**Job demands and perceived distance in leader-follower relationships: A study on emotional exhaustion among nurses**


## Abstract

*Aim*. This study investigated the impact of job demands - workload, cognitive demands, emotional demands, role conflict - and perceived leader-follower interaction frequency on emotional exhaustion among nurses. *Background*. Emotional exhaustion is the most important component of burnout syndrome, which represents a threat to nurses' psychological well-being.

*Methods*. This study was conducted at three hospitals in northern Italy through an anonymous self-report questionnaire administered to a sample of 560 nurses. Multiple hierarchical regression was performed.

*Results*. Workload and role conflict were positively related to emotional exhaustion, whereas cognitive demands and perceived leader-follower interaction frequency were negatively related. Emotional demands displayed a non-significant relationship with emotional exhaustion. Further analyses were performed to comment on the unexpected outcome of cognitive demands. A critical role of the perception of "distance" in leader-follower relationships on burnout was found.

*Conclusions*. This study provides novel insights into the relationship between job demands and burnout, and much needed empirical evidence on leader-follower relationships among nurses, pointing to the important role played by leader distance in nurses' well-being at work. Findings highlight the importance of training head nurses in managing their working relationship distance from their followers in order to help them soothing emotional exhaustion.



**KEYWORDS:** emotional exhaustion, leader distance, perceived leader-follower interaction frequency, job demands, nursing.

## Introduction

Burnout is defined as a “syndrome of chronic exhaustion, a cynical, negative attitude regarding work, and reduced professional efficacy” (Bakker & Demerouti, 2017, p. 273). According to the classical theory of Maslach, Jackson and Leiter (1997), job burnout is mainly characterized by a state of emotional exhaustion, during which "emotional resources are depleted [and] workers feel they are no longer able to give of themselves at a psychological level" (p. 192). An extensive medical and psychological literature has shown burnout to have a negative impact on physical outcomes - e.g., coronary heart diseases (Socaciu, Ionut, Barsan, Ungur, & Rajnoveanu, 2020) - psychological outcomes - e.g., depression (Bianchi, Schonfeld, Laurent, 2015a) - and organizational outcomes - e.g., poorer work performances (Bianchi et al., 2015a). Burnout is a syndrome with a high prevalence in individuals working in helping professions due to the high frequency of user/patient interactions, usually characterized by an extremely high emotional load. Among healthcare professionals, nurses are especially exposed to burnout because they work in particularly stressful environments involving night or holiday shifts while trying to cope with high job demands, especially the physical, cognitive and emotional ones (Clari et al., 2019). Thus, in a changing work environment characterized by increasingly growing job demands, it is now crucial to study burnout in nurses so as to provide them with all the necessary organizational support to prevent psycho-physical distress, which may in turn lead to negative job outcomes, such as reduced care quality (Prapanjaroensin, Patrician, & Vance, 2017). In this scenario, the present study aimed to establish a link between emotional exhaustion, work demands—i.e., workload, cognitive demands, emotional demands and role conflict—and leadership. Despite the importance of leadership in healthcare settings, a dimension poorly investigated is that of "distance" in leader-follower relationships. Reaching the "right distance", in line with the followers’ relationship needs contingent on working context and situation, has been shown to influence the perceived quality of the relationship itself and, therefore, its effectiveness (Antonakis & Atwater, 2002). As a constructive leader-follower relationship should improve the performance and well-being of the follower in the workplace, the perception of a "right distance" is then expected to reduce the follower's burnout. However, the possible link between the perception of distance in leader-follower

relationships and burnout among nurses has still to be explored. This paper is a first attempt to clarify this link.

***Emotional exhaustion and job demands***

Emotional exhaustion (EE) "refers to feelings of being overextended and exhausted by the emotional demands of one's work" (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001, p. 499). Many studies have shown that EE can cause stress reactions, such as fatigue, psychosomatic complaints and anxiety (Demerouti et al., 2001). EE is also closely related to depression (Bianchi et al., 2015a). A widely used model for investigating EE is the Job Demands-Resources model (JD-R; Bakker & Demerouti, 2017). According to this model, job demands are the dimensions most directly correlated with EE and in general with health impairment outcomes. They are defined as "those physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological effort and are therefore associated with certain physiological and/or psychological costs" (p. 274). The four job demands investigated in this study are described below.

Workload is the workers' perception of "how much work they have to do in a certain time and at a certain working pace" (Ghislieri et al., 2019, p. 1692) and can be excessive, i.e. overload, "when the environmental situation poses demands which exceed the individual's capabilities for meeting them" (Karasek, 1979, p. 287). When the situation of excessive workload becomes chronic, the result is a persistent sense of mental weariness and eventually EE (Demerouti et al., 2001). According to the JD-R model, workload is a robust and consistent antecedent of EE also in nurses (Montgomery, Spânu, Băban, & Panagopoulou, 2015).

