

Work-related Well-Being, Turnover Intention, and Completed Turnover in a Cohort of U.S. Patient Care Workers

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Running Head Title: Thriving, Burning Out and Turning Over

ABSTRACT

• **Objective:** To determine whether burnout and thriving from work affect turnover intention and actual turnover.

• **Methods:** This study used multivariable logistic regression to estimate the impact of burnout and thriving from work on turnover intention in a cohort of nurses and nursing assistants. Using administrative records of turnover, we used Cox regression to estimate the impact of these two factors on actual turnover.

• **Results:** Burnout affected both turnover intention and actual turnover, although 95% confidence limits for the effect of burnout among nursing assistants included 1.0. Thriving affected turnover intention but did not increase actual turnover.

• **Conclusions:** Using turnover intention as a proxy for actual turnover may be misleading.

KEYWORDS: burnout, thriving from work, turnover, worker well-being, hospital turnover, nursing turnover, job satisfaction

SMART Learning Outcomes

- Describe the relationship between more frequent burnout among hospital nurses and nurses' aides and both their intention to leave their job and their actual turnover.
- Describe the relationship between lower thriving from work among hospital nurses and nurses' aides and both their intention to leave their job and their actual turnover.
- Explain why using turnover intention to predict the effect of the work environment on turnover may be misleading.

INTRODUCTION

Nursing recruitment and retention remains one of the most pressing challenges in hospitals and other healthcare settings. Nursing staff turnover impacts patient care quality, workforce morale, and organizational costs.¹⁻⁴ In 2024, the national average turnover rate for nurses in hospitals was 18%, with some institutions experiencing a rate as high as 33%.⁵ Over 2019-2024, hospitals experienced an average cumulative total nursing turnover of 103%,⁵ underscoring the instability of the clinical workforce. The financial impact is substantial, with the average cost of replacing one bedside registered nurse estimated to be \$56,300.⁵

Understanding the reasons that nurses and nursing assistants leave—and the reasons that they stay—is critical. Turnover is often conceptualized as a response to the perceived balance of job demands and rewards.⁶ It reflects a worker's judgement that alternative jobs will provide a better balance of positive and negative job attributes than their current job. High workloads, inadequate staffing, and challenging working conditions can lead to burnout and job dissatisfaction.^{7,8} Conversely, opportunities for professional growth, manageable job demands, positive leadership styles, supportive unit culture and teamwork, work-life balance, and meaningful work can contribute positively to worker wellbeing.^{9,10}

Historically, research has focused on stressors that contribute to negative outcomes like burnout, poor mental health and well-being, and turnover intent.^{11,12} However, emerging evidence suggests that positive conditions at work that promote thriving may enhance work engagement, social connection, and care quality.¹²⁻¹⁴ In this study, we integrate both perspectives, examining the relationship between two indicators of job-related well-being—burnout and thriving—and their effects on turnover intent and actual turnover among nurses and nursing assistants in the hospital setting. Understanding associations between both positive and

negative work-related well-being and worker retention can inform policies, programs, and practices that affect working conditions.

Many studies solely rely on measures of turnover intent as the outcome of interest,¹⁵⁻¹⁸ versus actual turnover. Although turnover intent can be an important early indicator of retention risk,²⁴ studies have shown that turnover intention does not necessarily lead to turnover.¹⁸⁻²⁰ For example, Beecroft et al. found that 11% of new pediatric nurses had turned over among those who did not intend to leave, compared with 28% among those who intended to leave.²⁰ Changing perceptions of job opportunities, changes in the work environment, and personal factors like financial and social capital may affect the strength of this relationship.²¹ This disconnect can be due to labor market conditions, changing workplace conditions, and personal factors like financial and social capital.²¹

The purpose of this study was to examine how both positive and negative aspects of job-related worker well-being influence turnover intent and actual turnover among hospital staff. Building on prior research, we modeled both turnover intent and turnover outcomes to assess the distinct contributions of two indicators of worker well-being: burnout and thriving. Burnout captures the detrimental effects of chronic job stress,^{21,22} while thriving represents a more recently developed measure of the positive impacts of work on worker well-being.²³ We separately examine these effects on both nurses and nursing assistants in the hospital setting, offering insights across a wider range of critical hospital roles. Our primary hypotheses are:

- 1) More frequent experiences of burnout are associated with stronger intent to turn over,
- 2) Greater thriving at work is associated with a lower intent to turn over.
- 3) More frequent experiences of burnout are associated with higher actual turnover.
- 4) Greater thriving at work is associated with a lower actual turnover.

