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Intention to leave nursing in a major Milan hospital: current situation and future perspectives

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Key words
Burnout; public health nursing; staffing

Summary
Background: *European nurses manifest a significant tendency to leave nursing, with Italy in second place after the United Kingdom. It is therefore necessary to address the problem in national and local settings and to identify possible areas of intervention.* **Objectives:** *This paper discusses the results of a survey carried out in a major hospital in Milan (Italy) aimed at finding solutions to the above problem.* **Methods:** *In 2004 a questionnaire was administered to the entire nursing staff. Associations between intention to quit, socio-demographic variables and job characteristics were verified by means of Mann-Whitneys's and Kruskall-Wallis' tests, Spearman's correlation coefficients and logistic regression.* **Results:** *Nearly 60% of nurses considered leaving, at least every now and then. The tendency to quit was associated with job dissatisfaction, burnout symptoms and the job market situation. For those for whom nursing had a moral value, the tendency to quit was less marked. Characteristics such as regularity of shifts, type of ward, type of contract and number of working hours did not show any statistically significant association with tendency to quit.* **Conclusions:** *There are many organizational aspects that may be of importance in influencing nurses' intention to leave the profession. Efforts are needed to re-define the role of nurses in healthcare organization, adjusting salaries to the actual cost of living and preventing conditions that could lead to psychological exhaustion. Mentorship could also be useful for a better integration of nurses in hospital wards.*

Riassunto
«L'intenzione di abbandonare la professione infermieristica in un grande ospedale di Milano: situazione e prospettive». *Nella classifica dei Paesi europei in cui la propensione all'abbandono della professione infermieristica è elevata, l'Italia si colloca al secondo posto immediatamente dopo il Regno Unito. Questo studio è stato condotto all'interno di un grande ospedale di Milano allo scopo di valutare le origini del fenomeno ed individuare possibili soluzioni. La raccolta dei dati è iniziata nel 2004, con la somministrazione di un questionario a tutto il personale infermieristico dell'Ente. Le associazioni tra intenzione di abbandonare la professione infermieristica, le caratteristiche socio-demografiche e quelle lavorative sono state verificate mediante i test di Mann-Whitney, Kruskal-Wallis, il calcolo dei coefficienti di correlazione di Spearman e la regressione logistica. Nel nostro campione l'intenzione di lasciare la professione infermieristica è risultata elevata: circa il 60% degli infermieri ha riferito di aver preso in*

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considerazione almeno saltuariamente la possibilità di abbandonare la professione. L'intenzione di lasciare il lavoro è risultata associata a condizioni favorevoli del mercato del lavoro e ad indicatori di disagio psicologico nell'attuale posto di lavoro (insoddisfazione lavorativa e sintomi di burnout). Tra gli infermieri, quelli che attribuiscono una valenza morale e di crescita personale alla professione infermieristica minore sono meno propensi ad andarsene. Altre caratteristiche dell'ambiente di lavoro quali: modalità e regolarità della turnazione, reparto di appartenenza, tipo di contratto e tipologia dell'orario di lavoro (part-time o full-time) non sono risultate associate, in maniera statisticamente significativa, all'intenzione di abbandonare la professione.

Introduction

Over the last few years major multi-centre survey, "Nurses' Early Exit Study" (NEXT) was carried out in Europe, which officially drew attention to a widespread dissatisfaction among Italian nurses, especially in terms of: i) insufficient independence, intended as the possibility of professional decision-making in all activities involved in nursing; ii) imbalance between efforts made and goals achieved; iii) physical and psychological overload; iv) poor flexibility of working hours v) limited chances of attending training courses due to job demands (6).

All these conditions profoundly affect nurses' job satisfaction and very often lead them to quit the profession. The situation is critical since the Italian Federation of Nurses has estimated a shortage of 40,000 nurses (8).

