

## An Empirical Analysis of Job Content and Contextual Factors: A Case Study of Indian Physicians

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**ABSTRACT** This paper attempts to identify the factors influencing the overall satisfaction of Indian physicians, using stepwise regression and ANOVA (Analysis of Variance). Understanding the physicians' satisfaction is very crucial as their dissatisfaction does not only affect themselves, but may also have critical impact on the patients. A few of the major determinants influencing the overall satisfaction ( $R^2 = 0.630$ ) include practicing medicine as a specialty ( $B = 0.434$ ), delivery of care ( $B = 0.410$ ), relationship with community ( $B = 0.347$ ), having own hospital ( $B = 0.293$ ), personal time ( $B = 0.282$ ), practicing general surgery ( $B = 0.260$ ), earnings ( $B = 0.143$ ), resources ( $B = 0.157$ ), employment in private hospital ( $B = -0.326$ ), being in the same position for more than 6 years ( $B = -0.285$ ), and practicing gynecology as a specialty ( $B = -0.172$ ). The ANOVA showed no significant difference in perception towards overall satisfaction, on the basis of gender ( $p = 0.265$ ) and experience ( $p = 0.127$ ). The results from this study may be useful in designing satisfaction programs for the Indian physicians.

### INTRODUCTION

The Indian healthcare system is exposed to multidimensional problems and issues, such as, lesser expenditure on healthcare, shortage of doctors, and challenges due to epidemiological transition.

Dissatisfied doctors exhibit increased tendency to quit (Sibbald et al. 2003; Samad 2006; Vultee et al. 2007; Hann 2011), and burnout (Ozyurt et al. 2006; Diez-Pinol et al. 2008). Work dissatisfaction also has some cost implications in the form of high absenteeism and low morale (Mullins 1999). A positive relationship exists between doctor satisfaction and patient satisfaction (Haas et al. 2000; Linn et al. 1985), patient compliance (Weisman and Nathanson 1985) as well as the mental and physical health of doctors (Lavanchy et al. 2004; Ofili et al. 2004).

The prevalence and predictors of job satisfaction amongst physicians in India have not been comprehensively studied, despite the importance of the physicians' job satisfaction from the health perspective and its significance as a management goal and policy indicator. In contrast, studies conducted at the international level indicate satisfactory levels based on culture and demography, which vary from country to country. Higher level of satisfaction among female doctors have also been reported (Swanson et al. 1998; Malik et al. 2010). Other studies have indicated that females are less satisfied than males (Bovier and Perneger 2003; O'Leary et al.

2009; Pillay 2008), more so, other studies found no significant differences between genders (Lindfors et al. 2007). In certain studies, it has been reported that the older doctors are more satisfied as compared to the the younger doctors (Bovier and Perneger 2003; Matsumoto et al. 2004; Chi-Ming et al. 2005; Ozyurt et al. 2006), while some studies have reported otherwise (Pillay 2008). Swanson et al. (1998) reported that there is no correlation between job satisfaction and age. Some studies have found the variety and complexity of work to be strongly related to satisfaction (Duffy and Richards 2006; Lepnurm et al. 200), while others have showed a weak correlation between the two (Breslau et al. 1978; Swanson et al. 1998). Work context factors, such as income, security, office resources, work load, relationship with staff and so on, are strong determinants of satisfaction in some studies (Samad 2006; Hann et al. 2010; Lepnurm et al. 2007), while others (Breslau et al. 1978; Bates et al. 1998; Malik et al. 2010) have found work content factors (autonomy, recognition, continuous medical education and so on) as important determinants of satisfaction. Satisfaction levels were found to be linked with individual spirituality (Komala and Ganesh 2007), organizational structure (Williams et al. 2007), organizational culture (Richardson et al. 2015), use of information technology (Menachemi et al. 2009) and specialized technology (Janus et al. 2007). Bates et al. (1998) and Bovier and Perneger (2003) have reported a variance in job satisfaction across specialties,

while no significant difference was reported by Swanson et al. (1998) and O'Leary et al. (2009) in their study. Physician satisfaction has been linked to various management and cost control strategies (Keating et al. 2004).

The purpose of this paper is to determine the correlates of Indian physicians' satisfaction with the data collected across the northwestern region of India.

### Objectives of the Study

1. To identify the predictors of different satisfaction facets (autonomy, relationship with co-workers, relationship with staff, delivery of care, relationship with community, earnings, resources and personal time).
2. To identify the factors influencing the overall job satisfaction of the Indian physicians.
3. To determine the level of satisfaction of the Indian physicians.

### METHODOLOGY

Data for this study was obtained using a self-administered questionnaire that was specifically developed and pre-tested (Mehta and Kiran 2014). The survey questionnaires were distributed and collected personally wherever possible and were sent through emails. The time frame for data collection was between the months of January 2013 to October 2013. Reminders were sent to the doctors through telephone calls as well as emails. A total of 1,286 questionnaires were distributed and responses from 500 doctors (after discarding ineligible responses) were considered for further analysis. The response rate was therefore thirty-nine percent. Since the number of doctors in India is very large, a sample size of 500 at ninety-five percent confidence level and 4.3 percent confidence interval is adequate.

