



# A Survey To Assess The Job Satisfaction Scale Among Doctors Of Public Hospitals In Uttarakhand

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## ABSTRACT

Job satisfaction is a most vital concept in an organisation. Each employer focuses on the level of job satisfaction among employees as higher level of it leads to low level of complaints and work grievances among employees. Job satisfaction also influences various factors such as productivity, less absenteeism, lower turnover ratio, reduce accident, less job stress and less unionization and result in increased organisation effectiveness. Doctors play an important role in providing health care services to the society and present study focuses on job satisfaction of Doctors in Public Hospitals of Uttarakhand. Although a number of studies have been conducted on the Indian health sector towards job satisfaction but there is a dearth of such studies especially in hill state of Uttarakhand. For conducting the study responses of 150 doctors were recorded who were serving in 30 public hospitals in Deharadun and Haridwar district of Uttarakhand through judgmental sampling technique. Study used exploratory factor analysis and confirmatory factor analysis for data analysis. On the basis of the review of literature this study used 36 statement to measure the job satisfaction among doctors but on the basis of explorative factor analysis this study excluded the two statement I have opportunity practice the way I want to do, and I can take off time without feeling guilty. So finally this study find dimensions of job satisfaction included in Ten factors with 34 statement such as Resources (4 items), Relation with patients (4 items), Payment/compensation/income (4 items), Autonomy (4 items), Relationship with staff (3 items), Relationship with co-workers (3 items), Community (3 items), Intrinsic factors (3 items), Administration (3 items), Personal time (3 items). The proposed measurement model exhibited a good level of model fit, too.

**Key words:** job satisfaction scale, doctors, public hospitals, Deharadun and Haridwar district, Exploratory Factor Analysis, Confirmatory Factors Analysis.

## Introduction

Health care services are affected by various factors like advance technology, health delivery system, government policy and last but not least human resources. In health care system, human resources involve Doctors, Nurses, Administrators and other Health Care Workers. Performance of Health care services provided by health care organisations depends on the performance of Human Resources. Health systems cannot function effectively without sufficient number of skilled, motivated and supported health workers. Among these all, Doctors are vital in delivering health services. Doctors are considered as back bone for providing Public Health Services or facilities and Medical Education. The presence of highly qualified and motivated doctors is a key aspect of health system performance. Job satisfaction of the health workers is highly important in building up employee motivation and efficiency as it determines better employee performance. Job satisfaction of doctors is positively associated with level of patient's satisfaction (Haas JS et al, 2000). Conversely job dissatisfaction would result in burn out and staff turnover which could exacerbate under staffing of health facilities.

Job satisfaction is most vital concept in the organisation. In 1935, Hoppock introduced the concept of job satisfaction. He explained concept of job satisfaction thorough combination of psychological, sociological and environmental circumstances that prompted to say a person that "I am satisfied with my job". After that most researchers agreed that job satisfaction is closely related to behaviours and attitudes at work (McKenna, 2000). Job satisfaction of individual is influenced by various factors, which are divided into two parts such as intrinsic factors and extrinsic factors (Kenneth Mark Baylor, 2010). Intrinsic factors are defined as the factors derived from individual own self such as achievement, recognition, the work itself, responsibility, advancement, and growth (Herzberg et al.1959; Herzberg, 1966) (Kenneth Mark Baylor, 2010). These factors create satisfaction among employee but absence of these is not necessary to dissatisfaction among employees (Kenneth Mark Baylor, 2010).

Job satisfaction is very vast concept in any organisation as it consists of every one of the attributes of the job and workplace where employees work. In 1969, Smith, Kendall, & Hulin developed job descriptive index. Job satisfaction index consisted of five facets viz. Work itself, pay, supervisor, co-workers and promotion opportunities. Weiss, Dawis, England, and Lofquist (1967) developed the Minnesota Job Satisfaction Scale (MJSS) based on the theory of Work Adjustment. Study by Arvey (1989) at University of Minnesota identified factors such as Ability Utilization, Achievement, Activity, Advancement, Authority, Organisation Policies and Practices, Compensation, Co-Workers, Creativity, Independence, Moral Values, Recognition, Responsibility, Security, Social Service, Social Status, Supervision-Human Relations, Supervision-Technical, Variety in Work and Working Conditions affiliated to job satisfaction.

