

Level of Burnout Among Nurses Working in Oncology in an Italian Region

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Purpose/Objectives: To estimate the level of burnout among nurses working on oncology wards and to identify the risk factors of burnout and the strategies used to prevent and deal with stress.

Design: Descriptive study.

Setting: Oncology wards in public hospitals in a northeastern Italian region.

Sample: 100 nurses working on oncology wards.

Methods: Head nurses of the oncology wards were personally informed about the aims of the study and were asked to distribute a questionnaire among the staff nurses and collect them after completion. The questionnaire had 58 items divided into three parts: sociodemographic and job characteristics of the population, the Maslach Burnout Inventory modified for Italian healthcare workers, and the respondents' perceptions about coping mechanisms and strategies adopted by the organization to help the nurses cope with stress.

Main Research Variables: Levels of burnout according to the Maslach Burnout Inventory.

Findings: The global response rate was 71% (100 of 140); 35% of the nurses had a high level of emotional exhaustion, 17% had a high level of depersonalization, and 11% had a high level of personal achievement. Significantly high levels of emotional exhaustion were found in nurses older than 40 with a working seniority of more than 15 years, those who had chosen to work on an oncology ward, and those who wanted another work assignment. The mean emotional exhaustion in subjects who identified lack of coordination (disorganization) as an important cause of stress was 24.5 (SD = 10.6), whereas the mean score in the nurses who did not cite disorganization as a cause of stress was 18.3 (SD = 12.0).

Conclusions: An important cause of stress reported by nurses is poor organization; therefore, hospitals should focus attention on specific organizational aspects.

Implications for Nursing: Knowledge of the mechanisms of burnout and strategies to prevent and deal with them are important for nurses' psychophysical health and constitute a fundamental requirement in a policy that aims to improve quality in health services.

Healthcare workers employed in areas such as oncology and AIDS care are exposed to higher work-related stress. The need to deal with dying and death, the feeling of helplessness linked with the limits of medicine in those pathologies, the length of disease, the need to maintain an empathic relationship with patients who are suffering or dying, and the risk that empathy might lead to identification are potentially stressful situations for healthcare professionals (Costantini, Solano, Di Napoli, & Bosco, 1997; Lopez-Castillo, Gurpegui, Ayuso-Mateos, Luna, & Catalan, 1999).

Hospital management uses many different indicators to survey stress levels among healthcare workers, including the absen-

Key Points . . .

- ▶ The concept of stress in the workplace is of great importance in health care.
- ▶ Healthcare workers, particularly those caring for patients suffering from serious illnesses and those who are exposed to high death rates among patients, are considered at risk for burnout—a result of chronic occupational stress.
- ▶ To help healthcare workers manage stress, individual coping strategies and psychological support groups should be introduced as standard tools.

teeism rate (Larocque, 1996) and staff turnover among wards (Dartiguepeyrou, 1999). However, they are proxy indicators of stress, whereas the presence of burnout is more specific.

Burnout is a term frequently used to describe the experience of healthcare workers dealing with stressful situations. The multiple-factor syndrome is based on three aspects: emotional exhaustion, depersonalization, and lack of personal achievement.

Possible causes of burnout are a lack of resources (workload), a lack of technical ability, insufficient training, difficulty in coping with patient problems, and existing barriers in the organization (Chung & Corbett, 1998; Dartiguepeyrou, 1999). Several studies of helping professions have shown that situational factors (e.g., occupational role, organization) and demographic characteristics (e.g., age, marital status, education) may contribute to burnout; however, the findings remain controversial (Dorz, Novara, Sica, & Sanavio, 2003; Kleiber, Enzmann, & Gusy, 1993; Schaufeli & Greenglass, 2001).

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The burnout syndrome can cause a general decline in quality of work and can be associated with psychological effects, including depression, anxiety, conflicts with colleagues, indifference and cynicism toward patients, increased alcohol or drug intake, family pressure, relationship breakdowns, and increased irritability (Kelly, Todhunter, & Raphael, 1996). As a result, burnout in healthcare settings is an important problem that organizations must control to improve the quality of the service provided.

