

# Critical Antecedents to Job Satisfaction for a Sustainable Healthcare Profession: A Structural Equation Modeling Approach



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*A major challenge in the service sector resides in the quantification and effective management of workforce. Among the many factors of motivation, job satisfaction (JS) is the most important one (Luoma, 2006). Job satisfaction in the emerging healthcare economy has a direct influence on the magnitude of patient satisfaction and the quality of healthcare delivery. The purpose of this study is to validate a JS scale by using the data generated by 232 doctors from eighteen hospitals in Delhi/NCR. Exploratory factor analysis revealed three baseline dimensions and sixteen items contributing to these factors. The CFA model fit indicators were found to be good as per the recommended values. The reliability estimates, convergent and discriminant validity met all the criteria respectively.*

**Keywords:** Extrinsic Job Satisfaction, Intrinsic Job Satisfaction, Doctors, Healthcare Sector

## 1. Introduction

A policy agenda ensuring that the healthcare workforce achieves sustainable development goals has become imperative following the global strategy of World Health Organization (WHO), 2030, on human resources in healthcare. A motivated workforce is required to exert and maintain efforts towards organization goals. Of the many factors on which motivation depends, job satisfaction is the most important one (Luoma, 2006). The importance of job satisfaction in the emerging healthcare economy has a direct influence on the magnitude of patient satisfaction (Szecsenyi, et al., 2011) and the quality of healthcare delivery (Lichtenstein, 1984). Job satisfaction of doctors has increasingly gained attention worldwide in the last two decades. Its significance lies in the fact that satisfied employees prove to be better ambassadors of their organization showing greater commitment (Agho et al., 1992).

Being one of the most researched constructs in organizational behavior beginning from 1930's till date, the hallmark of research on Job satisfaction was undertaken by Hoppock (1935) who viewed job satisfaction as a combination of psychological, physiological and environmental circumstances. It may be defined as a positive emotional state reflected in the appraisal of one's job experiences (Weisman & Nathanson, 1985). It has been linked to an individual's motives, personalities as well as the job characteristics as pointed out by Herzberg et al., (1959), Vroom (1964) and Hackman and Oldham (1975). Job satisfaction is said to have a positive impact on the intention to stay (Wu et al., 2014) leading to better performance and organizational effectiveness (Lu, et al., 2012). Its significance lies in the fact that satisfied employees prove to be better ambassadors of their organization showing greater commitment (Agho et al., 1992).

As evident in the researches in past decades, job satisfaction still remains to be an issue of concern. It is conceived to be an attitudinal variable reflecting the degree to which people like their jobs (Spector, 1997) and the feelings that a worker has about his or her job experiences (Balzer, Kihm, Smith, Irwin, Bachiochi & Robie et al., 1997). Schaffer (1953) and Maier (1955) further highlighted the various aspects of job satisfaction. Various antecedents of job satisfaction have been determined by researchers such as Davis J. Weiss, Dawis, England and Lofquist (1967) who stressed on the importance of work environment on Job satisfaction followed by Locke (1976) who highlighted the importance of job experiences, thereby creating positive or negative emotional states. Factors such as challenging jobs, equitable rewards and recognition and empowerment were tapped by Cano and Castillo (2004). Other dimensions included personality (Duffy & Richard, 2006), commitment (Sahin, et al., 2014), job involvement (Singh & Pestonjee, 1990) and leadership (Tesfaw, 2014).

As far as the healthcare sector is concerned, job satisfaction of doctors has increasingly gained attention worldwide in the two decades. Previous studies in healthcare report a significant association between low physician job satisfaction and suboptimal care (Shanafelt et al., 2015), dissatisfaction among patients (Haas et al., 2000), surgery with errors (Shanafelt et al., 2010.) and inferior prescribing (Melville, 1980). Lower job satisfaction among doctors also results in illness, depression, stress and burnout (Kumar et al., 2007). Besides these, age, educational background, salary, equipments and medical training have been found to be a few important antecedents to a doctor's job satisfaction (Kaur et al., 2009; Fu et al., 2013). Berwick et al., (2008) are of the opinion that the aim of healthcare organizations to improve the healthcare outcomes, reducing per capita cost of care and to improve the patient's experience while receiving care has escalated the job demands of these doctors undermining their job satisfaction (Friedberg, et al., 2015).

