Respiratory Therapists' Attitudes About Participative Decision Making: Relationship Between Managerial Decision-Making Style and Job Satisfaction

Shane S Blake MA RRT, Lucy Kester MBA RRT FAARC, and James K Stoller MD MSc FAARC

BACKGROUND: Studies of non-health-care work environments indicate that non-managerial employee job satisfaction is higher in companies that use participative (as opposed to autocratic) decision making. It has not been determined whether managerial decision-making style influences job satisfaction among respiratory therapists (RTs) and which managerial decision-making style RTs prefer. METHODS: We surveyed Nebraska RTs' attitudes regarding their job satisfaction, their perceptions of their managers' decision-making styles (autocratic, consultative, and/or delegative), and which decision-making style they would prefer their managers to use. We sought to determine whether there is a significant correlation between RTs' perceptions of their managers' decision-making styles and the RTs' job satisfaction. The study population was 792 licensed and practicing non-managerial RTs in Nebraska, from which we randomly selected 565 RTs to survey. The self-administered, descriptive survey used 2 Likert scales (one for decision-making style and one for job satisfaction) and inquired about 57 items. The survey was mailed on October 1, 1999. On October 28, 1999, we sent a second mailing to RTs who had not responded. RESULTS: We received 271 responses (response rate 47.9%). The respondents were generally satisfied with their jobs (mean ± SD Minnesota Satisfaction Questionnaire score 73.46 ± 11.63). The sub-scale scores ranged from 20 ("very dissatisfied") to 100 ("very satisfied"). The respondents did not want autocratic managerial decision making (mean ± SD autocratic sub-scale score 4.29 ± 0.60). Autocratic decision making was associated with lower job satisfaction ($r = 0.49$), whereas consultative and delegative decision making were associated with higher job satisfaction ($r = -0.31$ and -0.48, respectively). RTs who worked in departments that had < 25 RT employees reported higher job satisfaction than did RTs in larger departments ($p = 0.029$). CONCLUSIONS: Our survey data indicate that (1) RTs prefer delegative and consultative managerial decision making, (2) job satisfaction was highest in departments that had < 25 RTs in the department and in which the manager practiced participative decision making. These findings offer guidance for organizing optimal work environments for RTs. *Key words: respiratory therapist, job satisfaction, personnel management decision making.* [Respir Care 2004;49(8):917–925. © 2004 Daedalus Enterprises]

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Introduction

As business has focused increasing attention on workplace and management practices that enhance employee satisfaction and productivity, the benefits of participative decision making (ie, that cultivates employee input into decisions and that recognizes the value of employee opinions) have been endorsed.[1] Studies in various organizational settings have found a moderately strong relationship between managers using participative decision making and employee job satisfaction.[2–12] But in health care surprisingly little attention has been given to the impact of managerial decision-making style or the benefits of participative decision making. The few available studies are limited to nursing, and those few studies confirm that participative decision making is associated with greater professional satisfaction and growth, less sick leave, and higher retention of hospital nurses.[13–24]

Because participative decision making offers benefits but—to our knowledge—has received no attention in respiratory care, we studied respiratory therapists' (RTs) job satisfaction and the relationship between job satisfaction and managerial decision-making style.

This study addressed 3 different decision-making styles, which represent a continuum ranging from the manager granting no influence in decision making (autocratic) to the manager's granting to others substantial influence in the decision-making process (delegative).[25] Yukl[26] defined 3 decision-making styles:

1. Autocratic: The manager makes decisions alone without asking for opinions or suggestions; employees have no direct influence on decision making; there is no participation.
2. Consultative: The manager asks for opinions and ideas and then makes the decision alone after considering suggestions and concerns.
3. Delegative: The manager gives an individual or group the authority and responsibility for making a decision; the manager usually specifies limits within which the final choice must fall, and prior approval may or may not be required before the decision can be implemented.

Methods

This study was undertaken as one of the investigators' (SB) graduate thesis, conducted in Nebraska. With the goal of characterizing non-managerial, licensed, and practicing RTs in Nebraska, a simple random sample was assembled from the roster of the Nebraska Department of Health and Human Services Regulation and Licensure Credentialing Division. Two coded mailings were sent to the survey RTs. The first was on October 1, 1999. The second mailing, on October 28, 1999, was to RTs who had not responded to the initial survey.