Cognitive demands are tasks that "require workers to expend sustained mental effort in carrying out their duties" (Viotti & Converso, 2016, p. 441), whereas emotional demands consist in handling intense emotional situations at work while caring for people (Donoso, Demerouti, Hernández, Moreno-Jiménez, & Cobo, 2015). Both demands can be important sources of burnout, and their functioning is quite complex. For example, in nurse samples, Viotti and Converso (2016) observed a direct positive relationship between cognitive demands and EE. By contrast, Ghislieri, Cortese,

Molino and Gatti (2019) found a more intertwined relationship between emotional demands and EE, which can be explained by the fact that emotional demands can be meant as challenging job demands that increase both EE, especially in environments where there are not enough personnel and work resources to deal with them, and motivation at work (Tadić, Bakker, & Oerlemans, 2015).

The fourth job demand is role conflict, which "results when the worker is subjected to inconsistent expectations as a result of conflicting demands from multiple roles (e.g., worker, team leader, parent), incompatible requirements of a single job (e.g., conflict among providing good customer service, sales quota, budget limitations), and incompatibility between what the worker is required to do and his or her values" (Ghorpade, Lackritz, & Singh, 2011, p. 1278). Recent studies have demonstrated a positive link between role conflict and EE for nurses (Konstantinou, Bonotis, Sokratous, Siokas, & Dardiotis, 2018). In view of these considerations, we formulate our first hypothesis:

*H1 – (a) workload, (b) cognitive demands, (c) emotional demands and (d) role conflict are positively associated with EE.*

***Emotional exhaustion and leadership "distance"***

Through their behaviors, leaders can influence both well-being and performance of their followers (Bakker & Demerouti, 2017). Although some studies have shown that leadership, in its different styles and approaches, can reduce followers' perception of burnout, the link between leadership and followers' well-being calls for further investigation (Inceoglu, Thomas, Chu, Plans & Gerbasi, 2018). It is widely recognized that leadership is a process taking place within the relationship of influence between leaders and followers. Among the various aspects characterizing this relationship, the different levels of leader-follower distance are of particular importance. Leader success, which strictly depends on the creation of a high quality relationship with followers, is also "contingent on actively managing the degree of distance leaders maintain from followers, depending on contextual factors" (Antonakis & Atwater, 2002, p. 697).

However, in several leadership studies, the concept of distance has only been implied. For example, the Leader-Member Exchange approach evaluates the quality of relationships between leaders and followers and distinguishes between "leadership" or "supervision" relationships (Dansereau, Graen, & Haga, 1975). In this regard, “leadership” relationships are closer, more frequent over time and therefore potentially more effective and satisfying, because they are based on trust and respect. On the other hand, “supervision” relationships are generally more distant because followers respect the leader only for his/her formal position of authority. Thus, it is critical to understand how distance—not only physical but also social and psychological—can shape leader-follower work relationships.

A first definition of the construct of “distance” in leadership derives from the work by Napier and Ferris (1993). The authors define distance as "a multidimensional construct that describes the psychological, structural, and functional separation, disparity, or discord between a supervisor and a subordinate" (p. 326). In their review of distance in leader-follower relationships, Antonakis and Atwater (2002) define leader distance as "the configural effect (i.e., the coexistence of a cluster of independent factors) of leader-follower physical distance, perceived social distance, and perceived interaction frequency" (p. 647), with the latter being defined "as the perceived degree to which leaders interact with their followers" (p. 686). Studies which discuss the issue of distance in leadership have only considered the first two factors described by Antonakis and Atwater (2002), physical and social distance. For example, a review on contextual leadership (Oc, 2018) mentions physical distance as one of the variables that make up a specific context (the "discrete context"), and defines it as the spatial distance between a leader and a follower which can neutralize any positive effect of leadership on its outcomes. Another recent study, focused exclusively on social distance (Kim, Lee, & Wong, 2016), defined as the degree of intimacy that people feel towards others in social relationships. Social distance mediated the relationship between supervisor humor and the outcome variables, such as psychological well-being and job performance. The innovative point addressed by our study is thus that of examining the third subdimension of leader distance, i.e., perceived interaction frequency between leader and follower, and of presenting some evidence of its impact on well-being at work. It is however important to point out that the dimension we are investigating does not simply indicate the

frequency of interactions between followers and their leader, but also the perception that followers have of being able to interact with their leader. In fact, "quality of interaction may not necessarily be related to quantity of interaction" (Antonakis & Atwater, 2002, p. 687). Leadership effectiveness and followers' satisfaction in interacting with their leader are strictly linked to contingent and contextual factors, meaning that "in certain situations (e.g., task ambiguity), followers would require frequent task or socioemotional interaction with their leader, whereas in other situations they may require less frequent interaction". If the need for leadership arises when followers realize they lack adequate tools or skills to face a certain situation on their own, given that leadership is "an important occupational health factor in its own right" (Montano, Reeske, Franke, & Hüffmeier, 2017, p. 344), it is highly likely that the awareness of having a leader you can rely on in case of need or in anticipation of critical situations will be a protective factor against the follower's perception of burnout. In light of the above, our second hypothesis is as follows:

*H2: a higher perceived leader-follower interaction frequency is negatively associated with lower EE.*

## Methods

### *Participants and Procedures*

The data used for this study are part of a broader project on leadership, entitled "*XX*" (i.e., "*XX*"), which investigates leader identity and its influence on well-being in the work place. Data for the project were collected by administering paper-and-pencil questionnaires to both nurses and head nurses working at four hospitals in northwestern Italy. For this study, we used partial data obtained when the data collection was still ongoing.

