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Section of INPATIENT CARE PRACTITIONERS℠

Exploring Facets of Job Satisfaction Among U.S. Hospital Pharmacists

Abstract

Purpose: The first objective of this study was to summarize facet-specific and global job satisfaction scores using a previously validated, pharmacy-specific, facet-specific job satisfaction instrument. The second objective was to examine the association of each facet-specific satisfaction score with a global job satisfaction measure. The third objective was to examine the association of pharmacist and work setting characteristics with facet-specific and global job satisfactions scores.

Methods: A cross-sectional, descriptive, survey design was used to collect data. A random sample of 2,000 subjects was selected from a sampling frame of 5,606 pharmacists, identified as members of the ASHP Section of Inpatient Care Practitioners. Subjects were contacted by e-mail and asked to complete an online survey form that consisted of nine questions related to pharmacist and work characteristics and 111 job satisfaction scale items. Only respondents reporting working in a hospital were used for data analysis.

Results: A total of 481 sampled subjects responded for an initial response rate of 24.1 percent. After removing respondents that partially completed the survey (n = 82) and those not working in a hospital (n = 27), 372 responses were used for analysis. Approximately one-half of the responding hospital pharmacists reported being highly satisfied in terms of global job satisfaction. The three most important job satisfaction facets associated with global job satisfaction were Autonomy, Management, and Job Role. A respondent's position (staff or manager) and residency/fellowship status were most often significantly associated with being highly satisfied with a job satisfaction facet.

Conclusions: In general, strategies to improve hospital pharmacists' job satisfaction should focus on: (1) increasing pharmacist control over how they perform their work, (2) managing pharmacists in a knowledgeable, supportive, decisive, and responsive manner, (3) promoting diverse and challenging work duties, (4) facilitating workplace teamwork and communication, and (5) promoting work/home balance.

Introduction

Assessing job satisfaction among pharmacists working in hospitals is important for several reasons. First, job dissatisfaction is positively related to job turnover, causing a pharmacist vacancy for the employing hospital. Given the shortage of pharmacists in the US and the consequent extended time necessary to fill a pharmacist vacancy, job turnover resulting from a dissatisfied pharmacist can result in significant financial loss to a hospital. Additionally, job turnover can result in the loss of a pharmacist who possessed special skills and knowledge, which may be expensive to replace. It is estimated that job turnover can cost an employer as much as four times the employee's annual salary.1 Second, job satisfaction can have positive impacts on a pharmacists' mental, emotional, and physical health. Since much of a person's time is spent working, it is important for work to maintain a worker's health. Third, there is a link between satisfied providers and provider behaviors and a link between satisfied providers and patient behaviors and outcomes.2,3 Thus, pharmacist job satisfaction may result in greater productivity, better quality work, or more satisfied patients.

Job satisfaction traditionally is measured in two ways. The first approach is to measure job satisfaction as a facet-free construct. This approach measures a person's global job satisfaction, assessing their general or overall satisfaction rather than their satisfaction with various aspects of their job. The second approach is to measure satisfaction on several specific facets of a job. Typically the facets measured are aspects of the job that can be changed or modified in order to increase job satisfaction. Facets are categorized as intrinsic or extrinsic. Intrinsic facets are employees' perceptions of characteristics or activities related to the work that they perform (i.e. autonomy in work, interesting work, challenging work).4 Extrinsic facets are employees' values about the context or environment in which work is performed and job characteristics determined by other people or external events. (i.e. pay, benefits, workload, supervision).4 It is useful to correlate facet-specific measures with facet-free measures in order to identify what intrinsic and extrinsic facets of work contribute most to job satisfaction.

Most of the past research examining job satisfaction solely among U.S. hospital pharmacists is more than 20 years old. 5-7 The studies measured both facet-free and facet-specific aspects of job satisfaction and focused attention on whether role expansion of hospital pharmacists was related to job satisfaction. A more recent study conducted 13 years ago showed that hospital pharmacists' job satisfaction was significantly related to the number of clinical activities performed and the amount of time spent in clinical activities.8 The authors are not aware of more recent studies examining both facet-free and facet specific aspects of job satisfaction among U.S. hospital pharmacists.

Purpose

The purpose of this study was to measure job satisfaction among pharmacists working in hospital settings. The first objective was to summarize facet-specific job satisfaction scores and

facet-free (global) job satisfaction scores using a previously validated, pharmacy-specific, facet-specific job satisfaction instrument. The second objective was to examine the association of each facet-specific satisfaction score with a global job satisfaction measure. The third objective was to examine the association of pharmacist characteristics and their work settings with facet-specific job satisfactions scores and a global job satisfaction score.