Survey Instrument

The survey instrument* inquired about 57 items, in 4 domains: demographic characteristics (sex, RT credentials, number of RTs working in the respondent's department, number of years as an RT, highest education level obtained, membership in professional organizations, and primary job responsibility); RTs' perceptions of their managers' decision-making styles; RTs' preferences regarding managerial decision-making style; and RTs' ratings of their own job satisfaction

The instrument used a 5-point Likert scale (1 = "strongly agree" through 5 = "strongly disagree") to assess RTs' perceptions and preferences regarding their managers' decision-making styles. Three sub-scales assessed autocratic, consultative, and delegative styles for each assessment. The instrument was developed by one of the investigators (SB), with guidance and input by Deryl Merritt and Dana Miller of Doane College, Lincoln, Nebraska, and Edwin Locke of the RH Smith School of Business, University of Maryland.

The metrics of job satisfaction were adapted from the Minnesota Satisfaction Questionnaire. The ratings on the 5-point Likert scale (5 = "very satisfied" to 1 = "very dissatisfied") were scored according to instructions from the developers of the instrument (Vocational Psychology Research, University of Minnesota).[26]

Data Analysis

Statistical analysis was conducted with commercially available software (Statistical Package for the Social Sciences, SPSS, Chicago, Illinois). We used basic descriptive statistics to analyze the respondents' perceptions of their managers' decision-making styles and the decision-making styles the RTs would prefer. To check the internal consistency of these attitudes measurements (perceived versus desired decision-making style), we evaluated Cronbach's alpha (with a criterion of reliability of alpha > 0.65). We used basic descriptive statistics to analyze the determinants of job satisfaction. We used inferential statistics (Pearson correlation coefficient) to analyze the relationship between decision-making style and job satisfaction. We used the independent Student's *t* test (differences were considered statistically significant when $p < 0.05$) and 1-way analysis of variance (differences were considered statistically significant when < 0.01) to analyze the differences in the demographic data, decision-making styles, and job satisfaction.

* Questionnaire available from corresponding author.

Table 1. Respondents' Demographic Data

Demographic	Variable	*n*	%
Sex	Male	85	31.4
	Female	186	68.6
RT certification level	RRT	192	71.1
	CRT	78	28.9
Department size (number of RTs)	≤ 5	63	23.8
	6–25	78	29.4
	26–50	85	32.1
	51–75	18	6.8
	> 75	21	7.9
Number of years as an RT	< 5	74	27.3
	6–10	68	25.1
	11–15	60	22.1
	16–20	29	10.7
	≥ 21	40	14.8
Education level	Some college	35	13.0
	Associate degree	130	48.1
	Bachelors degree	100	37.0
	Masters degree	5	1.9
Member of AARC	No	103	38.4
	Yes	165	61.6
Primary job responsibility	Hospital staff RT	153	65.1
	SNF/rehabilitation staff RT	18	7.7
	Diagnostics (eg, PFT)	6	2.6
	Sleep lab	9	3.8
	Home care	22	9.4
	Other	27	11.5

RT = respiratory therapist.
RRT = registered respiratory therapist.
CRT = certified respiratory therapist.
AARC = American Association for Respiratory Care.
SNF = skilled nursing facility.
PFT = pulmonary function testing.

Results

Table 1 summarizes the demographic data. The total population was 792 licensed and practicing non-managerial RTs in Nebraska. Based on the population size, and assuming unbiased sampling, 260 responses were needed to achieve 95% confidence that the results estimated the total population response within 5%. A total of 565 surveys were sent and 271 responses were received (response rate 47.9%).

Most respondents (186, 68.6%) were female, had achieved registered respiratory therapist (RRT) status (192, 71.1%), and worked in departments that had ≤ 50 RTs (226, 85.3%). Most respondents (202, 74.5%) had been in the profession < 15 years, were members of the American Association for Respiratory Care (165, 61.6%), and were hospital staff RTs (153, 65.11%). Approximately half (130, 48.1%) had completed an associate degree.

