

Les soins non prodigués : l'incidence sur l'intention de quitter et le roulement du personnel

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Cette étude a pour objectif d'examiner les soins non prodigués sur le roulement du personnel infirmier et sur l'intention de quitter. Une étude transversale a été menée à l'aide du questionnaire MISSCARE auprès d'un échantillon de 110 unités de soins, dans 10 hôpitaux de soins actifs. Des données portant sur le personnel, les taux de roulement et les indices de la charge de cas à l'échelle des unités ont été recueillies dans les hôpitaux participant. L'étude a révélé un lien entre les unités comptant des taux d'effectifs féminins supérieurs et la présence de taux de roulement inférieurs ($\beta = -0,235, p = 0,010$). Le personnel ayant l'intention de quitter était plus nombreux dans les unités affichant des taux supérieurs de soins non prodigués ($\beta = 0,302, p < 0,0001$) et d'absentéisme ($\beta = 0,247, p = 0,034$). Le personnel ayant l'intention de quitter était moins nombreux dans les unités où le personnel infirmier travaillait des heures supplémentaires ($\beta = -0,283, p = 0,001$) et était âgé de plus de 35 ans ($\beta = -0,270, p = 0,050$). En réduisant les incidences de soins non prodigués, les institutions peuvent potentiellement améliorer le taux de satisfaction et réduire l'intention de quitter (et le roulement de personnel qui s'ensuit).

Mots clés : intention de quitter, roulement de personnel, soins non prodigués, personnel

Missed Nursing Care: The Impact on Intention to Leave and Turnover

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The purpose of the study was to examine the relationship between missed nursing care, nurse turnover, and intention to leave. A cross-sectional study using the MISSCARE Survey was conducted. The sample comprised 110 patient-care units in 10 acute-care hospitals. Staffing data, turnover rates, and unit-level Case Mix Index were collected from the participating hospitals. Higher percentages of females on the unit were associated with lower turnover rates ($\beta = -.235, p = .010$). Units with higher rates of missed care ($\beta = .302, p < .0001$) and absenteeism ($\beta = .247, p = .034$) had more staff with intention to leave. Units with nursing staff who worked overtime ($\beta = -.283, p = .001$) and who were over 35 years of age ($\beta = -.270, p = .050$) were less likely to have staff with intention to leave. By minimizing missed nursing care, organizations may be able to improve satisfaction and reduce intention to leave (and subsequent turnover).

Keywords: intention to leave, turnover, missed care, nurse, staffing

As the nursing shortage continues, the ability to attract and retain nurses in acute-care hospital settings has become critical to maintaining quality patient care. The US Bureau of Labor Statistics predicts that there will be a need for more than 1 million new and replacement nurses in the United States by 2016 (Dohm & Shniper, 2007). Furthermore, it is estimated that by 2020 there will be a 36% shortfall of registered nurses (RNs) in the United States (US Department of Health and Human Services, 2006). According to the Federation of Nurses and Health Professionals (2001), one in five nurses plan to leave the profession within 5 years. A report by the Canadian Nurses Association (2009) identifies a shortage of approximately 60,000 full-time nurses in Canada if no policy interventions are implemented (and if trends continue). In addition, the financial cost of turnover is significant, ranging from \$21,514 to \$67,100 per nurse (Jones, 2005; O'Brien-Pallas et al., 2006). In light of these statistics, strenuous efforts are needed to recruit and retain RNs.

Although several studies have identified predictors of intention to leave and turnover, only a few have considered the impact of nursing care provided at the bedside on subsequent turnover (Gelinas & Yik-Hin Loh, 2004; Zimmerman, Gruber-Baldini, Hebel, Sloane, & Magaziner, 2002). For example, Strachota, Normandin, O'Brien, Clary, and Krukow (2003)

interviewed nurses who had voluntarily terminated or changed their job status. They found that 46% of nurses were frustrated with the quality of care they were able to deliver, and many of these nurses described instances of substandard care and concerns about errors.

The study reported on here was designed to directly test the relationship between the process of nursing care and both turnover and intention to leave. We used missed nursing care, defined as any aspect of care that is omitted (either in whole or in part) or significantly delayed (Kalisch, Landstrom, & Hinshaw, 2009), as an indicator of the process of nursing care.