Methods

DATA SOURCE

A cross-sectional, descriptive survey design was used for this study. A sampling frame of 5,606 pharmacists, identified as members of the ASHP Section of Inpatient Care Practitioners was provided by ASHP. The sampling frame consisted of section members who were not students, non-practitioners, or international members. We selected a random sample of 2,000 names from the list and each sampled pharmacist received an e-mail from ASHP that introduced the study, described the goals of the study, invited them to participate, offered an incentive of entering a drawing to win an iPod Nano® and included a link to access the online survey.

Subjects that responded and completed the online survey received a follow-up email thanking them for their contribution to the research project. Based on established survey methods, email reminders were sent to the non-responder sample subjects every two weeks for a total of three reminders to each non-responder. Data collection ran from August 1 to September 20, 2007. Qualtrics (Provo, UT) survey software was used to build, administer, and host the online questionnaire.

The online survey consisted of nine questions related to characteristics of pharmacists and where they worked and 111 job satisfaction scale items. Due to the length of the survey (i.e. 120 total questions), we developed a motivation strategy to help pharmacists complete the survey. We placed cartoons at the end of each pre-determined section. Generally, the cartoons made fun of the length of surveys and were designed to help respondents laugh about the process and keep them motivated to complete the survey. A total of four cartoons were used.

VARIABLES

The survey contained nine variables describing pharmacists and where they worked. The inclusion of the variables was based on hypothesized relationships with job satisfaction and a desire to reduce respondent burden. Variables describing respondents included gender, years of experience working in hospital pharmacy, years with current employer, position (management, staff, other), whether or not the respondent had completed a residency or fellowship, and highest degree earned. The variable describing work settings was number of beds.

Job satisfaction was measured using a previously validated, pharmacy-specific, facet-specific job satisfaction instrument. The instrument was developed by the authors in four phases (Churchhill, 1979). A brief description of the development of the instrument is below.

JOB SATISFACTION INSTRUMENT DEVELOPMENT

In the first phase, we developed a list of job satisfaction facets and scale items used to measure each job satisfaction facet. To create the list, we reviewed the pharmacist, nurse and physician job satisfaction literature to identify studies that measured specific facets of job satisfaction. Facets were identified and scale items used to measure each facet were examined. We reviewed the list of facets and developed a working model of pharmacist job satisfaction that we felt was most relevant to current pharmacy practice. The preliminary study model contained 18 facets of job satisfaction and 193 items measuring the facets, including seven items measuring two global constructs: global job satisfaction and career satisfaction.

In the second phase, four expert focus groups reviewed the list of facets and items developed in phase one for appropriateness, redundancy, and incompleteness. One focus group consisted of the Executive Committee of the ASHP Section of Inpatient Care Practitioners (n = 3) and a second consisted of current hospital pharmacy practitioners (n = 6). The remaining two focus groups (n = 5 and 5) were virtual focus groups consisting of randomly selected members of the ASHP Section of Inpatient Care Practitioners. Members of the focus groups were instructed to read, evaluate, and comment on each item in the list. Thirteen items were identified for removal from the list of 193 items. After this phase the initial study instrument consisted of 180 items measuring 18 facets of job satisfaction and eight items measuring the two global facets.

The third phase of instrument development involved surveying pharmacists and having them rate each item in the initial study scale. We developed an online survey form containing the 180 items and nine demographic questions. Each satisfaction item was evaluated using a five-point Likert-type scale (1 = Very Strongly Disagree, 2 = Strongly Disagree, 3 = Neither Disagree nor Agree, 4 = Strongly Agree, 5 = Very Strongly Agree). There was a mix of positively and negatively worded items to avoid biasing responses. The sampling frame for the survey was provide by ASHP and consisted of 7,106 individuals who were considered members of the ASHP Section of Inpatient Practitioners. A random sample of 1,500 individuals was selected. Each sampled pharmacist received an email invitation from ASHP that introduced the study, described the study goals, invited participation in the study, and provided a link for accessing the online survey. Email reminders were sent to non-responder sample subjects every two weeks (Dillman 2001). The survey was conducted between May 1 and June 29 of 2007. Qualtrics (Provo, UT) survey software was used to build, administer, and host the online questionnaire.

A total of 278 sampled subjects responded for an initial response rate of 18.5%. After removing respondents that partially completed the survey, the final usable number of responses used for analysis was 247. All scale items that were negatively scored were reverse coded. To examine the dimensionality of each proposed facet, the items within each proposed facet were subject to factor analysis using principle components extraction and varimax (oblique) rotation. Kaiser's

eigenvalue rule and Cattell's scree test were used to determine the number of factors within the job satisfaction scale. Items were retained if they had a loading of at least .40 and cross-loadings of less than .30. The reliability of the resulting scales was assessed using coefficient alpha. The resulting modified job satisfaction scale consisted of 111 items representing 18 facets. Three of the items represented the global job satisfaction scale and an additional three items represented the global career satisfaction scale.