To measure level of JS among doctors a few scales that need mention are Emergency Physician Job satisfaction scale (Lloyd et al., 1994), Job Satisfaction scale -2 (Koeske, et al., 1994), McCloskey/Mueller Satisfaction Scale (Mueller, et al., 1990), Measurement of Job Satisfaction (MJS) (Traynor, et al., 1993) etc. The reason for their use in the healthcare sector is that they possess high internal consistency (Cronbach's alpha), criterion related validity, cross validity and subscale correlates within the instrument.

Despite the presence of considerable international literature and scales in the developed countries, issues related to a doctor's JS still remained unexplored in India. Therefore, the significance of the measurement of level of JS of doctors cannot be questioned. Our study adopts a dynamic view focusing on the variables that contribute to the JS of doctors in the Indian healthcare sector by validating a scale.

The study is structured as follows: it starts with literature review followed by scale refinement and discussion on results. It concludes with managerial implications, limitations and anticipation for further studies.

## 2. Literature Review

The recent researches on JS have focused majorly on two aspects i.e. extrinsic and intrinsic JS. They are supported by one of the most recognized theories of JS, Herzberg's "two factor theory" which points that job satisfaction depends on motivational factors (Holmberg, Caro, Sobis, 2018). Despite the two factor theory being proposed in 1966, researchers have still proved it is relevance for a better understanding and interpretation of job satisfaction among healthcare professionals (Hunt, Probst JC, Haddock KS, et al., 2012; Goetz, Campbell, Broge, Dorfer, Brodowski, Szecsenyi, 2012 & Labiris, Gitona, Drosou & Niakas, 2008). Locke (1976) identified work, pay recognition, benefits, working condition, supervision, Co-workers Company, management as important dimensions of job satisfaction later arranged into extrinsic and intrinsic factors (Spector, 1997 & Hirschfeld, 2000). Vallerand and Ratelle (2002) focused on the concept intrinsic and extrinsic motivation in their study and these concepts are also a part of the Self determination theory (SDT) by Deci and Ryan, 2008. The theory proposes a spectrum of motivation such as "a motivation, intrinsic and extrinsic motivation" among individuals that engages them in goal directed behavior. The relative absence of motivation for performing an activity is "a motivation". Extrinsic motivation exists when an activity is performed for instrumental reasons. It has three levels of motivation namely, external regulation when the behavior is directed towards obtaining rewards such as a financial bonus; introjections i.e. behavior driven by internal pressure such as shame or guilt; and identification when behavior is motivated by values. When the activities lead to enjoyment, then comes the role of Intrinsic motivation. It comprises of such aspects as relatedness, autonomy and competence. This point is a pinnacle of self determination (Deci & Ryan, 2011). This is backed by the fact that intrinsic motivation proves to be more consistent as the behaviors get internalized while extrinsic motivation is vulnerable to situational factors (Waddimba et al., 2019).

## 3. Aim of the Study

The central aim of the study is to examine the job satisfaction factors relevant to doctors in the Indian healthcare sector and evaluate the factorial structure of the Minnesota satisfaction scale.

## 4. Rationale of the Study

Despite the fact that job satisfaction has been a topic of extensive interest shown by the researchers and academicians, most of the scales have been used in the developed countries, and therefore a scale is required to be validated in developing countries from the perspective of Indian healthcare sector.

## 5. Methodology

### 5.1 Overview of the Sample

The study sample was drawn using non-probability purposive sampling technique. Eighteen Indian healthcare organizations in Delhi were identified and approached to participate in the study. The sample population comprised of junior and senior residents, medical officers, general physicians, surgeons, orthopedics, oncologists, psychiatrists etc. A total of 300 questionnaires were distributed out of which 232 were returned giving a response rate of 77.3%. The sample comprised of 137 male doctors (59 percent) and 95 female (41 percent) doctors. In all, 142 doctors (61 percent) were from private sector and 90 doctors (39 percent) were from public sector hospitals. The mean age of respondents was 37 years having an average tenure level of 12.5 years. The data was scrutinized for outliers. The data was collected in a time span of 20 weeks.