Literature Review

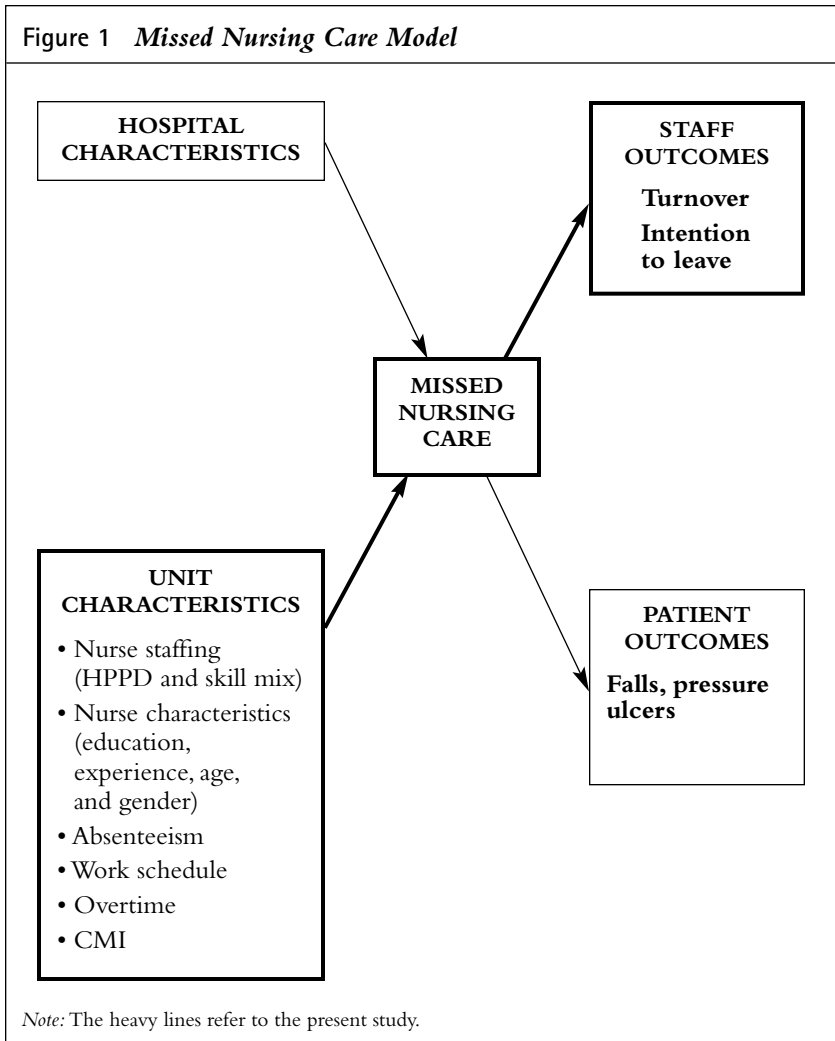
Several studies have shown that nursing staff are not consistently completing the standard elements of nursing care (Kalisch, 2006; Kalisch, Landstrom, & Williams, 2009; Kalisch, Tschannen, Friese, & Lee, in press). Failure to carry out specific nursing interventions (i.e., missed nursing care) has been shown to adversely affect patient outcomes (Callen, Mahoney, Grieves, Wells, & Enloe, 2004; Krishnagopalan, Johnson, Low, & Kaufman, 2002). Investigations using direct observation have shown that specific aspects of care, including ambulation (Callen et al., 2004), turning (Krishnagopalan et al., 2002), and administering medications (Anselmi, Peduzzi, & Dos Santos, 2007; Holley, 2006; Rinke, Shore, Morlock, Hicks, & Miller, 2007), are being missed.

A few studies have identified a link between intention to leave/turnover and the type of nursing care provided to patients. Larrabee and colleagues (2003) found that nurses who were satisfied with the care they provided, were able to meet a variety of clinical challenges, and had an opportunity to be of service to others and engage in research were 2.4 times more likely than other RNs to indicate no intention to leave. Castle, Degenholtz, and Rosen (2006) found that caregivers were more satisfied (a predictor of turnover) when they were able to provide what they perceived as high-quality care; this included being able to complete all the nursing tasks considered necessary for the patient.