Respondents' Perceptions of Their Managers' Decision-Making Styles

Figure 1 shows the mean ± SD values for the decision-making styles the respondents perceived their managers to use. The mean ± SD rating of 2.53 ± 0.83 indicated that respondents perceived that their managers used consultative decision making. However, the mean ± SD ratings of 3.14 ± 0.90 for autocratic and 3.13 ± 0.72 for delegative indicated generally neutral responses about whether the managers used autocratic or delegative styles. Internal reliability was demonstrated based on the Cronbach's alpha test value of > 0.65 for each of the sub-scales.

Decision-Making Style Desired by Respondents

Figure 2 shows the mean ± SD values for the decision-making styles the respondents desired. The mean ± SD rating of 4.29 ± 0.60 indicated respondents' strong desire for managers to avoid autocratic decision making. Similarly, a mean ± SD score of 2.57 ± 0.62 suggested a moderate desire that their managers use delegative decision making. The internal reliability criterion of Cronbach's alpha > 0.65 was not satisfied for the consultative sub-scale, and these ratings were excluded from further statistical analysis.

Job Satisfaction

Figure 3 shows the responses to the individual items in the Minnesota Satisfaction Questionnaire short form. Figure 4 shows the mean ± SD score for intrinsic job satisfaction (sub-scales 12 through 60), which was 47.43 ± 6.46. Figure 5 shows the mean ± SD score for extrinsic job satisfaction (sub-scales 6 through 30), which was 18.8 ± 5.22. Figure 6 shows the mean ± SD score for general job satisfaction (sub-scale 20 to 100), which was 73.46 ± 11.63, which indicates that the respondents generally had high job satisfaction.

Correlation Between Managerial Decision-Making Style and Job Satisfaction

Table 2 shows that autocratic decision making was modestly correlated with lower job satisfaction (r = 0.49), whereas consultative (r = −0.31) and delegative (r = −0.48) decision making were modestly correlated with higher job satisfaction.

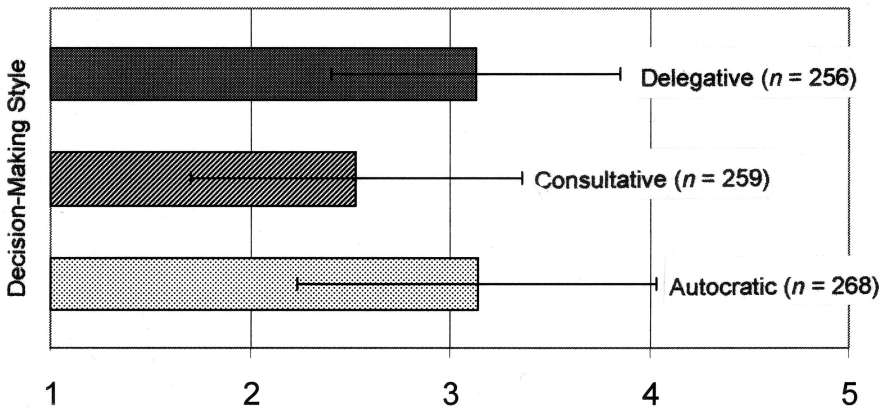

Fig. 1. Managerial decision-making styles perceived by the respondents. Mean Likert scale scores: 1 = strongly agree, 2 = agree, 3 = neither agree nor disagree, 4 = disagree, 5 = strongly disagree. The horizontal lines represent the standard deviations.

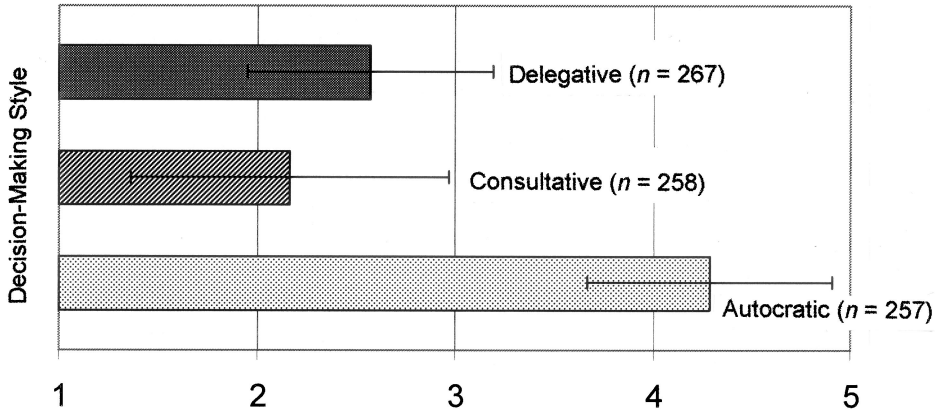

Fig. 2. Managerial decision-making styles desired by the respondents. Mean Likert scale scores: 1 = strongly agree, 2 = agree, 3 = neither agree nor disagree, 4 = disagree, 5 = strongly disagree. The horizontal lines represent the standard deviations.