The fourth phase of instrument development involved collecting scale ratings from a second sample of pharmacists to further refine the modified job satisfaction scale. An online survey was created by the authors using the 111-item modified scale and included the same nine demographic questions as in the first data collection. Each satisfaction item was evaluated using a five-point likert-type scale (1 = Very Strongly Disagree, 2 = Strongly Disagree, 3 = Neither Disagree nor Agree, 4 – Strongly Agree, 5 = Very Strongly Agree). There was a mix of positively and negatively worded items to avoid biasing responses. The sampling frame used for the second data collection was a list of 5,606 individuals that were not sampled to be a part of the first data collection. A total of 2,000 subjects were randomly sampled to participate in the survey. The survey methods used for the second data collection followed those used in the first data collection. The survey was conducted between August 1 and September 2007. Qualtrics (Provo, UT) survey software was used to build, administer, and host the online questionnaire.

A total of 481 sampled subjects responded for an initial response rate of 24.1 percent. After removing respondents that partially completed the survey, the final usable number of responses used for analysis was 399. We used the procedures described above to refine of the job satisfaction instrument. The final exploratory factor analysis using data from the second data collection identified 12 individual facets (54 items) and two global facets (6 items). The 12-factor solution accounted for 65.9% of the variance in pharmacists' responses to facet-specific satisfaction measures. One of the facets (technology) consisted of two items. All but two (job role and staffing) of the remaining 10 facets had internal consistency reliabilities that were in the acceptable range. (Appendix 1).

Sample

The sample used for this analysis was pharmacists who responded to the survey and reported working in hospital settings. To identify respondents working in hospitals, we used a respondent's answer to the question about number of beds in the hospital where they were employed. One of the choices for this question was not applicable. We excluded respondents who selected not applicable, assuming this answer meant they were not working in a hospital.

Data Analysis

The first step in data analysis was describing the sample of respondents in terms of individual characteristics and work settings. Frequencies and proportions were calculated for the sample of respondents. The second step in data analysis was summarizing the 12 purified facet-specific job satisfaction scores and the purified global job satisfaction scores for the sample. We examined the number of items in each final facet and global scale as well as the facet and global scale mean, the range of facet and global scale scores, the proportion of respondents who were highly dissatisfied (i.e. answered each item in the scale either 1 (Very Strongly Disagree) or 2 (Strongly Disagree)) with the facet or globally, and the proportion of respondents who were highly satisfied (i.e. answered each item in the scale either 4 (Strongly Agree) or 5 (Very Strongly Agree)) with the facet or globally.

To examine the association of each of the 12 job satisfaction facets with global job satisfaction, we used ordinary least squares regression with all of the facet scores as independent variables and global job satisfaction as the dependent variable. We did not transform the independent or dependent variables. We examined the importance of each facet to the global measures using the standardized (Beta) regression coefficient.

The final component of data analysis was examining job satisfaction scores by pharmacist characteristics and work setting characteristics. The proportion of respondents who were highly satisfied with each facet-specific and global satisfaction score was determined for each characteristic variable and chi-square tests were used to test for statistically significant associations across levels of the characteristics. Also, logistic regression was used to examine the association of respondent characteristic variables with being highly satisfied with each of the 12 job satisfaction facets and the global job satisfaction measure. The dependent variable for each logistic regression model was a dichotomous variable showing whether a subject was highly satisfied or not. The definitions of highly satisfied were as described above.

Results

Of the 399 respondents to the fourth data collection phase, a total of 27 were excluded because they reported the number of beds at the hospital where they worked as not applicable. A total of 54.8% of respondents were female and 48.1% of respondents reported that their highest degree was the PharmD.(Table 1) A significantly higher proportion of females (52.7%)) reported the Pharm.D. as their highest degree compared to males (39.1%). Pharmacists classified as managers reported jobs such as director, supervisor, assistant director, coordinator, or consultant. A significantly lower proportion of females (36.4%) reported being in management positions compared to men (57.0%). A significantly higher proportion of females (31.1%) reported having nine or fewer years of experience in hospital pharmacy compared to men (15.6%). Conversely, a significantly smaller proportion of females (14.5%) reported having 30 or more years of experience in hospital pharmacy compared to men

(33.5%). Of pharmacists who reported working in hospital pharmacy for 9 or fewer years, over half (55.7%) had completed a residency or fellowship.

Overall, approximately one-half of the responding hospital pharmacists reported being highly satisfied in terms of global job satisfaction (Table 2). The greatest proportion of respondents were highly satisfied with Work Environment – Technology (65.7%), Relationships with Technicians (57.0%), and Relationships with Health Professionals (49.7%). The smallest proportion of respondents were highly satisfied with Work Environment – Staffing (2.7%), Extrinsic Rewards – Work/Home Conflict (12.6%) and, Work Environment – Space (26.9%).