The primary objective of this study is to determine the extent of job satisfaction among Indian physicians and to evaluate the contribution of the influencing variables. The pre-tested instrument having scales with combining multiple items were used to measure satisfaction with autonomy, relationship with co-workers, relationship with staff, delivery of care, relationship with community, earnings, resources, personal

time, job satisfaction and career satisfaction. Satisfaction was measured using a five-point Likert scale, ranging from 1 (completely disagree) to 5 (completely agree). The dependent variable in the study was job satisfaction.

ANOVA (Analysis of Variance) was used to determine the perceived difference between various influencing variables under study. The final score that each of the doctors received for each of the variables was the mean score for each of the influencing variable obtained by averaging the scores of the items comprising that particular variable. Scores at the lower end of the range denote disagreement (dissatisfaction), and at the higher end, denote agreement (satisfaction). Inferences about the effect of independent variables on the dependent variables were drawn from multiple regression. A stepwise regression was used to select the variables that made the most important marginal contribution in explaining the variation in each of the dependent variables.

### RESULTS

#### Demographic and Practice Characteristics of the Respondents

A total of 500 (39%) doctors responded to the survey questionnaire. Respondents comprised 66.2 percent males and 33.8 percent females, while 14.2 percent were gynecologists, 13.2 percent pediatricians, 43.4 percent medical specialists, 17.4 percent surgeons and 11.8 percent orthopedicians. Fourteen percent respondents had their own hospital, while 40.2 percent were employed in government hospitals and 45.8 percent were employed in private hospitals. Majority of the respondents (93.6%) were post-graduates and 6.4 percent held doctorate degrees. 30.2 percent had experience less than 3 years, 23.2 percent had experience between 3 years to 6 years, and 46.6 percent had experience of more than 6 years. Forty-five percent were in their current position for less than 3 years, nineteen percent between 3 years to 6 years, and thirty-six percent for more than 6 years (Table 1). Thus, the key variables considered were gender, practice type, experience, and time in current position and specialty. Education as a variable was not considered, as majority of the respondents (93.6%) held postgraduate degrees.

Table 2 presents the mean scores of different categories for Autonomy (AT), Relationship

**Table 1: Demographic and practice characteristics of the respondents**

	Count	Percent
<i>Gender (n=500)</i>		
Male	331	66.2
Female	169	33.8
<i>Qualification</i>		
Post graduate	468	93.6
Doctorate	32	6.4
<i>Practice Type</i>		
Own hospital	70	14
Employed in pvt. hospital	229	45.8
Employed in govt. hospital	201	40.2
<i>Experience</i>		
0 > 3 years	151	30.2
3 years > 6 years	116	23.2
6 years ≤	233	46.6
<i>Time in Current Position</i>		
0 > 3 years	225	45
3 years > 6 years	95	19
6 years ≤	180	36
<i>Specialty</i>		
Orthopedics	59	11.8
Surgery	87	17.4
Medicine	217	43.4
Pediatrics	66	13.2
Gynecology	71	14.2

with Coworkers (RCO), Relationship with Staff (RS), Delivery of Care (DOC), Relationship with Community (RC), Employee earnings (ER), Resources (R), Personal Time (PT), job satisfaction, and career satisfaction. As evident from the mean scores, ranging from 2.42 to 4.44 (Table 2), physicians across all categories were moderately satisfied with their jobs. An exception was noticed only in the case of satisfaction with personal time. In the case of 'personal time', the mean score across all the categories was less than three (except where doctors had their own hospital and pediatricians), indicating dissatisfaction. Also, the mean score for 'resources' indicates a marginal dissatisfaction among males, government doctors, doctors with experience of six years and above, doctors with less than three years experience in their current position, orthopedicians, surgeons and gynecologists.

ANOVA was conducted to examine the difference in perception of eight factors of satisfaction and the overall job satisfaction, on the basis of gender, practice type, experience, time spent so far in current position and specialty. Initial analyses of results (Table 3) reveal a significant difference in perception as follows:

1. Among males and females towards autonomy, delivery of care, relationship with com-

munity, resources, personal time and career satisfaction.

2. Within practice types geared towards autonomy, relationship with staff, delivery of care, relationship with community, earnings, resources, personal time, job satisfaction and career satisfaction.
3. For different levels of experience towards autonomy, relationship with coworkers, relationship with staff, delivery of care, relationship with community, earnings, resources, and career satisfaction.
4. Time spent in current position towards autonomy, relationship with coworkers, relationship with staff, delivery of care, relationship with community, earnings, personal time, job satisfaction and career satisfaction.
5. Among five specialties towards all the factors under study.

However, pair wise comparison of these critical factors for gender, practice type, experience, time in current position and specialty, provides a deeper insight into these differences (Table 4).