Demographics, Decision-Making Styles, and Job Satisfaction

Using the perceived and desired decision-making styles and job satisfaction as dependent variables, analysis of variance showed no correlation (ie, $p > 0.05$ for all analyses, data not shown) to the independent variables: sex, credentials, education, and years as an RT. RTs who preferred delegative decision making were more commonly members of the American Association for Respiratory Care ($p = 0.03$).

RTs working in departments that had ≤ 5 RTs reported higher job satisfaction than those in departments with ≥ 26 RTs. Using post hoc cut points, Tukey's test indicated that extrinsic job satisfaction was higher in departments that had ≤ 5 RTs than in departments that had 26–50 RTs ($p = 0.008$) or 51–75 RTs ($p = 0.002$) (Table 3).

Autocratic decision making was more commonly reported in departments that had > 25 RTs than in those that had < 25 RTs. Comparison using post hoc cut points showed that RTs in departments that had 6–25 RTs reported more frequent use of consultative decision making than did RTs in departments that had 51–75 members. Similarly, RTs described delegative decision making more frequently in departments of < 5 RTs than in departments with > 25 RTs (see Table 3).

Discussion

Our main findings are:

1. The respondent RTs preferred that their managers use delegative and consultative decision making, not autocratic decision making.
2. The respondent RTs had high job satisfaction.
3. Higher job satisfaction correlated with consultative and delegative decision making; not with autocratic decision making.
4. Among the respondent RTs job satisfaction was higher in smaller departments.