Quitting the nursing profession is an event that profoundly affects health care systems, because a high level of staff turnover prevents the accumulation of the required amount of know-how and expertise and brings about a significant loss in the economic and human resources employed to provide education in the nursing field. The literature shows that low job satisfaction, lack of professional commitment and burnout precede job turnover (3, 4, 9).

There is thus a great need for a better understanding of the phenomenon in order to correctly address the problem and identify appropriate solutions. In 2004, the management of the San Paolo Hospital in Milan, which was aware of the difficulties in covering the requirements of assistance in various wards and shifts, commissioned a local survey to analyze the situation among nurses; this paper presents the results of the survey, discusses the problems and reports the strategies proposed by the nursing staff to improve the situation. The hospital was not at the time affected by turnover problems, but the management deemed it necessary to collect data on this problem in view of the increasing number of requests for part-time work and transfer to other Regions (which is foreseen in the national work contract for nurses). The general aim was to improve commitment to the hospital among nursing staff, discourage requests for transfer to regions of origin (located especially in the south of Italy) after receiving education and training in the Milan hospital.

Methods

Study population

The study was carried out at the San Paolo Hospital in Milan (635 beds). At the time of the survey, the hospital staff consisted of 374 physicians, 42 head nurses, 589 registered nurses, 15 paediatric nurses, 30 midwives, 16 children's attendants, 179 aides and 31 employees with other duties. At the time of the study, each ward had 14 nurses for every 30 patients. In 2004, the hiring rate of nurses was 23.0% and the leaving rate was 13,7%.

Measurements

Some scales used by the NEXT questionnaire were inserted as the core of our data collection tool, in order to have validated instruments for

comparisons. The study outcome was measured using the question "How often have you considered leaving the nursing profession?" (ITL) with a 5-point Likert scale (1=Never, 2=Sometimes, 3=Few times in a month, 4=Few times in a week; 5=Every day). The scales that better represent the major areas of concern in this hospital were selected for the present study by the first author: a head-nurse, Director of the School of Nursing in Milan. The Copenhagen Burnout Inventory (10), the first item of the Work Ability Index (16), the Influence at Work as subscale of the Demand-Control questionnaire (15), the Over-commitment scale of the ERI questionnaire (13), and the Organizational Commitment scales (1) were selected. Table 1 summarizes the details of the scales used for the

Table 1 - Scales used for the questionnaire

Scale name	Description/measured items	Items	Values	Author/reference
Copenhagen Burnout Inventory	This scale quantifies the frequency of the symptoms shown by the individual studied	6 -	1 (never) 5 (almost every day)	Borritz (10)
Work Ability Index	Its first item measures current work ability, compared to the fullest potential of the person	1	1 (completely unable to work) 10 (fullest work ability)	Tuomi (16, 17)
Influence at Work	The level of autonomy allowed while the person carries out his/her job	4	1 (completely false) 5 (completely true)	Theorell (15)
Hospital and professional Commitment	Level of commitment to the hospital and the nursing profession	8	1 (completely false) 5 (completely true)	Allen (1)
Intention To Leave	Frequency of intention to leave	1	1 (never) 5 (every day)	(5)
Over-commitment	Tendency to be excessively involved on the job, beyond the individual's capabilities of realization	6	1 (completely disagree) 4 (totally agree)	Siegrist (13)
Job Satisfaction	Satisfaction with various aspects of the job	6	1 (Very unsatisfied) 4 (very satisfied)	Kristensen (10)
Job Value	Expected satisfaction with a certain result (in our case, to nurse)	4	1 (completely disagree) 5 (completely agree)	Vroom (19)
Desire to Change Shift	Desire to change the structure of the shift schedule	1	1 (No); 2 (Yes, maybe); 3 (Yes, no doubt)	(5)
Satisfaction With Pay	Satisfaction with salary	5	1 (Completely unsatisfied) 5 (Very satisfied)	(5, 7)
Task relevancy	Measures the correctness of the assigned tasks (thinking about a typical working day, do you think you are carrying out tasks which should not be part of your profession?)	1	1 (No, never) 4 (Yes, for most of the time)	(5, 6)
Possibility for Development	Chances of professional growth in terms of decisional independence, variety of tasks, skills	4	1 (very few) 5 (mostly, yes)	Kristensen (10)

