvarzes during the last 30 years, the level of job stress is not high and its mean score is in the first quartile. In one study conducted in Zahedan, south east province of Iran, 40.5% of the Behvarzes were satisfied with their jobs, in terms of "working conditions and their co-workers". However, they were not satisfied with "work load", "organizational structure", "promotion" and "payment" (15).

The main distressful sources of job among Behvarzes in Mashhad, in north east province of Iran, were "high workload", "role ambiguity" and "physical environment". Nevertheless, in this study, the level of job distress was not considered abnormal, which may be due to "low external accountability" (16). Feeling of usefulness for the people who are living with them, may dilute the severity of job demand and distress. The results of the study on Behvarzes in Gazvin, central province of Iran, and Sabzevar, north part of Iran, demonstrated that the study subjects were satisfied with "living in the same village", "being effective for the health of the local people", "having regular training courses" and "being accepted socially with respect". However, managerial issues such as "meeting their authorities regularly", "having opportunities for promotion", "high working hours", and "environmental condition" were the main sources of job distress for them (17, 18). Therefore, it seems that job satisfaction among Behvarzes was moderate to high [15, 17, 18] and job stress was not distressful (16).

What this study adds

Reducing burnout among mental health personnel can be made possible by improving their interpersonal relationship (19). Regarding burnout syndrome in Behvarzes, we could not find any study carried out in Iran. However, several studies evaluated the burnout

syndrome among other medical staff such as nurses and medical doctors in Iran (20, 21). Comparing the results of other studies with that of the current study, it can be concluded that burnout is more severe among nurses and other medical staff than among Behvarzes (22). A study conducted in Italy showed that high levels of job distress affected nearly two-thirds of the psychiatric staff, and one in five staff members suffered from burnout syndrome. Psychiatrists and social workers reported the highest levels of burnout, and support workers and psychologists reported the lowest levels (23).

Although the scores of "emotional exhaustion" and "depersonalization/cynicism" were low, 43% of the study subjects expressed "inefficiency" and low "personal accomplishment". Being in control of the occupational changes has a positive relation with a sense of self-competency (24). Participation in planning to improve quality of care and receiving consultations by health authorities, provide a good sense of self-control and self-efficiency to Behvarzes. Providing fruitful interaction between health officers will reduce the burnout level of Behvarzes and other staff working in Health Centers (25).

As a conclusion, it seems that in spite of the fact that during the last 30 years Behvarzes have been assigned to increasing duties, the job stress and overly burnout are not distressful. Improvement of self accomplishment by providing support for occupation and promotion, reducing job ambiguity, participating in planning new programs, reducing job conflicts and promoting self control on daily activities may help Behvarzes to feel more comfortable, have less stress and experience less occupational burnout.

Strengths and limitation of the study

The strength of the current study are as follows: the first study on primary health workers in our setting, using standard and valid questionnaires, assessing burn-out, mental health, and occupation stress simultaneously, and high responsiveness.

This study has some limitations. The questionnaires were sent to subjects by ordinary mail without the supervision of interviewers; therefore, there was some missing data for the variables. We tried to complete the missing data, but there was no response from some subjects. In addition, the other limitation was related to the method of gathering data; some questions were not clear for Behvarzes, although, we tried to make the necessary clarifications by a phone call.

Acknowledgment

This work was supported by research and technology affairs of Iran University of Medical Sciences, Tehran, Iran.

We would like to thank all Behvarzes and staff of health centers who participated in the study and hope our findings can help to develop a more improved plan for their job in order to promote the health of the attending people.

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