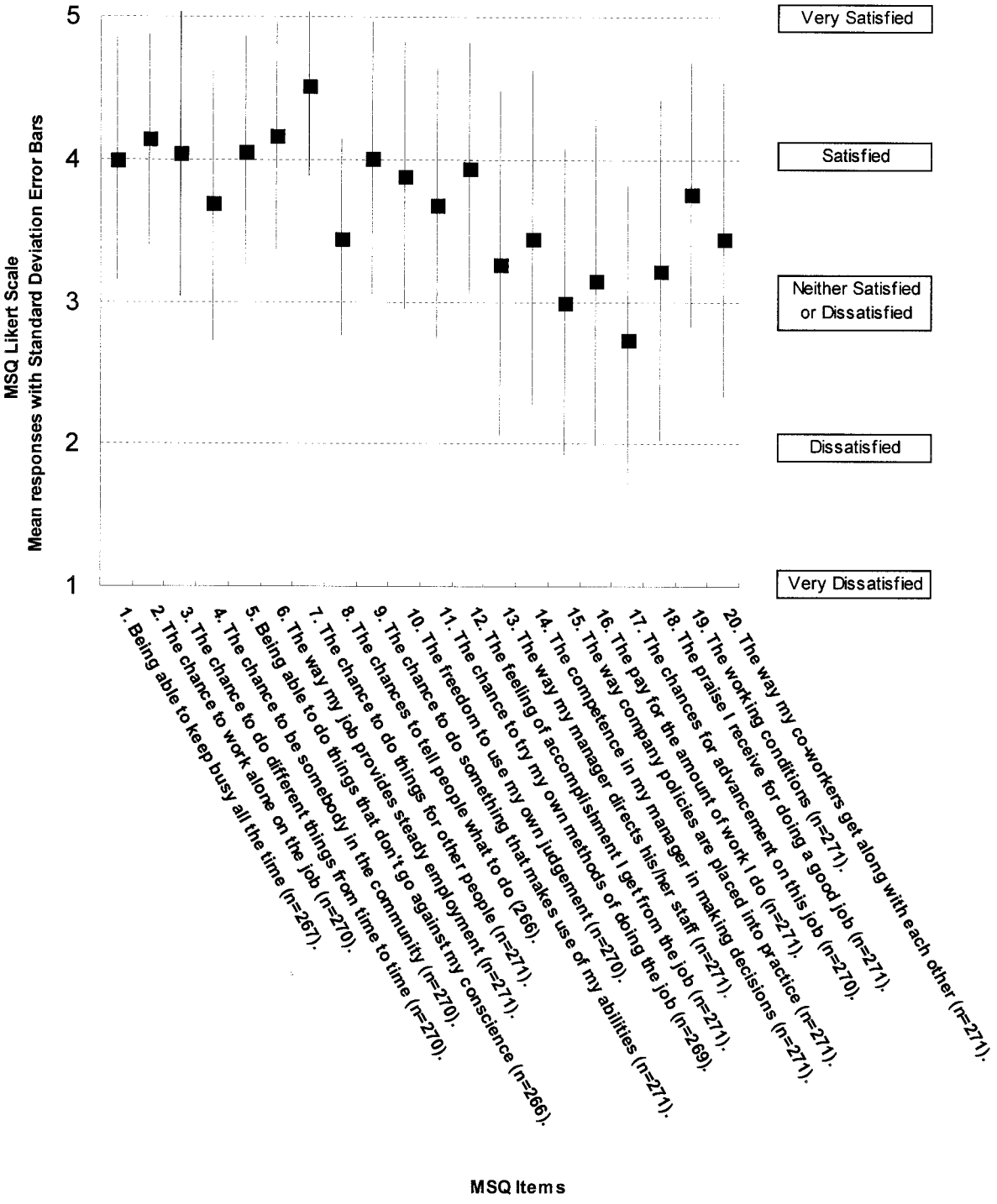

Fig. 3. Mean responses to Minnesota Satisfaction Questionnaire (MSQ) short form items. The vertical lines represent the standard deviations.

These findings that RTs prefer participative decision making and that job satisfaction is higher among RTs who are allowed to participate in decision making are consistent with observations from many non-health-care settings. Furthermore, many studies in non-health-care settings show that participative decision making is associated with better business performance.[27] For example, in examining the relationship between attention to people and shareholder wealth in 702 firms, Hueslid showed that a 1-standard-deviation improvement in a "human resources index" was associated with a $41,000 increase in shareholder wealth.[28] Welbourne and Andrews[29] found that companies that value

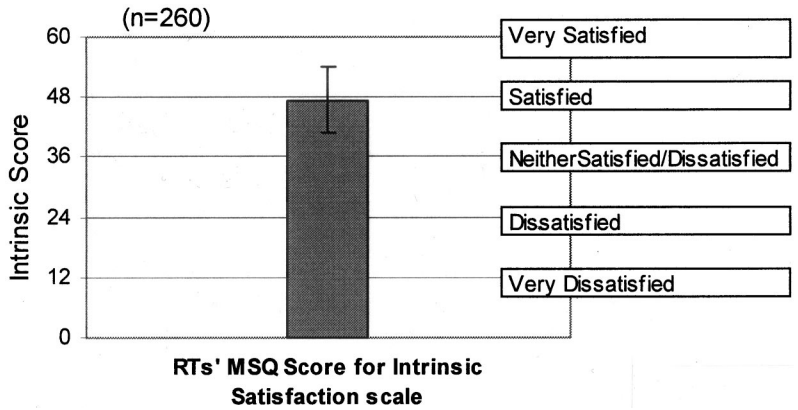

Fig. 4. Intrinsic job satisfaction score measured with the Minnesota Satisfaction Questionnaire (MSQ) short form. RTs = respiratory therapists.

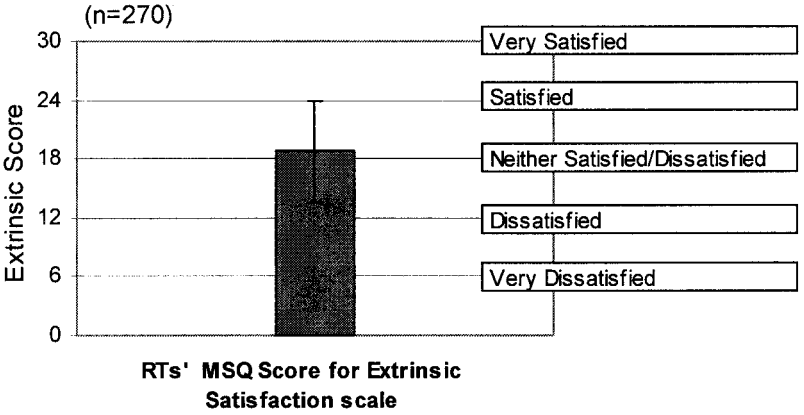

Fig. 5. Extrinsic job satisfaction score measured with the Minnesota Satisfaction Questionnaire (MSQ) short form. RTs = respiratory therapists.