Table 3 summarizes the results of regression analysis examining the association of the job satisfaction facets with global job satisfaction. In terms of correlations between the job satisfaction facets, there were four bivariate correlations that were correlated above 0.4: Job Role and Autonomy, Relationships with Patients and Relationships with Health Professionals, Management and Relationships with Technicians, and Management and Job Role. The three most important job satisfaction facets associated with global job satisfaction were Autonomy, Management, and Job Role.

A respondent's position and residency/fellowship status were the two respondent characteristics that were most often significantly associated with a respondent being highly satisfied with a job satisfaction facet (Table 4). For 7 of the 12 job satisfaction facets, a greater proportion of respondents in management positions were highly satisfied relative to staff pharmacists. Also, respondents who completed a residency/fellowship were significantly more likely to be highly satisfied with four of the 12 job satisfaction facets relative to respondents who had not completed a residency/fellowship. In terms of Global Job Satisfaction, respondents in management positions were significantly more likely to be highly satisfied relative to respondents in staff positions.

Table 5 contains the results of logistic regression models estimated for each job satisfaction facet and global job satisfaction. The dependent variable in each model was whether a respondent reported being highly satisfied with the corresponding facet-specific or global job satisfaction measure. The regression coefficients represent odds ratios of being highly satisfied controlling for the variables in the model. For example, for the Autonomy facet, the odds ratio for a PharmD degree (1.67) suggests that respondents earning a PharmD degree as their highest degree were 1.67 times more likely to be highly satisfied with Autonomy compared to respondents earning a BS degree as their highest degree controlling for the other variables in the model.

Respondents in staff positions were significantly less likely to be highly satisfied with five satisfaction facets (Relationships with Health Professionals, Relationships with Technicians, Relationships with Patients, Management, and Community) relative to respondents in management positions. A respondent's years with current employer and years experience in hospital pharmacy were significantly associated with four of the 12 job satisfaction facets. Generally, respondents with 10 or more years with their current employer were significantly

more likely to be highly satisfied with three satisfaction facets (Relationships with Health Professionals, Work Environment-Technology, and Community) relative to respondents with 0-3 years with their current employer. There was no consistent pattern of association between years of experience in hospital pharmacy and the likelihood of being highly satisfied for the job satisfaction facets.

Whether a respondent completed a residency/fellowship and hospital bedsize were significantly associated with three of the 12 satisfaction facets. Respondents who completed a residency/fellowship were significantly more likely to be highly satisfied with Relationships with Health Professionals, Relationships with Patients, and Job Role relative to respondents who had not completed a residency. There was no consistent pattern of association between hospital bedsize and the likelihood of being highly satisfied for the satisfaction facets. Respondents earning a BS degree as their highest degree were significantly less likely to be highly satisfied with Autonomy and Work Environment-Technology. In terms of global job satisfaction, respondents in staff positions were significantly less likely to be highly satisfied relative to respondents in management positions.

Discussion

Hospital pharmacists' job satisfaction is important to assess due to the potential financial impacts for a hospital, the potential impacts on pharmacists' health, and the potential impacts on quality of patient care provided by dissatisfied pharmacists. Our results suggest that approximately one-half of hospital pharmacists reported high levels of global job satisfaction. It is difficult to compare our results to other, recent studies of hospital pharmacists due to a lack of published studies. One study showed that the proportion of hospital pharmacists across the US who rated their global satisfaction as high increased from 63% in 2000 to 81% in 2004.10 Whether our results suggest a declining trend in hospital pharmacist job satisfaction is an important area for future research.

An advantage of coupling facet-specific job satisfaction measures with global job satisfaction measures is the ability to determine job characteristics that are associated with job satisfaction. Our results suggest that job satisfaction is influenced by by a mix of intrinsic and extrinsic job factors. In general, strategies to improve hospital pharmacists' job satisfaction should focus on: (1) increasing the control pharmacists have over how they perform their work, (2) managing pharmacists in a knowledgeable, supportive, decisive, and responsive manner, (3) providing an opportunity for pharmacists to perform diverse and challenging duties, (4) facilitating teamwork and communication between pharmacists, physicians and nurses, and (5) promoting balance between pharmacists' work life and family life. It is not surprising that several of the important factors in increasing pharmacist motivation center on characteristics of the job that pharmacists perform and establishing a supportive environment to perform tasks. Professionals desire to perform duties they find most stimulating and to perform those duties in a manner they feel is necessary. Additionally, pharmacists need supportive, knowledgeable

supervisors that will allow pharmacists to practice pharmacy in a manner that is consistent with the way the pharmacist wants to practice. The ability of supervisors to reduce pharmacists' ambiguity about their roles by providing feedback and providing praise has been shown to be positively related to pharmacist job satisfaction.11

A total of 41.4%, 39.0% and 12.5% of pharmacists reported being highly satisfied with Autonomy, Job Role, and Work/Home Conflict, respectively. Modifying and managing pharmacy work environments to improve autonomy, job role and work/home conflict likely is difficult in hospitals due to workplace constraints. Chief among the constraints is the pharmacist shortage. It may be very difficult to hire an adequate number of pharmacists to handle distributional activities as well as provide an opportunity for pharmacists to be involved in direct patient care activities. An important question is whether it is becoming harder to increase satisfaction among pharmacists due to constraints? What strategies to improve pharmacists' satisfaction in terms of autonomy, job role and work/home conflict have been most successful? It would be useful for researchers to examine these best practices in hospitals that are doing the best job of motivating pharmacists. Identifying magnet hospitals in terms of success in managing pharmacists would be one strategy to begin to identify and share these best practices.

