ORIGINAL PAPER

International Journal of Occupational Medicine and Environmental Health 2019;32(6):841–851
https://doi.org/10.13075/ijomeh.1896.01388

EMOTIONAL DISSONANCE AND EXHAUSTION AMONG HEALTHCARE PROFESSIONALS: THE ROLE OF THE PERCEIVED QUALITY OF CARE

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Abstract
Objectives: The aim of this exploratory study was to analyze the association between emotional dissonance and emotional exhaustion among healthcare professionals, and the mediating role of the perceived quality of care in this relationship. **Material and Methods:** Self-report questionnaires were administered to 724 healthcare workers. The measurement model was tested and the mediation hypothesis was verified through hierarchical multiple regression analyses. Bootstrapping was used to construct confidence intervals to evaluate the mediation effects. **Results:** Emotional dissonance was significantly related to emotional exhaustion, and the perceived quality of care was negatively related to emotional exhaustion. The perceived quality of care had a partial mediating effect on the relationship between emotional dissonance and emotional exhaustion. Emotional dissonance had a significant effect on emotional exhaustion, and the perceived quality of care was a mediating factor in this relationship among healthcare professionals. **Conclusions:** The management of the perceived quality of care may be helpful in the prevention of burnout and distress in the workplace. Int J Occup Med Environ Health. 2019;32(6):841–51

Key words:
exhaustion, healthcare professionals, work stressors, emotional dissonance, perceived quality of care, burnout

INTRODUCTION

Healthcare professionals are frequently exposed to chronic workplace stressors that can adversely affect their mental and physical health, and decrease the quality of care, treatment outcomes and clinical safety [1–3]. Specifically, emotional labor, which refers to the need for managing emotions, showing empathy and concern, instead of negative feelings, when interacting with patients, is a relevant stressor in healthcare professions.

Occupations that require significant emotional labor are at risk of being psychologically demanding because of the emotionally charged interactions at work (e.g., patients, colleagues); therefore, workers in high emotional labor occupations are likely to display emotions that may be in

Received: September 26, 2018. Accepted: July 31, 2019.
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contrast with what they really feel [4] and may perceive themselves as providing low-quality patient care.

Emotional labor refers to the management of emotions at work in order to meet the expectations of an organization irrespective of what one actually feels [5]. In this context, particular attention has been given to the concept of "emotional dissonance," which is a key component of emotional labor. Emotional dissonance is the conflict between emotion rules that employees are required to show at work and emotions they actually feel [6]. In other words, it is a state of tension that occurs when an individual perceives an internal role conflict and must display feelings that are discrepant from his/her actual emotions [7]. Previous studies have shown that emotional dissonance has detrimental consequences for workers' mental health and organizational performance [8,9], and it may enhance workers' burnout [7,10–12], with particular regard for healthcare professionals [5].

Burnout is a typical syndrome of professionals working with suffering people, which is characterized by emotional exhaustion (feeling emotionally overloaded with work), depersonalization (the negative and callous attitude from the recipients) and inefficacy (decreased personal accomplishment) [13]. Emotional exhaustion is the basic individual strain dimension of burnout, which is the most widely studied in scientific literature. It refers to the feeling that the job has drained the subject of all emotional and physical resources [13].

Previous studies have revealed that the display of emotions that are not authentically felt by workers is a key antecedent of emotional exhaustion [14]. For instance, findings from Bartram et al. showed that emotional labor was positively associated with burnout among Australian nurses [15].

Evidence in literature has indicated that burnout is, in turn, associated with a reduced quality of care and patient safety [2,16,17]. For example, previous studies have shown that the nurses who reported higher levels of burnout were regarded by their patients as providing a lower quality of health care and lower patient safety [16]. However, most studies on emotional labor have explored the nursing profession [18,19], while less attention has been paid to other healthcare staff who are required to express a high degree of emotional dissonance as well, such as physicians, physiotherapists and psychologists [20].

The quality of care is a critical issue in the healthcare system. It is a complex and multidimensional concept since it may involve a number of possible domains, including both technical and social dimensions of care [3,5]. Measuring the perceived quality of care means assessing the level of self-reported care by asking providers about their perception of care.