The 560 nurses in this sample worked in three different hospitals (which are part of the same umbrella organization) and are divided into 55 work teams. We distributed 932 questionnaires to nurses in these 55 teams and we collected 560 questionnaires where at least 61% questions/items were clearly completed thus obtaining a final response rate = 60.09%. The data collection for these 55 groups was complete when we started working on the sample. Participation in the project was voluntary, and

absolute confidentiality of the data collected was guaranteed to all participants. The project was approved by the Ethics Committee of the University of XX (Approval letter, Prot. No. XX of XX). The information sheet attached to each questionnaire detailed the project aim, the ways data will be used and stored, and specified that by filling in the questionnaire the respondent was giving his/her consent to participate in the project (for further details on the "*XX*" project and especially on the choices made to protect participants and, at the same time, be able to match head nurses and nurses in the sample, see XX, in preparation).

Table 1 summarizes the main characteristics of the study participants.

***Table 1.*** *Sample description (N = 560 nurses)*

| | | N | % |
|---|---|---|---|
| Gender | M | 89 | 16.2 |
| | F | 462 | 83.8 |
| Education Level | Nursing School Diploma | 296 | 53.5 |
| | Bachelor's Degree | 226 | 40.9 |
| | Master's Degree | 31 | 5.6 |
| Nurses' shifts | No | 113 | 20.4 |
| | Yes, two shifts | 88 | 15.8 |
| | Yes, three shifts | 354 | 63.8 |
| | | *M* | *SD* |
| Age | *(Years)* | 42.66 | 9.78 |
| Length of employment | *(Years)* | 20.15 | 10.52 |
| Unit tenure | *(Years)* | 10.49 | 8.82 |
| Average hours worked per week | *(Hours)* | 36.87 | 4.63 |
| Perceived interaction frequency with the head nurse | *(1 to 10 response scale)* | 7.33 | 2.34 |

*Measures*

All the scales used for this study were translated into Italian using a procedure involving the steps described by Brislin (1970): a) two experts translated each scale independently; b) the experts compared their translations to arrive at consensus versions; c) these versions were translated blindly (i.e., without seeing the original scales) back into English by a native speaker; d) the back-translated

versions and the original sources were matched, and any discrepancies were analyzed and resolved after a discussion among the experts and the native speaker.

*EE* was measured with the scale by Demerouti, Mostert and Bakker (2010) consisting of 8 items, using a 4-point *Likert* scale, (from 1 = "strongly disagree" to 4 = "strongly agree"). An example item is: *"After my work, I usually feel worn out and weary."* On this sample, α = .77; explained variance of the factorial solution = 29.98%.

*Workload* was assessed with a scale derived from Bakker, Demerouti and Verbeke (2004), consisting of 4 items, using a 5-point Likert scale (from 1 = "never" to 5 = "always"). An example item is: *"Do you work under time pressure?"*; α = .79; explained variance of the factorial solution = 49.09%.

*Emotional demands* were investigated with the scale by van Veldhoven, Prins, van der Laken and Dijkstra (2015), consisting of 5 items, using a 4-point Likert scale (from 1 = "never/hardly ever" to 4 = "always"). An example item is: *"Does your work demand a lot from you emotionally?"*; α = .80; explained variance of the factorial solution (calculated considering also the items of cognitive demands and asking for the solution using eigenvalues > 1) = 49.72%.

*Cognitive demands* were investigated with the scale by van Veldhoven and colleagues (2015), consisting of 4 items with a 4-point Likert scale (from 1 = "never/hardly ever" to 4 = "always"). An example of item is: *"Does your work require a great deal of carefulness?"*; α = .81; explained variance of the factorial solution = 49.72%.

*Role conflict* was assessed with the scale of Pejtersen, Kristensen, Borg, and Bjorner (2010), consisting of 4 items with a 5-point Likert scale (from 1 = "to a very small extent" to 5 = "to a very large extent"). An example item is: *"Are contradictory demands placed on you at work?"*; α = .77; explained variance of the factorial solution = 47.75%.

*Perceived leader-follower interaction frequency* (*PIF*) was measured by the single item *"How much do you perceive you can interact with your head nurse?"*, whit a 10-point response scale (from 1 = "not at all" to 10 = "completely" ). The results had an average of 7.33 (*SD* = 2.34).