Each employer of organisation should focus on the level of job satisfaction among employees because it correlates with low level of complaints and work grievances. Job satisfaction also influences various factors such as productivity, less absenteeism, lower turnover ratio; reduce accident, less job stress and less unionization and results in increased organisation effectiveness. Angelo Kinicki (1999) concluded that job satisfaction and turnover ratio are negatively correlated. Sharon Clarke et al (2004) identified that job satisfaction and safety are positively correlated which means that when job satisfaction increases then incidents related to safety would decrease. In Health organisation, it is necessary to focus on various factors which create dissatisfaction among physicians. Physician satisfaction/dissatisfaction related to their job directly affects their behaviour toward their co-workers, administration and particularly the patient. Job satisfaction influences the Quality of medical care and doctors- patient relationship (Syed Shakir Ali Ghazali, 2007). So aim of this study is to identify the job satisfaction scale among doctors of public hospitals in Uttarakhand.

**Review of literature :**

**Vincenza Capone et al (2022).** The present study aims to investigate the psychological and organizational factors that contributed to physicians' well-being during the pandemic. A total of 78 Italian physicians participated in the study. These findings may guide policymakers and healthcare organizations managers to consider the potential psychosocial factors related to physicians' well-being and the required preventive measures that can help in enhancing their human and organizational resources to cope with stressful situations such as the COVID-19 pandemic. **Hamzeh Mohammad Alrawashdeh, 2021,** assessed the prevalence of burnout and levels of job satisfaction among physicians in Jordan, and (ii) explore physicians' opinions, experiences, and perceptions during the pandemic crisis. This was a mixed-method study that utilized a structured web-based questionnaire and semi-structured individual interviews. The 10-Item Burnout Measure-Short version (BMS), and the 5-Item Short Index of Job Satisfaction (SIJS) were adopted to assess occupational burnout and job satisfaction, respectively. On the basis of the regression analysis revealed that age was positively associated with higher levels of job satisfaction. On contrary, being a general practitioner or specialist, working at highly loaded hospitals, low salaries, and suffering from burnout have predicted lower levels of job satisfaction. **Kostas Roditis 2019.** the present study seeks to unveil how Greek junior doctors perceive their residency, focusing on job satisfaction. A 36-question survey based on the Job Satisfaction Survey (JSS) translated into the Greek language, was placed online and promoted to junior doctors. Pay, Promotion, Supervision, Fringe Benefits, Contingent Rewards, Operating Procedures, Coworkers, Nature of Work and Communication facets were studied. The serious problems Greek junior doctors face are depicted with truly disappointing figures, with bureaucracy being the major problem leading to less work efficiency. More healthcare investments and fairer salaries must be implemented, especially in times of economic crisis, as good health is paramount for a stable society and public health is the result of the work of the country's hard-working junior doctors. **Sachin Ratan Gedam et al (2018)** measured the level of stress and job satisfaction among doctors. For data collection, used the socio-demographic proforma, professional characteristics for job satisfaction and kessler10 psychological distress instrument as a questionnaire. on the basis of the result concluded that more than half of doctors (76%) were not satisfied with their job and more stressful. So, these factors need to be addressed by authority to increase level of satisfaction and improve health care. **Mehata, prashant and Kiran, Ravi (2014)** developed and tested reliable measures of physician satisfaction among doctors of Indian health sectors. This study consisted review of literature for generating the initial items pool, focused and pre pilot study for consolidating the item pool and last, validation of the instruments. After refinement of scale researcher selected 51 items which were divided into eight facets (forty three items) and two global measures (eight items). On the basis of results it concluded that internal consistency range between .776 to .907 (except autonomy which had internal consistency of .639) is reliable and valid to measure the level of job satisfaction among Indian physicians. **Sharma et al. (2014)** conducted a study to explore the dimensions of physicians' job satisfaction in India. In order to measure physician satisfaction, 15 dimensions were included in the questionnaire. However, the final results identified only nine dimensions as the determinants of doctor satisfaction. These were physical working conditions, freedom to choose method of work, relation with co-workers, relations with superiors, recognition, inter department management, salary, opportunity to use abilities and attention paid to the suggestions. **Mehta and Kiran (2014)** attempted to develop an instrument for the measurement of physician job satisfaction in India. On the basis of its results the initial pools of items were refined and the new scale consisted of 48 items representing eight dimensions. The study identified eight facets of the final validated scale namely autonomy, relationship with co-workers, relationship with staff, intrinsic factors, relationship with community, remuneration,

