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Nurse coordinator leadership and work environment conflicts: consequences for physical and work-related health of nursing staff

A. Sili, Roberta Fida*, T. Trezza**, E. Vellone***, Rosaria Alvaro***

U.O.C. Direzione Infermieristica e delle Professioni Sanitarie, Policlinico Tor Vergata, Roma
* Psicologia del Lavoro, Sapienza Università, Roma
** Ospedale Pediatrico Bambino Gesù, IRCCS, Roma
*** Scienze Infermieristiche, Università di Roma Tor Vergata, Roma

Key words
Leadership; work environment; burnout

Parole chiave
Leadership; ambiente di lavoro; burnout

Summary
Background: *Research has amply demonstrated that positive leadership counters the onset of burnout and conflicting situations between colleagues that in turn create favourable conditions for a healthy organization and consequently for good quality of care.* **Objectives:** *To investigate if more positive leadership is associated with lower levels of conflict in the work environment that in turn are associated with lower levels of burnout, psychosomatic disorders and negative indicators of work environment (feeling not being adequately appreciated, lack of clarity about tasks and roles, gossip, resentment towards the organization), and with higher levels of work satisfaction.* **Method:** *Five scales of QISO (Nursing Organizational Health Questionnaire) and the Maslach Inventory (Burnout scale), were administered to a total of 192 nurses working in medical and surgical departments of two different Italian hospitals. The study design was cross-sectional. To test the hypothesis a structural equation model (SEM) was used.* **Results:** *The results of this study demonstrate the crucial role played by positive leadership of nursing coordinators that, directly and indirectly, promotes a healthy work environment with lower conflicts, burnout, and psychosomatic disorders among nurses and limits the presence of negative indicators in workplace.* **Conclusion:** *This study demonstrates the key role of the nursing coordinator in creating a healthy work environment that contributes to physical and work-related health of the nursing staff.*

Riassunto
«La leadership del proprio coordinatore e i conflitti nei luoghi di lavoro: le conseguenze sulla salute fisica e lavorativa del personale infermieristico». **Introduzione:** *La letteratura ha ampiamente dimostrato che una leadership positiva contrasta lo sviluppo del burnout e dei conflitti interpersonali tra colleghi, che a loro volta creano le basi per una organizzazione in salute e conseguentemente la buona qualità delle cure erogate.* **Obiettivi:** *Verificare se una maggiore leadership positiva è associata con livelli più bassi di conflitto nel ambiente che a sua volta sono asso-*

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Corrispondenza: Dott. Alessandro Sili, Responsabile U.O.C. Direzione Infermieristica, Policlinico Tor Vergata, Viale Oxford 81, 00133 Roma - Tel. 3493444773 - E-mail: alessandro.sili@ptvonline.it

ciati con livelli più bassi di burnout, di disturbi psicosomatici e di indicatori negativi nel contesto lavorativo (sensazione di non essere adeguatamente valutati, mancanza di chiarezza su compiti e ruoli, gossip, risentimento verso l'organizzazione, etc.) e con livelli più alti di soddisfazione lavorativa. **Metodi:** *Sono state somministrate cinque scale del QISO (Questionario Infermieristico sulla Salute Organizzativa) e la Maslach Inventory (scala del burnout), ad un totale di 192 infermieri in servizio presso i dipartimenti di medicina e chirurgia di due differenti ospedali italiani. Per la conduzione dello studio è stato utilizzato un disegno trasversale. Per testare le ipotesi è stato implementato un modello di equazioni strutturali (SEM).* **Risultati:** *I risultati di questo studio dimostrano l'importanza del ruolo di una leadership positiva dei coordinatori infermieristici che, direttamente ed indirettamente, contribuisce a promuovere un ambiente di lavoro in salute con minori conflitti, burnout, disturbi psicosomatici tra gli infermieri e limita la presenza di indicatori negativi nel contesto di lavoro.* **Conclusioni:** *Lo studio dimostra il ruolo chiave del coordinatore infermieristico nel creare un ambiente di lavoro in salute che contribuisce alla salute fisica e lavorativa del personale infermieristico.*

Introduction

The Nurse's Work Environment

Research has amply demonstrated that a worker's performance and, in general, an organization's service performance are related to the quality of the work environment and consequently to both employee performance and well-being (1, 2, 33). From this perspective, a healthy organization can be considered the result of a positive relationship between the employees and the organization itself. Organizational health in the nursing field is defined as the set of processes and of management and coordination practices for patient care, through the commitment of nursing staff (45). A healthy care environment is a work setting where there is promotion and an commitment to integration and professional cooperation, skill development and improvement, consolidation of abilities and cultural growth to create a sense of belonging to the profession and the organization itself. This ensures a positive work environment where nurses feel motivated to pursue their professional mission as health promoters (45).