### 5.2 Instrument

The Short Version of Minnesota Job Satisfaction Scale (MJSS) having 20 items has been used for the study. The scale developed in America is based on Herzberg's theory of motivation. The items are rated on a five point scale 1= 'very satisfied' to 5= 'very dissatisfied'. It comprises of three scores. Intrinsic satisfaction that reflects an employee's degree of commitment with the job in terms of commitment, achievement and recognition. It covers 12 items. Extrinsic job satisfaction is focused on contentment with such factors as salary, status and security. It has 6 items. General Job satisfaction (Weiss, 1967) that comprises two items.

## 6. Data Analysis

### 6.1 Exploratory Factor Analysis

SPSS version 23 was used to carry out exploratory factor analysis on 20 items for elucidating their aptness for three dimensions (Table -1). The analysis involved Principal Component Analysis with Varimax Rotation (Costello and Osborne, 2005) and the dimensions were retained as per the Eigen value (Cattell, 1966). Four items were dropped due to low factor loadings. Consequently 16 items were retained. The Kaiser Meyer Olkin (KMO value) was observed to be .89 greater than

the threshold value of .60(Kaiser & Rice, 1974). Moreover, the range of Chronbach's alpha was found to be between .80 to .93 (Nunnally & Bernstein, 1994).

**Table 1** Results of Exploratory Factor Analysis and Reliability of Job Satisfaction Scale

	Items	Factors	Factor Loadings	Cronbach's
1.	Being able to keep busy all the time.	<b>Intrinsic</b>	.79	.945
2.	The chance to do things for other people.		.84	
3.	The chance to be "somebody" in the community.		.83	
4.	The chance to do different things from time to time.		.82	
5.	The chance to work alone.		.82	
6.	The chance to tell people what to do.		.82	
7.	The chance to do something that makes use of my capabilities.		.84	
8.	The working conditions.	<b>Extrinsic</b>	.88	.943
9.	The way my co-workers get along with each other		.87	
10.	My pay and the amount of work I do.		.75	
11.	The way organization's policies are put into practice.		.73	
12.	The way my boss handles his/her employees.		.83	
13.	The competence of my supervisor in making decisions.		.87	
14.	The praise I get for doing a good job.		.86	
15.	The feeling of accomplishment I get from the job.	<b>General</b>	.74	.800
16.	The freedom to use my own judgment.		.91	

**Notes:** Extraction Method: Principle Component Analysis. Rotation: Varimax with Kaiser Normalization

## 6.2 Confirmatory Factor Analysis (First Order)

AMOS 21.0 was used for CFA to examine the goodness of fit of model statistically. Statistics including Chi-squared statistic, goodness of fit index (GFI), comparative fit index (CFI), root mean square error of approximation (RMSEA) (Hu and Bentler, 1999) have been used to judge the goodness of fit index. The results of CFA (Table -2) reveal that the observed data resulted into an overall good model fit (CMIN/DF= 1.88 , GFI= .91, RMSEA= .06, CFI= .97, NFI= .94 , PCLOSE= .08). The factor loadings in Figure-1 are above the threshold values of .60 reflecting that all the scale items effectively measure their corresponding constructs (Anderson and Gerbing, 1988).

**Table 2** Factor Loadings and Model Fit Indices of the First order Confirmatory Analysis

Factor	Item No.	Factor Loading	R <sup>2</sup>
Intrinsic	Int_1	.85	.73
	Int_2	.75	.56
	Int_3	.79	.63
	Int_4	.85	.72
	Int_5	.91	.83
	Int_6	.88	.76
	Int_7	.82	.67
Extrinsic	Ext_1	.87	.76
	Ext_2	.82	.68
	Ext_3	.75	.57
	Ext_4	.88	.77
	Ext_5	.86	.75
	Ext_6	.89	.79
	Ext_7	.76	.58
General	Gen_1	.83	.56
	Gen_2	.79	.73

CMIN/DF=1.88,

GFI= .91,

RMSEA=.06,

CFI= .97,

PCLOSE= .08

Source: The Authors

### 6.3 Second Order CFA Measurement Model

A second order measurement model was tested comprising of job satisfaction as a second order construct and the three dimensions as the first order construct was tested (Byrne,B.M.,2010).The results in Table- 3 show an acceptable model fit indices(CMIN/DF= 1.73 ,RMSEA= .05, GFI= .92 CFI= .97,PCLOSE=.22). The three first order constructs loaded very well on the second order construct of Job satisfaction. The results clearly signify that there exists a second order construct of Job satisfaction.