Previous studies on burnout in hospitals have focused on specific organizational aspects such as single wards, particularly mental health units (Alexander, Lichtenstein, Oh, & Ullman, 1998; Prosser et al., 1997) and hospices (Brenner, 1997), as well as a single aspect of the problem such as shift rotation (Dartiguyeyrou, 1999) or resource constraints (Woodward et al., 1999). In the field of oncology, two studies have been conducted on the topic of burnout. Lopez-Castillo et al. (1999) studied 41 oncology nurses, and Dorz et al. (2003) investigated the level of burnout in 260 oncology staff members, including nurses and physicians. In both cases, mean scores on the subscales of the Maslach Burnout Inventory (MBI) indicated moderate to high levels of burnout.

The purpose of the current study was to estimate the level of burnout among nurses working on oncology wards in public hospitals in an Italian region (i.e., Friuli Venezia Giulia) and to identify the risk factors of burnout and the strategies used by nurses and the hospital to prevent and deal with stress.

Methods

This descriptive study included RNs working on oncology units in Italian regional public hospitals. Research was carried out in 10 oncology units. After the approval of the hospital health director (a medical doctor responsible for the management of hospital healthcare units), head nurses of the oncology units were personally informed about the study aims and their role in the study. They were asked to distribute a questionnaire to nurses and collect them in sealed envelopes one week later. No exclusion criteria prevented nurse participation. An accompanying letter was given to participants informing them that the study was attempting to gather information on the level of stress in oncology wards.

Instruments

The questionnaire had 58 items divided into three parts. The first part investigated sociodemographic and job characteristics of the population, the second part incorporated the **MBI** modified for Italian healthcare workers, and the third part researched the respondents' perceptions about coping mechanisms and strategies adopted by the organization to help nurses cope with stress.

Demographic data collected were gender, age, marital status, number of children, education, and professional activity; length of employment in health services, in oncology, and on the present unit; prevailing work setting (i.e., a day hospital where patients do not sleep or an ordinary ward where patients stay day and night); time spent working on a ward (full- or part-time); and whether the nurses worked night shifts. Respondents also indicated whether they had

Table 1. Sociodemographic Characteristics (N = 100)

Characteristic	n	%
Gender		
Female	95	95
Male	4	4
No response	1	1
Age (years)		
< 30	13	13
30–39	40	40
40–50	38	38
> 50	8	8
No response	1	1
Marital status		
Not married	32	32
Married	54	54
Separated or divorced	12	12
No response	2	2
Children		
Yes	60	60
No	40	40
Education		
Intermediate school	35	35
Secondary school	56	56
Degree (i.e., university certificate)	1	1
No response	8	8
Years in health services		
0–4	11	11
5–9	20	20
10–14	15	15
15–19	15	15
20–24	20	20
25–29	12	12
≥ 30	7	7
\bar{X} = 15.7	–	–
SD = 8.8	–	–
Years in oncology		
0–3	25	25
4–7	30	30
8–11	11	11
12–15	12	12
16–19	8	8
≥ 20	11	11
No response	3	3
\bar{X} = 8.7	–	–
SD = 6.8	–	–
Years on present unit		
0–3	30	30
4–7	35	35
8–11	11	11
12–15	9	9
16–19	7	7
≥ 20	4	4
No response	4	4
\bar{X} = 7.1	–	–
SD = 5.9	–	–
Prevailing work setting		
Day hospital	61	61
Ordinary ward (patient sleeps in hospital)	36	36
No response	3	3
Employment status		
Full-time	82	82
Part-time	18	18
Night shifts		
Yes	35	35
No	64	64
No response	1	1

chosen to work on an oncology ward and whether they wanted to change work assignments.

The MBI (Maslach & Jackson, 1993) is a 22-item questionnaire designed to assess the three aspects of burnout syndrome—emotional exhaustion, depersonalization, and lack of personal achievement—with separate subscales. Emotional exhaustion encompasses feelings that result from depletion of emotional resources. Depersonalization measures impersonal and uncaring attitudes. Personal accomplishment examines feelings of competence and successful achievement in working with people.