Healthcare organizations must consider the complexity of managing organizational health. Apart from the adoption of regulatory, procedural and behavioural practices, leadership style, employee empowerment and support for positive relationships at work are crucial and should be taken into consideration (24, 51). Indeed, all of these factors contribute to a positive work environment directly influencing nurses' work-related health and the quality of the care that they provide (37). Therefore, it is necessary to improve the quality of nursing, offer new professional growth opportunities, and invest in experienced nurses in order to provide more meaningful service and values for the healthcare community.

In general, it is important to intervene in the work environment by keeping in mind the actual context in which the profession operates. Several research studies have demonstrated how some variables, such as clinical practice, interpersonal relationships, conflicts between colleagues, responsibility levels, decision-making autonomy and professional growth perspectives, influence well-being and job satisfaction (10, 17, 22, 28, 47).

Leadership

It has been clearly demonstrated that leaders (in terms of management style) and their relationship with other healthcare professionals are important in creating a positive working environment that counters the onset of conflicting relationships at work (14, 28, 32, 61). Motivation, collaboration, involvement, rapid transmission of information, individual flexibility and trust are all factors that will improve worker health and, therefore, patient satisfaction regarding the quality of care received

(34, 48, 60). It is well known that leaders play a key role in creating working conditions that influence employees' experience of their work and consequent job and health-related outcomes (41). Several studies have indeed demonstrated that positive leadership practices are important and influence nurses' professional satisfaction (15, 55, 57), suggesting that leadership is the keystone of healthcare organizations. (20). There is also general agreement that leaders play a key role in creating work environments that promote both optimization of the quality of care and well-being for whoever delivers that care (23, 25). Implicitly or explicitly, leaders communicate the fundamental values that characterize worker behaviour. However, in the absence of positive leadership, the psychosocial quality of the work environment deteriorates, nurses' well-being is affected, and the quality of care declines (8, 51, 58). In this regard, it has been extensively documented that an authentic and positive leader, who is distinguished by his/her honesty, clarity, self-awareness, behavioural integrity and coherence, communicates a sense of true care for the employees they are in charge of, creates conditions that promote trust and builds up confidence in accomplishing work goals, thereby increasing employee and organization performance (3, 16, 56, 59).

Positive nurse coordinator leadership decreases the likelihood of burnout, professional dissatisfaction and the intention to quit the profession or organization (26, 27, 31, 41), not only directly but also indirectly, creating a more positive and collaborative work environment. A recent investigation confirmed that sincere, fair and clear behaviour of a coordinator are important for the work climate, because such behaviour reduces the occurrence of bullying and conflict in the wards, further reducing burnout levels in the emotional exhaustion and cynicism dimension (27). Positive leadership contributes to creating trust in both the coordinator and the organization (6). In addition, while several studies linked poor leadership style to the onset of nursing burnout (27, 30, 61), others have demonstrated how a supportive leadership style is linked to low levels of emotional exhaustion of staff (4, 53) and general burnout (29).

Burnout

Emotional exhaustion, considered to be the main factor of burnout (35), if extended over time, turns into cynicism, emotional withdrawal from work and feelings of inefficacy (34, 36). Burnout's negative, personal and organizational effects have mostly been observed (39, 44) regarding work dissatisfaction (40, 53) and low work performance (22, 33). Several studies have demonstrated that the prevalence of burnout in the nursing field and in other helping professions is particularly recurrent because of the high emotional and physical involvement that comes with the role (1, 17, 29). Burnout, mostly in the case of emotional exhaustion, is influenced by the quality of the work environment. However, good relationships between colleagues, good conflict management and the absence of aggressive behaviour are protective factors for burnout, and all of these have positive impacts on a nurse's quality of life (12, 31, 13, 49) and on the quality of care (38). High levels of emotional exhaustion, if extended, cause cynicism and a decreased sense of personal efficacy, which are important antecedents for work dissatisfaction and other connected disorders.