questionnaire. The summary score was computed from each scale items allowing for just one missing value, otherwise the subject was dropped. We also adopted the Satisfaction with Payment scale from the NEXT study group adding another two questions: "satisfaction with payment in relation to family needs" and "satisfaction with payment in relation to social status". The new scale had an excellent internal consistency reliability (Cronbach's α=0.91). We added 2 items we deemed particularly relevant for the nursing profession To the COPSOQ Job Satisfaction scale (10): i) How far are you satisfied with the opportunity to provide adequate care for patients?; ii) How far are you satisfied with the economic conditions of your job? The new scale had an excellent Cronbach's alpha (α=0.81). We also added 5 items on a 5-point Likert scale (from "completely disagree" to "completely agree") covering aspects of work value[1]: i) the nursing profession is essentially a way to help the suffering; ii) the nursing profession is only a secure source of income; iii) the nursing profession is a way to expand my skills and enjoy an interesting activity; iv) the nursing profession is just a way to earn a living; v) the nursing profession is a way to achieve social recognition. Work value as defined by Vroom represents the expected satisfaction that would be obtained from an effort (19). The new 4-item scale had a 1-factor structure but poor internal consistency reliability (α=0.54). Reliability was low, in fact one motivation does not imply the others, so we analyzed the single items separately. We also modified the wording of some NEXT questions regarding demographic and work features in order to adjust them to the specific situation at hand: for example, question 1 in our survey added more specific ward classification to the NEXT list and question 41 of the NEXT survey was modified to include only shift types foreseen at the San Paolo Hospital. The shift table included 2nd, 1st/night, and two days off. "1st" and "2nd" refer to the morning and afternoon shifts respectively. The nursing management did not agree with this table, since it did not allow workers enough rest between the shifts; however, the workers themselves wanted it to be applied. Meetings with the hospital management (medical and nursing managers, chief nurses) took place to explain the motivations and the method of data collection, after informing the labour unions. The questionnaires were prepared and attached to the monthly pay sheets; chief nurses were requested to keep a check on the data collection process. Two weeks after administration, the questionnaires were collected in a dedicated mailbox located at the Hospital entrance.

[1] We used Vroom's definition of "work valence": "Valence: refers to the emotional orientations which people hold with respect to outcomes (rewards). The depth of the want of an employee for extrinsic (money, promotion, free time, benefits) or intrinsic (satisfaction) rewards. Management must discover what employees appreciate" (19).

Statistical analysis

The U Mann-Whitney and the Kruskal-Wallis tests were used to evaluate univariate associations between socio-demographic characteristics of the study subjects, organizational aspects of the job and the tendency to quit the profession. For variables with more than 2 levels, *post hoc* pair-wise comparisons were made in order to assess the association of each variable level with the outcome score. Non-parametric Spearman's correlation coefficient was used to test associations between measurements of psychological adjustment to work activity and the propensity to leave the profession. Multivariate logistic regression analysis was used to test the independent effect of selected variables on ITL. The ITL variable was dichotomized in order to allow logistic regression modelling. The cut-off for dichotomization was set at score = 2, which corresponds to a low frequency of thinking about leaving the profession ("I think about leaving the profession only sometimes"). Values >2 were considered high; while values ≤2 were considered low. The Principal Component Analysis (PCA) with Varimax rotation was performed to create a set of factors to be treated as uncorrelated variables for the logistic regression modelling. PCA is a statistical technique used to discover the common variance of a set of variables, and group highly correlated variables into one or more components. It allows minimization of the number of variables in a dataset while minimizing the consequent loss of

