

Emotional demands as a risk factor for mental distress among nurses

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KEY WORDS

Emotional demands; mental distress; nurses

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Richieste emotive; distress mentale; infermieri

SUMMARY

Background: *Although it is widely acknowledged that in certain occupations emotional demands may be a critical phenomenon for workers' health, this has been traditionally taken for granted and their role in the stress process has not often been directly assessed.* **Objectives:** *To examine the relationship between emotional demands and mental distress, adjusting for the potential effect of common psychosocial factors (workload, job control, social support, role stressors, and poor relationships) and personal psychological factors (i.e. having been diagnosed with anxiety or depressive disorder).* **Methods:** *A cross-sectional study on a sample of nurses of the National Healthcare Service was carried out (N=256, 81.3% women). The psychosocial factors considered were assessed by means of widely known and validated scales. The examined health outcome (i.e. mental distress) was operationalized by means of the General Health Questionnaire (12-item version). Covariates: gender, age, tenure and shiftwork. Analyses: a series of logistic regressions.* **Results:** *Exposure to emotional demands was a risk factor for mental distress. The resulting risk was not altered when adjusting for other psychosocial and personal factors. In the final model emotional demands, workload and role stressors, in addition to having been diagnosed with anxiety or depressive disorder, were significant risk factors for nurses' mental distress.* **Conclusions:** *Emotional demands may substantially impact on nurses' mental distress. These results give rise to concern in relation to work-stress prevention in certain professions, given that emotional demands are not included in the most common psychosocial risk assessment tools currently available, which may then miss identifying an important precondition of work stress.*

RIASSUNTO

«Richieste emotive come fattore di rischio per il distress mentale tra gli infermieri». **Introduzione:** *Nonostante sia ampiamente riconosciuto che in certe occupazioni le richieste emotive sono un fenomeno critico per la salute dei lavoratori, ciò è stato spesso dato per scontato ed il loro ruolo nel processo dello stress da lavoro è stato raramente valutato in maniera diretta.* **Obiettivi:** *Esaminare la relazione tra richieste emotive e distress mentale, controllando per comuni fattori psicosociali (carico di lavoro, controllo, supporto sociale, stressors del ruolo e qualità delle relazioni interpersonali) e personali (aver ricevuto da un medico una diagnosi di disturbo d'ansia o depressione).* **Metodi:**

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*studio cross-sectional su 256 infermiere (81,3% donne) del Servizio Sanitario Nazionale. I fattori psicosociali sono stati valutati attraverso scale validate e ampiamente conosciute. La variabile di esito è stata operativizzata con il General Health Questionnaire a 12 item. Covariate: genere, età, anzianità lavorativa e lavoro a turni. Le analisi sono consistite di una serie di regressioni logistiche. **Risultati:** L'esposizione a richieste emotive è risultata fattore di rischio per il distress mentale. Il rischio non veniva modificato aggiustando per gli altri fattori psicosociali e personali considerati. Nel modello finale le richieste emotive, il carico di lavoro e gli stressors del ruolo, oltre ad aver riportato una diagnosi di disturbo d'ansia o depressione, sono emersi come fattori di rischio per il distress mentale delle infermiere. **Conclusioni:** Le richieste emotive possono impattare sostanzialmente sul distress mentale delle infermiere. Questi risultati destano preoccupazione in relazione alla prevenzione dello stress in certe occupazioni, dato che le richieste emotive non sono considerate nella gran parte degli strumenti disponibili per valutare i rischi psicosociali, i quali quindi ignorano una determinante importante dello stress da lavoro.*

INTRODUCTION

Classical models of work-related stress have considered the phenomenon as the result of exposure to factors such as high psychological demands (or workload), low control and social support or high effort and low reward (e.g. low pay, lack of promotion prospects and job insecurity) (32). These factors have to do mainly with the specific tasks required by the job (i.e. job content) or with aspects related to work organization (i.e. job context). More recently, however, especially with the transition towards a service economy – in which jobs heavily rely on interpersonal relationships and the capacity to manage them – there has been a strong increase in attention to “relational factors”, which have to do with the quality of the relationships between colleagues, between employees and supervisors, and between employees and customers, clients or patients (21).

Emotional demands or emotion work, which concern the effort needed to express organizationally desired emotions during interpersonal transactions at work (24), constitute a prototypical example of such relational factors. Emotional demands, especially during difficult exchanges (when the customer or patient manifests strong feelings such as sorrow, anger, desperation, and frustration), may be particularly difficult to manage.