Predictive strength of the eight critical factors of job satisfaction was examined using stepwise regression, with job satisfaction as the dependent variable and demographic factors, as well as eight critical factors of satisfaction and physician specialty as the independent variables (Table 5). Sixty-three percent of the variance in the overall job satisfaction was explained by eleven factors. Practicing medicine as a specialty ( $B = 0.434$ ), delivery of care ( $B = 0.410$ ), social relationships represented by the relationship with community ( $B = 0.347$ ), practicing general surgery ( $B = 0.260$ ), doctors having their own hospital ( $B = 0.293$ ), availability of personal time ( $B = 0.282$ ), availability of resources ( $B = 0.157$ ) and employee earnings ( $B = 0.143$ ) were significant predictors of overall satisfaction. Practicing gynecology ( $B = -0.172$ ), being in a current position for more than 6 years ( $B = 0.285$ ), and employment in private hospitals ( $B = -0.326$ ) were significant predictors of lower job satisfaction.

Stepwise regression analysis was also carried out to determine the predictors for each of the facets representing the physicians' satisfaction (Table 6).

Satisfaction with autonomy was positively correlated with time in current position of six years and above ( $B = 1.025$ ), and three to six years ( $B = 0.422$ ) and experience of three to six

Table 2: Mean and standard deviation (gender, practice type, experience, Time in current position (TICP), and specialty

	AT		RCO		RS		DOC		RC		ER		R		PT		JS		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
<i>Gender (n=500)</i>																			
Male	3.29	0.74	4.21	0.72	3.80	0.78	3.69	0.82	3.70	0.99	3.04	1.14	2.99	0.85	2.90	1.05	3.33	1.10	
Female	3.13	0.76	4.14	0.55	3.87	0.80	3.88	0.53	3.50	0.95	2.90	1.19	3.20	0.80	2.64	1.18	3.22	1.02	
<i>Practice Type</i>																			
Own hospital	3.57	0.58	4.21	0.50	4.00	0.68	3.87	0.67	3.73	0.76	3.08	0.87	3.59	0.66	3.29	0.74	3.97	0.63	
Employed in pvt. hospital	3.32	0.61	4.2	0.59	3.73	0.72	3.65	0.70	3.45	0.88	2.63	1.11	3.28	0.72	2.69	1.07	3.02	1.01	
Employed in govt. hospital	3.01	0.88	4.16	0.78	3.88	0.87	3.83	0.78	3.80	1.12	3.38	1.18	2.63	0.81	2.78	1.17	3.37	1.15	
<i>Experience</i>																			
0 > 3 years	3.1	0.63	3.86	0.62	3.45	0.74	3.58	0.58	3.45	0.74	2.58	1.00	3.09	0.76	2.69	1.04	3.15	0.89	
3 years > 6 years	3.59	0.58	4.08	0.59	3.94	0.63	3.84	0.57	3.63	0.94	2.79	1.10	3.33	0.79	2.78	1.02	3.34	1.01	
6 years ≥	3.14	0.84	4.44	0.63	4.01	0.81	3.82	0.87	3.75	1.12	3.37	1.17	2.92	0.87	2.90	1.15	3.37	1.19	
<i>Time in Current Position</i>																			
0 > 3 years	3.07	0.66	3.98	0.64	3.55	0.74	3.64	0.64	3.58	1.01	2.49	1.09	2.99	0.84	2.42	1.09	2.99	0.99	
3 years > 6 years	3.39	0.80	4.27	0.56	4.07	0.65	3.78	0.53	3.68	0.86	3.11	0.92	3.10	1.00	2.98	0.90	3.46	0.91	
6 years ≥	3.35	0.79	4.4	0.68	4.05	0.80	3.89	0.91	3.95	0.92	3.57	1.07	3.14	0.72	3.21	1.04	3.59	1.15	
<i>Specialty</i>																			
Orthopedics	3.22	0.79	4.01	0.54	3.75	0.67	3.72	0.65	3.57	0.75	2.91	0.80	2.92	0.90	2.69	1.11	3.06	0.85	
Surgery	3.47	0.77	4.29	0.58	3.91	0.58	3.94	0.70	3.61	0.83	3.22	1.12	2.98	0.63	2.82	0.90	3.43	0.79	
Medicine	3.13	0.54	4.15	0.72	3.64	0.81	3.58	0.81	3.38	1.06	2.70	1.10	3.08	0.76	2.65	1.02	3.23	1.17	
Pediatrics	3.48	0.75	4.13	0.81	4.02	0.72	3.95	0.64	4.05	0.99	3.55	1.07	3.67	0.94	3.47	0.92	3.73	1.15	
Gynecology	3.02	1.07	4.33	0.50	4.19	0.91	3.89	0.54	4.10	0.80	3.19	1.44	2.96	1.05	2.74	1.40	3.14	1.06	

**Table 3: ANOVA to examine the difference in perception of eight factors of satisfaction and two global measures on the basis of gender, practice type, experience, time in current position and specialty.**