information. Each component formed by PCA is not correlated with other components derived from the data. This property allows the use of the components produced by the PCA to reduce the colinearity of data and increase the precision of multivariable regression models. All the summary scores of the questionnaire scales listed in the "methods" section, except the ITL variable, were included in the PCA. The Kaiser-Mayer-Oklin measure of sampling adequacy and Bartlett's test of sphericity were performed in order to assess the suitability of our data for the PCA. Data were entered in a Excel® 2000 for Windows™ spreadsheet and analyzed with SPSS® v14.0 for Windows™.

Results

Demographic features

Out of 615 questionnaires administered to the nurses, only 240 were completed and returned (39%). Respondents and non-respondents were equally distributed among the different Hospital units (not shown). Table 2 and table 3 shows the demographic features of the sample. Many of the subjects were full-time shift workers (6am-14pm; 14pm-22pm; 22pm-6am), about 40% had received job offers from other hospitals, nursing homes or businesses outside the healthcare sector, and almost all the nurses had being working in the hospital for less than 5 years (table 3). 42.7% of the respondents were working in the medical ward and 22.3% in the surgical wards, mostly as staff nurses (87.7%); few were head nurses (9.7%) or manager nurses (2.5%)

Table 2 - Study sample: socio-demographic features

Socio-Demographic features of study sample	N	%
Age	225	
18-26	29	12.9
27-34	98	43.6
35-42	63	28.0
43-50	25	11.1
51-58	7	3.1
>59	3	1.3
Gender	232	
Female	171	73.7
Male	61	26.3
Immigration Status	233	
Local	122	52.4
Other Italian region	95	40.8
Other Country	16	6.9
Education	234	
Infant school	10	4.3
Primary school	55	23.5
Secondary school	159	67.9
University Degree	10	4.3
Marital Status	218	
Single	112	51.4
Married	90	41.3
Divorced	12	5.5
Widow	4	1.8
Children	220	
None	138	62.7
1 child	44	20.0
2 children	33	15.0
3 children	3	1.4
4 children or more	2	0.9

Intention to leave the nursing profession

About 1/5 of the respondents considered leaving the nursing profession at least once a month (~50 nurses) (table 4).

Burnout and work ability

Over one half of the sample complained of tiredness every week or even every day; 60% were highly emotionally involved "sometimes/every month" to "every day"; 30% complained of weakness and tendency to fall ill. The mean Burnout score was 1.8 (SD 0.6; median: 1.67, Interquartile range, IQR: 0.83) indicating an overall low frequency of negative symptoms related to burnout while the median for item 1 of the Work Ability Index was 8 (IQR: 2) indicating a high level of perceived ability to work compared to respondents' lifetime best.

Table 3 - Study sample: working conditions and occupational background

Working Conditions of study sample	N	%
Division	239	
Medicine	90	42.7
Surgery	47	22.3
Outpatient Services	35	16.6
Emergency Room	27	12.8
Operating Theatre	12	5.7
Other Services	28	11.7
Position	236	
Nurse	207	87.7
Head nurse	23	9.7
Other nursing management positions	6	2.5
Patients/shift	201	
<10	70	34.8
11-20	82	40.8
>20	49	24.4
Working hours	201	
According to National Contract	154	76.6
Paid overtime	20	10.0
Unpaid overtime	7	3.5
Hours to be recovered	13	6.5
Other	7	3.5
Shift Schedule	227	
Full-time: day	66	29.1
Full-time: day and night-shift	136	59.9
Part-time: day	19	8.4
Part-time with night-shifts	6	2.6
Shift Variability	190	
Never	50	26.3
1-2 times/month	118	62.1
3-5 times/month	15	7.9
> 5 times/month	7	3.7
Job Offers	232	
None	130	56.0
Yes, other hospital	87	37.5
Yes, other sector	15	6.5
Experience	232	
< 1 year	40	17.2
1-5 year	178	76.7
> 5 years	14	6.0