Research has shown that employees may use different strategies to deal with emotional demands. One such strategy is surface acting (36), in which

the employee tries to reproduce the superficial and visible aspects of a desired emotion, while that emotion is not actually experienced. Otherwise stated, the expressed emotion is faked and the employee is exposed to what has been called emotional dissonance, that is, the divergence between the communicated and experienced emotional state (37). For example, an employee may continue to show calmness and courtesy to a rude customer while actually experiencing resentment and hostility. A different strategy is deep acting (36), in which the employee tries to align his or her inner feelings to the emotion that has to be displayed. This strategy requires more effort, since the employee needs to activate psychological processes facilitating the experience of the desired emotion. For example, the employee may try to view the situation from the perspective of an angry customer (i.e. understanding his or her reasons), which may facilitate the employee in remaining calm and courteous.

Emotional demands are particularly prevalent in person-related occupations, which require either face-to-face or voice-to-voice interactions, such as call centre operators, police officers, teachers, and the health professions. Exposure to high emotional demands has been found to be related to a number of negative stress-related outcomes such as emotional exhaustion and, more in general, burnout (4, 17) and psychosomatic complaints such as headache and gastrointestinal symptoms (31).

Despite the increasing acknowledgment of the potential effects of emotional demands in modern

working life (18), from an applied perspective the most common tools to assess the psychosocial work environment – all derived from the classical work-stress models – do not consider such factor, leaving an important cause of work-related stress totally unexplored (6). This has important implications in terms of both the estimation of risk factors for work-related stress and the development and implementation of effective preventive interventions, especially in certain occupations. The aim of the present study was to provide further evidence on the possible adverse effect of high emotional demands at work. Specifically, we explored the potential contribution of emotional demands to mental distress vis-à-vis the most powerful and commonly assessed risk factors for work-related stress (i.e. workload, control, social support, role, and relationships). We started from the hypothesis that for certain types of occupations, emotional demands is one of the most critical factors for understanding the dynamics of work-related stress. Furthermore, emotional demands require by definition the ability of keeping one's own emotional experiences under control (14). Thus, it is to be expected that individuals with emotional problems have trouble in managing emotional demands. Therefore, in testing for the potential effect of emotional demands on mental distress we also considered whether the study participants was affected by emotional dysfunctions (anxiety or depressive disorders) that imply low personal resources and life skills. By doing so we provide an original test on the unique contribution of emotional demands in the stress process, since the available literature has rarely checked at the same time for concurrent psychosocial and personal factors (for an exception, see 26).

To explore the postulated relationships we focused on a sample of nurses. Nurses constitute a population at high risk for work-related stress (5). As these workers frequently deal with the suffering of individuals, they are involved in emotionally charged interactions with patients, which result in highly prevalent emotional demands. Furthermore, relational and emotional aspects of the job have been shown to be implicated in important outcomes for nursing such as job satisfaction (11) and, importantly, turnover (12). Thus, gaining a better

understanding of the role of emotional demands in nurses is important to obtain a fine-grained view of their risk profile for work-related stress. In turn, this is critical for preventive purposes at a time when we are witnessing a worldwide shortage of nurses (25).

METHODS

Participants

The data were collected in a National Health Service (NHS) facility located in the north of Italy employing approximately 2600 people. Data collection was part of a psychosocial risk assessment carried out in the year 2009. As part of the project, employees were invited to fill in a self-report anonymous questionnaire during working hours. Participation in the project was on a voluntary basis. On explicit request made by the management, only sixteen departments or hospital wards (e.g. emergency departments, pediatric wards, long-term care wards, etc.) were included in the project. These departments/wards were those most at risk for work-related stress according to a number of objective indicators (e.g., sickness absence, turnover, disciplinary actions) established by the Italian health and safety law. In all 574 employees participated, with an average response rate of 75.4% in the different departments/wards. Of these, 343 were nurses. The analyses reported here focused on the 256 nurses with complete data on all the study variables. Participants were females in 81.3% of the cases and were aged 40 years or more in 43.8% of the cases (table 1). Furthermore, most of the participants had a job tenure of more than five years (83.6%) and did shiftwork on a regular basis (64.1%) (table 1).

Measurements

Emotional demands were measured by using four items (e.g. "Does your work put you in emotionally disturbing situations?") making up the emotional demands scale of the long version of the Copenhagen Psychosocial Questionnaire (22). The

items were adapted into Italian from the English version by using the back translation method. Responses to items were given on a 5-point scale ranging from 1 ("to a very small extent" or "never", according to specific items) to 5 ("to a very large extent" or "always"). Since we could not trace any previous use of the scale on Italian data in the literature, we conducted a preliminary Principal Component Analysis on its items to test for scale dimensionality. Results confirmed the presence of only one factor with an eigen value higher than 1 (2.188), explaining 54.71% of the variance in the data. Items loading on the emerged factor were quite high in all cases, ranging from 0.68 to 0.83. The internal consistency (Cronbach's α) of the scale was found to be adequate ($\alpha=.72$).