	Gender		Practice type		Experience		TICP		Specialty	
	F	Sig	F	Sig	F	Sig	F	Sig	F	Sig
Autonomy (AT)	5.51	0.025*	18.55	0.000	18.53	0.000	9.78	0.000	6.55	0.000
Relationship with Co-workers (RCO)	1.13	0.0287*	0.32	0.728	42.81	0.000	22.59	0.000	2.64	0.033*
Relationship with Staff (RS)	0.79	0.376	4.12	0.017*	26.83	0.000	28.39	0.000	8.78	0.000
Delivery of Care (DOC)	7.36	0.007**	4.32	0.014*	5.78	0.003**	6.10	0.002	6.49	0.000
Relationship with Community (RC)	4.49	0.035*	7.46	0.001***	4.22	0.015**	19.88	0.000	11.49	0.000
Employee Earnings (ER)	1.17	0.279	24.77	0.000	25.35	0.000	52.29	0.000	9.13	0.000
Resources (R )	6.99	0.008**	58.85	0.000	10.05	0.000	1.67	0.189	3.00	0.018*
Personal Time (PT)	6.36	0.012*	8.45	0.000	1.74	0.177	30.09	0.000	7.80	0.000
Job Satisfaction (JS)	1.25	0.265	23.49	0.000	2.07	0.127	17.96	0.000	4.44	0.002**
Career Satisfaction (CS)	8.35	0.004**	37.94	0.000	6.67	0.001**	11.05	0.000	6.97	0.000

years (B = 0.882), and less than three years (B = 0.621). While, being employed in a government hospital (B = -0.346) was negatively correlated with autonomy.

Experience of more than six years (B = 0.556), and practicing gynecology as a specialty (B = 0.250) were positively related to relationship with co-workers, while being employed in a government hospital (B = -0.413) and having experience of less than three years (B = -0.245) were negatively related.

Relationship with staff (nursing and auxiliary) was positively related with practicing gynecology (B = 0.506) and pediatrics (B = 0.214) as a specialty. Younger doctors with experience less than three years (B = -0.151) and doctors who had occupied their current positions for less than three years (B = -0.348) were more likely to be dissatisfied with their relationship with the supporting staff.

Practicing medicine as a specialty (B = -0.276) and being male (B = -0.254) were predictors of low satisfaction with the way care is imparted to patients. Physicians who have been in the current position for more than six years (B = 0.283) are more likely to be satisfied with the way care is imparted to the patients.

Satisfaction with the relationship with the community where the physicians practice or reside is positively related with practicing gynecology (B = 0.966) and pediatrics (B = 0.443) as a specialty. Time in current position of less than three years (B = -1.015) and three to six years (-0.721), having experience more than six years (B = -0.590) and being female (B = -0.358) were potential predictors of lower satisfaction with the community.

Younger physicians with experience of less than three years (B = 0.479), physicians who have held their current position for more than

**Table 5: Multiple regression analysis for the prediction of overall job satisfaction with 8 critical factors, 4 demographic factors and physician specialty**

Independent variable	B	f''	SE	p
Practicing medicine as a specialty	0.434	0.2	0.079	0.000
Delivery of Care (DOC)	0.410	0.283	0.052	0.000
Relationship with community (RC)	0.347	0.318	0.042	0.000
Practice type (own hospital)	0.293	0.094	0.107	0.006
Personal time	0.282	0.287	0.03	0.000
Practicing general surgery	0.260	0.092	0.097	0.008
Employee earnings	0.143	0.154	0.034	0.000
Resources	0.157	0.092	0.097	0.008
Practice type (employed in private hospital)	-0.326	-0.151	0.084	0.000
Time in current position (more than 6 years)	-0.285	-0.127	0.075	0.000
Practicing gynecology as a specialty	-0.172	-0.056	0.102	0.093

R = 0.793, R<sup>2</sup> = 0.630, Adjusted R<sup>2</sup> = 0.621, Sig. = 0.000, F = 75.404