Nursing turnover in the hospital setting affects both the organization and patient care (Minore et al., 2005), but few studies have considered what is actually occurring at the point of nursing-care delivery and its relationship to intention to leave and turnover. The present study examined the link between missed nursing care, intention to leave, and turnover rates in the acute-care hospital setting, while considering unit-specific characteristics (staffing levels, Case Mix Index [CMI], work schedules, absenteeism, overtime, and nursing staff characteristics).

Conceptual Framework

The Missed Nursing Care Model served as a conceptual framework for the study (Figure 1). This framework is based on structure, process, and outcome (Donabedian, 1988). Hospital and unit characteristics (structure variables) lead to missed nursing care (process variable), which in turn affects staff outcomes (i.e., turnover and intention to leave) as well as patient outcomes. The study focused on the relationship between missed nursing care and the staff outcomes of turnover and intention to leave.



Research Questions

The research questions for the study were as follows: 1. *Do missed nursing care and other unit characteristics (staffing levels, staff and nurse characteristics, absenteeism, overtime, and work schedules) predict staff turnover rates in the acute-care setting while controlling for patient acuity (CMI)?* 2. *Do missed nursing care and other unit characteristics (staffing levels, staff and nurse characteristics, absenteeism, overtime, and work schedules) predict intention to leave in the acute-care setting while controlling for patient acuity (CMI)?*

Methods

Setting and Sample

This was a cross-sectional, descriptive study with 110 medical-surgical, rehabilitative, intermediate, and intensive care units in 10 acute-care hospitals in the Midwestern region of the United States. A sample of hospitals ranging in size from 60 to 913 beds was used to ensure variation in hospital size and type. All of the units within the hospitals eligible for inclusion (i.e., adult inpatient units), which ranged from 2 to 22 per hospital, agreed to participate. A power analysis using an alpha of 0.05, medium effect size (0.50), and beta of 0.8 revealed that 107 units were needed to compute a regression model with eight independent variables.

There were two inclusion criteria for the patient units within each hospital: an average patient length of stay ≥ 2 days and a patient population over 18 years of age. Exclusion criteria were: (1) short-stay units (≤ 23 hours); and (2) pediatric, women's, emergency, perioperative, and psychiatric units. RNs ($n = 3,143$), licensed practical nurses (LPNs) ($n = 83$), and nursing assistants (NAs) ($n = 943$) were included in the study on each of the participating units. The return rate for the survey was 60% overall, with a patient unit response rate varying from 44% to 99%. This return rate is consistent with the average return rate reported in the medical literature, which is also 60% (Asch, Jedrzewski, & Christakis, 1997).

Study Variables and Procedure

Definitions of the study variables, as well as respective referent or cut-off points used for analysis, are included in Table 1. Data were collected from November 2008 to March 2009 by means of (1) surveying the nursing staff on medical-surgical, rehabilitative, intermediate, and intensive care units using the MISSCARE Survey; and (2) collecting turnover, intention to leave, and staffing data by patient care unit. Institutional Review Board approval was obtained at each of the participating hospitals. A survey packet — which included a letter describing the study and assur-

ing anonymity, the MISSCARE Survey (including questions relating to the type of care being missed, intention to leave, nursing characteristics, and work schedules), and a return envelope — were placed in the mailboxes of all RNs, LPNs, and NAs on staff. The nurses were asked to place their completed surveys in a locked box located on their unit. Reminders were sent to all nursing staff approximately 2 weeks into the survey collection in an effort to increase response rates. Although the data for the entire sample of hospitals were collected over a 5-month timeframe, data for each individual hospital were collected over a 4-week timeframe.

For the staffing and turnover data, administrative staff at each hospital were asked to input data into an MS Excel file designed by the research team. The file included specific definitions (i.e., numerator and denominator) and data requirements for each of the study variables (i.e., turnover, hours per patient day [HPPD], skill mix, CMI). Turnover and staffing data were collected for 2 months (beginning 1 month prior to distribution of the MISSCARE Survey). Two months was averaged to account for any unusual events on the unit in a given month. The variables of interest were computed (using the raw data) to ensure consistency in calculation across institutions.