Workload, job control and social support were measured by using the Job Content Questionnaire (JCQ) (19). The JCQ has been adapted into Italian (1) and is routinely used to conduct research on (and assessment of) psychosocial factors at work (2). Workload is measured by using five items (e.g. "I have to work very fast") which basically quantify the level of mental demands and time pressure. Job control or decision latitude consists of the two sub-dimensions of decision authority (e.g. "I have a lot of say about what happens on my job") and skill discretion (e.g. "My job requires me to learn new things"), for a total of eight items ($\alpha = .72$). Social support considers supervisory support (e.g. "My supervisor pays attention to what I say") and co-workers' support (e.g. "My co-workers are competent"); eight items in all ($\alpha=.72$). Responses to JCQ items are given on a 4-point scale ranging from 1 ("strongly disagree") to 4 ("strongly agree").

Role stressors were measured by an overall scale consisting of two subscales of five items each investigating role conflict (e.g. "I receive incompatible requests from two or more people") and role ambiguity (e.g. "I know what my responsibilities are") (30). Response options ranged from 1 ("Entirely true") to 5 ("Entirely false"), with items of the role conflict scale being reverse coded before the scale total was computed. The two subscales were developed as separate measures; however we derived a unique role stressors score since the two measures were quite highly intercorrelated ($r=.47$, $p<.001$).

Internal consistency of the overall scale was good ($\alpha=.79$).

Relationship quality was measured by using three items that referred to (negative) social climate at work (e.g. "There is interpersonal tension in my workplace"). The items were developed by Vartia (34) and have already been used to conduct research in this area in Italy (3). Responses were given on a 4-point scale ranging from 1 ("strongly disagree") to 4 ("strongly agree"); internal consistency of the scale was good ($\alpha=.79$).

Additional covariates considered in the analyses were age, gender, and tenure, whether the participant worked on a shiftwork basis and whether he or she received a medical diagnosis of anxiety or depressive disorder.

As outcome variable we focused on mental distress as measured by the General Health Questionnaire (15) in its 12 items version (GHQ-12). This tool investigates the respondent's experience of a number of psychological symptoms (e.g. "You have been capable of making decisions"), with responses ranging from 0 ("No" or "More than usual", according to specific items) to 3 ("Much more than usual" or "Much less than usual"). The GHQ-12 was well validated in Italy (27), with factor analytical studies (e.g. 8) suggesting the presence of three strongly-correlated factors: social dysfunction, general dysphoria and loss of self-confidence. We applied to each GHQ-12 item the widely known conventional scoring method (i.e. 0-0-1-1), which identifies the *presence* of the investigated symptoms. We considered those participants with a total GHQ-12 score of four (symptoms) or more to be mental distress cases (27).

Statistical analyses

We first examined descriptive statistics of the study variables, including means (M) and standard deviations (SD) of the explored psychosocial variables. Such variables were treated in the analyses as continuous, since they represent inherently continuous phenomena. To explore whether emotional demands acted as a risk factor for mental distress, we fitted a series of logistic regression models. In the first model (Model 1) we examined the crude

association between mental distress and emotional demands. In the second model (Model 2) we adjusted for age, gender, tenure, and whether the participant worked on a shiftwork basis. In the following model (Model 3) we further adjusted for concurrent psychosocial factors, namely workload, control, social support, role stressors, and poor relationships quality. In the final model (Model 4) we additionally adjusted for whether the participant had received a medical diagnosis of anxiety or depressive disorder. All the psychosocial variables were standardized (i.e. $M = 0$, $SD = 1$) before entering the regression models. All the analyses were conducted by using SPSS 17.

RESULTS

Table 1 reports descriptive statistics of the study variables. As for the dependent variable focused on in the analyses, namely mental distress, it can be seen that as many as a quarter of the nurses could be categorized as mental distress cases, reporting an above-threshold number of symptoms ($GHQ \geq 4$). This is quite a high percentage, considering that research has shown that approximately 15-20% of employees in a given organization should be expected to report above-threshold symptoms with the GHQ-12 (16). In other words the experience of significant mental distress was prevalent among nurses of the organization under study. As far as emotional demands were concerned, their mean level ($M=3.64$) indicate that the nurses experienced a high level of the phenomenon. An analysis at item level revealed that the more frequently reported aspect of the phenomenon was: "Is your job emotionally demanding?" ($M=4.29$ on a 1-5 response scale). As for the other psychosocial factors investigated, it should be noted that workload was also high. However, it could be compensated by an equally high level of control (decision latitude). Lastly, from table 1 it can be seen that 11.3% of nurses reported a medical diagnosis of anxiety or depressive disorder.