resources and personal time. **Said, Salem Bin and Toubly, Al (2014)** identified the various factors influencing job satisfaction and also determining the job satisfaction level in nurses and Omani physician working in the public sector health in Muscat and Oman. On the basis of findings it was concluded that job satisfaction among nurses and physicians aged between 30 and 40 years was not at high level. Study recommended that the Ministry of Health in Oman should monitor and address healthcare employees' needs on an annual basis. **Faye et al. (2013)** in their study attempted to generate an instrument for assessing the satisfaction among the health workers. The EFA and CFA results refined the scale and identified 8 dimensions of multidimensional satisfaction scale composed of 24 items. These were tasks, salary and benefits, workload, management style, job stability, work environment, moral satisfaction and continuing education. **Miryala and Thangella (2012)** identified the factors which determined the doctors' job satisfaction who were working in both hospitals such as government and public hospitals in India. The study identified five dimensions of the job satisfaction construct. These were human resource practices, personal contentedness, work and delegation, pride and recreation facilities and retirement benefits. The 'human resource practices' factor was found to be the best predictor of doctors' job satisfaction and retirement benefits had the least impact. **Kebriaei and M.S. Moteghedhi (2009)** evaluated level of satisfaction among health workers from the various job aspects such as work itself, co-workers, management, workload, promotion, organizational structure, working conditions, and payment and benefits. On the bases of result it concluded that workers are satisfied with the work itself and co-workers, but they were very dissatisfied with all other job aspects such as payments and benefits. **Kaur et al. (2009)** examined the level of job satisfaction among the doctors of a tertiary hospital in Delhi. The response of the participants was recorded for five dimensions, namely, working hours per day, work environment, relations with colleagues at the workplace, salary and satisfaction with profession. The results showed that doctors were dissatisfied with the number of working hours and salary. The working environment of the hospital was considered satisfactory by most of the respondents. Relationship with co-workers was also observed to be cordial. **Wada et al. (2009)** in their study investigated the relationship between the working conditions of the doctors and their satisfaction. Result revealed that the working conditions were measured through ten dimensions such as salary, relationship with doctor co-workers, hospital staff & patients, career satisfaction, difficulty in patient care, personal time, workload, administrative work and availability of resources in hospital. A significant relationship was observed between six factors of working environment with Job satisfaction. Difficulty in patient care, administrative work, personal life and workload had no significant association with physician satisfaction. **Ozaki et al. (2008)** conducted a study to develop an instrument to measure physicians' job satisfaction in Japan. The data analysis resulted in a refined scale with 28 items depicting 6 dimensions which were significantly associated with physician satisfaction. These were relationship with other doctors, burden and business, community, relationship with staff, compensation and patient care issues. **Ghazali, Syed Shakir Ali et al. (2007)** identified prominent factors of job dissatisfaction among doctors working at Bahawal-Victoria Hospital / Quaid-e-Azam Medical College, Bahawalpur. On the basis of result it concluded that 68% of the doctors working in the teaching Hospitals of Karachi were not satisfied with their jobs and also revealed that main factors of job dissatisfaction were service structure and low income. Although designation and working environment contributed towards job satisfaction, the mean satisfaction scores were still small. **Eker, levent et al (2004)** evaluated the level of job satisfaction and identified the predictors of job satisfaction among physiotherapist of (five university hospitals, seven government hospitals and one municipality hospitals) Ankara, turkey. Result of the study revealed that there was no significant difference between Genders or among groups and logistic regression showed that most important predictors of job satisfaction were leadership, interpersonal relationship,