**Table 4: Pair wise comparison in perception for each of the critical factor**

<i>Practice type</i>	
<i>Autonomy (AT)</i>	Significant difference between all the three categories.
<i>Relationship with Co-workers (RCO)</i>	No significant difference between the three categories.
<i>Relationship with Staff (RS)</i>	Significant difference between category 1 and 2.
<i>Delivery of Care (DOC)</i>	Significant difference between category 1 and 2.
<i>Relationship with Community (RC)</i>	Significant difference between category 2 and 3.
<i>Employee Earnings (ER)</i>	Significant difference between category 1 and 2 and category 2 and 3.
<i>Resources (R )</i>	Significant difference between all the three categories.
<i>Personal Time (PT)</i>	Significant difference between category 1 and 2 and category 1 and 3.
<i>Job Satisfaction (JS)</i>	Significant difference between all the three categories.
<i>Career Satisfaction (CS)</i>	Significant difference between category 1 and 2 and category 2 and 3.
<i>Experience</i>	
<i>Autonomy (AT)</i>	Significant difference between category 1 and 2 and category 2 and 3.
<i>Relationship with Co-workers (RCO)</i>	Significant difference among all the three categories.
<i>Relationship with Staff (RS)</i>	Significant difference between 1 and 2 and 1 and 3.
<i>Delivery of Care (DOC)</i>	Significant difference between 1 and 2 and 1 and 3.
<i>Relationship with Community (RC)</i>	Significant difference between 1 and 3.
<i>Employee Earnings (ER)</i>	Significant difference between 1 and 3 and 2 and 3.
<i>Resources (R )</i>	Significant difference between 1 and 2 and 2 and 3.
<i>Personal Time (PT)</i>	No significant difference among the three categories.
<i>Job Satisfaction (JS)</i>	No significant difference among the three categories.
<i>Career Satisfaction (CS)</i>	Significant difference between 1 and 3.
<i>Time in Current Position (TICP)</i>	
<i>Autonomy (AT)</i>	Significant difference between 1 and 2 and 1 and 3.
<i>Relationship with Co-workers (RCO)</i>	Significant difference between 1 and 2 and 1 and 3.
<i>Relationship with Staff (RS)</i>	Significant difference between 1 and 2 and 1 and 3.
<i>Delivery of Care (DOC)</i>	Significant difference between 1 and 3.
<i>Relationship with Community (RC)</i>	Significant difference among all the three categories.
<i>Employee Earnings (ER)</i>	Significant difference among all the three categories.
<i>Resources (R )</i>	No significant difference among the three categories.
<i>Personal Time (PT)</i>	Significant difference between 1 and 2 and 1 and 3.
<i>Job Satisfaction (JS)</i>	Significant difference between 1 and 2 and 1 and 3.
<i>Career Satisfaction (CS)</i>	Significant difference between 1 and 2 and 1 and 3.
<i>Specialty</i>	
<i>Autonomy (AT)</i>	Significant difference in perception among surgeons and medical specialists as well as with gynecologists.
<i>Relationship with Co-workers (RCO)</i>	Significant difference in perception among orthopedicians and gynecologists.
<i>Relationship with Staff (RS)</i>	Significant difference in perception among gynecologists and medical specialists as well as with orthopedicians.
<i>Delivery of Care (DOC)</i>	Significant difference in perception among medical specialists and pediatricians as well as with surgeons.
<i>Relationship with Community (RC)</i>	Significant difference in perception among gynecologists and medical specialists, surgeons as well as with orthopedicians; pediatricians and orthopedicians, surgeons as well as with medical specialists.
<i>Employee Earnings (ER)</i>	Significant difference in perception among medical specialists and pediatricians, gynecologists as well as with surgeons; orthopedicians and pediatricians.
<i>Resources (R )</i>	Significant difference in perception among pediatricians and surgeons, gynecologists as well as with orthopedicians.
<i>Personal Time (Pt)</i>	Significant difference in perception among pediatricians and surgeons, gynecologists, medical specialists as well as with orthopedicians.
<i>Job Satisfaction (JS)</i>	Significant difference in perception among pediatricians and gynecologists, medical specialists as well as with orthopedicians.
<i>Career Satisfaction (CS)</i>	Significant difference in perception among pediatricians and surgeons, medical specialists as well as with orthopedicians.
<i>Experience</i>	Practice type
0 > 3 years (Category 1)	Own hospital (Category 1)
3 years > 6 years (Category 2)	Employed in pvt. Hospital (Category 2)
6 years ≥ (Category 3)	Employed in govt. Hospital (Category 3)
<i>Time in current position (TICP)</i>	
0 > 3 years (Category 1)	
3 years > 6 years (Category 2)	
6 years ≥ (Category 3)	