Aim

Although several studies conducted also in Italy in the nursing field have shown how positive leadership counters the onset of burnout and conflicting situations between colleagues (6, 28, 32, 61), research has poorly investigated how much and how all of these factors can influence the onset of psychosomatic disorders, nurse's work satisfaction and the presence of negative indicators in the work environment (feeling not being adequately appreciated, lack of clarity about tasks and roles, gossip, resentment toward the organization). Therefore, the objectives of the present study were:

To investigate if a higher level of perceived positive leadership is associated with lower levels of perceived conflict in the work environment;

To investigate if higher levels of perceived conflict in the work environment are associated with higher levels of nurses' emotional exhaustion and cynicism.

To investigate if higher levels of emotional exhaustion are associated with higher levels of cynicism.

To investigate if higher levels of emotional exhaustion and cynicism are associated with higher levels of psychosomatic disorders, nurses' work satisfaction and the presence of negative indicators in the work environment (figure 1).

Method

Design and sample

A cross-sectional design was used for the study. The sample comprised 192 nurses employed in two university hospitals in Rome.

Tools for data collection

To measure the study variables, the following scales were used:

1. Nursing Organizational Health Questionnaire (QISO) (46).

This is a multidimensional tool consisting of several scales and subscales that measure different dimensions and components of organizational health already validated in the Italian context on a sample of more than 4000 nurses (45). On a 4-point Likert scale (from 1=Never to 4=Often), the nurse interviewed was asked to report the frequency of certain situations or events in his/her work environment. For the purposes of this study, five specific dimensions were considered; each one was measured using different items.

a) *Positive Leadership.* This was measured using 6 items, and the question asked concerned the frequency of different coordinator behaviour (item example: employees are treated equally).
b) *Conflict Perception*. This was measured using 4 items, and the question asked was about the frequency of some conflicting situations between colleagues in their work environment (item example: there are colleagues who are marginalized).
c) *Work Satisfaction.* This was measured using 10 items, and the question asked was the frequency of certain situations in the work environment that determines an employee's general work satisfaction (item example: a sense of satisfaction is felt regarding their organization).