Burnout is conceptualized as a continuous variable ranging from low to high degrees of the emotions experienced. Burnout is not a dichotomous variable because it is either present or absent. A high degree of burnout is correlated with high scores on the emotional exhaustion and depersonalization subscales of the MBI and is inversely correlated with personal accomplishment. Burned-out subjects were defined as those who scored in the high range on at least two subscales out of three in accordance with the literature (Pedrabissi & Santilnello, 1993).

The Italian version of the MBI differs from the original. In the original version, only one subscale measures frequency of feeling and intensity is not tested because of the high correlation between frequency and feeling intensity (Brusaferrò, Agnoletto, Gubian, & Balestrieri, 2000).

The third part of the questionnaire consists of 35 items in which the respondents' perceptions to coping mechanisms and strategies adopted by the organization to help healthcare workers cope with stress are researched. In the section, the term disorganization is used to explain poor organization and work management in the ward.

Data Analysis

Data were analyzed with SPSS® version 12.0 (SPSS Inc., Chicago, IL), and the chi-square test and Spearman's analysis were used. T test was used for mean comparison. When the data distribution did not conform to the normality assumption, the Mann-Whitney test and Kruskal-Wallis test were used.

The study confirmed the correlation between subscales and items reported by Maslach and Jackson (1993) by Spearman's analysis (high levels of emotional exhaustion and item 8 [$r = 0.85$, $p < 0.001$]; depersonalization and items 10 [$r = 0.7$, $p < 0.001$] and 11 [$r = 0.71$, $p < 0.001$]). The data allow for comparison between the results of the study and the literature (Maslach & Jackson).

Results

A global response rate of 71% ($n = 100$ of 140) was obtained. Sociodemographic and job characteristics of the population are reported in Table 1.

Fifty-nine percent of the respondents chose to work on an oncology ward; 27% would work in another work assignment, 71% would not, and 2% did not respond. Fifty-nine percent ($n = 24$ of 41) of the nurses who chose to work in oncology were happy to remain on the unit. No correlation was found between the wish to change work assignments and seniority ($p > 0.05$).

Table 2 shows the distribution values in the respondents with respect to the three burnout subscales. According to

Table 2. Distribution Values of the Sample With Respect to the Maslach Burnout Inventory Subscales

Subscale	Low Burnout		Moderate Burnout		High Burnout	
	Range	n	Range	n	Range	n
Emotional exhaustion	0–14	39	15–23	26	≥ 24	35
Depersonalization	0–3	55	4–8	28	≥ 9	17
Personal achievement	≥ 37	69	30–36	20	0–29	11

N = 100

the study's definition, 19 workers were identified as being burned out (Pedrabissi & Santilnello, 1993). Table 3 reports the means of burnout values in the study respondents and in a comparison sample investigated by Maslach and Jackson (1993).

Another analysis studied the possible correlation between burnout subscales and single variables. Emotional exhaustion correlated with being older than 40 years ($p < 0.05$), having children ($p < 0.001$), having seniority greater than 15 years ($p < 0.05$), not choosing to work on an oncology ward ($p < 0.05$), and wanting another work assignment ($p < 0.001$). A low level of personal achievement was correlated with working in a day hospital ($p < 0.05$) and working a night shift ($p < 0.05$).

Among the burned-out subjects, 47% ($n = 9$ of 19) would have liked another work assignment, but only 2% ($n = 18$ of 79) of those who were not burned out expressed a desire to change their current job (odds ratio = 3; confidence interval = 95% = 1.0–9.8; $p < 0.05$).

Table 4 reports the significant correlations between the high level of the three burnout subscales and the items exploring respondents' perceptions regarding coping mechanisms and strategies adopted by the organization to help manage stress. The more frequent strategies reported by nurses ($n = 75$ of 100) were physical activity (15%), medical examinations (13%), nonconventional strategies to manage stress (12%), healthy diet behaviors (12%), rest (9%), healthy lifestyle (12%), and hobbies (5%). Significant statistical increases in emotional exhaustion and depersonalization were noted when increased stress resulted from poor relationships with colleagues and internal disorganization.