advancement and salary. Study also revealed that salary and advancement indicated higher dissatisfaction among physiotherapist. **Patrick, A. Bovier and Thomas, V. Perneger (2003)** evaluated the predictor of work satisfaction among physicians of Switzerland. On the basis of result study concluded that physicians were more satisfied with the following aspects of their current work situation: patient care, professional relations and personal rewards (intellectual stimulation, opportunities for continuing medical education, enjoyment at work). The lowest satisfaction scores were found for work-related burden (workload, time available for family, friends or leisure, work-related stress, administrative burden) and work-related income and prestige. In multivariate models, variables associated with most dimensions of satisfaction included type of practice (physician in training were less satisfied), specialty (internal medicine specialists and paediatricians were more satisfied), time spent on administrative tasks (globally negative effect), time spent on continuing medical education (globally positive effect). **Bovier and Perneger (2003)** in their study explored the factors which determined the job satisfaction among physicians. The data were collected with the help of a questionnaire containing seventeen items which covered five dimensions of work satisfaction namely patient care, work related burden, income -prestige, personal rewards and relationship with colleagues. The level of satisfaction was higher for patient care, relations and personal rewards. The physicians were found to be less satisfied with workload and income-prestige. Some of the physician personal characteristics were also found to be significantly associated with their satisfaction. **Rout, U. (1999)** measured and compared job stress, job satisfaction and mental wellbeing between male and female general practitioners (GPs). On the basis of result it concluded that Female GPs are positive regarding mental wellbeing in contrast with a normative group. Conversely, male doctors are significantly higher anxiety and depression scores than the norm. Male and female GPs are not significantly difference between male and female regarding various aspects of job such as rate of pay, hours of work and amount of work. Multivariate analysis showed that three job stressors that were predictive of high levels of job dissatisfaction for both male and female GPs; these were: time pressure/interruptions, working environment/communication, career and goal achievement. **Konrad et al. (1999)** conducted a study to develop a scale for measurement of job satisfaction among physicians. Study identified that the final physician job satisfaction scale consisted of the following sub scales: autonomy, relationship with colleagues, relationship with patients, relationship with staff, personal time, intrinsic factors, pay, communication, administration and resources. **Ng, Sik Hung (1993)** measured the job satisfaction and its impact on the organization commitment. On the basis of result it concluded that job satisfaction consisted of administrated, co-workers, career, patient care, relation with supervisor, nursing education and communication and overall job satisfaction is positively correlated with organization commitment especially career and relation with supervisor. **Paul E. Spector (1985)** developed the job satisfaction instruments, job satisfaction survey and measurement of human service staff satisfaction.

### **Research Objectives**

The main objective of the study is to explore the job satisfaction scale among doctors in public Hospitals

### **Subject and Method**

Study is exploratory in nature and a self-structured questionnaire was framed to record responses of respondents. Questionnaire was divided into two sections in which first section was related to demographic profile of respondents and in second section responses of respondents were recorded regarding their respective job satisfaction on five point likert scale where the five alternatives were strongly disagree, disagree, not decided, agree and strongly agree. The final sample size of the study was determined using pre-testing results. The sample size (n) for doctors was determined by following formula (Hair *et al.*, 2013);

$n = (Z*d/e)^2$ . Based on above formula and calculating sample size by using Hair's criterion (Hair *et al.*, 2013), sample size was determined 174. After data collection, a total of 150 responses were found appropriate for analysis. Sample was disproportionally selected from public hospitals of Haridwar and Dehradun District in Uttarakhand and used various statistical tools such as reliability, factor analysis and last confirmatory factor analysis.

### Demographic profile of the Respondents:

This study selected the various demographic factors such as age, gender, Marital Status, Education, Working Experience and Average number of Patient Per Day.

