

Respiratory Therapist Job Perceptions: The Impact of Protocol Use

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BACKGROUND: Demand for respiratory care services and staffing levels of respiratory therapists (RTs) is expected to increase over the next several years. Hence, RT job satisfaction will be a critical factor in determining recruitment and retention of RTs. Determinants of RT job satisfaction measures have received little attention in the literature. This study examines the use of respiratory care protocols and associated levels of RT job satisfaction, turnover intentions, and job stress. **METHODS:** Four-hundred eighty-one RTs at 44 hospitals responded to an online survey regarding job satisfaction, turnover intentions, and job stress. Random coefficient modeling was used for analysis and to account for the nested structure of the data. **RESULTS:** Higher levels of RT protocol use were associated with higher levels of job satisfaction, lower rates of turnover intentions, and lower levels of job stress. In addition, RTs with greater experience had higher levels of job satisfaction, and RTs working at teaching hospitals had lower rates of turnover intentions. **CONCLUSIONS:** The study extends prior research by examining how the use of respiratory care protocols favorably affects RTs' perceptions of job satisfaction, turnover intention, and job stress. In a time of increasing demand for respiratory care services, protocols may enhance retention of RTs. *Key words:* respiratory care; protocols; job satisfaction; turnover; empirical research; organizational study. [Respir Care 2015;60(11):1556–1559. © 2015 Daedalus Enterprises]

Introduction

Current forces affecting health-care management require an increasing supply of capable allied health providers. The increasing life expectancy and the aging population in the United States indicate the need for more health-care providers to care for individuals with a greater burden of illness. At the same time, physician shortages are projected; the Association of American Medical Colleges has

forecasted a shortage of 130,600 physicians by 2025,¹ equally comprised of specialists and primary care physicians. Finally, in the interest of standardizing and optimizing care in a cost-attentive environment, health-care organizations are increasingly designing care paths for common illnesses that call for allied health providers and nurses to practice at the top of their license. The use of respiratory care protocols is one example of utilizing respiratory therapist (RT) assessment skills in an effort to maximize their job duties within their licensure.

In the context of forces affecting health care, the Bureau of Labor Statistics has predicted that the demand for RTs will increase by 19% from 2012 to 2022, leading to an estimated 22,700 vacant positions nationwide.² This growing demand creates the need to both train new RTs and retain existing practitioners (eg, by minimizing turnover and the number of RTs leaving the health-care field). Although RT turnover has received relatively little attention, Stoller et al³ reported annual turnover rates of 3–18% in the Cleveland Clinic Health System of 9 hospitals and showed that RT turnover incurred substantial expense to the hospital system.

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Because employees' perceptions and experiences in their jobs have been shown to affect productivity and performance,⁴ respiratory care managers must consider how work design impacts RT job satisfaction and turnover intentions. A previously reported multi-hospital, survey-based report regarding determinants of respiratory care protocol use⁵ provides the basis for this more detailed analysis of the impact of respiratory care protocol use on RT job satisfaction and turnover intentions. Specifically, we examine the effect of respiratory care protocol use on RT overall job satisfaction, turnover intentions, and perceived job stress.

Methods

Sample

Acute care, non-government hospitals in the United States were included in this study. Within such hospitals, the unit of analysis was the individual hospital unit, of which 4 types were analyzed: the ICU, emergency department, adult in-patient unit, and neonatal ICU. The recruitment of hospitals and participating RTs and managers and the deployment of the online surveys were as described previously.⁵ In brief, collected data elements included RTs' perceptions of job satisfaction, turnover intentions, and job stress. Managers were queried regarding the level of protocol use within each participating hospital unit. In total, 44 hospitals with 99 units and 481 RTs were included in the analysis. The survey methodology was approved as exempt from written consent by the institutional review board of the University of South Carolina; participants granted verbal informed consent.