Table 4 - Intention to leave the profession

How often have you been thinking of:	Leaving Nursing (present study)
Never	41% (n=98)
Sometimes	29% (n=70)
Every month	11% (n=26)
Every week	3% (n=7)
Every day	7% (n=17)
No answer	9% (n=22)

Job satisfaction

A consistent proportion of nurses reported that they were highly dissatisfied or dissatisfied with i) quality of care given (24%); ii) how their skills were perceived (42%); iii) environmental conditions of the workplace (64%); iv) professional perspectives (56%); v) economic perspectives (69%); vi) comprehensive evaluation of their job (34%).

Value of nursing

Taking care of patients was "important" or "very important" for about 50% of nurses, and 55% considered that personal enrichment was an "important" or "very important" aspect of the nursing profession (while 10% perceived it as scarcely relevant or not important at all); 20% thought that nursing was merely a source of income. Each value characteristic was significantly associated with Job Satisfaction (table 5).

Correlates of intention to leave the profession

No difference in the ITL score was detected with respect to gender, age, immigration status, education level, marital status, number of children, division/ward, number of patients in care, full-time versus part-time work, shift schedule (night versus daytime shifts), shift variability (defined as the reported chance of an unforeseeable and sudden change in working schedule), position/role (head nurse versus staff nurse).

Statistically significant correlations were found between ITL and Burnout scale, the first item of

Table 5 - Job satisfaction and Job Value: Correlation matrix of different aspects of job satisfaction

	Help people	Income source	Interesting Job	Only a Job	Respectable Job
Satisfaction with Pay	0.071	0.025	0.086	0.120	0.156*
Job Satisfaction	0.186**	0.094	0.275**	0.024	0.331**

Spearman's rho coefficients ** p<0.01; * p<0.05

Work Ability, the separated items of Job Satisfaction, Satisfaction with payment, Organizational Commitment, Influence at Work. Correlation coefficients ranged from -0.37 (Job Satisfaction) to 0.24 (Burnout scale) (table 6).

Moreover, we found a statistically significant association between higher ITL scores with a longer experience in nursing and having received job offers from other hospitals (table 7).

Since most of the variables describing well-being (burnout, satisfaction, commitment) were linearly correlated, we performed a PCA to extract a set of uncorrelated factors for logistic regression modelling. We retained 5 significant principal components from the (PCA) with eigenvalues greater than 1 which indicates that the component under examination explains a significant share of the variance in the data matrix. The variance explained by the model was 63%. The rotated solution demonstrated clear separation of components with only 3 cross-loadings (correlation of >0.40 with more than 1 component) and no variable failing to load with at least one component (correlation of at least 0.40). The rotated loadings matrix is shown in table 8. The empirical solution grouped variables by content (e.g.: satisfaction, value of the profession, commitment). The results of the PCA suggest that the variable scores are statistically grouped in the 5 categories below:

1. Ethical/social value of nursing;
2. Satisfaction with work situation;
3. Psychological exhaustion;
4. Material/economic value of nursing;
5. Satisfaction with shifts.

Table 6 - Intention to leave the profession and psychological adjustment to work activity: Correlation matrix of different aspects of intention to leave the profession and psychological adjustment

	Burnout	Job Control	Over-commitment	Organizational Commitment	Intention to leave the profession	Satisfactiony with Pa	1 item WAI
ITL	0.24**	-0.18*	0.07	-0.37**	-0.37**	-0.19*	-0.21**

Spearman's rho coefficients. ** p<0.01; * p<0.05

Table 7 - Intention to leave the profession: experience and job offers

Working Conditions	Intention to leave the Profession			
	n	Mean Rank	Overall significance	Post-Hoc Pair-wise comparisons
Job Offers	215			
None	117	105.63		Ref
Yes, other hospital	83	102.64	p=0.004	Ns
Yes, other sector	15	156.13		p<0.05
Experience	215			
< 1 year	38	86.29		ref
1-5 year	166	113.67	p=0.027	p<0.05
> 5 years	11	97.41		ns