METHODS

Data

We used data from a cohort study of hospital patient care workers from two tertiary care hospitals in a large Northeast U.S. city. The cohort includes administrative data from the employer, linked with worker surveys at the individual worker level. We retained in the cohort all nurses' and nursing assistants' data at the study hospitals even among those who left the institution. The study team has periodically fielded a survey to a random sample of the cohort who worked at least 20 hours per week for the 3 months before the survey, asking workers about their working conditions, health, and wellbeing. From June 2023 through January 2024, we fielded a survey to 2,614 nurses and 895 nursing assistants. The survey was available in English, Spanish, Haitian Creole, and Portuguese, the main languages spoken within our study population. The response rates for nurses and PCA's were 46% and 49%, respectively. After data cleaning and merging with administrative data, the final sample size for this study included 1,162 nurses and 420 nursing assistants.

Exposures

Negative work-related well-being: Burnout is a well-established indicator of negative well-being, particularly in high-stress professions such as healthcare.²⁴ We measured burnout with a single-item question: "How often do you feel burned out from your work?" This is an item from the standard instrument for measuring burnout, the Maslach Burnout Inventory (MBI).²² It has been shown to be highly correlated with the emotional exhaustion domain of the MBI, and thus is suitable to use as a one-item measure.^{25,26} Feedback from a pre-survey convenience sample of hospital employees led us to add a definition of burnout to the question, as the term was not universally understood within our socioeconomically diverse, multi-lingual

sample. We added the following description: “Burnout is a feeling of physical and emotional exhaustion, due to stress from working under difficult or demanding conditions.” Response categories were on a 7-point Likert scale (Never, A few times a year or less, Once a month or less, A few times a month, Once a week, A few times a week, Every day). For analysis, we collapsed these into three categories: once a month or less, a few times a month, and once a week or more often. There were few responses in the 3 categories for burnout once a week or more, so we collapsed them. This measure has been dichotomized elsewhere,^{26,27} but we used 3 categories in the present analysis to provide additional granularity.

Positive work-related well-being: We measured thriving from work using a recently-developed scale, the Thriving from Work Questionnaire Short Form.¹² Thriving from work is a composite work-related well-being construct that is defined as the state of positive mental, physical, and social functioning in which workers' experiences of their working conditions enable them to thrive in their overall lives, contributing to their ability to achieve their full potential in their work, home, and community.²³ This is a reproducible, reliable, and valid instrument measuring work-related thriving. All 8 items were ranked on a 6-point Likert scale from (1) never to (6) always. We used a summed scoring approach as described by Peters et al.,²⁸ with scores ranging from 8-48 (higher score indicates higher levels of thriving). Cronbach's alpha was 0.84.

Hospital tenure: We measured this using the question: “How long have you worked in this hospital?” with response categories: Less than 1 year, 1-5 years, 6-10 years, 11-20 years. and more than 20 years.

Outcomes

Turnover intent: We modeled turnover intent at the time of the survey, in which we asked participants their level of agreement with the statement: “I will probably take steps to leave this job in the next year,” measured on a 5-item Likert scale from “Strongly Disagree” to “Strongly Agree.” This item is drawn from the Michigan Organizational Assessment Questionnaire.²⁹ We considered somebody as intending to leave if they answered “Agree” or “Strongly Agree.” Only 15% of nurses and 13% of nursing assistants responded in these 2 categories

Actual turnover: We extracted our measure of organizational turnover from payroll records, which indicated termination dates for those who left the hospital. We followed workers who were employed at the participating hospitals between completion of the survey and December 31, 2024. Average follow-up was 16.2 months. We did not distinguish types of turnover, so our measure includes voluntary and involuntary turnover as well as retirement.