Data Analysis

Overall use of respiratory care protocols was measured as the percentage of subjects (0–100%) within each unit who were treated according to an RT-directed respiratory care protocol. Job satisfaction, turnover intentions, and job stress were measured using Likert scale-type responses (1 = strongly disagree, 5 = strongly agree). Additional control variables were included to account for RT experience (y) and education (bachelor's degree or higher vs associate's degree). Differing levels of experience and education may be additional reasons for variations in job satisfaction, turnover intentions, and stress. Unit controls (ICU, neonatal ICU, and emergency department) were included as binary control variables in the analysis and are interpreted in the results compared with adult in-patient units. Hospital controls for size (measured as number of beds) and teaching status (teaching vs non-teaching) were also included in the analysis. It is plausible that unit type,

QUICK LOOK

Current knowledge

The Bureau of Labor Statistics has predicted that the demand for respiratory therapists (RTs) will grow by 19% from 2012 to 2022, leading to an estimated 22,700 vacant positions nationwide. This growing demand creates the need to train new RTs and to retain existing practitioners. Annual turnover rates of 3–18% have been reported in the Cleveland Clinic Health System, demonstrating that RT turnover adds substantial expense to the hospital system.

What this paper contributes to our knowledge

In a survey of 44 hospitals and nearly 500 RTs, the use of respiratory care protocols was associated with higher RT job satisfaction, lower rates of turnover intentions, and lower levels of job stress. RTs with more experience had higher levels of job satisfaction but higher levels of job stress. RTs working at teaching hospitals tended to have lower turnover. These findings are important for recruitment and retention of the workforce.

hospital size, and teaching status may account for the differences in resources that could impact overall RT satisfaction and turnover intentions. Hospital controls for size and teaching status were retrieved from the American Hospital Association database (<http://www.ahadataviewer.com>, Accessed March 15, 2013). Details of the survey items are shown in Figure 1.

Because RTs are nested within hospital units, traditional regression methods would provide biased results.⁶ Thus, random coefficient modeling was used for analysis to account for the nested structure of the data. Stata 13 software (StataCorp, College Station, Texas) was used for analysis.

Results

Table 1 shows the results of the random coefficient models. Higher levels of protocol use ($P < .01$) and higher levels of experience ($P < .05$) were associated with higher RT job satisfaction. Furthermore, higher levels of protocol use ($P < .05$) and working at a teaching hospital ($P < .10$) were associated with lower rates of RT turnover intentions. High levels of protocol use were associated with lower levels of job stress ($P < .05$). However, working in the ICU ($P < .05$) or emergency department ($P < .05$) and greater experience ($P < .01$) increased job stress. RT education level and hospital size did not appear to impact job satisfaction, turnover intentions, or job stress.

Survey Questions [survey respondent in brackets]	
Hospital Unit: (1) ER, (2) ICU, (3) NICU, (4) Adult Inpatient	
Use of RT driven Protocols [manager] Responses 0-100% (1) What percentage (%) of patients in this unit are typically assigned orders of RT "Assess and Treat" (via RT protocol?)	
Job Satisfaction [therapist] Responses: 1 - strongly disagree to 5 - strongly agree (1) I am quite satisfied with my job in general.	
Turnover Intention [therapist] Responses: 1 - strongly disagree to 5 - strongly agree (1) I frequently think of quitting my job. (2) I am planning to search for a new job in the next 12 months.	
Job Stress [therapist] Responses: 1 - strongly disagree to 5 - strongly agree (1) I experience tension from my job. (2) Aspects of my job are a source of frustration for me.	
Education [therapist] Describe your level of education (1) Associates Degree (2) Bachelors Degree or higher	
Experience [therapist] Responses in number of years. (1) How many years have you been a respiratory therapist?	

Fig. 1. Survey questions. ER = emergency room; NICU = neonatal ICU; RT = respiratory therapist.