**Table 6: Stepwise regression for predicting facet satisfaction**

Facet	Variable	B	f <sup>2</sup>	SE	p
Autonomy	Time in current position (six years and above)	1.025	0.652	0.117	0.000
	Experience (three to six years)	0.882	0.493	0.111	0.000
	Experience (less than three years)	0.621	0.378	0.126	0.000
	Time in current position (three to six years)	0.422	0.219	0.103	0.000
	Employed in govt. hospital	-0.346	-0.225	0.070	0.000
<i>R</i> = 0.488, <i>R</i> -square = 0.238, Adjusted <i>R</i> square = 0.231, Sig. = 0.000, <i>F</i> = 30.916					
Relationship with Co-workers (RCO)	Experience (six years and above)	0.556	0.414	0.073	0.000
	Practicing gynecology as a specialty	0.250	0.130	0.076	0.001
	Employed in govt. hospital	-0.413	-0.302	0.062	0.000
	Experience (less than three years)	-0.245	0.168	0.073	0.001
<i>R</i> = 0.476, <i>R</i> -square = 0.226, Adjusted <i>R</i> square = 0.220, Sig. = 0.000, <i>F</i> = 36.232					
Relationship with Staff (RS)	Practicing gynecology as a specialty	0.506	0.224	0.094	0.000
	Practicing pediatrics as a specialty	0.214	0.092	0.098	0.029
	Time in current position (less than three years)	-0.348	-0.219	0.096	0.000
	Experience (less than three years)	-0.151	-0.094	0.071	0.000
<i>R</i> = 0.413, <i>R</i> -square = 0.171, Adjusted <i>R</i> square = 0.163, Sig. = 0.000, <i>F</i> = 20.369					
Delivery of Care (DOC)	Time in current position (six years and above)	0.283	0.183	0.070	0.000
	Practicing medicine as a specialty	-0.276	-0.184	0.065	0.000
	Male	-0.254	-0.162	0.071	0.000
<i>R</i> = 0.288, <i>R</i> -square = 0.083, Adjusted <i>R</i> square = 0.077, Sig. = 0.000, <i>F</i> = 14.904					
Relationship with Community (RC)	Practicing gynecology as a specialty	0.966	0.342	0.135	0.000
	Practicing pediatrics as a specialty	0.443	0.152	0.122	0.000
	Time in current position (less than three years)	-1.015	-0.512	0.156	0.000
	Time in current position (three to six years)	-0.721	-0.287	0.144	0.000
	Experience (six years and above)	-0.590	-0.298	0.136	0.000
	Female	-0.358	-0.172	0.105	0.001
<i>R</i> = 0.444, <i>R</i> -square = 0.197, Adjusted <i>R</i> square = 0.187, Sig. = 0.000, <i>F</i> = 20.192					
Employee Earnings (ER)	Experience (less than three years)	0.479	0.189	0.147	0.001
	Time in current position (six years and above)	0.402	0.166	0.135	0.003
	Employed in govt. hospital	0.386	0.163	0.102	0.000
	Time in current position (less than three years)	-0.904	-0.386	0.164	0.000
	Practicing medicine as a specialty	-0.439	-0.187	0.101	0.000
	Practicing orthopedics as a specialty	-0.326	-0.090	0.157	0.038
	Male	-0.263	-0.107	0.110	0.017
<i>R</i> = 0.504, <i>R</i> -square = 0.254, Adjusted <i>R</i> square = 0.243, Sig. = 0.000, <i>F</i> = 23.940					
Resources (R)	Time in current position (six years and above)	0.668	0.382	0.114	0.000
	Practicing pediatrics as a specialty	0.200	0.080	0.097	0.041
	Employed in govt. Hospital	-0.741	-0.433	0.074	0.000
	Experience (six years and above)	-0.638	-0.379	0.116	0.000
	Time in current position (less than three years)	-0.432	-0.256	0.092	0.001
	Male	-0.230	-0.130	0.072	0.001
	Practicing general surgery as a specialty	-0.217	-0.098	0.086	0.012
<i>R</i> = 0.568, <i>R</i> -square = 0.322, Adjusted <i>R</i> square = 0.312, Sig. = 0.000, <i>F</i> = 33.394					
Personal Time (PT)	Time in current position (six years and above)	0.685	0.300	0.157	0.000
	Experience (less than three years)	0.612	0.256	0.145	0.000
	Practicing pediatrics as a specialty	0.536	0.165	0.131	0.000
	Time in current position (less than three years)	-1.109	-0.503	0.150	0.000
	Experience (six years and above)	-0.731	-0.333	0.155	0.000
<i>R</i> = 0.448, <i>R</i> -square = 0.238, Adjusted <i>R</i> square = 0.230, Sig. = 0.000, <i>F</i> = 30.814					

six years ( $B = 0.402$ ), and being employed in a government hospital ( $B = 0.386$ ) were positively related with satisfaction with earnings. Physicians with less than three years of stay in their current position ( $B = -0.904$ ), physicians practicing medicine ( $B = -0.439$ ) and orthopedics ( $B = -0.326$ ) as a specialty and being male ( $B = -0.263$ ) were predictors of lower satisfaction with earnings.

Satisfaction with the availability of resources was positively related to time in current position for more than six years ( $B = 0.668$ ) and being a pediatric specialist ( $B = 0.200$ ). Employment in a government hospital ( $B = -0.741$ ), experience of more than six years ( $B = -0.638$ ), having been in current position for less than three years ( $B = -0.432$ ), being male ( $B = -0.230$ ) and a surgeon ( $B = -0.217$ ) manifested a negative relationship.

Physicians occupying current positions for more than six years ( $B = 0.685$ ), having experience of less than three years ( $B = 0.612$ ) and being a pediatrician ( $B = 0.536$ ) were significant predictors of satisfaction with the availability of personal time. While the holding of the current position for less than three years ( $B = -1.109$ ) and experience of more than six years ( $B = -0.731$ ) were significant predictors of dissatisfaction.