Table 8 - PCA: rotated solution[1]

Rotated Component Matrix	Component Loadings*				
	1	2	3	4	5
Work Ability Index (item 1)	**0.433**	0.109	**-0.479**	-0.314	0.206
Nursing as a chance to help people	**0.635**	-0.077	0.034	0.380	-0.094
Nursing as a chance of personal enrichment	**0.652**	0.037	-0.299	-0.093	-0.017
Nursing as a source of social recognition	**0.612**	0.220	0.062	0.204	0.041
Organizational Commitment	**0.620**	0.392	-0.005	-0.310	-0.103
Job Satisfaction	**0.407**	**0.708**	-0.078	0.012	-0.170
Satisfaction with economic conditions	-0.065	**0.779**	-0.150	0.112	0.133
Job Control	0.247	**0.551**	0.027	-0.023	**-0.445**
Over-Commitment	0.060	0.006	**0.796**	-0.170	0.089
Burnout	-0.131	-0.158	**0.799**	0.046	0.138
Nursing is only a Job	-0.108	0.221	0.038	**0.776**	0.173
Nursing as a source of income	0.245	-0.082	-0.117	**0.748**	-0.143
Desire to change Shift scheme	0.023	-0.034	0.167	0.005	**0.896**

* Loadings represent the association between variables and components

[1] In bold type loadings above 0.400

These factors were entered in a multiple logistic regression model of ITL; the factors associated with high ITL are shown in table 9. Considering nursing as a source of moral value and not perceiving psychological exhaustion were strongly associated with a low risk of ITL. There was a non-statistically significant trend of higher ITL with low job satisfaction. On the other hand, regarding as most valuable the material/economic aspects of the nursing profession independently led to a significantly higher risk of ITL. In any case, the most important correlate of ITL was having received in the past any job offer from another hospital or business in non-healthcare sectors (OR: 11.78).

Discussion and conclusions

In this cross-sectional study we found that ITL was relatively frequent at the hospital under study and the result was comparable to the NEXT result as shown in table 3. Since a high turnover rate may negatively impact on the quality of care and may be a signal of poor working conditions, it is important to investigate which factors are associated with propensity to leave the nursing profession. The strongest independent predictor of ITL was having received "offers concerning other jobs"; this finding suggests that employment dynamics in the community is likely to be a leading factor in determining supply of nurses and that human resources managers and policy makers in the health sector should compete with other employers so as to enhance nursing attraction (in terms of job quality and benefits) and maintain an adequate and skilled staff.

We also found that nurses with 1 to 5 years of experience showed higher ITL propensity, if compared to their colleagues with different levels of experience. Even if this effect disappeared after adjusting for other variables measuring psychological adjustment to work activity, it may indicate that there is a "window" of vulnerability which starts after the phase needed to understand the "real" job and to compare this with expectations. Since burnout, diminished work ability and poor satisfaction are strong determinants of turnover, it is also possible that those nurses with poorer occupational adjustment are selected out of employment before achieving a longer work attachment. Testing these hypotheses is beyond the objectives of our analysis and should be performed by means of further longitudinal cohort studies.