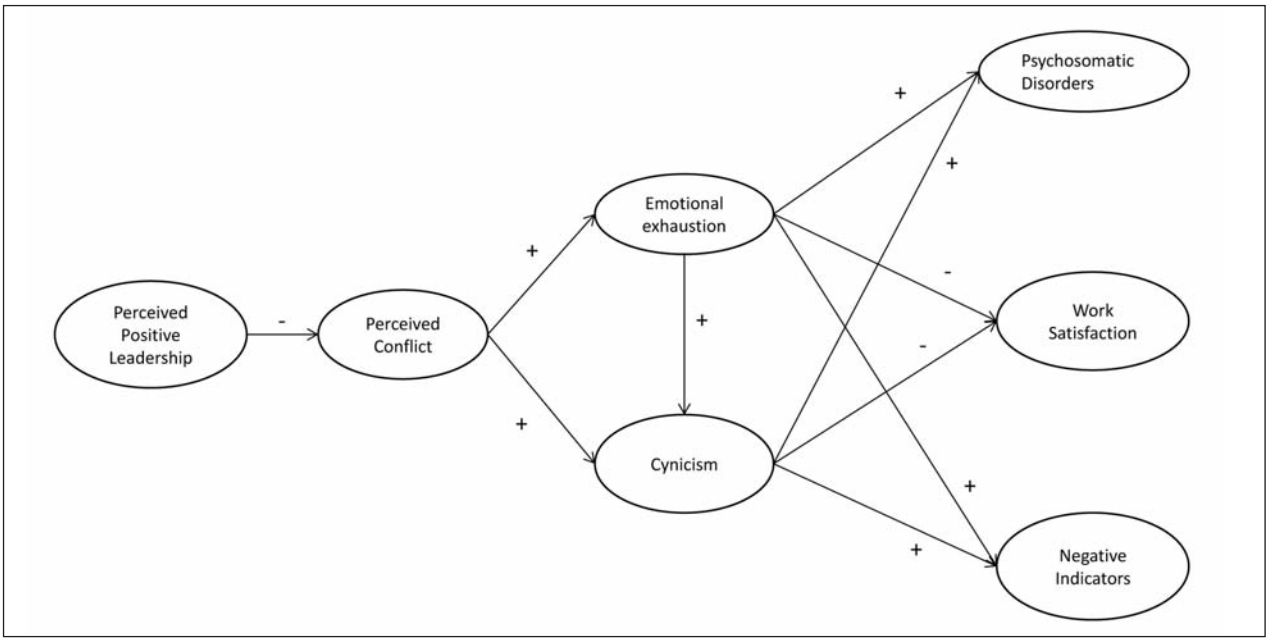

Figure 1 - Theoretical model of variable relationships

d) *Negative Indicators*. These were measured using 13 items, the question asked concerned the frequency of some negative situations in their work environment (item example: (reluctance to go to work).
e) *Psychosomatic Disorders*. These were measured using 8 items, and the question asked was the frequency of certain symptoms over the last 6 months (item example: headache, gastritis, etc.).

2. Maslach Burnout Inventory – General Survey (7).

This tool consists of different scales measuring the components of burnout. Using a 7-point Likert scale (from 0=Never to 6=Daily), and the question asked was about the frequency of some uneasy professional situations in the work environment. For the purposes of this study, the following scales were considered: one investigated Emotional Exhaustion and the other Cynicism.

a) *Emotional Exhaustion*. This was measured using 5 items that examined the feelings of emotional exhaustion caused by the subjects' work (item example: at the end of the day, I feel particularly tired).
b) *Cynicism*. This was measured using 5 items that evaluated feelings of indifference or a detached attitude towards work (item example: I have doubts about the significance of my work).

Data collection

The questionnaire was administered, following corporate governance authorization, from June to November 2012 in medical and surgical departments of two different Italian hospitals (192 nurses). The study's purposes and the questionnaire instructions were explained to the nursing staff involved. Questionnaires were handed out in blank envelopes to nurses by trained research assistants. In order to preserve anonymity participants were asked to put their completed questionnaires in sealed ballot boxes available in selected areas of the hospitals. Participants took part in the study on a voluntary basis and did not receive any form of compensation, financial or otherwise. A total of 110 questionnaires (57.2% of respondents) were considered because they were completed correctly.

Data analysis

The collected data were analysed via descriptive and inferential statistics. Central tendency and dispersion measures (mean, standard deviation, absolute frequencies and percentages) were used to describe the participants' socio-demographic characteristics and to calculate the scale dimensions mean scores. To examine the relationship between variables, Pearson's r correlations were calculated and a structural equation model (SEM) was then implemented. This technique suited the aims of this study very well because it allowed examination of all of the specific relationships in one model (Figure 1). In addition, a set of fit indices allowed examination of how the theoretical model fits the empirical data. According to Hoyle's recommendations (43) and with Tanaka's approach to fit evaluation, the following indices were considered: Chi-square (χ^2) and incremental indexing, such as the Comparative Fit Index (CFI) (5), Root Mean Square Error of Approximation (RMSEA) (50) and Standardized Root Mean Square Residual (SRMR) (21). Following Bollen, all of the studied dimensions were posited as a "single-indicator" latent variable (52). To take into account measurement error and for the purpose of obtaining more precise estimates of structural parameters, error variance for each single indicator was fixed at one minus the sample reliability estimate of the variable multiplied by its sample variance. The data were processed with SPSS Package version 15.0, and with Mplus 7.1. In order to avoid a type II error, for all the analyses the statistical significance was considered with an alpha equal to 0.05.