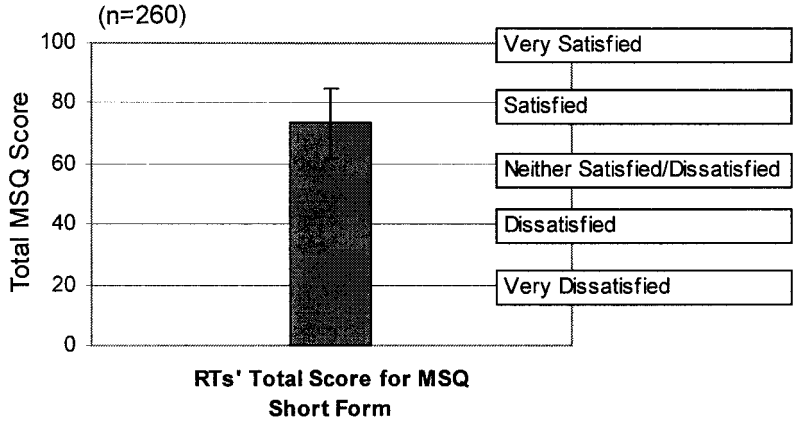

Fig. 6. Total job satisfaction score measured with the Minnesota Satisfaction Questionnaire (MSQ) short form.

their workers are more likely to survive initial public offerings. Specifically, survival probability increased by 20% for each 1-standard-deviation increase on a scale that assessed attentiveness to workers, including whether the strategy and mission statement cited employees as providing a competitive advantage, whether the company's materials mentioned employee training, whether a company official was charged with human resources management, the degree to which the company used full-time employees rather than temporary workers, the company's self-rating of its

Table 2. Correlation Between Managerial Decision-Making Style and Job Satisfaction (MSQ Scores)

	Pearson Correlation Coefficient (r)	*n*
Autocratic sub-scale scores vs MSQ scores	0.49	257
Consultative sub-scale scores vs MSQ scores	−0.30	249
Delegation sub-scale scores vs MSQ scores	−0.48	246

MSQ = Minnesota Satisfaction Questionnaire.

employee climate, and how the company rewarded people (ie, whether there were stock options, for whom, and whether there was profit-sharing and other gain-sharing programs for employees). In the automobile industry a production strategy that emphasized employee involvement and team building conferred advantages such as better quality (by 47.4%) and productivity (by 42.9%).[30] In the steel industry there was marked enhancement of business outcomes after implementation of a progressive human resources policy that included careful employee selection, job rotation, and an emphasis on team problem solving. For example, compared to more restrictive "command and control" environments, assembly lines populated by workers in more progressive settings were "on line" more often (98% vs 87% of the time), and the progressive businesses enjoyed better operating income (a 1% increase in operating time meant a $360,000/y increase in operating income).[31] In the semiconductor industry a study by Sohoni[32] showed that factories that have better ratings on a "management practices scale" (higher score for decentralized power, better employee training, more widely-shared corporate information, and gain-sharing and other employee-contingent compensation) showed substantial operational and business advantages, including lower defect density, higher line yield, and more rapid cycle time. Similarly, in the oil-refining industry Salpulkas[33] observed that implementation of teams, decentralized decision making, and sharing performance information were associated with improved well productivity: production rose from 80,000 barrels/d to 91,000 barrels/d; per-worker production rose from 150 barrels/d to 250 barrels/d. In summary, studies in various non-health-care industries strongly support the value of engaged workers for producing business

Table 3. Relationship Between Job Satisfaction, Managerial Decision-Making Style, and Department Size