Data Analysis

Analyses were conducted using SPSS Version 16.0. After data cleaning, preliminary analyses of the data were completed using descriptive and bivariate analysis techniques according to the research questions. Characteristics of the sample, although collected at the individual level ($n = 4,288$), were aggregated to the unit level in order to test the relationships between turnover, intention to leave, missed care, and other unit characteristics. The researchers did this by computing each of the unit characteristic variables into the proportion of staff above a referent point (i.e., median) (Table 1). For example, education values represented the proportion of nursing staff in each unit who held a baccalaureate degree (BSN) or higher. The experience value for each unit represented the proportion of nursing staff on a given unit with more than 5 years' experience (in their occupation). The referent value for intention to leave was having plans to leave (in either 6 months or 1 year), and for absenteeism it was missing work 1 or more days. For missed care, a unit-level missed care score was calculated as the average amount of missed care identified for each of the elements of nursing care by staff on the unit.

Correlation analysis was used to determine the relationship between the study variables. Multiple regression analyses were performed to test the predictive ability of missed care and other unit characteristics on the dependent variables (intention to leave and turnover). All significant variables ($p < 0.05$) from the preliminary analyses were selected as indepen-

Table 1 Study Variables, Definitions, and Referent Groups

Variable	Definition	Referent Group (median)
Turnover rate (RN) ^a	Number of voluntary uncontrolled separations ^c during the month for nursing staff divided by number of nursing staff on the last day of the month	NA
Intention to leave ^b	Anticipation to leave his/her current position	Plans to leave versus no plans to leave
Missed nursing care ^b	Average amount of missed care identified for each of the elements of nursing care by staff on each unit	NA
HPPD ^a	Number of productive hours worked by nursing staff with direct patient care responsibilities divided by inpatient days	NA
Skill mix ^a	Number of productive hours ^d worked by RN nursing staff with patient care responsibilities divided by total number of productive hours worked by nursing staff with direct care responsibilities	NA
Education ^b	Highest degree earned	Proportion of nursing staff with BSN or higher

Experience ^b	Number of years in current occupation	Proportion of nursing staff with 5 years' experience or more
Perceived absenteeism ^b	Number of days or shifts missed in the past 3 months due to illness, injury, or extra rest (exclusive of approved days off)	None versus missed 1 or more days of work
Overtime ^b	Number of overtime hours worked in the past 3 months	No overtime versus overtime
Age ^b	Age	Proportion of nursing staff over 35
Gender ^b	Gender	Female
Work hours ^b	Typical shift worked	Day/rotating versus evening/night
Full-time equivalence ^b	Number of hours worked per week (considered full time if more than 30 hours)	Part time versus full time
Shift length ^b	Typical length of shift	12 hours versus other
<p>^a Data were collected from the administrative databases of the hospitals. ^b Data were collected via the MISSCARE Survey. ^c Separation due to death, illness, pregnancy, relocation, retirement, performance or discipline, cutbacks as a result of mergers, cyclical lay-offs, or permanent reduction in workforce. ^d Actual hours worked as opposed to budgeted or scheduled hours (excludes vacation, medical leave, orientation, education, and committee time).</p> <p><i>Note:</i> Validity and reliability of the MISSCARE Survey are published elsewhere (Kalisch & Williams, 2009).</p>		

Table 2 *Hospital and Unit Characteristics of Sample*

Hospital	Size (Number of Beds)	Number of Units Participating in Study	Age (Over 35) (%)	Gender (Female) (%)	Education (BSN or Higher) (%)	Experience (More Than 5 Years) (%)	RN (%)	Full Time (%)	Work Hours (Day Shift or Rotating) (%)
1	347	5	57	95	40	63	64	84	55
2	60	2	67	97	35	72	75	71	53
3	760	15	51	90	51	51	68	88	60
4	317	11	66	86	32	59	61	84	55
5	304	6	77	94	37	73	62	82	57
6	411	8	67	94	41	57	76	87	57
7	880	22	39	91	53	45	71	75	58
8	433	9	58	89	38	54	77	89	57
9	479	14	58	90	43	59	76	82	62
10	913	18	54	90	55	47	84	80	59
Total		110	55	90	46	54	73	82	58

dent variables in the multivariate analysis. In addition, to account for hospital effect (i.e., nesting of data) the individual hospital variable was included.