**Table 1 Demographic profile of Doctors in Public Hospitals**

No.	Demographic Factors	Public Hospitals	
		Number	%(Percentage)
<b>1.</b>	<b>Age</b>		
	26 to 35	70	45.7
	35 to 45	32	21.3
	45to 55	29	19.3
	More than 55	19	22.7
	Total	150	100
<b>2.</b>	<b>Gender</b>		
	Male	105	70
	Female	45	30
	Total	150	100
<b>3.</b>	<b>Marital Status</b>		
	Single	54	36
	Married	96	64
	Total	150	100
<b>4.</b>	<b>Education</b>		
	MBBS	73	48.7
	MD	29	19.3
	MS	38	25.3
	Others	10	6.7
	Total	150	100
<b>5.</b>	<b>Working Experience</b>		
	1 to 6	74	49.3
	6 to 12	56	37.3
	13 to 18	14	9.3
	18 & above	6	4.0
	Total	150	100
<b>6.</b>	<b>Average number of Patient Per Day</b>		
	Less than or equal 15	18	12
	16-30	33	22
	31-45	59	39.3
	More than 45	40	26.7

In our study, total 150 respondents selected for data collection in which find that under the age group, gender group, marital status group, education status group, working experience group and average number of patient per day group, maximum doctors belongs to 26-35, Married group, male group, MBBS status group, 6-12 work experience group and last 31-45 Average number of Patient Per Day status respectively.

## Exploratory factor analysis (EFA) for Identifying the influencing factors of Job satisfaction in Public Health Sector:

Employing the Principal components analysis (PCA) and orthogonal method with varimax rotation, exploratory factor analysis was performed using SPSS (version 20.0). Exploratory factor analysis is used for reducing the number of variables to a smaller set of underlying summary variable or component, to identified sample adequacy of data. This method is one of a statistical method to uncover the underlying structure of a relatively large set of variables. this study employed two test such as Kaiser–Meyer–Olkin (KMO) and Bartlett test of sphericity (BTS) values indicated that correlations between items were sufficiently large for principal component analysis (according to Sharma, 1996).

**Table 2 Bartlett and KMO Test Result:**

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.906
Bartlett's Test of Sphericity	Approx. Chi-Square	4121.917
	Df	630
	Sig.	.000

factor analysis was run on 36 items comprising of job satisfaction which resulted in the Kaiser Meyer–Olkin ( KMO) value of .906 which means that, according to Hutchenson and Sofroniou (1999), it is quite significant, as it is higher than the 0.7 level another side Bartlett test of sphericity (BTS) values as chi-square = 4121.91, Df = 630 at significant level 0.000 also indicates that it is possible to continue with factor analysis.

### Reliability:

After performing an exploratory factor analysis, the reliability test was conducted in order to examine the reliability for each component by computing a Cronbach's Alpha value. These values must be more than 0.6, so that we can conclude the items are loaded to the reliable components. Table 2 illustrated the results of Cronbach's Alpha for each component. As a result, all the Cronbach's Alpha values are more than 0.6 which indicated that those components extracted have a reliable measure of consistency among the 150 Doctors.

Factors	Cronbach's Alpha value
Resources	0.91
Relation with patients	0.89
Payment/compensation/income	0.87
Autonomy	0.92
Relationship with staff	0.88
Relationship with co-workers	0.87
Community	0.86
Intrinsic factors	0.87
Administration	0.86
Personal time	0.88

in this study Cronbach's Alpha value were set at the minimum level .60. table 4 result showed that Cronbach's Alpha value of the all the factors varies from .92 to .86. As a result, all the Cronbach's Alpha values are more than 0.6 which indicated that those components extracted have a reliable measure of consistency among the 150 Doctors.