The mean emotional exhaustion in the subjects who attributed poor relationships with colleagues as an important cause

Table 3. Means of Maslach Burnout Inventory Subscale Values in the Study Sample and a Comparison Sample

Subscale	Comparison Sample ^a (N = 748)		Study Sample (N = 100)		p
	\bar{X}	SD	\bar{X}	SD	
Emotional exhaustion	20.2	11.3	19.5	11.9	NS
Depersonalization	7.0	5.9	4.2	5.3	< 0.01
Personal achievement	32.5	8.7	38.6	6.8	< 0.001

^a Data are from Maslach and Jackson (1993).

NS—not significant

Table 4. Correlations Among Strategies to Manage Stress and the Maslach Burnout Inventory Subscales

Strategy and Type	n	Subjects With High Level of EE	\bar{X}	SD	p
Care for one's own health (PS).					< 0.01
Yes	77	22	18.2	11.7	
No	16	10	26.9	9.8	
No response	7	—	—	—	
Take the time to do something to feel better (PS).					< 0.01
Yes	82	24	18.2	12.0	
No	17	11	26.4	9.5	
No response	1	—	—	—	
Manage relationship conflicts in an effective way (PS).					< 0.001
Yes	73	19	17.6	12.1	
No	23	15	25.7	10.4	
No response	4	—	—	—	
Take part in focus groups (OS).					< 0.05
Yes	43	13	16.5	11.7	
No	56	22	22.0	11.6	
No response	1	—	—	—	
Participate in management decisions (OS).					< 0.01
Yes	45	10	16.5	12.1	
No	51	24	22.5	11.2	
No response	4	—	—	—	
Participate in the processes of the hospital organization (OS).					< 0.01
Yes	47	6	11.1	9.3	
No	51	21	21.6	11.8	
No response	2	—	—	—	
Receive positive feedback regarding conduct (OS).					< 0.01
Yes	47	9	15.1	10.7	
No	51	25	23.1	11.6	
No response	2	—	—	—	
Strategy and Type	n	Subjects With High Level of DP	\bar{X}	SD	p
Consider teamwork an important point of reference and mutual support (PS).					< 0.05
Yes	78	13	4.0	5.6	
No	17	3	5.6	3.7	
No response	5	—	—	—	
Try to ask for help (PS).					< 0.001
Yes	83	11	3.2	3.9	
No	15	5	9.2	8.5	
No response	2	—	—	—	
Strategy and Type	n	Subjects With High Level of PA	\bar{X}	SD	p
Try to focus on positive work aspects (PS).					< 0.05
Yes	92	7	39.2	6.4	
No	6	3	31.3	8.6	
No response	2	—	—	—	
Consider teamwork an important point of reference and mutual support (PS).					< 0.01
Yes	78	5	40.1	5.9	
No	17	2	35.3	4.8	
No response	5	—	—	—	
Manage relationship conflicts in an effective way (PS).					< 0.001
Yes	73	4	39.9	6.0	
No	23	5	35.8	6.4	
No response	4	—	—	—	

N = 100

DP—depersonalization; EE—emotional exhaustion; OS—organizational strategy; PA—personal achievement; PS—personal strategy

of stress was 22.5 (SD = 11.1), and the mean emotional exhaustion in the nurses who did not was 17.4 (SD = 12.2, $p < 0.05$). The mean depersonalization in the subjects who attributed relationships with colleagues as an important cause of stress was 5.6 (SD = 5.4), and the mean depersonalization score in the nurses who did not was 3.3 (SD = 5.1, $p < 0.001$). The mean emotional exhaustion in the subjects who attributed disorganization as an important cause of stress was 24.5 (SD = 10.6), whereas, in the nurses who did not, it was 18.3 (SD = 12.0, $p < 0.05$). The mean depersonalization score in the subjects who attributed disorganization as an important cause of stress was 6.5 (SD = 6.2), and in the nurses who did not, it was 3.7 (SD = 4.9, $p < 0.05$).

Discussion

The high proportion of completed questionnaires gave assurances in the findings, indicating that the study could provide an estimate of the level of burnout among nurses working on oncology wards in public hospitals in an Italian region. The response rate of the study (i.e., 71%) is comparable to those reported in other investigations (Brusaferro et al., 2000; Dorz et al., 2003; Lopez-Castillo et al., 1999; Ragazzoni, Tangolo, & Zotti, 2004).