Many studies conducted in the healthcare setting have explored the associations between the perceived quality of care and health-related (i.e., mental distress) and organizational (i.e., errors, an intention to leave) outcomes [17]. Even though the association between the healthcare professionals' perceived quality of care and burnout has been largely explored [17], the nature of this relationship is still not completely clear. Indeed, the healthcare staff who experience burnout may show a decreased ability to deliver a high quality of care; alternatively, healthcare workers who perceive a low quality of care in their organization may be emotionally distressed and disengaged from their job [3]. Moreover, only few studies have explored the relationship between emotional dissonance and the perceived quality of care among healthcare workers, and the need to advance this field of knowledge has been underlined [5,21], with particular regards to the role of the perceived quality of care on the workers' well-being.

Purpose

The aim of this exploratory study was to investigate the relationships between emotional dissonance, the perceived quality of care and emotional exhaustion on a sample of healthcare professionals.

Specifically, the authors examined the following 2 hypotheses:

– H1: emotional dissonance is positively related to emotional exhaustion;
– H2: healthcare professionals' perception of the quality of care mediates the relationship between emotional dissonance and emotional exhaustion.

MATERIAL AND METHODS

Sample and procedure

A cross-sectional study was conducted in an Italian healthcare organization. The data for this study were collected by means of a stratified sample that can be considered representative for the composition of professionals in the healthcare sector. The study was approved by the Ethics Committee of the Hospital, the Cremona-Mantova-Lodi Region, Italy. All the participants were previously informed about the research objective by means of oral presentations, and gave their informed consent for the participation in the study. Furthermore, the workers were asked to fill in a socio-demographic form. In order to guarantee their anonymity, the researchers used the following coding system: the compiled questionnaires were collected in sealed envelopes and then delivered to the research institute. All the participants were asked to put their questionnaires into a box that was placed in a common room of the hospital.

The researchers delivered questionnaires to the participants during daily shifts. A total of 724 workers were eligible and the questionnaires were included in further analyses. During this process, the excluded respondents were controlled for selective non-response bias [22]: the excluded respondents had similar socio-demographic characteristics as the respondents that were included in this study.

The majority of the respondents were female (75.7%) (with 1.5% missing cases for gender), and were 35–50 years old (58.1%) (with 2.34% of missing cases for age). As regards their profession, 60.6% of the respondents were employed as nurses, 16.2% were physicians, 12.5% were physiotherapists, and 10.7% were nurse aides (with 3.59% of missing cases for professional categories). As regards tenure, 52.1% of the respondents had > 20 years of work seniority, 24.6% held 11–20 years of tenure, and 23.3% of the respondents had between 1 and 10 years of work seniority (with 1.1% of missing cases for tenure within this hospital). Finally, only 13% of the respondents worked part time, while 87% had full-time jobs. Night-shift work concerned 51.4% of the respondents, while 32% claimed that they did not perform shift work, and 16.6% worked only day-shifts (with 1.65% of missing cases for shift work). The results are summarized in Table 1.

Measurements

The variables included in the survey were all measured using Likert scales. The reliability of the scales were tested by means of Cronbach's α (see within each scale paragraph).

Emotional dissonance

A 3-item scale was used to measure workers' emotional dissonance. The scale was derived from the *Emotional Dissonance* subscale of the *Frankfurt Emotional Work Scale* [23,24]. The workers were asked to what extent they felt obliged to repress or show different emotions in their workplace (e.g., "During your work, how often do you have to suppress your own feelings (e.g., irritation) to give a «neutral» impression?"). A 5-point scale was used, ranging from 1 (never) to 5 (always). Cronbach's α was 0.800.