*Data analysis*

Data analysis, performed using SPSS® 25.0, consisted in calculating: *i)* descriptive statistics (i.e., average and *SD*) for each scale; *ii)* Cronbach's α, as a measure of internal consistency between the items (Nunnally, 1978) and EFA using the maximum likelihood estimator (ML); and *iii)* Pearson correlation coefficient (Pearson's r) and multiple hierarchical regression, to observe the relationships between EE and the variables considered as potential predictors. In the multiple regression we also used two socio-demographic variables as control variables. The socio-demographic characteristics used, chosen following an analysis of the literature on EE, are gender (Guthrie & Jones, 2012) and unit tenure (Decker 1997), with the latter being a measure closely linked to organizational tenure, related to EE (Bianchi, Schonfeld, & Laurent, 2015b). In the studies considered, these characteristics had high correlations with EE. As for multiple hierarchical regression, the occurrence of multicollinearity between the variables in the model was verified through the variance inflation factor (VIF) and tolerance coefficients. As no critical values were found, the hypothesized model was confirmed as the definitive model. Importantly, given the cross-sectional design of the study, causality between the antecedents and EE using multiple regression could only be presumed.As specified in the sample description, the 560 participants were part of 55 different working units and, therefore, were divided into 55 working groups. This would have allowed us to investigate the topic of EE with a multilevel design, which would be useful in gaining an understanding of any influences of the working group or nursing coordinator on the perceptions of exhaustion. We chose not to follow this approach after checking the intraclass correlation coefficient (ICC1) on the null model which considers only the outcome variable (i.e., EE). The ICC shows the percentage of variance of the individual outcome variable which is explained by the divisions of the sample into work groups (Shrout & Fleiss, 1979). The ICC for exhaustion is 0.044 in this sample. In other words, little more than 4% of variance of EE depends on division into groups. If it is true that: "The justification for multilevel modeling is a function of the structure of the data and how data were collected, and not a function of the variance attributable to either level of analysis" (Kiersh & Byrne, 2015, p. 301), with such a low ICC value – lower than the minimum cut-off indicated by some authors and equal to 0.05 – we were able to carry

out analyses that do not take into account the multilevel nature of the data without the risk of serious distortions in our results.

**Results**

Table 2 shows averages, standard deviations and correlations for the variables in the study. EE shows positive correlations with emotional demands, role conflict and workload. While the correlation between EE and cognitive demands is positive but not significant, that between EE and PIF is negative. Multiple hierarchical regression was performed in three steps (Table 3). At step 1, only unit tenure had a significant positive relationship with EE. At step 2, among independent variables, we observed positive relationships between EE and workload and between EE and role conflict, whereas EE was negatively related to cognitive demands and not significantly related to emotional demands. At step 3, we recorded a statistically significant negative relationship between PIF and EE, while the relationships with all the job demands did not change much when compared to step 2. The relationships with the control variables (gender: $p$ = .052; UT: $p$ = .047) were barely statistically significant. To sum up, H1 is only partially confirmed, meaning that among the dimensions related to EE, only workload and role conflict show a positive link, as expected. By contrast, cognitive demands and emotional demands show, respectively, a negative and not statistically significant link with EE. Consequently, only the sub-hypotheses H1.a and H1.d are confirmed, whereas H1.b and H1.c are not confirmed. Lastly, H2 is confirmed due to the negative relationship between PIF and EE.

***Table 2*** *- Means, standard deviations and correlations for all variables. Cronbach's alphas on the diagonal*

| | **EE** | **Gender** | **UT** | **WL** | **CD** | **ED** | **RC** | **PIF** |
|---|---|---|---|---|---|---|---|---|
| **EE** | (.77) | | | | | | | |
| **Gender** | .070 | - | | | | | | |
| **UT** | .085 | .027 | - | | | | | |
| **WL** | .311** | .065 | .084 | (.79) | | | | |
| **CDs** | .009 | .079 | .67 | .307** | (.81) | | | |
| **EDs** | .177** | .065 | .080 | .304** | .307** | (.80) | | |
| **RC** | .208** | -.042 | - .001 | .173** | -.039 | .281** | (.77) | |
| **PIF** | -.167** | .041 | .018 | -.028 | .143** | .001 | - .098* | - |
| ***M*** | 2.54 | - | 10.49 | 3.58 | 3.70 | 3.15 | 3.09 | 7.33 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ***SD*** | 0.53 | - | 8.82 | 0.74 | 0.41 | 0.61 | 0.89 | 2.34 |

*Note*. * p<.05; **p<.01. *UT = unit tenure; WL = workload; CDs = Cognitive Demands; EDs = emotional demands; RC = role conflict; M = mean; SD = standard deviation*

***Table 3*** *- Results of hierarchical multiple regression*

| | | **EE** | | |
|---|---|---|---|---|
| | | Step 1 | Step 2 | Step 3 |
| | | β | β | β |
| 1. | Gender | .09 | .08 | .08 |
| | UT | .11* | .08 | .09* |
| 2. | WL | | .30*** | .29*** |
| | CDs | | -.13** | -.11* |
| | EDs | | .09 | .08 |
| | RC | | .13*** | .12*** |
| 3. | PIF | | | -.12** |
| | $R^2$ | .02 | .16 | .17 |
| | Adjusted $R^2$ | .02 | .15 | .16 |
| | $\Delta R^2$ | .02** | .14*** | .01** |