Results

Descriptive analysis of sample

As shown in table 1, the majority of the sample consisted of women with a mean age of 35. The

Table 1 - Respondent demographics

	n (%)
Gender	
Male	38 (35)
Female	72 (65)
Age (Mean ± SD)	35 (8.1)
Educational qualification	
Diploma in Nursing	26 (24)
Degree in Science of Nursing	21 (19)
BSN	63 (57)
Post-qualification courses	
Speciality Certificate	14 (13)
Management Certificate	5 (3)
Post graduate	76 (69)
Master's degree	11 (10)
Other degrees	4 (5)
Marital status	
Single	67 (61)
Separated /Divorced	11 (10)
Married /Civil partnership	32 (29)
Contract type	
Open-ended	82 (75)
Fixed term	28 (25)
Work commitment	
Full-time	105 (96)
Part-time	5 (4)

sample's age ranged from 22 to 54 years. Regarding educational qualifications, the majority had a BSN. The participants were asked to report any additional qualifications obtained by attending post-qualification courses, and 62 nurses reported that they had taken further education courses. With regard to marital status, a large part of the sample was single (61%). In addition, 36% of the sample stated that they had at least 1 child. With regard to work, the majority stated that they had an open-end contract.

Descriptive statistics of variables

Table 2 shows the descriptive statistics of the variables examined in this study. As shown, all dimensions were normally distributed with skewness and kurtosis minor equal |1|. Moreover all the measures were reliable in terms of internal consistency examined with Cronbach's alpha.

Analyses of correlations highlighted that perceived positive leadership was associated with fewer perceived conflicts and lower levels of emotional exhaustion, cynicism, negative indicators and psychosomatic disorders. Therefore, nurses that perceived their coordinator as more honest, supportive, etc. worked in an environment with less conflicts, felt more satisfied with their work, were less exhausted, had lower levels of cynicism and, in the end, lower psychosomatic symptoms. In addition, it emerged that higher levels of perceived conflict were associated with higher levels of emotional exhaustion, cynicism, negative indicators and psychosomatic disorders, while lower levels of perceived conflict were associated with higher work satisfaction. Regarding emotional exhaustion, this was found to be positively correlated with cynicism. Fi-

Table 2 - Descriptive statistics of variables

Dimensions	M	SD	Skewness	Kurtosis	1.	2.	3.	4.	5.	6.	7.
1. Perceived Positive Leadership	2.9	0.6	-0.4	-0.6	0.79						
2. Perceived Conflict	2.4	0.7	0.2	-0.5	-0.35**	0.73					
3. Emotional Exhaustion	2.2	1.4	0.6	-0.5	-0.17**	0.34**	0.90				
4. Cynicism	1.6	1.2	1.0	0.9	-0.34**	0.38**	0.37**	0.76			
5. Work Satisfaction	2.9	0.6	0.0	-0.4	0.63**	-0.39**	-0.47**	-0.55**	0.86		
6. Negative Indicators	2.6	0.6	-0.3	-0.2	-0.35**	0.47**	0.43**	0.50**	-0.63**	0.90	
7. Psychosomatic Disorders	2.2	0.7	0.2	0.6	-0.17*	0.38**	0.59**	0.43**	-0.37**	.49**	.84

Note. Cronbach's alpha values are reported on the diagonal; ** p<0.01, * p<0.05

nally, higher levels of emotional exhaustion and cynicism were associated with higher negative indicators in the work environment and psychosomatic disorders, as well as with lower levels of work satisfaction.

Structural equation model

The originally tested model (figure 1) did not fit the data well: $\chi^2(9)=63.48$, $p<0.01$; CFI=0.80; RMSEA=0.235 (CI=0.18-0.29), p<01; SRMR=0.11. By analysing the model's modification indexes, we re-specified the model, in line with the literature, by adding a direct path from perceived positive leadership to work satisfaction, and from perceived conflict to negative indicators and psychosomatic disorders (see for example 16, 27). The resulting model (figure 2) showed a good fit: $\chi^2(6)=10.01$, p=.12; CFI=0.99; RMSEA=0.078 (CI=0.00-0.16), p=0.25; SRMR=0.075. From the SEM, the relationship between the variables initially hypothesized was confirmed. Overall, the model explained the 42% psychosomatic disorders total variance, 55% work satisfaction and 38% negative indicators. Regarding the two components of burnout, the model respectively explains the 11% emotional exhaustion and 21% cynicism.