Analysis

We first used multivariable logistic regression to estimate turnover intent as a joint function of burnout, thriving, and tenure. We generated separate estimates for nurses and nursing assistants.

We then estimated Cox proportional hazards models for actual turnover as a function of burnout, thriving, and tenure, beginning with the date of survey completion and with a censoring date of December 31, 2024, or the turnover date, whichever came first. Follow-up averaged 16.2 months (Table 1).

Given an observed association between age and both turnover intent and turnover, we also did a sensitivity analysis including age categories as independent variables. (See Supplemental Digital Content / Appendix Tables. <http://links.lww.com/JOM/C449>)

We conducted this study in accordance with the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines³⁰ and completed a STROBE checklist (Supplemental Digital Content / STROBE checklist, <http://links.lww.com/JOM/C450>). The study was approved by the Institutional Review Board of Mass General Brigham (protocol 2021P002118). Our survey included a consent page, but signatures were not required because the participants' primary risk was identification.

RESULTS

Of 1069 nurses who responded, 164 (15%) indicated that, as of the survey date, they planned to leave their jobs within the next year. (We report rates excluding missing responses.) For nursing assistants, 13% (42 of 334) indicated their intention to turn over within the next year. About 90% of both nurses and nursing assistants were women. About half of nurses and 2/3 of nursing assistants experienced burnout once a month or less, while 25% of nurses and 17% of nursing assistants experienced burnout once a week or more. Both nurses and nursing assistants reported similar levels of thriving from work. See Table 1.

Frequency of reported burnout was associated with intent to turn over. Among nurses planning to leave, about 15% reported feeling burned out once a month or less, while 61% reported feeling burned out once a week or more (Table 2). For those who planned to stay, these percentages were 55% and 19% respectively. There was a similar pattern among nursing assistants.

Thriving also was associated with turnover intent. For nurses planning to leave, the average thriving score (lower scores indicate lower levels of thriving) was 28, compared with 34 for those planning to stay. For nursing assistants, these averages were 29 and 36, respectively. However, the relationship between thriving and actual turnover was less apparent.

Nurses with 1-5 years of tenure were 45% of those who intended to leave, compared with 36% of those who intended to stay. Nurses with more than 10 years of tenure comprised 32% of those who intended to leave and 40% of those who planned to stay. The relationship of actual turnover with tenure was stronger. Nurses with 5 years of tenure or less comprised 81% of those who turned over, as compared with only 41% of those who stayed. Among nursing assistants, the relationship of turnover intent with tenure was not as clear, but the relationship with actual turnover was similar to that of nurses.

Not surprisingly, turnover intent was associated with actual turnover. Of nurses who left, 46% had planned to leave at the survey date. Of those who stayed, only 13% had planned to leave. For nursing assistants, the parallel numbers were 21% and 12%.

Tables 3a and 3b show the results of our logistic regressions to estimate turnover intent for nurses and nursing assistants. Compared with feeling burned a few times a year or less, burnout a few times a month increased nurses' intent to turn over, with an odds ratio of 2.47 (95% CI:1.44, 4.31). Nurses who reported feeling burned out at least once a week were significantly more likely to report an intent to turnover (OR=5.53, 95% CI: 3.25,9.67) The odds ratio for intent to turn over for one standard deviation increase in thriving score was 0.50 (95% CI: 0.39, 0.63). For nursing assistants, the odds ratios for burnout increased with increasing burnout frequency, but the 95% confidence intervals included 1.0. The estimated odds ratio for

thriving as a predictor of turnover intent was similar to that of the nurses, 0.48 (95% CI: 0.33, 0.68).