Perceived quality of care

The workers' perception of the quality of care they give to patients was measured with a 2-item scale, according to Aiken et al. [25]. The 2 items were: "In general, how would you describe the quality of nursing care delivered to patients in your unit?" and "How would you describe

Table 1. Socio-demographic characteristics of the sample of 724 healthcare workers in a cross-sectional study on the relationships between emotional dissonance, the perceived quality of care and emotional exhaustion in an Italian healthcare organization

Variable	Participants (N = 724)	
	n	%
Gender		
male	173	24.3
female	540	75.7
Age		
< 35 years	85	12
35–50 years	411	58.1
> 50 years	211	29.8
Professional categories		
nurse aides	75	10.7
nurses	423	60.6
physicians	113	16.2
physiotherapists	87	12.5
Tenure within this hospital		
1–10 years	167	23.3
11–20 years	176	24.6
> 20 years	373	52.1
Part-time work		
yes	92	13
no	618	87
Shift work		
no	228	32
yes, only day-shifts	118	16.6
yes, also night-shifts	366	51.4

the quality of nursing care delivered on your last shift?". A 4-point scale was used, ranging from 1 (excellent) to 4 (poor). Cronbach's α was 0.820.

Emotional exhaustion

The workers' perception of their emotional exhaustion at work was measured with a 5-item scale (e.g., "I feel emotionally drained from my work") based on Schaufeli et al. [26,27]. A 7-point scale was used, ranging from 0 (never) to 6 (daily). Cronbach's α was 0.896.

Control variables

Based on previous research in the healthcare field [1,16,17,28], the authors selected main socio-demographic variables to be included in the survey, i.e., gender (1: male, 2: female); age (1: < 35 years, 2: 35–50 years, 3: > 50 years); tenure within this hospital (1: 1–10 years, 2: 11–20 years, 3: > 20 years); professional categories (1: nurse aides, 2: nurses, 3: physician, 4: physiotherapists); part-time work (1: yes, 2: no); shift work (1: no, 2: yes, only day-shifts, 3: yes, also night-shifts).

Statistical analyses

All the analyses were divided into 2 steps. First, the authors tested the measurement model, and then they ran the mediation model.

Hence, before testing their hypotheses, the authors examined the factorial structure of their measures. The confirmatory factor analysis was computed using the Mplus program [29].

The authors tested the hypothesized measurement model and compared it with an alternative model. The hypothesized model was a 3-factor model (Model 1) in which all items loaded on the corresponding latent variables, i.e., emotional dissonance, the perceived quality of care and emotional exhaustion. The alternative measurement model was a 1-factor model (Model 2), in which all items loaded on the same factor. As previous scholars have argued [30], the common method variance can be a problem in cross-sectional research, since data in a single questionnaire can be closely related. Thus, the authors decided to compare the 3-factor model (the measurement model) with the 1-factor model tested; in doing so, they aimed to provide an indication of whether a single factor accounted for the covariances among the items.

The confirmatory factor analysis results were evaluated by using the χ^2 statistic and other relevant indices [31]: the comparative fit index (CFI; values ≥ 0.95 indicating a good fit) and the root mean square error of approximation (RMSEA; values ≤ 0.08 indicating an acceptable fit). Nested models were evaluated not only by using the ΔCFI, with values in this statistics up to 0.002 indicating that the models are equivalent in terms of the fit [31], instead of the $\Delta\chi^2$ due to the fact that it is well known that this index is very sensitive to the sample size.

In order to test the meditation hypothesis, i.e., the second step of the analysis, the authors conducted hierarchical multiple regression analyses using the Process Macro by Hayes [32]. Firstly, they estimated an independent model; secondly, emotional dissonance was inserted as the independent variable, the perceived quality of care as the mediation variable, and emotional exhaustion as the dependent variable.

Bootstrapping was used to construct confidence intervals to evaluate the mediation effects. This procedure was considered one of the more valid methods for testing the intervening variable effect [32]. Especially, in order to test the indirect effects, 95% confidence intervals (CIs) were calculated, based on bias-corrected bootstrap analyses with 10 000 repetitions.

RESULTS

Preliminary analysis

Correlations among variables were in line with the authors' expectations (Table 2). Emotional dissonance significantly and positively correlated with emotional exhaustion ($r = 0.325$, $p < 0.001$), and negatively with the perceived quality of care ($r = –0.089$, $p = 0.016$); at the same time, the perceived quality of care significantly correlated with emotional exhaustion ($r = –0.154$, $p < 0.001$).