**Table 3** Factor Loadings and Model Fit Indices of the Second order Confirmatory Factor Analysis

Factor	Item No.	Factor Loading	R <sup>2</sup>
Intrinsic	Int_1	.84	.71
	Int_2	.73	.53
	Int_3	.78	.60
	Int_4	.85	.73
	Int_5	.91	.84
	Int_6	.88	.78
	Int_7	.82	.67
Extrinsic	Ext_1	.86	.75
	Ext_2	.82	.67
	Ext_3	.77	.60
	Ext_4	.88	.79
	Ext_5	.86	.75
	Ext_6	.88	.78
	Ext_7	.76	.58
General	Gen_1	.83	.69
	Gen_2	.79	.63

CMIN/DF= 1.73, GFI= .92,

RMSEA= .05,

CFI= .97,

PCLOSE=.22

Source: The Authors

### 6.4 Construct Validity

**Table 4** Validity and Reliability

	CR	AVE	MSV	ASV	$\sqrt{AVE}$
<b>Intrinsic</b>	.90	.69	.16	.12	.83
<b>Extrinsic</b>	.92	.65	.21	.18	.80
<b>General</b>	.76	.65	.21	.15	.80

Source: Authors Calculations

The scale items have been further analyzed to establish convergent and discriminant validity (Anderson and Gerbing, 1988; Hair et al., 2010, Fornell and Larker, 1981).Composite reliability, Standard factor loadings and Average variance extracted have been used as the three standard criteria for evaluating the convergent validity (Table- 4). For discriminant validity AVE should be greater than MSV and AVE should be greater than ASV. All the standard loadings are found to be above .60.The values of Average variance extracted for the factors lie in the range of .65 to .69.Further the values of Maximum shared variance range from .16 to .21 indicating AVE to be greater than MSV. The results show a strong evidence of discriminant validity (Kline et al., 2012).

## 7. Discussion

The current research examined the important variables of job satisfaction by evaluating the psychometric properties of the job satisfaction scale and explored whether this scale can be applied in the Indian healthcare organizations. The scale shows promising validity and reliability confirming it's suitability in the Indian workplace. Out of twenty items in the original scale four items were dropped as they failed to cross the cut off value of .40. This resulted in a sixteen item scale, seven items measuring intrinsic satisfaction and seven items measuring extrinsic satisfaction. Two items (moral and independence), which originally loaded on intrinsic satisfaction made a different factor which has been named as General satisfaction. Also, two items, working conditions and co-workers which originally included in the factor of General satisfaction loaded on the factor of extrinsic satisfaction. The reason behind this may be the uniqueness of the sample.

The results of the first order factor of JS represent three inter-related dimensions. A good model fit has been demonstrated by the model fit indices of the second order construct. The findings indicate intrinsic ( $\alpha = .51$ ), extrinsic ( $\alpha = .78$ ) and general satisfaction ( $\alpha = .59$ ) as important correlates of JS. The importance of supervision, working conditions, organizational policies, pay, co-workers and recognitions as important extrinsic factors contribution to JS has been highlighted by Locke (1976), Ullrich(1978) and Purohit, & Bandyopadhyay (2014). Activity, authority, variety, status, service, responsibility and ability as important intrinsic factors contributing to overall satisfaction has been highlighted by Hirschfeld(2000); Buitendach & De Witte(2005). The importance of such aspects as moral and independence for promoting job satisfaction of employees has been highlighted by Hancer and George (2003).

## 8. Managerial Implications

- The study would provide deep insight into the role of intrinsic, extrinsic and general job satisfaction of doctors that can further growth and development of the healthcare sector.
- It would assess the job satisfaction of doctors which requires attention due to the nature of their duty, continued interpersonal interaction and strenuous working hours.
- The use of this scale will increase the productivity that can be evident in enhanced the patient satisfaction.
- This would increase job satisfaction and talent retention.
- It will also facilitate in generating crucial data for strategic planning to evaluate the physical as well as psychological environment of the organization.

## 9. Limitations

The study is limited to Indian healthcare sector and therefore the results cannot be generalized. The dimensions of the constructs may vary with sectors. Also, the comparison is missing on demographic levels like age, gender or marital status etc. Apart from this Job satisfaction is the only variable around which the study revolved. It has a wide variety of antecedents and consequences that can be considered in future studies. Future studies can be focused on larger sample sizes to get better results.

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