Tables 4a and 4b display the results of Cox proportional hazards estimation of the relationship between burnout, thriving, and actual turnover. For nurses, we see a strong relationship between burnout and actual turnover, with a HR=2.87 (95% CI: 1.35-6.10) for burnout a few times a month compared with a few times a year or less. For those experiencing burnout once a week or more, the effect was larger, HR=3.99 (95% CI: 1.80-8.83). For nursing assistants, the estimated hazard ratios for burnout a few times a month or more were about 2.0, but the 95% confidence intervals included 1.0. The effects of thriving on actual turnover did not support our hypothesis. They were close to 1.0 for both nurses and nursing assistants. Thriving among nursing assistants has an estimated hazard ratio of 0.98 (95% CI 0.71-1.36), the 95% confidence interval includes 1.0. We see an inverse gradient between tenure and actual turnover, with longer-tenured workers less likely to turn over. This may reflect the healthy worker survivor effect.³¹

DISCUSSION

The relationship between burnout and turnover intent among nurses has been well documented. This study has added to that literature in several ways. First, we have analyzed the impact of not only burnout but also thriving, a measure of the positive experience of work, on turnover intent. Second, we have measured both turnover intent and actual turnover and examined their relationship with burnout and thriving. Third, we have analyzed turnover separately among nurses and nursing assistants in a hospital setting.

This study supports the hypothesis that burnout increases risk of both turnover intent and turnover, as well as the hypothesis that workers' thriving from work is associated with lower

turnover intent for both nurses and nursing assistants. However, we do not find evidence that actual turnover in this population is associated with thriving. Given the different magnitude and significance of turnover intention and actual turnover as predicted by work-related thriving, our findings highlight the importance of focusing on actual turnover in research on effects of working conditions on turnover rather than relying on turnover intention as a proxy measure..³²

Turnover intention was consistently associated with our measures of work-related wellbeing, with those experiencing burnout a few times a month substantially more likely to plan to turn over than those experiencing burnout infrequently. Burnout at least once a week was even more strongly associated with intent to turn over. We saw the same pattern for nursing assistants, although 95% confidence intervals for burnout included the null. For both nurses and nursing assistants, higher thriving was strongly associated with lower turnover intent. These findings are consistent with the substantial literature on burnout and turnover among nurses.

This study adds information about the extent to which relationships observed among nurses extend to lower-wage nursing assistants. Our findings also suggest that burnout may be more strongly associated with turnover intention among nurses than nursing assistants. Associations between burnout and actual turnover also appear to be stronger among nurses than nursing assistants. Price has noted that available job opportunities can affect actual turnover, so this finding might be a consequence of differences in demand for nurses and nursing assistants.^{21,33} Additional research is needed to see whether these results are confirmed.

This research fills several notable gaps in the literature on healthcare workforce retention. Most prior studies have relied solely on cross-sectional measures of turnover intent, limiting our understanding of how these intentions translate into actual leaving behaviors.³⁴ By employing a longitudinal design that tracks actual turnover following measurement of wellbeing, this study

offers a more nuanced understanding of the dynamic relationship between work-related wellbeing, turnover intention, and retention. Additionally, most previous research has focused on registered nurses, with less attention paid to nursing assistants—an essential but often overlooked segment of the hospital workforce, one that has been studied primarily in nursing home settings.³⁵ Our inclusion of both patient care roles broadens the scope of understanding and highlights unique vulnerabilities and protective factors across different patient care job categories, which have historically been studied primarily in nursing home settings.³⁵ Our inclusive approach to patient care roles outside of nursing alone informs more targeted interventions aimed at improving retention across the entire nursing team.

This study has several limitations. First, burnout was assessed using a single-item measure that captured the frequency, but not the intensity, of burnout experiences. We do not know whether using a multi-item scale or an intensity-based measure would have altered our findings.³⁶

Second, the study sample was drawn from two large academic medical centers in the same city and may not be representative of nurses and nursing assistants nationwide, limiting the generalizability of our results to the broader U.S. hospital workforce. Nevertheless, the observed associations highlight the importance of considering both positive and negative job attributes in efforts to address staff turnover.

Third, the study is subject to selection bias related to the healthy worker survivor effect.³¹ ³³ Workers most affected by adverse working conditions (and thus higher levels of burnout) may have left the workforce before the survey, potentially leading to an underestimation of the relationship between burnout, thriving, and turnover outcomes. For example, nurses who are more affected by stressful working conditions are more likely to have left the hospital, leaving

behind a cohort that is less responsive to these factors and less likely to leave than more recent hires.