Table 2 reports the results of the logistic regressions in which mental distress acted as outcome variable. The crude association between emotional demands and mental distress was significant

Table 1 - Distribution of study variables (N=256)

	n.	%	M	SD
Mental distress ($GHQ \geq 4$)	65	25.4		
Gender (female)	208	81.3		
Age (≥ 40 years)	112	43.8		
Tenure (> 5 years)	214	83.6		
Shiftwork (yes)	164	64.1		
Anxiety or Depression (yes)	29	11.3		
Emotional demands			3.64	0.73
Workload			3.00	0.45
Social support			2.70	0.34
Control (decision latitude)			3.10	0.35
(Poor) Relationships			2.61	0.61
Role stressors			2.51	0.62

(Model 1), indicating that an increase of one standard deviation in the emotional demands scale increased the risk of mental distress by 1.83 times (CI: 1.30-2.60; $p < .01$). Such risk was not substantially modified after adjusting for socio-demographic variables and common psychosocial risk factors. In the final model (Model 4), when we further adjusted for a possible medical diagnosis of anxiety or depressive disorder reported by the participant, we found that emotional demands were still a significant risk factor for mental distress. In this model, having been diagnosed with anxiety or depression was the stronger risk factor for mental distress, which underlies the potential importance of personal factors in the stress process. Other significant risk factors for the focussed outcome were workload (OR: 1.69, $p < .05$, CI: 1.12-2.55) and role stressors (OR: 1.83, $p < .01$, CI: 1.17-2.87).

In addition to the reported analyses, we also investigated whether the risk for mental distress associated with emotional demands could be mitigated by job control and social support. It is well established that job control and social support are important resources in the workplace for protecting health and wellbeing; thus, in line with the demand-control-support model (19), we speculated that job control and social support could buffer the effect of emotional demands on mental distress. However, when we computed the corresponding interaction terms and added them in two further logistic regression models (not reported in table 2), we did not find the anticipated results.

Table 2 - Emotional demands as a risk factor for mental distress: results of logistic regressions (N=256)

	Model 1 OR (CI 95%)	Model 2 OR (CI 95%)	Model 3 OR (CI 95%)	Model 4 OR (CI 95%)
Emotional demands	1.83** (1.30-2.60)	1.79** (1.26-2.55)	1.60* (1.07-2.40)	1.74* (1.14-2.66)
Gender (0 = male; 1 = female) ^a		1.99 (0.82-4.81)	2.96* (1.13-7.72)	2.53 (0.94-6.76)
Age (0 = less than 40 years; 1 = 40+)		1.40 (0.73-2.69)	1.80 (0.85-3.77)	1.67 (0.78-3.56)
Tenure (0 = less than 6 years; 1 = 6+)		1.00 (0.41-2.45)	0.56 (0.21-1.51)	0.50 (0.18-1.37)
Shiftwork (0 = No; 1 = Yes)		0.85 (0.45-1.60)	0.58 (0.27-1.29)	0.61 (0.28-1.34)
Workload			1.80** (1.21-2.69)	1.69* (1.12-2.55)
Social support			1.05 (0.68-1.62)	0.96 (0.61-1.52)
Control (Decision latitude)			0.92 (0.64-1.33)	0.98 (0.67-1.42)
(Poor) Relationships			1.39 (0.97-2.00)	1.29 (0.88-1.89)
Role stressors			1.84** (1.20-2.83)	1.83** (1.17-2.87)
Anxiety or depression (0 = No; 1 = Yes)				4.60** (1.73-12.20)

Note. The outcome variable for all the models is mental distress (GHQ-12 \geq 4). For the psychosocial risk factors examined (i.e. emotional demands, workload, social support, control, relationships, and role stressors), the reported odds ratio correspond to a 1 standard deviation increase in their level. ^a For all categorical risk factors, the modality with a value of 0 is the reference category. * $p < .05$, ** $p < .01$, *** $p < .001$

DISCUSSION

The analyses showed that having to deal with emotionally charged social interactions, namely being exposed to emotional demands, is a prevalent phenomenon among nurses and a significant risk factor for mental distress. More specifically, we found that even when we adjusted for common psychosocial risks and personal factors in the form of having been diagnosed with anxiety or depressive disorder, emotional demands were still associated with nurses' mental distress. It should be stressed that our analyses, by checking for a range of work environment *and* personal factors (which is not frequently found in the literature), may be considered a conservative test of the potentially adverse effect of emotional demands. This suggests that the contribution of emotional demands to the stress process may be unique and substantial among nurses, i.e. it is not confounded by concurrent psychosocial risks and personal psychological factors.