Table 2. Correlation matrix: emotional demand, emotional exhaustion, the perceived quality of care and socio-demographic characteristics in a cross-sectional study on the relationships between emotional dissonance, the perceived quality of care and emotional exhaustion (N = 724) in an Italian healthcare organization

Variable	Pearson's correlation								
	1	2	3	4	5	6	7	8	9
1. Emotional dissonance	1								
2. Perceived quality of care	–0.09*	1							
3. Emotional exhaustion	0.32**	–0.15**	1						
4. Gender[a]	0.13**	–0.09**	0.09*	1					
5. Age[b]	–0.02	–0.00	0.01	–0.02	1				
6. Professional categories[c]	–0.23**	0.06	–0.13**	–0.15**	0.05	1			
7. Tenure within hospital[d]	0.07*	0.03	0.02	0.16**	0.55**	–0.05	1		
8. Part-time work[e]	0.01	0.03	0.02	–0.21**	–0.02	–0.00	–0.13**	1	
9. Shift work[f]	0.04	0.00	–0.05	–0.18**	–0.23**	–0.15**	–0.30**	0.23**	1

[a] 1 – male, 2 – female.
[b] 1 – < 35 years, 2 – 35–50 years, 3 – > 50 years.
[c] 1 – nurse aides, 2 – nurses, 3 – physicians, 4 – physiotherapists.
[d] 1 – 1–10 years, 2 – 11–20 years, 3 – > 20 years.
[e] 1 – yes, 2 – no.
[f] 1 – no, 2 – yes, only daily, 3 – yes, also night–time.
* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Table 3. Goodness of fit statistics for the tests of all measurement models applied to workers in a cross-sectional study on the relationships between emotional dissonance, the perceived quality of care and emotional exhaustion (N = 724) in an Italian healthcare organization

Model	χ^2	df	RMSEA	CFI	SRMR	DCFI
Model 1 (3-factor)	157.489	32	0.075	0.961	0.030	
Model 2 (1-factor)	1171.472	35	0.215	0.649	0.133	0.312

df – degrees of freedom; RMSEA – root mean square error of approximation; CFI – comparative fit index; SRMR – standardized root mean square residual; DCFI – delta comparative fit index.

Based on the results of the correlation matrix, the mediation paths from emotional demand to emotional exhaustion, via the perceived quality of care, are plausible and it, therefore, appears justified to test them [33].

Measurement model

Table 3 shows findings of the confirmatory factor analyses for the 2 measurement models. Overall, Model 1, i.e., the proposed 3-factor model, treating emotional dissonance, the perceived quality of care and emotional exhaustion as separate factors, showed an acceptable fit with the data ($\chi^2 = 157.489$, df = 32, $p < 0.001$, RMSEA = 0.075, CFI = 0.961). The competing model, Model 2, did not fit the data in an acceptable way; in particular CFI was largely lower than the minimum required, and RMSEA was largely higher ($\chi^2 = 1171.472$, df = 35, $p < 0.001$, RMSEA = 0.215, CFI = 0.649). In particular, this result demonstrates that the common method variance was unlikely to significantly distort the participants' responses. Furthermore, $\Delta\chi^2$ test evidenced that χ^2 of Model 2 largely deteriorated, compared to that of Model 1 ($\Delta\chi^2$ M2–M1(3) = 1013.983); additionally, and even more importantly, ΔCFI M2–M1 = 0.312 suggested that Model 1 could not be considered equivalent to Model 2. Consequently, the authors decided to use the 3 scales proposed in the measurement model to test the study hypotheses.

Testing the mediation model

Table 4 presents the detailed results of the hypotheses tested. As shown in the upper part of the table, the authors first computed the model with emotional exhaustion as the dependent variable. In support of H1, emotional dissonance was significantly related to emotional exhaustion ($\beta = 0.295$, $p < 0.001$).

The authors then computed the indirect effects and related bootstrap analyses. As can be seen in the lower part of Table 4, and in support of H2, the indirect effect of emotional dissonance on emotional exhaustion, via the perceived quality of care as the mediator, was significant (b = 0.018, 95% CI: 0.0035–0.0442). This result shows that the effect of emotional demand on emotional exhaustion is partially mediated by the perceived quality of care, meaning that emotional dissonance raises emotional exhaustion in healthcare workers, by reducing the perception of the quality of care they provide to patients. Thus, it is plausible that the high scores in emotional exhaustion are caused by emotional dissonance, which are further exacerbated by the perceived quality of care (Figure 1). However, it should be considered that the effect sizes are quite small, hence future research should be conducted in order to better investigate the clinical relevance of the variables included in this model.