Results

Unit characteristics within the 10 hospitals are presented in Table 2. A large number of nurses on the units were over the age of 35 (55%), with a range of 39% to 77%. The majority of nursing staff (at each hospital) were female (90%), RNs (73%), and full-time staff (82%). The majority of respondents at each hospital worked either day or rotating shifts (58%). In terms of education, the average percentage of staff on the unit holding a BSN degree or higher was 46%. Staff employed on the units were more likely to have more than 5 years' experience in their occupation (54%).

The mean missed-care score for the participating units was 1.55 ($SD = .19$). HPPD values for participating units ranged from a low of 6.5 to a high of 32.0, with the mean being 11.16 ($SD \pm 4.55$). The mean skill mix of staff on the units was 0.75 ($SD \pm .15$), with a range of 0.39 to 1.00, 1.00 being all-RN staff. The mean turnover rate was 1%, with a range of 0 to 8%. The percentage of staff expressing intention to leave was 19.2%, with a range of 0% to 64%.

Missed Care and Unit Characteristics Associated With Intention to Leave

Pearson correlations were performed (Table 3) to determine whether there were any significant relationships between the study variables. Four variables were found to be significantly related to nurse turnover: missed care, skill mix, gender, and absenteeism. Larger amounts of missed care were associated with higher turnover rates ($r = .23, p < .05$). Positive correlations were also identified for skill mix ($r = .32, p < .01$) and absenteeism ($r = .35, p < .01$). Furthermore, units with higher percentages of female staff had lower turnover rates.

Intention to leave was significantly correlated with nine variables: turnover, missed care, CMI, skill mix, education, age, experience, overtime, and absenteeism. Turnover and intention to leave were positively correlated ($r = .30, p < .05$). Larger amounts of missed care were associated with greater intention to leave ($r = .40, p < .01$). A positive correlation was found between intention to leave and several unit characteristics. The higher the CMI ($r = -.22, p < .05$) and skill mix ($r = .34, p < .01$), the greater the intention to leave among the unit staff. Education and perceived absenteeism were also significantly related to intention to leave. Specifically, greater absenteeism ($r = .40, p < .01$) and higher education ($r = .23, p < .01$) were associated with greater intention to leave. In contrast, age ($r = -.33, p < .01$), experience ($r = -.35, p < .01$), and

Table 3 Intention to Leave, RN Turnover, Missed Care, and Unit Characteristics: Correlation Matrix

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Intention to leave	–													
2. RN turnover	.30**	–												
3. Missed care	.40**	.23*	–											
4. HPPD	.02	-.07	-.32**	–										
5. CMI	.22*	.07	-.18*	.63**	–									
6. Skill mix	.34**	.32**	.01	.20*	.34**	–								
7. Education (BSN or higher)	.23**	-.09	-.08	.48**	.53**	.45**	–							
8. Gender (female)	.02	-.20*	.04	-.18	-.39**	-.24*	-.08	–						
9. Over age 35	-.33**	.04	-.03	-.00	-.18	-.08	-.36**	-.04	–					
10. Experience (more than 5 years)	-.35**	-.15	-.20*	.21*	.00	.00	-.13	-.02	.77**	–				
11. Shift (12 hours)	-.15	-.03	-.06	.33**	.25**	-.22*	.13	-.04	-.15	.01	–			
12. Full time	-.03	.10	-.02	.19*	.19*	-.11	-.16	-.21*	.16	.05	.38**	–		
13. Work hours (day shift or rotating)	.12	-.01	.18	-.08	-.09	.04	-.02	.17	-.13	-.13	.17	.19*	–	
14. Overtime	-.31**	.14	-.02	-.11	-.20*	.03	-.11	-.07	.23*	.16	-.28**	-.12	-.19*	–
15. Absenteeism	.40**	.35**	.25**	-.14	-.02	.48**	.07	-.19*	-.11	-.21*	-.10	.02	.20*	.11

* $p < .05$ ** $p < .01$

overtime ($r = -.31, p < .01$) were negatively associated with intention to leave. In other words, units whose nursing staff were older, had more years of experience, and worked more overtime were less likely to report intention to leave.

Findings from the preliminary analysis were used to identify the variables that would be included in the multivariate regression analyses utilized to determine whether missed nursing care and unit characteristics predicted intention to leave and turnover.