Our results are in line with the literature studies, suggesting a high prevalence of emotional demands among workers of the health sector, of which nurses constitute a conspicuous subgroup. For example, the latest European Working Conditions Survey (13) showed that more than 35% of workers in the health sector report that they have to hide or sup-

press their true feelings always or most of the time at work. Furthermore, our results are also in line with studies indicating that emotional demands may drain the care provider's resources, leading to emotional exhaustion and stress-related disorders (17).

The main implication of the study is that emotional demands should be monitored, together with other psychosocial risks, as a possible work-related stress factor among nurses. Currently this is certainly not common practice, at least in Italy, since the assessment of work-related stress is mainly based on traditional job content (e.g. job demand) and contextual (e.g. role stressors) factors, which may lead to underestimating the psychosocial risk profile of certain occupational groups, including nurses.

Our study also suggests that emotional demands among nurses should be targeted for preventive interventions. Primary interventions aiming at reducing exposure to emotional demands may not be feasible, since contact with suffering patients as well as the demonstration of empathy and compassion towards them is fundamental to the nursing profession. Of course limiting the number of patients for care for would be helpful, although this can hardly be feasible at a time when understaffing seems to be widespread in the NHS. Alternative primary prevention strategies could include aug-

menting job control or social support. With higher levels of job control the individual may, for example, adapt the expression of the 'professional' emotions (e.g. empathy) to his or her own personality style, which would lead to a reduction in emotional dissonance (36). With higher levels of social support the individual may have the possibility to talk about his or her true emotions with colleagues, which would permit the discharge of potentially dangerous feelings (anger, anxiety, pessimism, etc.). Contrary to this, in the present study we did not find evidence of a moderating role of job control or social support in the emotional demands–mental distress relationship. However, this could be related to the very low sample size available for the analyses and the consequent low power for detecting significant interactions (9).

Secondary prevention strategies could also be useful in limiting the adverse effect of emotional demands. An organizational psychological support service which nurses are encouraged to take advantage of may be an example. Alternatively, relaxation training or meditation (such as mindfulness meditation) (29), ideally offered at the workplace, could also support nurses to cope with emotional demands.

The study has a number of limitations that need to be acknowledged. An important limitation is that it is entirely based on cross-sectional self-reported data, which may be affected by the common method bias (33). Although this may have influenced the magnitude of the results obtained, research has also shown that employees' descriptions of their psychosocial work environment tend to be valid and reliable (20). In addition, we used a well-validated tool (i.e. the GHQ) to assess the outcome and we checked for personal factors, which is also a way to reduce the common method bias (28). In additional analyses (not reported here) we also assessed empirically the potential effect of the common method bias on the results¹. Specifically, by means of Confirmatory Factor Analysis we assessed whether a one-factor model in which a postulated common method factor influencing the

main study variables (i.e., mental distress and the six psychosocial factors examined) fit the data well (see 28). This model, however, did not fit the data. Furthermore, the model fitted significantly worse than a seven-factor model in which mental distress and the six psychosocial factors examined all influenced their respective observed indicators. This provided some evidence that the common method bias was not a major cause of concern. Finally, as for the cross-sectional design of the study, it is true that this precludes causality inferences. However the utility of cross-sectional studies is widely acknowledged (7), especially in the case of under-researched topics before employing more robust research designs.

An additional limitation of our study, as already acknowledged, is the very low sample size, which undermines any sort of generalization even to the nursing profession. This implies that additional research is needed, especially in the Italian context, where research on the adverse effect of emotional demands has been quite limited so far. Another potential limitation that should be acknowledged is that we ran a logistic regression analysis by using a 'common' outcome (i.e. with a prevalence higher than 10%). The use of odds ratio in such conditions has been discouraged because odds ratio can overestimate the relative risk (23), although there are also diverging opinions on this (10).

Finally, we also acknowledge that the emotional demands scale adopted (22) does not permit identifying which specific aspects of the job (e.g. patients suffering, impolite requests from the public, etc.) influenced the scale score in the departments and wards examined. Qualitative data would be necessary to reach a more thorough understanding of such aspects.

Despite these limitations, we believe that we have provided some evidence that emotional demands may indeed be a very critical dimension of the stress process in nurses, which leads to the conclusion that it is necessary to consider emotional demands in psychosocial risk assessment exercises routinely conducted in health care organizations.

¹ The details of these analyses are available upon request from the first author.

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