DISCUSSION

To the best of the authors' knowledge, this is one of the first quantitative studies exploring the relationship between emotional dissonance and emotional exhaustion, mediated by the perceived quality of care on a sample of healthcare workers.

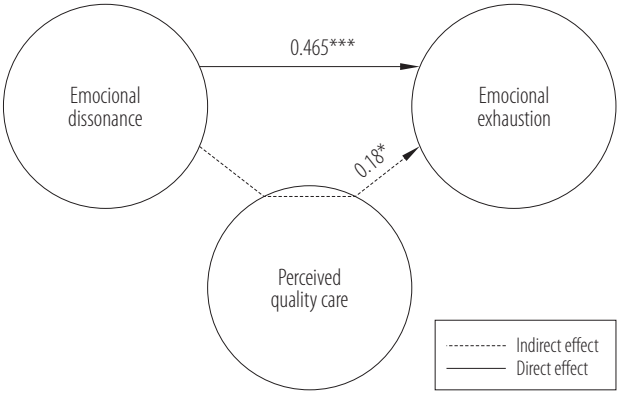
Table 4. Direct and indirect effects of emotional demand on emotional exhaustion in a cross-sectional study on the relationships between emotional dissonance, the perceived quality of care and emotional exhaustion (N = 722) in an Italian healthcare organization

Variable	Emotional exhaustion			
	step 1 b (SE)	step 2 b (SE)	effect (boot ES)	95% CI
Gender[a]	0.21 (0.133)	0.18 (0.133)		
Age[b]	0.06 (0.091)	0.05 (0.091)		
Professional categories[c]	–0.12 (0.072)	–0.11 (0.072)		
Emotional dissonance	0.46*** (0.057)	0.45*** (0.057)		
Perceived quality of care		–0.31** (0.106)		
R^2	0.11***	0.12***		
ΔR^2		0.01**		
Indirect effect				
Perceived quality of care			0.02 (0.0099)	0.0035–0.442

b – coefficient; SE – standard error; boot ES – bootstrapping.
[a,b,c] Explanations as in Table 2.
** p < 0.01, *** p < 0.001.
Confidence intervals (CIs) of indirect effects based on 10 000 bias corrected bootstrap samples. For the indirect effects, the non-standardized coefficient is reported.

These results confirmed the first hypothesis and showed that emotional dissonance was a significant precursor to emotional exhaustion [24] among healthcare professionals. The discrepancy between the emotions actually felt and those required to be displayed, i.e., emotional dissonance [6,24], produces a state of unpleasant tension [9] which, in turn, may be emotionally exhausting in the long run [34]. In this sense, emotional dissonance might be seen as a dangerous threat to one's identity [7], and it can eventually lead to burnout syndrome [14].

Even though early literature in this field demonstrated the predicting role of the frequency of interactions with customers on burnout [35], the results of this study demonstrated that also the quality of interactions with customers should be considered in the burnout process. In contact with suffering patients, high emotional control of healthcare professionals is needed in order to regulate their emotional expressions and to maintain their positive attitude [36]. These results are in line with previous studies [7,10,11] according to which the emotion-rule dissonance can have deleterious effects on the workers'



* p< 0.05
*** p < 0.001

Figure 1. The final model of emotional dissonance, emotional exhaustion and the mediating role of the perceived quality of care

well-being, especially in terms of burnout. For instance, Brotheridge and Grandey [36] have found that the individual perception that the job requires high levels of hiding negative emotions, such as anger and fear, is a significant predictor of emotional exhaustion.

Furthermore, the results of this study supported the second hypothesis. Emotional dissonance might have both a direct and indirect effect on emotional exhaustion [3,5]. Namely, emotional dissonance raises emotional exhaustion in healthcare workers, by reducing their perception of the quality of care. Thus, it is conceivable that high levels of burnout, and in particular emotional exhaustion, are determined by the constant discrepancy between the emotions genuinely felt and those required to be displayed, but it is further boosted by the perception of a low quality of care. Conversely, high levels of the perceived quality of care among healthcare staff might suggest that they have a sense of pride and personal accomplishment in their work, which reduces the risk of emotional exhaustion [37].