## Confirmatory factor analysis (CFA) for Job Satisfaction scale among doctors of Public Health Sectors:

After applying EFA and reliability analysis, the final factors emerged were analysed with CFA tools in Amos to confirm whether the models proposed are perfectly fit or not. CFA is a statistical technique used to evaluate the measurement models that represent hypotheses about relations between indicators and factors (Kline, 2011). The factors or latent constructs are assumed to cause the observed scores in the indicators. The data exploring accounted for global criteria (allowing the analysis of the sustainability of the hypothesized model as a whole) and specific criteria (centered in the analysis of the adequacy of individual parameters) (Ullman, 2007; Byrne, 2010; Kline, 2011). Concerning the first ones, there are several fit indices, turning to researchers the task of choosing the ones to base the analysis upon. According to the above mentioned authors, we used the Chi-Square test statistic, the CFI (Comparative Fit Index), the AGFI (Adjusted Goodness-of-Fit Index), and the RMSEA (Root Mean Square Error of Approximation) as well as its respective confidence interval. The use of these statistics is well supported by the literature (Byrne, 2010) and therefore are frequently referenced. For these indices and according to the generally recommended and accepted values by the authors, the following criteria was used to assess the fit between the data and the hypothesized models: non significant  $\chi^2$  or the ratio between its value and the corresponding degrees of freedom near or less than 2, due to the reputed sensibility of the Chi-Square test (e.g. Ullman, 2007); CFI values near or greater than .95 (Hu and Bentler, 1999); AGFI values near or greater than .90; and RMSEA values of less than .08 (Browne and Cudeck, 1993). Concerning the analysis of the individual parameters of the model, we considered the weight of its estimation and its statistical significance.

**Job Satisfaction Component:** initially confirmatory factor analysis (zero based model) run with 36 with into 10 factors and finds that all the statement full-fill the all above mentioned criteria except two statements such as I have opportunity practice the way I want to do, I can take off time without feeling guilty which standard regression weight (0.270 & -0.188) and squared multiple correlation values (0.036 & -0.073) respectively is less than standard criteria (0.50).

After that confirmatory factor analysis were run again find that all the statements full fill the standard criteria such as squared multiple correlation values, standard regression weight, model fitness, T value, p value which mentioned table no 4

Factors		Items	Standard regression weight	Squared multiple correlation	T values	P values
Resources		JA6	.830	.688	N/A	***
		JB6	.882	.779	13.359	***
		JC6	.911	.830	14.000	***
		JD6	.784	.615	11.171	***
Relation with patients		JA5	.830	.690	N/A	***
		JB5	.892	.795	13.639	***
		JC5	.892	.796	13.648	***
		JD5	.821	.674	11.998	***
Payment/compensation /income		JA2	.841	.707	N/A	***
		JB2	.802	.643	11.340	***
		JB3	.708	.501	9.542	***
		JB4	.852	.726	12.340	***
Autonomy		JA1	.911	.830	N/A	***
		JB1	.804	.646	13.225	***
		JC1	.859	.737	15.099	***



	JD4	.834	.696	14.219	***
<b>Relationship with staff</b>	JA4	.816	.667	N/A	***
	JB4	.858	.736	12.101	***
	JC4	.905	.819	12.794	***
<b>Relationship with co-workers</b>	JA3	.785	.616	N/A	***
	JB3	.809	.654	10.564	***
	JC3	.921	.581	11.731	***
<b>Community</b>	JA10	.762	.842	N/A	***
	JB10	.809	.654	10.161	***
	JC10	.918	.848	11.264	***
<b>Intrinsic factors</b>	JA7	.747	.558	N/A	***
	JB7	.905	.818	10.763	***
	JC7	.839	.705	10.214	***
<b>Administration</b>	JA9	.783	.613	N/A	***
	JB9	.770	.592	9.844	***
	JC9	.909	.825	11.530	***
<b>Personal time</b>	JA8	.814	.663	N/A	***
	JB8	.814	.663	11.320	***
	JC8	.923	.852	12.997	***

The above table exhibits the standard regression weight, squared multiple correlation values, T values and level of significant P values. On the basis of the result this study concluded that all the selected components full-fill minimum cut value of standard regression weight (more then or equal to .50), squared multiple correlation values (more than or equal to 0.50) T values greater than 2.50 and another side P value of the all components is less than (.05) significant value (Netemeyer et al. 2006).

## VALIDITY MEASUREMENT

1. **Validity:** this study applied three types of validity method which mentioned bellows:

*a.* Content Validity of the scale was established through review of literature and deliberation with the subject academicians, experts, doctors for the selection of items in the questionnaires. Later, the items were modified to make statements conceivable to respondents that further checked the face and content validity.