## DISCUSSION

Results from this survey indicated that physicians overall, were moderately satisfied with their jobs. Furthermore, as indicated by the mean scores, physicians working in government hospitals were slightly more satisfied than physicians employed in private hospitals. Previous studies have indicated that a physician's job satisfaction may be positively related with their own physical and mental well-being (William and Skinner 2003; Kravitz 2012). It has also been reported that satisfied doctors exhibit more conscientious prescription behaviors, and less self-reported likelihood of making errors and sub-optimal patient's care practices (Williams et al. 2007; Williams and Skinner 2003; DeVoe et al. 2002). A physician's satisfaction also correlates positively with patient satisfaction, greater patient trust and confidence, better adherence to treatment and lower no-show rates (Haas et al. 2000; Grembowski et al. 2005; Linn et al. 1985; DiMatteo et al. 1993). These positive influences of a physician's job satisfaction may reduce the cost of treating or replacing ill, depressed, burned out physicians or physicians who with-

draw from the medical practice (Sibbald et al. 2003; Buchbinder et al. 1999), while also reducing the costs of medical errors (Williams and Skinner 2003).

The findings from this study showed no difference in perception towards job satisfaction on the basis of gender. While some earlier studies (Rivet 2006; Pillay 2008) suggested that male physicians appeared to be more satisfied than female physicians, there are other studies which indicated otherwise (Frank et al. 1999; McMurray et al. 2000; Sibbald et al. 2003; Robinson 2004). Consistent with this study's results, some studies have suggested gender to be a neutral determinant of satisfaction or rather the absence of significance to support a causal difference (Emmons et al. 2006; Keeton et al. 2007).

Regression analysis showed that practicing medicine and general surgery as a specialty is positively related to satisfaction, while practicing gynecology is negatively related to satisfaction. The negative relationship between job satisfaction and gynecologists may have profound implications in the Indian context, as India accounts for the highest number of maternal deaths (estimated to be 56,000 in the year 2010) in the world (Trends in Maternal Mortality: 1990-2010 WHO, UNICEF, UNFPA and World Bank Estimates). Lower satisfaction among gynecologists may have serious impact on the achievement of the Millennium Development Goals. It is also possible that dissatisfaction among gynecologists stems from difficulties faced by the doctors, on account of dealing with patients with low awareness, regarding maternal and neonatal health. In India, child and maternal health awareness is still at a very nascent stage. The use of and access to maternal and reproductive health is influenced by economic status, gender, education, social status (registered caste or tribe) and age (Sanneving et al. 2013). Thus, besides focusing on other factors, it may be desirable to examine the impact of improving the variables that influence the inequitable use and access to maternal health, on job satisfaction of gynecologists.

Delivery of care is an important parameter that deals with the physician's own perception of the opportunity his/her job provides, towards intellectual stimulation, in order to use the full range of skills for which he/she is trained and undertake diagnostic and treatment planning, ultimately leading to the belief that he/she is



making a significant difference in the patient's life. Delivery of care therefore, refers to both the personal and professional fulfillment that a physician experiences on the job. A positive relationship between job satisfaction and delivery of care acknowledges the fact that physicians perceive their jobs to be fairly challenging and hence, devoid of boredom and unhappiness. Numerous studies (Richardson et al. 2015; Pratt 2010; Kisa et al. 2009; Grembowski et al. 2005; Landon et al. 2003; Spickard et al. 2002; Smith et al. 2001) showed a significant relationship between job satisfaction and delivery of care, the difference is only with respect to the magnitude of this relationship.

In this study, the researchers found that positive contributions to job satisfaction were made by a harmonious relationship with the community, where the physicians practice. The factor is linked with the "support seeking" or "social support" kind of coping mechanism. Previous studies have shown to positively link relationship with community as well as with job satisfaction (Shimizu and Nagata 2003; Koleck et al. 2000). This has also been supported with the findings that learning and practicing interpersonal skills lead to an improvement in burnout test scores related to job satisfaction, through the enhancement of social support (McCue and Sachs 1991). Physicians who experienced positive relationship with the community may derive the benefit of satisfaction, on account of being in the specialty of their choice, which may increase their wellbeing and consequently, increase their compatibility with coworkers and patients (Lodewijk 2014).

Physicians having their own hospital were more likely to be satisfied in their jobs. It may be fairly safe to assume that a high degree of perceived freedom on account of not having to report to others, availability of time and less involvement in decision-making, may greatly influence the physician's satisfaction (Epstein 2000; Murray 2000). In the Indian scenario, it may be desirable to develop and formulate policies that may encourage physicians to undertake the establishment of their own practice set up. However, studies elsewhere (Stamps 1995; Linzer et al. 2000; Nixon and Jaramilo 2010) indicate that doctors who work in hospitals are more satisfied as compared to self-employed physicians.

Further, findings of this study also pointed towards a negative relationship between em-

ployment in a private hospital and job satisfaction. This further reinforces the above view that physicians may feel constrained, on account of higher level of rules and regulations, obligation to give report about their activities or excessive workload, and low salary. Previous literature reviews also suggested that physicians in private practice reported having only a medium level of job satisfaction (Votmer et al. 2012). Another study (Kisa et al. 2009) reported that a negative relationship exists between employment in public hospitals and job satisfaction. These findings relating to practice type are important to policymakers as well as administrators, in designing and fostering the organizational climate that nurtures efficiency and effectiveness.