Furthermore, even though the majority of the respondents were nurses, this study was conducted on a sample of different healthcare professions (i.e., nurses, nurse aides, physicians and physiotherapists), while previous studies have mainly explored the nursing profession, with less attention being given to the other healthcare categories [5,15,16].

Despite the relevant results discussed above, the present research exhibits some limitations. First, the cross-sectional design of the study does not allow one to make any causal inferences among the variables; the possibility that the considered dimensions have a reversed causal pattern cannot be excluded and, therefore, future longitudinal research may better support these causal relationships.

Second, this research was restricted to Italian healthcare professionals belonging to a single organization, and this limits the generalization of the findings. Nevertheless, the participants were employed in different hospital departments and had different roles, as a result of which the sample could be viewed as quite heterogeneous. Nonetheless, since healthcare jobs represent specific situations in terms of emotional demands, caution should be exercised in generalizing these findings to other professions.

Third, the results obtained by the authors are based only on self-report measures, which may have inflated the relationships among the variables even if, as suggested by Evans [38], the common method variance is generally more likely to attenuate, rather than inflate, the interaction effects.

Lastly, the authors tested an innovative model which introduces a new variable (the perceived quality of care) as a mediator of a well-known relationship (emotional dissonance leads to emotional exhaustion), and the available literature on this subject is actually limited. The present study is of an exploratory nature and future research is needed in order to support this model.

In order to improve the research in this field, future studies could also focus on other variables, which could better explain the relationship between emotional dissonance and the well-being of healthcare professions. In this regard, it could be useful to consider individual characteristics (i.e., personality traits or coping strategies), as well as organizational factors (i.e., workload); it would be interesting to examine the impact of emotional labor on burnout also through organizational and personal factors [7].

Furthermore, it has been demonstrated that burnout is caused by both emotional dissonance and by being the target of customers' negative emotions. Patients and their relatives often deal with the disease and its negative effects (e.g., discomfort, death), so they may not always be able to regulate the related negative emotions (e.g., fear and anger) during interactions with healthcare providers [13]. These negative emotions may be relevant predictors of job burnout [39]. Therefore, future research could consider the negative emotional behaviors by patients and their relatives as a further potential source of burnout, together with emotional dissonance.

Finally, literature suggests that emotional labor can be defined and operationalized in at least 2 ways, as:

1) an emotional dissonance in terms of a mismatch between:
   a) the emotions actually felt and those expressed,
   b) the emotions actually felt and the organization's display rules,
2) emotion regulation strategies (deep and surface acting).

In this study, the authors focused on the 1a concept and, therefore, their results are limited by this specific approach.

CONCLUSIONS

These findings provide further evidence on the adverse work conditions in the hospital setting, mainly in terms of emotional dissonance, and their impact on the well-being of healthcare staff, mainly in terms of emotional exhaustion [34,36].

The present exploratory study demonstrates that emotional dissonance may be a possible predictor of emotional exhaustion among healthcare professionals, indicating that the hospital staff with a high emotional dissonance are at a higher risk of exhaustion. Furthermore, the perceived quality of care is an important factor since it can affect, whether directly or indirectly, as a mediator, the relationship between emotional dissonance and exhaustion. These results suggest that the professionals satisfied with their quality of care might feel effective and accomplished in their work, thus reducing the risk of developing emotional exhaustion.

These findings have some practical implications. First, the relationship between the work environment of healthcare staff, in terms of work stressors and the perceived quality of care, and their occupational well-being should lead to establishing preventive strategies [40]. For instance, in their study, McCance et al. [41] have found that social sharing practice (i.e., talking about an emotionally requiring event with colleagues) contributes to reducing the related negative emotions (such as anger) [41]. Thus, interventions based on social sharing seem to moderate the effect of negative emotions on the potential negative outcomes. Second, interventions focused on the improvement of coping strategies (for example, emotions management strategies, communication skills, professional training) may be helpful in enhancing healthcare professionals' self-efficacy and reducing the risk of emotional exhaustion.

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