*Note. N = 560. *p < .05; **p < .01; ***p < .001. UT = unit tenure; WL = workload; CDs = Cognitive Demands; EDs = emotional demands; RC = role conflict*

*Additional analyses*

The results on emotional demands and cognitive demands were unexpected. As the negative beta of the cognitive demands partially recalls the distinction between challenging and hindrance demands (Tadić et al., 2015), we chose to further investigate the role of cognitive demands in this model. Specifically, we addressed the two following moderation effects: 1) Moderation effect due to PIF. We hypothesize that the negative impact of cognitive demands on EE could be weaker or insignificant for low levels of PIF. The underlying idea is linked to the support function that a boss can have (Breevaart & Bakker, 2018), which allows the follower to perceive job demands as less "threatening". On the contrary, when the leader is perceived as distant, the follower can find more difficult to deal with those same demands. . 2) Moderation effect due to unit tenure. We hypothesize that seniority can moderate the negative effect of cognitive demands on EE. We postulate that in short-tenured nurses the aforementioned association may be insignificant or even positive. The rationale behind this is that the nurse seniority level can influence the type of response to job demands. A long-tenured nurse should be more prepared on work processes and have more skills (García-Chas, Neira-Fontela, & Varela-

Neira, 2019), thereby perceiving cognitive demands as less threatening or even challenging. To carry out these analyses, we performed two multiple hierarchical regressions by inserting at the last step the interaction effect between cognitive demands and PIF, in one case, and between cognitive demands and unit tenure in the other. While the first interaction was not significant (β = -.06, *p* = .18), the interaction between cognitive demands and unit tenure showed a significant β in relation to EE (Table 4). The other regression coefficients did not change substantially upon inclusion of the interaction effect. To interpret the moderation effect, we plotted data using an Excel macro developed by Dawson (2014), obtaining a graph (Figure 1) that clarifies the functioning of moderation and the slope values of the cognitive demands in relation to EE according to low or high unit tenure values (Table 5).

***Table 4****. Step 4 of hierarchical multiple regression with the interaction effect between Cognitive demands and Unit Tenure*

| | **EE** |
|---|---|
| | Step 4 β |
| Gender | .09* |
| UT | .09* |
| WL | .30*** |
| CDs | -.14** |
| EDs | .08 |
| RC | .12** |
| PIF | -.13** |
| CDs x UT | -.11* |
| $R^2$ | .18 |
| Adjusted $R^2$ | .17 |
| $\Delta R^2$ | .01** |

*Note. N = 560. *p < .05; **p < .01; ***p < .001.*

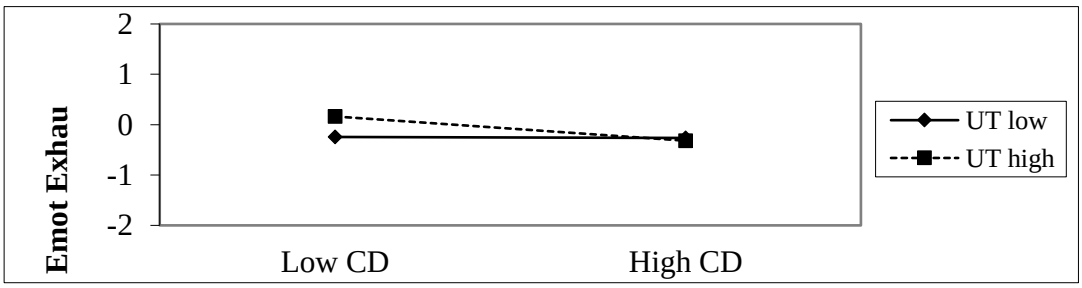


**Figure 1.** *Interaction between Cognitive demands (CDs) and Unit Tenure (UT) on EE*

**Table 5** - *Regression coefficients of Cognitive demands across two levels of the moderator (unit tenure - UT)*

| | β | t | p |
|---|---|---|---|
| Low UT | -.010 | -0.187 | .852 |
| High UT | -.258 | - 3.531 | <.001 |

*Note*. Dependent variable: EE.