We included characteristics of pharmacists and the employing hospital to examine whether any of these characteristics were associated with global satisfaction or facets of satisfaction. A pharmacists' position in a hospital was significantly associated with being highly satisfied with job satisfaction facets and global job satisfaction more frequently relative to other characteristics. Consistent with past research, pharmacists who reported holding a management position in their hospital were more frequently significantly highly satisfied with job satisfaction facets and global job satisfaction relative to staff pharmacists.6,12 One explanation for the differences between management and staff pharmacists is they likely do not engage in the same activities, or may not spend the same amount of time in similar activities in the hospital and likely report to different supervisors. Thus, the comparability of their reaction to various facets in their work environments is questionable. Future research with facet-specific job satisfaction data could explore results separately for management and staff pharmacists and compare conclusions derived from the data.

Pharmacists who had received residency/fellowship training were significantly more likely to be highly satisfied with three facets important to global job satisfaction (Relationships with Health Professionals, Relationships with Patients, and Job Role) relative to pharmacists who had not received residency/fellowship training. It is unknown whether this result is consistent with past research. It is possible that residency/fellowship training allows pharmacists to specialize in a desired practice area and possibly accomplish that activity in the manner in which they desire. The fact that satisfaction is higher for residency/fellowship trained pharmacists is an additional benefit of this type of training. Future research could explore job satisfaction data separately for pharmacists who do and do not have residency/fellowship training to better understand differences between these pharmacists.

Our results suggest there is no significant difference between men and women pharmacists in terms of the facet-specific and global job satisfaction measures. Past research showed that among pharmacists in all practice settings, women reported significantly higher job satisfaction relative to men.13 If the gap between men and women in job satisfaction has closed, an important question is whether job satisfaction for women has decreased or job satisfaction for men has increased to close the gap. Future research could examine the importance of job facets on overall job satisfaction scores for men and women pharmacists separately to see whether men and women value aspects of their job differently. This is an important issue given the current and future trend of a larger proportion of women pharmacists in the pharmacist workforce.14

Limitations

Several limitations of this study should be addressed to highlight sources of bias. First, the response rate to the surveys was low. Of concern is whether the likelihood of response is random or depends on how satisfied a pharmacist was with their job. We could not assess non-response bias using information about non-responders. Given the length of both surveys, we anticipated low response rates and tried to encourage response. Caution should be used when attempting to generalize the results.

Several of the facet-specific satisfaction scales were highly skewed suggestive of ceiling effects. The skewed data influenced how we classified respondents as highly satisfied or dissatisfied. Future research using the scales should consider using either 7- or 10-point rating scales in an attempt to temper the ceiling effects. Additionally, research could focus on developing different items that better discriminate levels of job satisfaction.

Conclusion

Overall, about one-half of hospital pharmacists reporting being highly satisfied with their jobs. Pharmacists' satisfaction with the autonomy and control they have in how they perform their work, their satisfaction with how they are managed, and their satisfaction with the activities they perform in their job role were the three most important facets of their jobs associated with their overall job satisfaction. Pharmacists in management positions can use these results to attempt to influence pharmacist job satisfaction. Future research could use the scales developed in this study for additional samples of pharmacists as well as examine the relationships between job facets and overall job satisfaction for specific sub-groups of pharmacists such as management and staff pharmacists, men and women pharmacists, and pharmacists who have and have not received residency/fellowship training.

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Table 1

Sample Characteristics

	N (%)
Gender	
Male	168 (45.2)
Female	204 (54.8)
Years Experience Practicing Hospital Pharmacy	
0-9	93 (25.0)
10-19	87 (23.4)
20-29	109 (29.3)
>29	83 (22.3)
Years with Current Employer	
0-3	111 (29.8)
4-9	104 (28.0)
10-19	83 (22.3)
>19	74 (19.9)
Position	
Management	166 (44.6)
Staff	206 (55.4)
Bedsize	
100 or fewer	41 (11.0)
101-300	105 (28.2)
301-500	83 (22.3)
Greater than 500	84 (22.6)
Unknown	59 (15.9)
Completed Residency/Fellowship	
Yes	136 (36.6)
No	236 (63.4)
Highest Degree Earned	
BS	113 (30.4)
PharmD	179 (48.1)
Other	80 (21.5)

Note: Management positions included directors, supervisors, assistant directors, coordinators, or consultants.