Fourth, our turnover outcome combined all types of departures – voluntary, involuntary, and retirement-related – because the reasons for turnover often overlap and administrative categorizations may be subjective and not reflect the motivation of the worker. Moreover, working conditions are likely to influence both voluntary exits and retirement, further supporting this inclusive approach.

In addition, burnout and thriving were measured at a single point in time. We could not assess levels of worker well-being before or after the survey. Changes in working conditions after the survey could have influenced burnout, thriving, turnover intent, and actual turnover. In addition, the job dissatisfaction mirrored by turnover intent may lead to transfer to another unit, working with others to improve working conditions, versus actually leaving the organization. Finally, conditions at work and in the labor market may change during the follow-up period. Future research using repeated measures would be valuable to capture the dynamics of these relationships over time.

Future research could address these limitations by using a validated multi-question burnout scale, by conducting research in other hospital systems or other sectors, by sampling and estimation methods that address the healthy worker survivor effect, and by measuring burnout and thriving longitudinally to better understand how temporal changes in working conditions affect turnover.

CONCLUSIONS

Turnover among healthcare providers represents a significant cost to healthcare systems and may compromise the quality and continuity of patient care. Even when health care workers

do not turn over, both burnout and thriving can affect the mental health of health care workers and the quality of care at their institutions.

This study contributes to the growing body of research on healthcare workforce sustainability by examining the relationship between worker well-being—operationalized through measures of burnout and thriving from work—and both turnover intent and actual turnover. Findings from this study underscore the role of burnout as a key driver of turnover intent, with increased frequency of burnout associated with a greater likelihood of eventual departure. Conversely, in this study, thriving from work appears to substantially reduce turnover intent, although not necessarily actual turnover. We also note that burnout, thriving, and turnover can affect patient care. Significantly, this study concludes that turnover intent may be misleading as a proxy for actual turnover in studies relating working conditions to turnover.

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ACCEPTED

Table 1. Summary statistics

Variable	Nurses (n=1162)	Nursing Assistants (n=420)
Age		
29 or younger	352 (30%)	79 (19%)
30-39 years	354 (31%)	63 (15%)
40-49 years	185 (16%)	96 (23%)
50 or older	266 (23%)	177 (43%)
Missing	5 (0%)	5 (1%)
Gender		
Women	1068 (92%)	367 (88%)
Men	71 (6%)	44 (11%)
Other	18 (2%)	4 (1%)
Missing	5 (0%)	5 (1%)
Hospital Tenure		
1 year or less	77 (7%)	45 (11%)
1-5 years	421 (36%)	165 (40%)
6-10 years	199 (17%)	68 (17%)
11 years or more	459 (40%)	134 (32%)
Missing	6 (1%)	8 (3%)
Burnout		
Once a Month or Less	520 (49%)	230 (68%)
A few times a month	278 (26%)	53 (16%)
Once a week or more	272 (25%)	56 (17%)
Missing	92 (8%)	81 (19%)
Thriving		

(mean/SD)	33.1 /6.1	35.0 /7.5
Missing	53 (5%)	50 (12%)
Actual turnover		
Yes	69 (6%)	35 (8%)
No	1093 (94%)	385 (92%)
Turnover intent		
Yes	164 (15%)	42 (13%)
No	905 (85%)	292 (87%)
Missing	93 (9%)	86 (26%)

Note: Percentages for non-missing values exclude missing values. Missing percentages are a percent of all completed surveys.

Table 2. Summary Statistics for Turnover Intent and Actual Turnover

	Nurses				Nursing Assistants			
	Turnover intent		Actual Turnover		Turnover intent		Actual Turnover	
	Yes (n=164, 15%)	No (n=905, 85%)	Yes (n=69, 6%)	No (n=1094, 94%)	Yes (n=42, 13%)	No (n=292, 87%)	Yes (n=35, 8%)	No (n=385, 92%)
Burnout								
Once a	24	493	11	509	18	205	17	213
A few tim	40	238	20	258	8	45	9	44
Once a	100	171	32	240	15	40	8	48
Missing	0	3	6 (9%)	86	1 (3%)	2	2 (6%)	79
Thriving /	28.4 /	34.1 /	30.4 /	33.3 /	29.2 /	35.9 /	34.1 /	35.1 /
Missing	2 (1%)	2	3 (4%)	50 (5%)	0	5 (2%)	1	49
Hospital								
	10 (6%)	63	12	65	9 (21%)	30	10	35
1-	73	326	43	378	16	117	18	147
6-	28	152	5 (7%)	194	10	46	3 (8%)	65
11 years	53	363	8	451	7	97	5	129
Missing	0	1	1	5	0	2	0	8
Turnover								
Yes	164	0	29	135	42	0	7	35
No	0	905	34	871	0	292	26	266