Discussion

The results of this study attest to the prominent role of positive leadership in creating a healthy organization by contrasting conflicts (in general), and in so doing, decreasing the likelihood of burnout and several negative worker job-related and health outcomes (work disaffection, psychosomatic disorders and negative indicators). Emotional exhaustion and cynicism, as hypothesized, were associated with psychosomatic disorders, work dissatisfaction

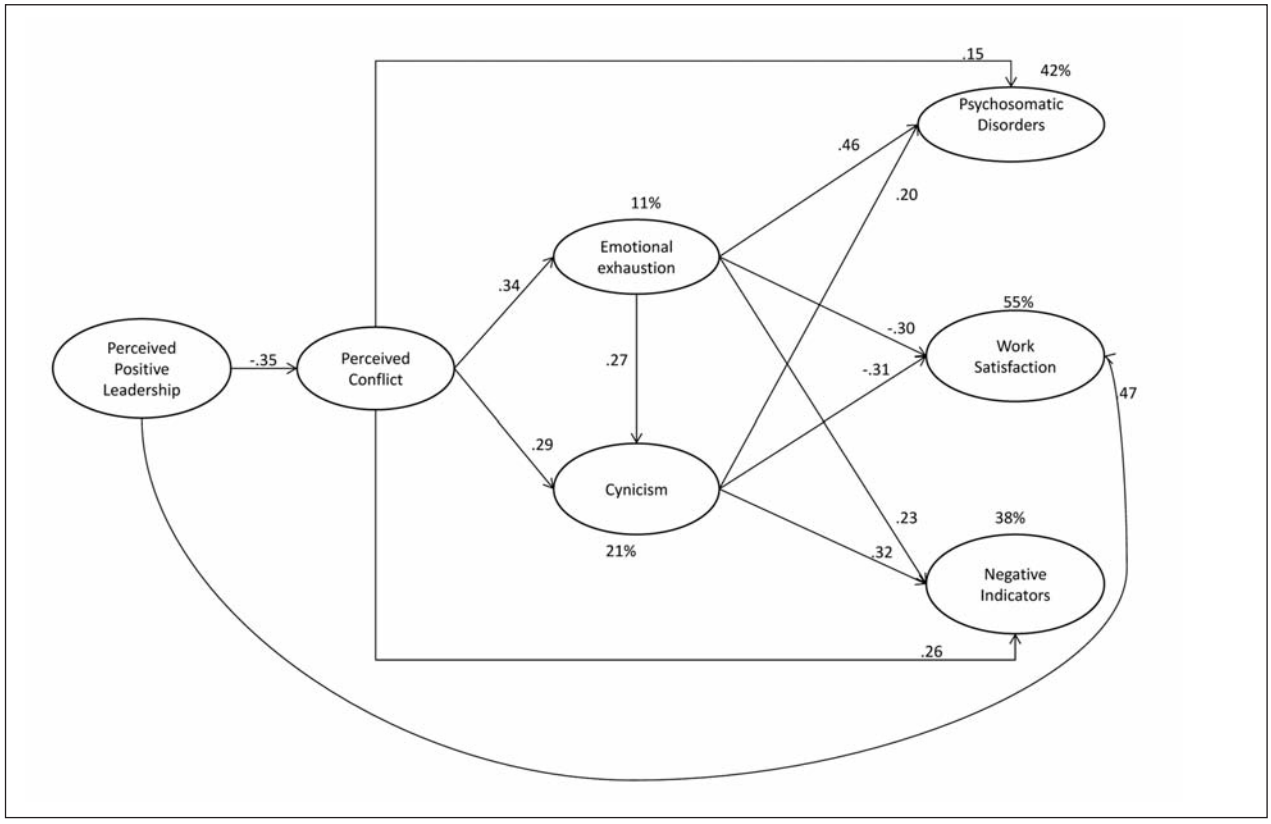

Figure 2 - Results of the structural equation model

and the presence of negative indicators in the work environment. Therefore, a positive leadership is associated, in general, either directly or indirectly, with good working conditions that contribute to limiting negative episodes related to a nurse's quality of work life. In addition, from the literature, we can see how fundamental the leader's role is in work environments in limiting and countering conflicting situations. A recent study on new graduate nurses during their first work experience demonstrated how conflicting episodes in the work environment (mostly incivility and bullying) were significantly correlated with leadership (42). In the same study, it was also demonstrated that cynicism and a nurse's emotional exhaustion are the results of work conflict situations (42). In this study, a nurse's emotional exhaustion and cynicism also emerged as directly influenced by the presence of conflict in the work environment. Many studies agree on this aspect, because in several cases it was demonstrated how conflict can be an important stressor. Conflicts depend not only on the relationship that the employee has with his/her colleagues, but also with the whole team, and this can directly influence the onset of burnout, mostly among older nurses (9, 18). The creation of a peaceful and conflict-free work environment, as this study also demonstrated, could reduce the onset of burnout and could increase work satisfaction which, as shown, also improves relationships with patients (37).