Predicting Nurse Turnover

The model with the dependent variable turnover considered the following independent variables: missed care, skill mix, gender, absenteeism, intention to leave, and hospital. The hospital variable was included to control for the nested data structure. The overall model accounted for 46.5% of the variation in nurse turnover ($p < .0001$) (Table 4). Gender was the only significant predictor of turnover. Specifically, a higher percentage of females on the unit was associated with lower turnover rates ($\beta = -.235, p = .010$). The predictive ability of intention to leave with regard to turnover approached significance ($p = .08$).

Predicting Intention to Leave

A second multiple regression model with the dependent variable intention to leave was computed with the following independent variables: missed care, CMI, skill mix, education (BSN or higher), age (over 35 years), experience (more than 5 years), overtime, and absenteeism

Variable	B	SE B	β	t	P
Missed care	.009	.008	.108	1.210	.230
Skill mix	.006	.016	.058	.381	.704
Gender (female)	-.062	.023	-.235	-2.647	.010
Absenteeism	-.005	.012	-.058	-.434	.665
Intention to leave	.024	.014	.174	1.745	.084
R^2	$R^2 = .465$				
$F (p)$	5.781 (.000)				
<i>Note:</i> The analysis included nine dummy variables for the study hospitals to control for their effects, but coefficients were not included in the table to respect privacy of the data.					

Table 5 Predictors of Intention to Leave					
Variable	B	SE B	β	t	P
Missed care	.181	.048	.302	3.758	.000
CMI	.007	.009	.072	.784	.435
Skill mix	.043	.129	.055	.332	.741
Education (BSN or higher)	.050	.075	.069	.662	.510
Age (over 35)	-.175	.088	-.270	-1.985	.050
Experience (more than 5 years)	.000	.078	-.001	-.009	.993
Overtime	-.215	.062	-.283	-3.479	.001
Absenteeism	.168	.078	.247	2.154	.034
R^2	$R^2 = .584$				
$F (p)$	7.284 (.000)				
<i>Note:</i> The analysis included nine dummy variables for the study hospitals to control for their effects, but coefficients were not included in the table to respect privacy of the data.					

(Table 5). The overall model accounted for 58.4% of the variation in intention to leave ($p < .0001$). Missed care, age, overtime, and perceived absenteeism were significantly associated with intention to leave. Specifically, units with higher rates of missed care ($\beta = .302, p < .0001$) and absenteeism ($\beta = .247, p = .034$) had more staff with plans to leave. However, units with nursing staff who worked overtime ($\beta = -.283, p = .001$) and were older than 35 ($\beta = -.270, p = .050$) were less likely to have staff who intended to leave. Other variables in the model were not significant predictors of the dependent variable, intention to leave.

Discussion

Turnover among nursing staff results in significant organizational costs, in addition to the potential ramifications for the quality of care delivered at the bedside. Evidence shows that a high level of turnover leads to adverse patient outcomes. Zimmerman and colleagues (2002) examined the impact of home nursing care on patient infection rates. They found that each proportionate loss of an RN increased the risk of infection by almost 30% and the risk of hospitalization by more than 80%. Another

study found that organizations with low turnover (4%–12%) had lower risk-adjusted mortality and shorter patient length of stay than organizations with moderate (12%–22%) or high (22%–44%) turnover (Gelinás & Yik-Hin Loh, 2004). Although high turnover has been associated with adverse patient outcomes (Gelinás & Yik-Hin Loh, 2004; Zimmerman et al., 2002), we do not know the specific relationship between care that a nurse is able to provide and the nurse's intention to leave (and subsequent turnover). In an attempt to better understand this relationship, the present study examined the link between missed nursing care, nurse turnover, and intention to leave.