**Discussion**

Although our results confirm a negative relationship between a "right" distance in leadership and EE (H2), the results on cognitive demands and emotional demands partially disconfirm the first hypothesis (H1) postulating a positive correlation between job demands and EE. These unexpected findings can be ascribed to the fact that cognitive demands and emotional demands are characterized by complex functioning, which—for some professionals (Bakker & Sanz-Vergel, 2013) and under certain circumstances—are appraised as challenging demands that, despite requiring a large amount of energy expenditure, can also elicit positive emotions (Tadić et al., 2015). We also think that the lack of statistical significance in the association between emotional demands and EE may be due to the nature of the nursing profession itself, given that nurses' education makes them well suited to deal with situations involving high emotional demands (Donoso et al., 2015). This finding may also be related to the reasons for becoming a nurse. Typically, an individual undertaking a career in a helping profession, such as nursing, works "for the fulfillment that doing the work brings to the individual" (Wrzesniewski, McCauley, Rozin, & Schwartz, 1997, p. 22), which is consistent with the notion that "calling jobs" are strongly related to intrinsic motivations. Consequently, nurses tend to consider emotional demands as job demands intrinsically connected to their job, with little or no impact on their burnout. Similarly, nurses are more likely to regard cognitive demands as intrinsic features of their duties since precision and attention are mainstays of their daily activities. This could be at the same time one of the reasons why, on the contrary, workload and role conflict behave as hindrance demands that foster exhaustion. The value that nurses assign to their job can make them unwilling to do it in a condition where an excessive workload or inconsistent job requests decrease the quality of the service offered. The analysis of the moderating effect on cognitive demands by the control variable unit tenure

shows a difference in the impact that cognitive demands have on EE in long- *vs.* short-tenured workers. While in the former, as cognitive demands increase, the perception of EE decreases, in the latter this relationship is not significant. As long-tenured nurses tend to have a better knowledge of organizational rules and duties, they are generally more successful in enacting adaptive behaviors (García-Chas et al., 2019). Similarly, they are more likely to consider high cognitive demands as an opportunity to improve their own skills and provide better care to patients (Tadić et al., 2015). As for leadership, the results are in good agreement with our second hypothesis (H2). Having the perception of a "right" frequency of interaction with one's leader (e.g., head nurse) seems to lower, at least in part, the number of negative experiences of the follower (e.g., nurse). Our findings suggest that once nurses perceive their boss as easily reachable and available, they feel more confident in being able to perform difficult tasks, thereby improving their emotional well-being and the quality of care they provide. In light of the state of the art about the topic of distance in leadership and of the findings of this study that confirm the significant effect of perceived interaction frequency, it would be interesting to investigate the impact of perceived distance in leader-follower relationships by building an indicator containing all three sub-dimensions of distance, as put forward by Antonakis and Atwater (2002). This is of particular importance because, even though the perceived social distance from the leader in a sample of nurses, as in this study, may be the same—since the leaders are all head nurses, and thus occupy the same hierarchical position, in a similar professional context—this distance can be interpreted differently by individuals and organizations. A similar consideration applies to physical distance, in situations where there are coordinators managing several services at once and nurses that, working night shifts, have a greater physical distance from their coordinator than day shift nurses. In this case, as well, it would be important to assess whether these apparently marginal differences have an impact on burnout among nurses. This study focuses on the subdimension of distance which seemed to be more relevant for nurses but it would be important to really tackle the multi-dimensionality of distance in future projects.

The study has the following limitations: 1) the low levels of $R^2$ in the regression analyses, which are however similar to those reported in a previous study addressing EE antecedents (i.e., Ghorpade et al.,

2011); 2) the cross-sectional data collection which requires that the researchers determine the direction of the relationships between the variables (Ghislieri et al., 2019); 3) lastly, as discussed above, the investigation of perceived leader-follower interaction frequency with only a single item, without evaluating the other components of distance.

**Implications for *Practice***

Our findings indicate that nurses can manage emotional demands and cognitive demands so effectively that these job demands appear to be appraised by these workers as challenging demands. This can be ascribed to the training received by university nursing students, which likely provides these professionals with all the tools needed to deal with high job demands. In this regard, it would be extremely informative to systematically assess the academic activities that are most effective in helping nursing students manage emotional and cognitive demands. This would be beneficial for two reasons. Firstly, it would enable us to understand what type/s of nursing training can have the strongest impact on coping with high job demands. Secondly, it would tell us what could be "transferred"—after being adapted—to nurses experiencing high emotional demands and cognitive demands. With regard to the implications related to leadership, perceived leader-follower interaction frequency proves to be a dimension that should be fully addressed during training in leadership and work well-being: a leader perceived as approachable and available to interact with at any time can more effectively support employees, thereby improving the leader-follower relationship. It is therefore recommended that training of head nurses should cover these key competences and specifically address the issue of distance in leadership.

**Conclusions**

The present study points to a critical role of the perception of “distance” in leader-follower relationships with respect to burnout, a theme that is transversal to leadership relationships and of increasing importance in the global economic scenario. As the intertwining of physical distance variability and perceived leader-follower interaction frequency is bound to become an increasingly

important issue, it will be crucial to understand how the different perceptions of distance from one's leader—as a multidimensional construct modulated by the followers' contingent needs of closeness with the boss—can affect work well-being. Overall, at a time when remote work is becoming more popular due to the COVID-19 pandemic (Molino et al., 2020), the frequency of workers interfacing with physically distant leaders is bound to grow exponentially, thereby driving a renewed interest in studying the effects of leader distance.