Table 2

Summary of Facet-Specific Satisfaction Scores and Global Satisfaction Scores

Facet	# of items	Scale Mean (SD)	Scale Score Range	% Highly Satisfied	% Highly Dissatisfied
Work environment – technology	2	7.6 (1.8)	2-10	67.5	7.8
Relationships with technicians	3	11.2 (2.2)	3-15	57.0	3.3
Relationships with health professionals	8	31.2 (4.9)	15-40	53.2	0.5
Community	3	11.0 (2.5)	3-15	49.7	7.5
Relationships with patients	3	10.9 (2.0)	6-15	42.2	1.3
Autonomy	3	10.5 (2.3)	3-15	41.4	6.2
Job role	4	14.3 (2.6)	6-20	39.0	3.0
Management	10	34.6 (8.3)	10-50	33.1	6.5
Extrinsic rewards - pay	5	16.4 (4.4)	5-25	31.5	12.9
Work environment – space	4	12.6 (3.6)	4-20	26.9	16.9
Extrinsic rewards – work/home conflict	6	17.8 (4.9)	6-30	12.6	17.2
Work environment - staffing	3	7.1 (2.1)	3-14	2.7	40.1
Global job satisfaction	3	11.0 (2.5)	3-15	49.7	5.6

Note: The items used to measure each facet are listed in Appendix 1. The scale used for each item was a 5-point Likert scale with 1= Strongly Disagree, 2 = Disagree, 3 = Neither Disagree nor Agree, 4 = Agree, 5 = Strongly Agree. Highly Satisfied was defined as rating each item in a facet as Agree (4) or Strongly Agree (5). Highly Dissatisfied was defined as rating each item in a facet as Strongly Disagree (1) or Disagree (2).

Table 3

Regression Results: Association of Facets with Global Job Satisfaction

Facet	Beta	t-statistic
Autonomy	.233	4.93**
Management	.185	3.80**
Job role	.167	3.58**
Relationships with patients	.162	3.55**
Community	.139	3.20**
Relationships with health professionals	.104	2.10**
Extrinsic rewards – work/home conflict	.103	2.30**
Relationships with technicians	.006	.12
Extrinsic rewards - pay	.004	.09
Work environment – technology	-.003	-.06
Work environment – space	-.031	-0.66
Work environment - staffing	-.069	-1.65*
Adjusted R2	.44	

*p < 0.10, ** p < 0.05

Table 4

Proportion of Pharmacists Highly Satisfied with Each Satisfaction Facet by Pharmacist Characteristics

	Facet						
	Auto	R-HCP	R-Tech	R-Pts	Pay	Wrk/Hm	Role
Gender							
Male	40.5	53.6	60.7	41.1	35.1	12.5	37.5
Female	42.2	52.9	53.9	43.1	28.4	12.7	40.2
Years Experience Practicing Hospital Pharmacy							
0-9	48.4	48.4	49.5	37.6	24.7	16.1	40.9
10-19	46.0	51.7	54.0	37.9	33.3	10.3	41.4
20-29	35.8	52.3	57.8	42.2	31.2	11.9	38.5
>29	36.1	61.4	67.5	51.8	37.3	12.0	34.9
Years with Current Employer							
0-3	38.7	44.1*	51.4	43.2	27.0	15.3	36.0
4-9	42.3	52.9*	60.6	36.5	27.9	14.4	41.3
10-19	45.8	56.6*	55.4	42.2	36.1	8.4	44.6
>19	39.2	63.5*	62.2	48.6	37.8	10.8	33.8
Position							
Management	45.2	59.6**	65.7**	47.6**	36.1**	9.6	36.7
Staff	38.3	48.1**	50.0**	37.9**	27.7**	15.0	40.8
Bedsize							
100 or fewer	31.7	56.1	75.6	43.9	36.6	17.1	41.5
101-300	37.1	46.7	55.2	34.3	26.7	16.2	39.0
301-500	49.4	54.2	53.0	43.4	32.5	9.6	45.8
Greater than 500	44.0	57.1	53.6	50.0	36.9	11.9	36.9
Unknown	40.7	55.9	57.6	42.4	27.1	8.5	30.5
Completed Residency/Fellowship							
Yes	50.0**	60.3**	50.7*	49.3**	30.1	12.7	45.6**
No	36.4**	49.2**	60.6*	38.1**	33.8	12.5	35.2**
Highest Degree Earned							
BS	28.3**	48.7	63.7	38.9	30.1	12.4	33.6
PharmD	45.8**	55.3	52.0	42.5	29.1	14.5	41.3
Other	50.0**	55.0	58.8	46.2	38.8	8.8	41.2

*p < 0.10, chi-square test

** p < 0.05, chi-square test

Note: Significant results suggest an association between the particular pharmacist characteristic and being highly satisfied on the corresponding satisfaction facet.

Table 4 cont.