In terms of turnover, gender was the only variable significantly related to turnover rate — other than the specific hospital where the nurses worked, which was included as a control. Specifically, units with a higher percentage of females (i.e., fewer males) had lower turnover. This finding aligns with the results of previous studies (Estryń-Béhar et al., 2007), some of which found males to be more active in seeking outside advancement opportunities (Williams, 1995). Other variables in the model (missed care, skill mix, overtime, gender, absenteeism, intention to leave) failed to show significance. In addition, several indicators identified as predictors of turnover in the literature review (i.e., workload, work schedules) failed to show an association with turnover, even in the preliminary analysis. This may be partly due to (1) the low turnover rate for this study (1%), and (2) current economic conditions in the geographic location of the study. The region in which the data were collected had very high unemployment rates, exceeding 13.1% (Bureau of Labor Statistics, 2010). Research has shown that the importance of a nurse's income to the family significantly reduces intention to leave (and potentially turnover) (Zeytinoglu et al., 2006). Due to the high unemployment rate in the region of this study, the reliance on a nurse's income for financial well-being is growing increasingly more prevalent. Estryń-Béhar and colleagues (2007) found that having children still living at home resulted in lower rates of intention to leave. This may partly explain why intention to leave was not a significant predictor of turnover in the present study. Staff with children to support may be more willing to remain in their current position even though they are unhappy with clinical practice and environmental conditions.

Units with high levels of missed care had more staff with intention to leave within 1 year. This finding supports the results of previous research (Larrabee et al., 2003; Strachota et al., 2003). Of the nurses interviewed by Strachota and colleagues (2003), 70% shared a passion for nursing, wishing to provide good patient care and to be supportive of families in crisis. Inability to provide the care they viewed as needed was a reason for leaving their position. In the present study as well, high rates of missed

care and absenteeism were associated with greater intention to leave. Nursing staff (similar to employees in other fields) want to perform at a high level (Cameron & Caza, 2004; Wooten & Crane, 2004). When that is not possible, they may be absent more often. Interestingly, units where staff worked overtime had fewer staff with intention to leave. This finding, again, could be related to the current economy (i.e., staff might have had an unemployed spouse or were seeking ways to earn more money). Furthermore, units with older staff were less likely to have nurses who expressed an intention to leave their position. This finding is consistent with the results of earlier work (Estryn-Béhar et al., 2007) indicating that older adults may be willing to remain in their current job longer due to financial concerns (Andrews, Manthorpe, & Watson, 2004) as well as perceived investment in their current organization (Strachota et al., 2003). Another reason could be the belief that a relatively advanced age will limit one's ability to secure a job elsewhere. Work schedules in the present study were not a predictor of intention to leave, although previous research supports this link (Larrabee et al., 2003).

Limitations

There are several limitations to this study. Generalizability is limited to hospitals of similar size (60 to 913 beds) located in the Midwestern region of the United States. Another limitation is that the measure of missed nursing care was based on perceptions of nursing staff. The other ways to determine actual missed care — conducting an observation study or carrying out a chart review — also have limitations (reporter bias, documentation errors). Finally, absenteeism and overtime were measured using participant self-report instead of obtaining data from attendance records. Gaudine and Gregory (2010) compared self-reported absenteeism with organizational attendance records. Although there was a tendency to underreport absences, they found a strong positive correlation, intra-class correlation, and Cronbach's alpha for the two measures.

Implications

The ability to attract and retain nursing staff in acute-care hospitals is critical for optimal patient outcomes. As confirmed by this study, the care that nursing staff are able to deliver has an impact on their intention to leave. Nurses want to provide good patient care and struggle when they are unable to do so. The findings from this study point to the need for systems and approaches that allow and encourage staff to miss less care. The development of such systems and approaches begins with knowledge about the extent and types of care being missed. Staff providing direct patient care need to be engaged in evaluating missed care (along

with other indicators) and in developing action plans to improve care. This issue must be handled in a non-punitive manner. Only through an understanding of the elements of care being missed can targeted interventions be implemented. These interventions must be co-created with direct-care providers and administrators if acceptance and sustainability of the change are to follow.

Further work is needed before we can fully understand the relationship between missed care, intention to leave, and patient outcomes. Previous work has highlighted the impact of missed elements of care on patient outcomes (Callen et al., 2004; Krishnagopalan et al., 2002). What is not clear is how these outcomes are affected by staff intention to leave and subsequent turnover. In addition, further work is needed to determine the point at which missed care affects patient and professional outcomes. Nursing care demands are increasing and in many instances require the nurse to prioritize as to which nursing tasks are essential and which ones can be eliminated. Understanding the impact of missed care (i.e., ambulation missed once vs. multiple times) on patient outcomes and nurses' sense of satisfaction may facilitate the development of further strategies for improving quality and retaining nurses in acute-care settings.

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