*b.* Construct Validity was established through convergent and discriminant validity. Convergent validity was evaluated through an assessment of item factor loadings and their statistical significance, followed by an assessment of the factors' average variance extracted (AVE) and construct reliabilities (CRs). Convergent validity was indicated by an item factor loading  $\geq 0.5$  and  $p < .05$  (Hair, Black, Babin, & Anderson, 2009),  $AVE \geq 0.5$ , and  $CR \geq 0.7$  (Fornell & Larcker, 1981). AVE and CR values were calculated according to the following equations given by Fornell and Larcker (1981):

$$CR = \frac{[\sum_{i=1}^n \lambda]^2}{[\sum_{i=1}^n \lambda]^2 + [\sum_{i=1}^n e_i]}$$

$$AVE = \frac{\sum_{i=1}^n \lambda_i^2}{\sum_{i=1}^n \lambda_i^2 + \sum_{i=1}^n e_i^2}$$

where AVE- average variance explained, CR= composite reliability,  $\lambda$ = factor loading of the items  $i$ = number of items and  $e$ =variance explained

**Table 5 Composite reliability**

Factors	Composite reliability	AVE
Resources	0.914	0.728
Relation with patients	0.919	0.738
Payment/compensation/income	0.878	0.644
Autonomy	0.909	0.714
Relationship with staff	0.895	0.740
Relationship with co-workers	0.877	0.706
Community	0.870	0.692
Intrinsic factors	0.871	0.694
Administration	0.862	0.677
Personal time	0.888	0.726

Table 5 exhibits the results of composite reliability and average variance explained value for each component. In this study researcher were set minimum level value of CR at the above of equal to 0.7 and for the average variance explained at the above .50 (Fornell & Larcker, 1981).. result of the table revealed that all selected component fulfil the minimum criteria value of AVE and CR which indicated that those components extracted have a valid measure of consistency among the 150 Doctors.

c. Discriminant validity test assumes that concepts or measurements that are not supposed to be related are, in fact, unrelated. Discriminant validity is examined by comparing average variance extracted value (AVE) with average shared variance (ASV) and maximum shared variance (MSV). The AVE came out to be greater than ASV & MSV for all the dimensions that establishes discriminant validity (Table 6). As well as the square root of the AVE for each construct is greater than its correlations with other constructs (Fornell and larcker, 1981). This study applied following formula to measured the average shared variance (ASV) and maximum shared variance (MSV).

MSV for latent construct= squared of higher correlation coefficient value between latent construct

ASV= the average mean of squared of correlation coefficient value between latent construct

**Table 6 Discriminant validity for Public doctor's job satisfaction from CFA**

	MSV	MaxR (H)	AA	BB	CC	DD	EE	FF	GG	HH	II	JJ
<b>AA</b>	0.450	0.922	<b>0.845</b>									
<b>BB</b>	0.449	0.887	0.670***	<b>0.803</b>								
<b>CC</b>	0.450	0.901	0.670***	0.498***	<b>0.840</b>							
<b>DD</b>	0.382	0.903	0.563***	0.528***	0.453***	<b>0.861</b>						
<b>EE</b>	0.392	0.923	0.569***	0.543***	0.437***	0.618***	<b>0.859</b>					
<b>FF</b>	0.374	0.924	0.551***	0.446***	0.386***	0.363***	0.593***	<b>0.853</b>				
<b>GG</b>	0.396	0.891	0.596***	0.629***	0.390***	0.497***	0.539***	0.356**	<b>0.833</b>			
<b>HH</b>	0.374	0.906	0.589***	0.600***	0.397***	0.462***	0.567***	0.612**	0.544**	<b>0.852</b>		
<b>II</b>	0.429	0.885	0.605***	0.655***	0.404***	0.467***	0.626***	0.456**	0.576**	0.586**	<b>0.823</b>	
<b>JJ</b>	0.414	0.896	0.559***	0.586***	0.407***	0.528***	0.605***	0.519**	0.521**	0.587**	0.643***	<b>0.832</b>

**Note:** The bold faced diagonal elements are the square root of the variance shared between the constructs and their measures Off-diagonal.