Note: Percentages for non-missing values exclude missing values. Missing percentages are a percent of all completed surveys.

Table 3a: Logistic regression estimates of nurses' turnover intention

<i>Predictors</i>	<i>Odds Ratios</i>	<i>95% CI</i>
Tenure		
1 year or less	0.85	0.37 – 1.79
1-5 years	REF	
6-10 years	1.00	0.58 – 1.68
More than 10 years	1.06	0.69 – 1.62
Burnout		
A few times a year or less	REF	
A few times a month	2.47	1.44 – 4.31
Once a week or more	5.53	3.25 – 9.67
Thriving (Z-score)	0.50	0.39 – 0.63
Observations	1061	

Note: Turnover intention, burnout, and thriving as expressed in 2023 survey response. Tenure is employment duration at the hospital at the survey date.

Table 3b. Logistic regression estimates of nursing assistants' turnover intention

<i>Predictors</i>	<i>Odds Ratios</i>	<i>95% CI</i>
Tenure		
1 year or less	3.74	1.31 – 10.61
1-5 years	REF	
6-10 years	2.02	0.77 – 5.21
More than 10 years	0.67	0.24 – 1.77
Burnout		
A few times a year or less	REF	
A few times a month	1.25	0.46 – 3.17
Once a week or more	2.30	0.93 – 5.64
Thriving (Z-score)	0.48	0.33 – 0.68
Observations	324	

Note: Turnover intention, burnout, and thriving as expressed in 2023 survey response. Tenure is employment duration at the hospital at the survey date.

Table 4a. Proportional hazards estimates of nurses' months to actual turnover

<i>Predictors</i>	<i>Hazard Ratio</i>	<i>95% CI</i>
Tenure		
1 year or less	1.75	0.91 – 3.38
1-5 years	REF	
6-10 years	0.31	0.12 – 0.78
More than 10 years	0.21	0.09 – 0.47
Burnout		
A few times a year or less	REF	
A few times a month	2.87	1.35 – 6.10
Once a week or more	3.99	1.80 – 8.83
Thriving (Z-score)	0.90	0.65 – 1.24
Observations	1068	

Note: Burnout and thriving as expressed in 2023 survey response. Tenure is employment duration at the hospital at the survey date. Actual turnover was extracted from administrative files.

Table 4b. Proportional hazards estimates of nursing assistants' months to actual turnover

<i>Predictors</i>	<i>Hazard Ratio</i>	<i>95% CI</i>
Tenure		
1 year or less	2.65	1.19 – 5.90
1-5 years	REF	
6-10 years	0.47	0.14 – 1.63
More than 10 years	0.41	0.15 – 1.13
Burnout		
A few times a year or less	REF	
A few times a month	2.07	0.89 – 4.80
Once a week or more	1.84	0.72 – 4.73
Thriving (Z-score)	0.98	0.71 – 1.36
Observations	332	

Note: Burnout and thriving as expressed in 2023 survey response. Tenure is employment duration at the hospital at the survey date. Actual turnover was extracted from administrative files.

Graphical abstract

Among nurses and nursing aides, burnout and thriving from work predicted turnover intention, but only burnout predicted actual turnover

Turnover in health care can affect patient care and is costly.



Employers sometimes survey turnover intention to see if workplace initiatives reduce turnover.



Turnover intention is an important indicator of worker well-being but may be misleading when used as a proxy for actual turnover.



Work-related Well-Being, Turnover Intention, and Completed Turnover in a Cohort of U.S. Patient Care Workers

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