Research Question	Number of RTs in the Department	*n*	Job Satisfaction Score (mean ± SD)	F	p*
MSQ total satisfaction	≤ 5	60	77.9 ± 11.4	4.4	0.002
	6–25	76	73.9 ± 12.1		
	26–50	81	71.7 ± 11.2		
	51–75	16	67.6 ± 7.0		
	≥ 76	21	69.8 ± 12.0		
MSQ extrinsic satisfaction	≤ 5†	62	20.7 ± 4.8	5.6	< 0.001
	6–25	78	19.5 ± 4.8		
	26–50†	85	17.9 ± 5.3		
	51–75†	18	15.6 ± 4.5		
	≥ 76	21	17.0 ± 6.1		
Autocratic practice	≤ 5	61	3.4 ± 1.0	4.7	0.001
	6–25	78	3.3 ± 0.9		
	26–50	85	2.9 ± 0.8		
	51–75	18	2.7 ± 0.6		
	≥ 76	21	3.1 ± 0.9		
Delegative practice	≤ 5	58	2.8 ± 0.7	6.4	< 0.001
	6–25	74	3.1 ± 0.7		
	26–50	83	3.2 ± 0.7		
	51–75	16	3.6 ± 0.7		
	≥ 76	19	3.4 ± 0.9		

RT = respiratory therapist.
*p calculated with analysis of variance.
†Post hoc Tukey's test comparison done between department sizes and extrinsic satisfaction.
MSQ = Minnesota Satisfaction Questionnaire.

advantage. As summarized by Pfeffer[31] in his book "The Human Equation: Building Profits by Putting People First," "In the information age, businesses must increasingly create and deploy intangible assets—for instance, customer relationships; employee skills and knowledge; information technologies; and a corporate culture that encourages innovation, problem solving, and general organizational improvements." He goes on to say that, "Intangible assets have become major sources of competitive advantage."[31] These management lessons and our findings in the present study suggest similar benefits in health care settings where workers are empowered by sophisticated training and certification of their advanced skills. In addition to RTs' preference for participative decision making and the benefits of higher job satisfaction found in the present study, studies show that RT-implemented respiratory care protocols, which call on professional skills specific to RTs, are associated with better outcomes, including better allocation of respiratory care services and cost savings.[34–36]

Another important finding of the present study is that the respondent RTs preferred smaller work environments. We propose several explanations. First, it may be that RTs in smaller departments are closer (than RTs in larger departments) to the organization and to the locus of decision making. Second, being in a smaller group allows each member to increase her/his job-relevant knowledge and skills, and such mastery increases job satisfaction.[37] The strong association between job satisfaction and department size recommends strategies that create small work environments, including within large RT departments. Though validation of the concept is needed, our data suggest that a strategy of specialty working groups (eg, pediatric care, intensive care, adult non-intensive-care) within large departments would allow greater mastery and closeness among colleagues.

The present study had several shortcomings. First, we conducted no independent assessment of managers' decision-making styles but instead relied on the respondents' reports, so to the extent that the respondents misperceived their managers' decision-making styles, the correlation between management style and job satisfaction may be confounded. On the other hand, RTs' *perceptions* of their managers' decision-making styles may be the most important factor, because employees' perceptions are the true drivers of workplace experience.

Second, the correlation we found between decision-making style and job satisfaction does not prove causality; that is, our findings do not establish that nonautocratic decision making creates job satisfaction. However, that similar correlations have been shown in various other work settings supports that view.[31]

Third, we did not measure productivity among the RT respondents, so the present study cannot make conclusions regarding the relationship between job satisfaction, managerial style, and employee productivity. Nonetheless, there is a strong association between job satisfaction and higher productivity in other work settings, which strengthens this hypothesis for health care settings.[31]

Finally, although our sampling method and sample size were calculated to assure that our findings represented the target population of all Nebraska RTs, we can neither exclude the possibility that our findings reflect a response bias nor assure that these results generalize to RTs everywhere. Notably, we did not fully characterize a subset of nonrespondents to determine whether they were similar to respondents, which would be necessary to determine whether the respondents were representative.

Conclusion

Our results strongly support the value of participative decision making to enhance RT job satisfaction. Further study is needed to determine whether participative decision making confers the same benefits in a health care setting that it does in other work environments, but the evidence from non-health-care settings strongly suggests that it should.

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