Our results showed that ITL was only partly determined by economic conditions of the job and was instead more related to a broader set of work-

Table 9 - Independent correlates of Intention to Leave the profession. Multivariable Logistic regression

Intention to leave the Profession, socio-demographic features, working conditions and psychological adjustment to work activity				
	OR	95% C.I.		Sig.
		Lower	Upper	p
Moral value of Nursing	0.51	0.32	0.83	0.01
Satisfaction with Work Situation	0.64	0.40	1.01	0.06
Psychological exhaustion	1.94	1.24	3.03	<0.01
Material/Economic value of nursing	1.67	1.04	2.68	0.03
Satisfaction with work-shift	1.29	0.86	1.95	0.22
Age				
18-34	-	-	-	-
>35	1.52	0.58	3.96	0.39
Gender				
Female	-	-	-	-
Male	1.78	0.67	4.75	0.25
Job Offers				
None	-	-	-	-
Yes	11.78	2.95	47.02	<0.01
Job Experience				
<1 year	-	-	-	-
1-5 years	1.84	0.49	6.94	0.76
>5 years	4.83	0.51	45.34	0.16

Logistic Regression: independent correlates of Intention to Leave

ing conditions that were deemed to be necessary for "good" nursing: we observed that those considering the nursing profession as a source of moral and intellectual value were less likely to report high ITL even after adjusting for age, gender, other psychological aspects, and occupational prospects. These findings are mirrored by the fact that nurses considering the nursing profession as a mere source of economic/material value showed a higher risk of ITL. In addition we found that psychological exhaustion was strongly associated with ITL despite only a minority of respondents reporting problems in this area. This shows that the prevention of burnout should be of primary interest in the nursing field. According to the NEXT study (7) psychological overload may be related to organizational factors, such as uneven workload distribution and frustration due to limited chances to talk to patients and effectively improve their quality of life (7, 11). When the burnout syndrome arises, those subjects are unable to cope with their workload and experience feelings of defeat and lack of professional success (18). Job organization aimed at relieving nurses from improper activities and improving nurses' influence at work and flexibility of working hours could provide additional opportunities to maintain relationships and sustain personal development; in addition, professional psychological counselling, workplace empowerment programmes and interventions aimed at maintaining nurses' health could reduce the levels of psychological exhaustion and increase their occupational well-being and perceived work ability (2, 12, 14). Finally, we found lower burnout scores compared to what was previously reported by the NEXT study. This finding could be due in part to the selection bias. However, according to the NEXT study, our survey showed that if the burnout score increases, so does the tendency to leave; this indicates a direct correlation between these factors, and leads us to surmise that even with a more representative population the results would not be significantly different. The inclusion of psychosocial risk assessment in the occupational health service rou-

tine and major efforts to assure confidentiality might improve participation in future surveys. The small sample size prevented us from performing extensive multiple regression techniques; controlling for confounders and examining interactions between variables. PCA yielded a clear separation of components and clearly interpretable results.

The possible solutions discussed and implemented by the nursing staff management in order to prevent a high level of leaving included the introduction of new rules for part-time workers, as well as the creation of internal educational prospects. The educational programmes, in particular, were designed to give nurses more career chances in the hospital (for example, in terms of working in more highly paid jobs, such as in critical care units, which were often requested in the study period according to the data received from the nursing staff management). As regards the problems related to the lack of time for talking to patients and implementing the core activities of the nursing profession, since 2004 task planning for nursing aides has been put into practice, allowing nurses to concentrate on professional activities more than on technical tasks. In order to support nurses in this situation, protocols, activity plans and evidence-based procedures were introduced.

At the beginning, before our survey, the requests for part-time work had been granted as far as was possible; this created a heavier workload for full-time shift workers, especially during night shifts and weekends. Therefore, the hospital management had to introduce new rules in order to distribute the workload as uniformly as possible. The strategy also involved the mentoring process in the wards, as well as education for the newly enrolled nurses. The mentoring process now lasts as long as possible, considering the human resources available; a period of six months would be desirable, but hardly ever applicable.

Even though our cross-sectional design does not allow causal relationships to be identified, our study shows that many modifiable organizational aspects could be of great significance in affecting nurses' intention to leave the profession. In particular, efforts are needed to re-define the role of nurses in an integrated healthcare organization, adjusting salaries to the actual cost of everyday living and preventing conditions which could lead to psychological exhaustion and poorly perceived functional status.

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