Proportion of Pharmacists Highly Satisfied with Each Satisfaction Facet by Pharmacist Characteristics

	Facet					
	WE Space	WE Tech	Staff	Mgmt	Comm	Global Job Sat
Gender						
Male	27.4	68.5	4.2	38.1*	51.2	50.6
Female	26.5	66.7	1.2	28.9*	48.5	49.0
Years Experience Practicing Hospital Pharmacy						
0-9	23.7	75.3	3.2	28.0	46.2	49.5
10-19	25.3	64.4	5.7	27.6	48.3	42.5
20-29	26.6	69.7	0.9	35.8	48.6	51.4
>29	32.5	59.0	1.2	41.0	56.6	55.4
Years with Current Employer						
0-3	23.4	59.5	1.8	34.2	40.5**	45.9
4-9	28.8	70.2	3.8	32.7	40.4**	44.2
10-19	21.7	67.5	3.6	32.4	60.2**	56.6
>19	35.1	75.7	1.4	33.1	64.9**	55.4
Position						
Management	31.3**	65.1	3.0	43.4**	57.8**	57.8**
Staff	23.3**	69.4	2.4	24.8**	43.2**	43.2**
Bedsize						
100 or fewer	26.8	65.9	0.0	39.0	58.5	51.2
101-300	28.6	60.0	3.8	30.5	47.6	53.3
301-500	26.5	68.7	2.4	28.9	55.4	47.0
Greater than 500	21.4	73.8	1.2	40.5	47.6	46.4
Unknown	32.2	71.2	5.1	28.8	42.4	50.8
Completed Residency/Fellowship						
Yes	27.2	66.2	2.9	35.3	52.2	54.4
No	26.7	68.2	2.5	31.8	48.3	47.0
Highest Degree Earned						
BS	28.3	60.2	1.8	31.9*	49.6	46.0
PharmD	24.0	70.9	3.9	29.1*	46.9	48.6
Other	31.2	70.0	1.2	43.8*	56.2	57.5

*p < 0.10, chi-square test

** p < 0.05, chi-square test

Note: Significant results suggest an association between the particular pharmacist characteristic and being highly satisfied on the corresponding satisfaction facet.

Table 5

Logistic Regression Results

	Facets						
	Auto	R-HCP	R-Tech	R-Pts	Pay	Wrk/Hm	Role
Constant	1.08	2.03*	3.89**	1.14	.65	.05**	.38**
Years with Current Employer							
4-9	1.32	1.52	1.47	.75	1.05	.92	1.36
10-19	1.81*	1.76*	1.17	.87	1.43	.55	1.60
>19	1.69	2.24**	1.11	.98	1.56	.77	1.16
Years Experience							
10-19	.78	1.06	.99	1.21	1.32	.82	.98
20-29	.53*	1.09	1.16	1.51	1.15	.98	1.04
>29	.47*	1.57	1.69	2.28**	1.34	1.14	.87
Staff	.73	.64*	.57**	.66*	.79	1.73	1.28
Bedsize							
101-300	.89	.59	.48*	.62	.55	.91	.66
301-500	1.60	.84	.45*	.99	.76	.50	.86
Greater than 500	1.01	.85	.48	1.21	.82	.69	.50
Unknown	1.29	.80	.51	.79	.53	.42	.47*
Female	1.12	1.14	.93	1.33	.84	.88	1.05
Residency/fellowship	1.37	1.64*	.80	1.60*	1.32	.97	1.67*
Highest Degree Earned							
PharmD	1.67*	1.39	.83	1.20	1.01	1.19	1.17
Other	2.52**	1.11	.82	1.01	1.28	.76	1.62

Note: Numbers are odds ratios. Confidence intervals are available on request. The reference group was a pharmacist with 0-3 years with their current employer, 0-9 years of experience in hospital pharmacy, in a management position, working in a hospital with 100 or fewer beds, male, with no residency/fellowship experience, and earning a BS degree.

*p < 0.10, ** p < 0.05

Table 5 cont.

Logistic regression results

	Facets					
	WE Space	WE Tech	Staff	Mgmt	Comm	Global Job Sat
Constant	.59	1.90	.001	1.42	2.29**	2.22**
Years with Current Employer						
4-9	1.41	.87**	2.50	.94	1.09	1.09
10-19	.95	2.07**	3.30	.89	3.12**	2.31**
>19	1.69	3.77**	3.50	.57	3.82**	1.55
Years Experience						
10-19	1.05	.44**	1.03	.94	.66	.50**
20-29	.96	.45**	.12	1.71	.55*	.82
>29	1.12	.24**	.15	1.83	.69	.84
Staff	.73	1.31	.73	.47**	.61**	.58**
Bedsize						
101-300	1.06	.55	2.31	.69	.53	.93
301-500	1.01	.76	2.41	.71	.72	.70
Greater than 500	.68	.92	2.63	1.10	.44*	.58
Unknown	1.25	1.14	2.65	.64	.39**	.86
Female	1.12	.76	.27*	.85	1.05	1.13
Residency/fellowship	1.18	.72	.72	1.25	1.43	1.43
Highest degree						
PharmD	.84	1.70*	1.65	.94	.92	1.07
Other	1.17	2.24**	.68	1.19	1.34	1.55

Note: Numbers are odds ratios. Confidence intervals are available on request. The reference group was a pharmacist with 0-3 years with their current employer, 0-9 years of experience in hospital pharmacy, in a management position, working in a hospital with 100 or fewer beds, male, with no residency/fellowship experience, and earning a BS degree.