Regarding the relationship between work satisfaction, psychosomatic disorders and negative indicators in work environments, this research confirmed how these variables are directly influenced by emotional exhaustion and cynicism. This aspect was also evaluated in a recent European research study conducted on a sample of more than 23,000 nurses from 10 different countries (19). This study confirmed that along with burnout, other factors, such as lack of participation in the "work life" and interpersonal relationships with colleagues contribute to work dissatisfaction, thereby increasing a nurse's desire to abandon the profession. Therefore, the coordinator's role becomes extremely important. As shown by the model tested in this study, positive leadership is at the basis of the relationship "process" between organizational variables that have direct and indirect effects on conflicts, emotional exhaustion and work disaffection, psychosomatic disorders and work satisfaction and turnover.

This relationship was also observed in another study (30) in which nursing leadership was demonstrated to play a fundamental role in determining a nurse's quality of work life. The study's results suggest that when nurses perceive that their work environment supports practice, they are more committed to the job. In addition, some aspects of what emerged from our results were also confirmed in a Canadian study (29). It was demonstrated how a structural empowerment-oriented leadership style, good work coexistence and burnout can, all together, influence work satisfaction, nursing turnover and work commitment (28, 29). Future studies should also examine whether and how positive leadership, acting as an organizational and social resource, buffers the conflict outcomes relationships.

The results of this research's are also in line with those reported in the literature on work satisfaction. Indeed, several studies have demonstrated how a nurse's work satisfaction, the work environment's most investigated variable, can act as a protective factor for burnout (11, 54). In our structural analysis, a nurse's work satisfaction is the only outcome variable to also be directly influenced by the nursing coordinator. Therefore, nursing leadership plays a key role in the management of health services to guarantee a nurse's self-accomplishment at work.

In conclusion, this study's results show how important it is to act on nursing coordinators who, directly and indirectly through their key roles in health organizations, contribute in promoting good working lives among workers. From the model's results, a coordinator who is perceived as a good leader creates a work environment with fewer conflicts which, in turn, results in lower levels of emotional exhaustion and cynicism. This is directly proportional to psychosomatic disorders, work dissatisfaction and the presence of negative indicators. The effects of a positive leadership on work satisfaction are not only mediated but also have direct

effects. In the same way, conflict acts on psychosomatic disorders and on the presence of negative indicators not only directly, but also indirectly. Managers should periodically monitor their nurse coordinators, assessing their leadership style in terms of their honesty, clarity, self-awareness, behavioural integrity and coherence, as well as monitoring their job attitudes and asking for suggestions for improvement. Moreover they should design interventions aimed at developing positive leadership style by increasing leaders' internal moral control through mastery (e.g. role playing in training courses or substitution experience (e.g. critical incident technique to share good practices and analyse situations positively managed by other colleagues), rather than being limited to reinforcing external control and sanctions.

Limitations of the Study

It is not possible to draw alternative causal relationships between the variables studied due to the cross-sectional nature of our data, even though the posited model is strongly grounded in prior theories. Future longitudinal and experimental research is required to strengthen the tested model. Another limitation is the exclusive use of self-report measures. Since the methodology used in this study was based on self-reporting, one may question how much the self-reporting bias influenced reporting about undesirable behaviour such as conflict at work. However, our questionnaires were administered anonymously: there was no possibility of the subject being identified. This procedure may mitigate the self-reporting bias, although it does not exclude the fact that some self-reporting bias is present in our results, particularly because of unconscious/non-deliberate processes. Lastly, the results of this study may not be fully generalized to other medical and organizational contexts due to the sampling procedure adopted in the present study. Thus, future studies should confirm our results in other samples and contexts.

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