**References**


Antonakis, J., & Atwater, L. (2002). Leader distance: A review and a proposed theory. *The Leadership Quarterly*, *13*(6), 673-704. https://doi.org/10.1016/S1048-9843(02)00155-8

Bakker, A.B., & Demerouti, E. (2017). Job demands-resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, *22*(3), 273-285. https://psycnet.apa.org/doi/10.1037/ocp0000056

Bakker, A.B., & Sanz-Vergel, A.I. (2013). Weekly work engagement and flourishing: The role of hindrance and challenge job demands. *Journal of Vocational Behavior*, *83*(3), 397-409. https://doi.org/10.1016/j.jvb.2013.06.008

Bakker, A.B., Demerouti, E., & Verbeke, W. (2004). Using the job demands-resources model to predict burnout and performance. *Human Resource Management*, *43*(1), 83-104. https://doi.org/10.1002/hrm.20004

Bianchi, R., Schonfeld, I.S., & Laurent, E. (2015a). Burnout-depression overlap: a review. *Clinical psychology review*, *36*, 28-41. https://doi.org/10.1016/j.cpr.2015.01.004

Bianchi, R., Schonfeld, I.S., Laurent, E. (2015b). Interpersonal rejection sensitivity predicts burnout. A prospective study. *Personality and Individual Differences*, *75*, 216-219. https://doi.org/10.1016/j.paid.2014.11.043

Breevaart, K. & Bakker, A.B. (2018). Daily job demands and employee work engagement: The role of daily transformational leadership behavior. *Journal of Occupational Health Psychology, 23*(3), 338-349. https://psycnet.apa.org/doi/10.1037/ocp0000082

Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of cross-cultural psychology*, *1*(3), 185-216. doi:10.1177/135910457000100301

Clari, M., Garzaro, G., Di Maso, M., Donato, F., Godono, A., Paleologo, M., …& Pira, E. (2019). Upper limb work-related musculoskeletal disorders in operating room nurses: A multicenter cross-sectional study. *International journal of environmental research and public health*, *16*(16), 2844. doi:10.3390/ijerph16162844

Dansereau Jr, F., Graen, G., Haga, W.J. (1975). A vertical dyad linkage approach to leadership within formal organizations: A longitudinal investigation of the role making process. *Organizational Behavior and Human Performance*, *13*(1), 46-78. https://doi.org/10.1016/0030-5073(75)90005-7

Dawson, J.F. (2014). Moderation in management research: What, why, when and how. *Journal of Business and Psychology*, *29*, 1-19. https://doi.org/10.1007/s10869-013-9308-7

Decker, F.H. (1997). Occupational and non occupational factors in job satisfaction and psychological distress among nurses. *Research in Nursing & Health*, *20*(5), 453-464. https://doi.org/10.1002/(SICI)1098-240X(199710)20:5%3C453::AID-NUR9%3E3.0.CO;2-N

Demerouti, E., Bakker, A.B., Nachreiner, F., & Schaufeli, W.B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology, 86*(3), 499-512. DOI: 10.1037//0021-9010.86.3.499

Demerouti, E., Mostert, K., Bakker, A.B. (2010). Burnout and work engagement: a thorough investigation of the indipendency of both constructs. *Journal of Occupational Health Psychology, 15*(3), 209-222. DOI: 10.1037/a0019408

Donoso, L. M. B., Demerouti, E., Hernandez, E. G., Moreno-Jimenez, B., & Cobo, I. C. (2015). Positive benefits of caring on nurses' motivation and well-being: A diary study about the role of emotional regulation abilities at work. *International journal of nursing studies*, *52*(4), 804-816. https://doi.org/10.1016/j.ijnurstu.2015.01.002

FNOPI (2018). Infermieri: Quanti sono e come e dove lavorano. *Proceedings of the First FNOPI Congress*, Rome.

García-Chas, R., Neira-Fontela, E., & Varela-Neira, C. (2019). High-Performance Work Systems and Work-Role Performance: A Multilevel Moderated Mediation Model. *Performance Improvement Quarterly*, *32*(1), 77-101. https://doi.org/10.1002/piq.21289

Ghislieri, C., Cortese, C. G., Molino, M., & Gatti, P. (2019). The relationships of meaningful work and narcissistic leadership with nurses' job satisfaction. *Journal of Nursing Management*, *27*(8), 1691-1699. https://doi.org/10.1111/jonm.12859

Ghorpade, J., Lackritz, J., & Singh, G. (2011). Personality as a moderator of the relationship between role conflict, role ambiguity, and burnout. *Journal of Applied Social Psychology*, *41*(6), 1275-1298. https://doi.org/10.1111/j.1559-1816.2011.00763.x

Guthrie, C. P., & Jones III, A. (2012). Job burnout in public accounting: Understanding gender differences. *Journal of Managerial Issues*, 390-411.

Inceoglu, I., Thomas, G., Chu, C., Plans, D., & Gerbasi, A. (2018). Leadership behavior and employee well-being: An integrated review and a future research agenda. *The Leadership Quarterly*, 29(1), 179-202.