Physicians in this study perceived the availability of personal time to be one of the most important predictors of job satisfaction. Numerous studies in the past have indicated time pressures to be important predictors of dissatisfaction among physicians (Epstein 2000; Sirovich et al. 2006; Duffy and Richard 2006). Shortage of time due to increasing workloads may not only cause physicians to spend lesser time with their patients, which compromises the quality of care, but may also lead to work-life imbalance.

Remuneration or employee earnings were also a significant predictor of job satisfaction. Physicians in India employed in government hospitals, like other government employees received compensation in the form of fixed monthly salary, on the basis of the position they occupy. Higher mean scores ( $M = 3.38$ ) for physicians, employed in government hospitals with respect to both, physicians having own hospitals and employed in private hospitals, is geared towards higher economic security perceived by the doctors on account of assured income. Physicians having their own hospital, follow a fee for service compensation system, while charging the patients proportionate to the services rendered. However, this system is inherently inflationary, and may lead to over servicing (Stearns et al. 1992; Gosden et al. 2000), thereby, propelling the cost of treatment. In contrast, physicians employed in private hospitals either for salary or on resource sharing basis (whereby, physicians charge patients on the basis of fee for service and give a portion of this fees to the hospitals to compensate them for utilizing their resources), may feel constrained. Nevertheless, whatever be the mode of compensation, most of

the studies suggested a positive relationship between income and satisfaction (Frank et al. 1999; Stoddard et al. 2001; Leigh et al. 2002), while some suggested otherwise (Sturm 2002; Williams et al. 2002).

A physician's ability to provide quality care to its patients, besides being influenced by other factors will also depend on the availability and sufficiency of resources, such as materials, equipments, and space. Results from this study predicted that a perceived satisfaction with resources, significantly and positively relates to job satisfaction. This conclusion is in synchronization with previous studies that have positively linked job satisfaction with resources (Lichtenstein 1994; Freeborn 2001) and negatively, with burnout (Freeborn 2001). Other studies reported resource shortage to be a source of strain, that may lower satisfaction (Sirovich et al. 2006). Since it is the primary responsibility of the administration to ensure the availability of resources, these findings may be of great importance to them. In this context, it is important to note, as some studies have indicated that scarcity of resources were as a result of administrative reasons, rather than as a result of resource shortage (Linzer et al. 2000; Conway et al. 1998)

The findings from this study showing that physicians with higher experience (experience of more than 6 years; mean 3.37) are more satisfied as compared to physicians with lesser experience, are in agreement with the industrial sociology (Argyle 1972) and other studies relating to physician satisfaction (Matsumoto et al. 2004). Furthermore, this study reveals that being in the same position for more than six years, is negatively related to satisfaction. This may not be surprising from the viewpoint of organizational psychology, wherein it is expected that monotony and boredom may set in, on account of performing the same tasks over a longer period of time, leading to a lack of cognitive or intellectual stimulation (Petrozzi et al. 1992).

### CONCLUSION

Physician satisfaction has a significant bearing, not only on the wellbeing of the physicians themselves, but also on the delivery of quality of care. As stated previously, physician satisfaction is a multidimensional construct, with many variables impacting it. The findings from this study attempt to explain physician satisfac-

tion on the basis of specialty, delivery of care, relationship with community, time, earnings, resources, and time in current position. Although, doctors were marginally satisfied, this study suggests opportunities for enhancing physician job satisfaction in the Indian milieu. Organizational climate that provides opportunities for utilizing some sets of skills for which physicians are trained, treatment planning, harmonious relationships with community, availability of resources, earnings and availability of time, are all potential satisfiers. A work environment that fosters good working conditions, complementing the value systems and aspirations of physicians is likely to enhance the satisfaction of doctors and consequently, influence individuals, organizational and health outcomes, positively.

### RECOMMENDATIONS

Satisfied physicians are assets in terms of high productivity, efficiency and delivery of care in a resource constrained, and disease laden country, like India. On the basis of the results obtained, the following recommendations are made.

- ♦ To have an organizational climate that provides opportunities for utilizing skill sets for which physicians are trained.
- ♦ Provide opportunities, which promote harmonious relationships with the community.
- ♦ Physicians value the availability of personal time as a potential motivator. It is therefore, recommended that efforts in terms of adequate manpower must be made, to ensure that physicians have sufficient time at their disposal.
- ♦ A work environment complementing the value systems and aspirations of physicians is likely to enhance the satisfaction of doctors and resultantly, influence individual, organizational and health outcomes, positively.

### LIMITATIONS

Some limitations were encountered in this study, which need to be mentioned. First, the study was confined to the northwestern region of India. Second, the response rate of thirty-nine percent was modest. Third, the study is limited to only five specialties. It is advisable to consider specialty groups individually, rather than examining physician satisfaction overall.

Fourth, the study does not take into consideration, the impact of technology on job satisfaction. Fifth, although, the concept of medical insurance is gaining recognition in India, the impact of the same, has not been considered in this study.

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