Discussion

There are 4 main findings of this study on respiratory care protocol use and RTs' perceptions. (1) Greater use of respiratory care protocols was associated with higher RT job satisfaction, lower rates of turnover intentions, and

lower levels of job stress. (2) RTs with more experience had greater levels of job satisfaction and, interestingly, higher levels of job stress. (3) RTs working in the ICU and emergency department tended to have higher levels of job stress compared with those working in an adult in-patient unit. (4) RTs working at teaching hospitals tended to have lower rates of turnover intentions.

In the context of a growing need for RTs, little attention has been given to determinants of RT turnover or job satisfaction. The 2014 AARC Respiratory Therapist Human Resource Study found that 64% of hospitals had turnover rates similar to the previous year, with 18% reporting increases in turnover and 18% reporting decreases.⁷ A previous study³ examined the rate and correlates of RT turnover within the Cleveland Clinic Health System. Annual turnover rates varied by hospital from 3 to 18%, and the parameter that bore the highest association with observed turnover rates was the ratio of hospital beds to RTs, with higher ratios associated with higher turnover ($r^2 = 0.61$). Although respiratory care protocols were widely used in Cleveland Clinic hospitals, neither the association between protocol use rates at specific hospitals and RT turnover rates nor an individual RT's job satisfaction was examined in the earlier study.

This study extends available research regarding determinants of RT job satisfaction by analyzing it in several ways. This is, to our knowledge, the first study to examine correlates of an individual RT's perception of job satisfaction with turnover intention and job stress. The findings suggest that a formal protocol program may be a tool for retaining RTs and may be especially important in an environment where there is competition for a constrained supply of RTs.

This study has several limitations. First, although recognizing that the hospital bed/RT ratio correlates with RT turnover rates from prior work,³ data regarding hospital bed/RT ratios were not available from participating insti-

Table 1. Results of Random Coefficient Models

Independent Variables	Dependent Variables		
	Job Satisfaction	Turnover Intentions	Job Stress
Protocol use, mean ± SE	0.004 ± 0.001*	-0.003 ± 0.002†	-0.003 ± 0.002†
Experience, mean ± SE	0.007 ± 0.003‡	-0.0002 ± 0.004	0.018 ± 0.005*
Education, mean ± SE	-0.089 ± 0.071	0.127 ± 0.098	0.137 ± 0.100
ICU, mean ± SE	-0.154 ± 0.093	0.150 ± 0.127	0.319 ± 0.137†
Neonatal ICU, mean ± SE	-0.131 ± 0.147	0.340 ± 0.204	0.257 ± 0.209
Emergency department, mean ± SE	0.089 ± 0.142	0.256 ± 0.196	0.447 ± 0.198†
Teaching hospital, mean ± SE	-0.064 ± 0.093	-0.229 ± 0.129‡	-0.109 ± 0.141
Hospital size, mean ± SE	0.0001 ± 0.0001	0.0002 ± 0.0001	0.0003 ± 0.0002
<i>n</i>	479	479	481

* $P < .01$.

† $P < .05$.

‡ $P < .10$.

tutions in this survey. Second, our findings regard RTs' stated turnover intentions, but the cross-sectional design precluded longitudinal assessment to assess actual turnover rates. Still, findings by Griffeth et al⁸ that turnover intentions correlate with actual turnover support the robustness of our findings. Also, assignments regarding protocol use were based on RT managers' reports rather than actual observation of protocol use (eg, by direct observation, query of hospital information systems). Finally, the survey instrument did not ask respondents about race, sex, or sexual orientation, so these variables were not included in the study.

Conclusions

Notwithstanding these limitations, in the context of the sparse available literature on determinants of RT turnover, our findings likely have implications for RT practice. Specifically, by showing that respiratory care protocol use is associated with benefits regarding RT turnover and job satisfaction, these results extend our understanding of the benefits of respiratory care protocols.⁹ In addition to their positive effect on allocation of respiratory care treatments, improved outcomes, and reduced costs,¹⁰⁻¹² this study suggests that respiratory care protocols can also be used to increase RT job satisfaction and reduce turnover intentions. In an environment of increasing demand and job shortages, RT job satisfaction and turnover intentions will be increasingly important to managers.

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