The results highlight the presence of substantial levels of emotional exhaustion ($\bar{X} = 19.5$, $SD = 11.9$) in a significant number of nurses caring for patients with cancer. The data are comparable to other Italian studies in which all healthcare workers were investigated. Maslach and Jackson (1993) reported emotional exhaustion levels of 20.2 (SD = 11.3), and Ragazzoni et al. (2004) showed that the mean emotional exhaustion level was 20.6 (SD = 11.7). The comparison with studies conducted in the oncology field showed mean levels lower than those reported by Lopez-Castillo et al. (1999), but higher than the mean found by Dorz et al. (2003). The current study's researchers expected to find a higher number of burned-out professionals based on reports in the literature (Lopez-Castillo et al.) that some areas of medicine, such as oncology and AIDS care, expose staff members to higher work-related stress. The low level of emotional exhaustion could be explained by the high proportion of nurses who chose to work in oncology to obtain greater personal achievement and by the many courses organized by regional hospitals regarding the relationship between healthcare workers and patients with cancer.

The results of the current study show the importance of individual characteristics (e.g., age, having children, working seniority) with regard to emotional exhaustion. The findings regarding age contrast those previously reported in the literature (Ulrich & Fitzgerald, 1990) in which younger subjects appeared to comprise the majority of those suffering burnout because they were more sensitive to death and showed more difficulty in caring for patients with cancer. The data could be explained by a change in Italian nursing education and, particularly, in the recent introduction of university first-level nursing education and the institution of specific humanistic disciplines that deal with relationships with patients with cancer and knowledge of the patient population.

Burnout consistently is linked to occupational factors in healthcare settings that entail greater ambiguity and less control (Lopez-Castillo et al., 1999). Some of the factors

that produce less control and more ambiguity are inevitable parts of the job (e.g., night shifts), but others are amenable to change. Thus, results of the current study show that the development of more participatory decision-making procedures, better methods of providing meaningful feedback and recognition, and opportunities to take part in focus groups have the potential to improve the job environment and consequently reduce the risk of burnout.

An important cause of stress reported by nurses was a lack of organization and management of the work in the ward (i.e., lack of coordination). Therefore, hospitals should focus attention on specific organizational aspects such as shift rotation, resource constraints, workload, and lack of support. A very high proportion of the burned-out subjects expressed a desire to change their current jobs, which reinforces the general opinion that the mechanism to select clinical staff to work in different units should be based primarily on personal choice.

The study results show that individual strategies in coping may be important buffers of perceived stress. In particular, the study revealed the importance of healthcare workers caring for their own health (e.g., physical activity, medical examinations), taking time to do something that makes them feel better, trying to focus on positive work aspects, and asking for help when needed.

The study's results were returned to each hospital to provide a preliminary evaluation of hospital quality. Healthcare workers perceive quality as a decisive aspect because it determines hospital output quality (Ovretveit, 1992). The interaction and empathy between healthcare workers and patients are decisive in the clinical results and in patients' perceptions (Woodward et al., 1999). Healthcare workers with high levels of personal achievement and low levels of depersonalization and emotional exhaustion are inclined to be empathic and supportive to patients (Leiter, Harvie, & Frizzel, 1998). Creating support groups and providing psychological support should be undertaken to help staff manage stress (Lopez-Castillo et al., 1999).

Limitations

The study did not request the characteristics of nonrespondents, which would have been helpful; however, to maintain confidentiality, the records of the characteristics of individuals who completed the questionnaires were not retained. The nurses' perceptions of the organizational and situational factors related to burnout only, whereas objective reality was not investigated.

Conclusions

Knowledge of the mechanisms of burnout and the strategies to prevent and manage them are important for nurses' psychophysical health and constitute a fundamental requirement in a policy that aims to improve the quality of healthcare services. As a result, a training course about occupational stress, burnout, and strategies to counter them needs to be introduced in nursing education. Mental health services also could play an important role in carrying out research and providing practical help to deal with staff difficulties.

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