*p < 0.10, ** p < 0.05

Appendix 1

Facets of Pharmacist Job Satisfaction and Items Used to Measure Each Facet

		Alpha
Autonomy (3 items)		.71
	I am allowed a sufficient amount of freedom to decide how I do my work.	
	I am able to set the pace at which I work.	
	I determine the extent of time that I provide patient care.	
Relationships with Health Care Providers (8 items)		.89
	I receive adequate recognition for work well done from hospital physicians.	
	Good working relationships exist between me and hospital physicians.	
	Physicians never consult with me on professional matters. (r)	
	It is easy to communicate with physicians with whom I share patients.	
	I receive support from physicians for my patient care recommendations.	
	I am respected as part of the healthcare team by hospital physicians.	
	Nurses are uncooperative when I initiate communication with them. (r)	
	I receive support from nurses for my patient care recommendations.	
Relationships with Technicians (3 items)		.79
	Pharmacists and technicians pull together in my practice; we support and help each other.	
	Technicians in my practice reliably carry out instructions.	
	I am satisfied with the on-the-job relationships I have with the technicians I work with.	
Relationships with Patients (3 items)		.73

	In general, I find that patients attempt to comply with the directions and advice I give them.	
	I feel a strong personal connection with patients.	
	My direct interactions with patients are professionally rewarding.	
Extrinsic – Pay (5 items)		.90
	The monetary rewards I receive from my work are less than they should be.(r)	
	My salary is equivalent to the salary of persons holding similar positions in other hospitals/health systems.	
	Considering the kind of work I do and the amount of responsibility I have, my pay is about right.	
	Comparing my position with other positions in this hospital/health system (compare seniority, education, importance of work, etc.) my salary is too low. (r)	
	My job offers satisfactory salary.	
Extrinsic-Work/Home (6 items)		.85
	I can take time off without feeling guilty.	
	Work rarely encroaches on my personal time.	
	My work schedule leaves me adequate time for my family life.	
	The interruption of my personal life by work is a problem for me.(r)	
	The number of hours I work is excessive. (r)	
	My workload is excessive.(r)	
Job Role (4 items)		.64
	I am not permitted to perform very many patient care duties.(r)	
	The type of dispensing duties which management expects me to perform are the same type of duties which I expect to perform.	
	I like the balance of my dispensing role.	
	My job does not provide me with enough intellectual stimulation.(r)	
Work Environment (4 items)		.82
	The size of my work space is sufficient to perform my duties.	
	The physical arrangement of my practice setting facilitates quality patient care.	
	The physical arrangement of my practice setting facilitates work flow.	
	The physical arrangement of my practice setting facilitates communication between pharmacy personnel.	

Work Environment-Technology (2 items)		.62 (rho)
	I have adequate access to computer resources.	
	Pharmacists have access to the necessary equipment and technology required to perform their job.	
Work Environment-Staffing (3 items)		.56
	During many hours of the day, there are more pharmacists on the job than needed.	
	Not enough technicians are hired to cover the workload. (r)	
	During many hours of the day, there are more technicians on the job than needed.	
Management (10 items)		.92
	My supervisor gives ample consideration to employee complaints.	
	My supervisor seems to be in the dark about what is going on at work.(r)	
	Good working relationships exist between me and my supervisor.	
	My supervisor responds to complaints in a timely manner.	
	My supervisor has an adequate knowledge of their job.	
	When situation calls for a decision, my supervisor is indecisive.(r)	
	My supervisor provides competent supervision.	
	Pharmacy department gives clear direction about advancement.	
	My employer hires only highly competent people.	
	I cannot rely on the policies and practices set by management at my place of employment as they are subject to frequent change.(r)	
Community (3 items)		.80
	I do not feel at home in the surrounding community where I practice.(r)	
	I feel a sense of belonging to the community where I practice.	
	My family and I are strongly connected to the community where I work.	
Global Job Satisfaction (3 items)		.86
	I often leave work with a bad feeling, a feeling that I am doing something which I do not enjoy. (r)	
	I often get so wrapped up (interested) in my work that I lose	

	track of time.	
	The idea of spending the remainder of my working life in a job like my current one is depressing. (r)	

Note: Items followed by (r) were worded as negative items and reverse coded prior to data analysis.