Karasek Jr, R. A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative science quarterly*, 285-308. DOI: 10.2307/2392498

Kiersch, C. E., & Byrne, Z. S. (2015). Is being authentic being fair? Multilevel examination of authentic leadership, justice, and employee outcomes. *Journal of Leadership & Organizational Studies*, *22*(3), 292-303. https://doi.org/10.1177%2F1548051815570035

Kim, T. Y., Lee, D. R., & Wong, N. Y. S. (2016). Supervisor humor and employee outcomes: The role of social distance and affective trust in supervisor. *Journal of Business and Psychology*, *31*(1), 125-139. DOI 10.1007/s10869-015-9406-9

Konstantinou, A. K., Bonotis, K., Sokratous, M., Siokas, V., & Dardiotis, E. (2018). Burnout evaluation and potential predictors in a Greek cohort of mental health nurses. *Archives of psychiatric nursing*, *32*(3), 449-456. https://doi.org/10.1016/j.apnu.2018.01.002

Maslach, C., Jackson, S. E., & Leiter, M. P. (1997). Maslach burnout inventory. Evaluating stress: A book of resources. *Scarecrow Education, Lanham, MD*, 191-218.

Molino, M., Ingusci, E., Signore, F., Manuti, A., Giancaspro, M. L., Russo, V., ... & Cortese, C. G. (2020). Wellbeing Costs of Technology use during Covid-19 remote working: An investigation using the italian translation of the technostress creators scale. *Sustainability*, *12*(15), 5911. https://doi.org/10.3390/su12155911

Montano, D., Reeske, A., Franke, F., & Hüffmeier, J. (2017). Leadership, followers' mental health and job performance in organizations: A comprehensive meta-analysis from an occupational health perspective. *Journal of Organizational Behavior*, *38*(3), 327-350. https://doi.org/10.1002/job.2124

Montgomery, A., Spânu, F., Băban, A., & Panagopoulou, E. (2015). Job demands, burnout, and engagement among nurses: A multi-level analysis of ORCAB data investigating the moderating effect of teamwork. *Burnout research*, *2*(2-3), 71-79. http://dx.doi.org/10.1016/j.burn.2015.06.001

Napier, B. J., & Ferris, G. R. (1993). Distance in organizations. *Human Resource Management Review*, *3*(4), 321-357. https://doi.org/10.1016/1053-4822(93)90004-N

Nunnally, J.C. (1978). *Psychometric Theory* 2nd ed. New York (NY): McGraw-Hill Book Company.

Oc, B. (2018). Contextual leadership: A systematic review of how contextual factors shape leadership and its outcomes. *The Leadership Quarterly*, *29*(1), 218-235. https://doi.org/10.1016/j.leaqua.2017.12.004

Pejtersen, J. H., Kristensen, T. S., Borg, V., & Bjorner, J. B. (2010). The second version of the Copenhagen Psychosocial Questionnaire. *Scandinavian Journal of Public Health*, *38*(3_suppl), 8-24. https://doi.org/10.1177%2F1403494809349858

Prapanjaroensin, A., Patrician, P. A., & Vance, D. E. (2017). Conservation of resources theory in nurse burnout and patient safety. *Journal of Advanced Nursing*, *73*(11), 2558-2565. https://doi.org/10.1111/jan.13348

Shrout, P. E., & Fleiss, J. L. (1979). Intraclass correlations: uses in assessing rater reliability. *Psychological bulletin*, *86*(2), 420-428. https://psycnet.apa.org/doi/10.1037/0033-2909.86.2.420

Socaciu, A. I., Ionut, R., Barsan, M., Ungur, A. P., & Rajnoveanu, A. G. (2020). Burnout in Gastroenterology Unit Nurses. *International Journal of Environmental Research and Public Health*, *17*(9), 3115. https://doi.org/10.3390/ijerph17093115

Tadić, M., Bakker, A. B., & Oerlemans, W. G. (2015). Challenge versus hindrance job demands and well-being: A diary study on the moderating role of job resources. *Journal of Occupational and Organizational Psychology*, *88*(4), 702-725. https://doi.org/10.1111/joop.12094

Van Veldhoven, M. J. P. M., Prins, J., Van der Laken, P. A., & Dijkstra, L. (2015). *QEEW2. 0: 42 short scales for survey research on work, well-being and performance*. Amsterdam (NL): SKB.

Viotti, S. & Converso, D. (2016). Relationship between job demands and psychological outcomes among nurses: does skill discretion matter? *International Journal of Occupational Medicine and Environmental Health*, *29*(3), 439–460. http://dx.doi.org/10.13075/ijomeh.1896.00520

Wrzesniewski, A., McCauley, C., Rozin, P., & Schwartz, B. (1997). Jobs, careers, and callings: People's relations to their work. *Journal of Research in Personality*, 31(1), 21-33. https://doi.org/10.1006/jrpe.1997.2162 7