FIGURE 1: Covariance model of job satisfaction (zero base model)

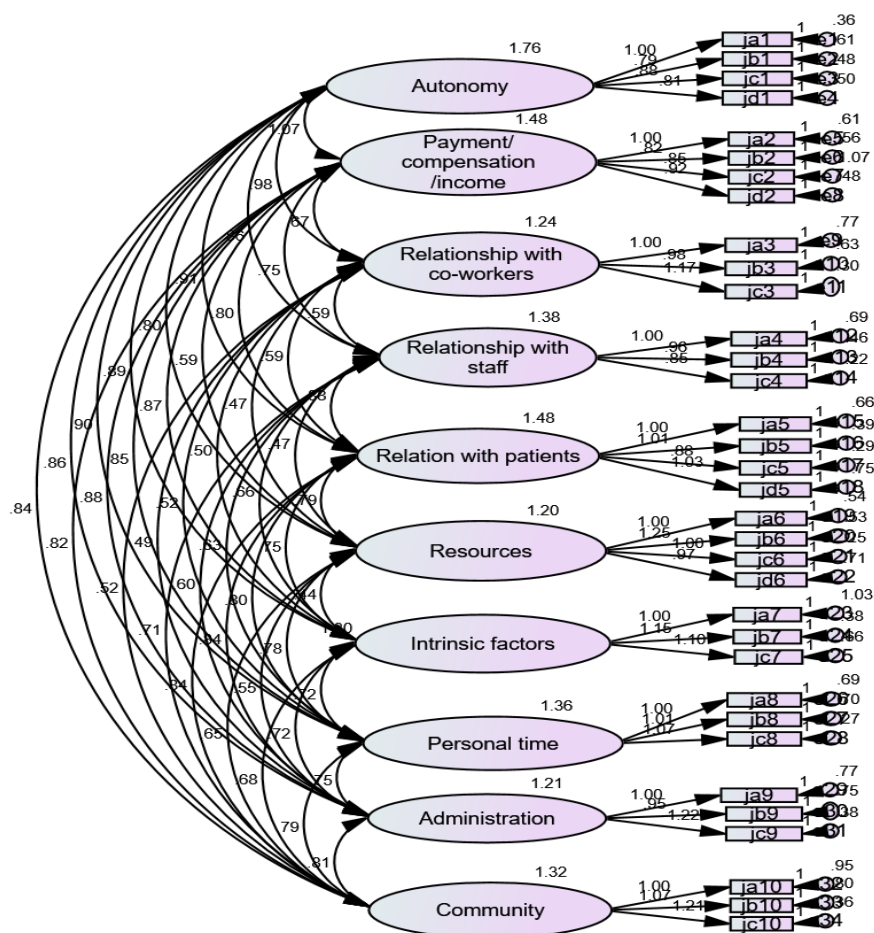


Table 6. MODEL FITNESS:

Cmin	Df	Cmin/df	P value	GFI	NFI	TLI	CFI	RMR	RMSEA
675.013	482	1.400	.000	.799	.846	.941	.950	.092	.052

Note: GFI= goodness –of-fit index; NFI= normed fit index; TLI= Tucker-Lewis index; CFI= comparative fit index; RMR= root mean square of residual; RMSEA= root mean square error of approximation.

in this study following tools used for measuring model fitness such as CMIN, DF, CMIN/DF, p values, GFI, NFI, TLI, CFI, RMSEA and were set at minimum criterial for following tools like non significant  $\chi^2$  or the ratio between its value and the corresponding degrees of freedom near or less than 2, due to the reputed sensibility of the Chi-Square test (e.g. Ullman, 2007); CFI values near or greater than .95 (Hu and Bentler, 1999); NFI- value near .90, TLI value near .95, and RMSEA values of less than .08 (Browne and Cudeck, 1993). On the basis of the result this study concluded that all tools fulfil the minimum criteria value as mentioned above which indicate above model is best for measuring the job satisfaction among doctors of public hospitals.

### Findings of the study:

- In this study, we have investigated the identified the job satisfaction scale among doctors of public hospitals in two district of Uttarakhand such as Dehradun and Haridwar and find out one factor model or 10 factor model of job satisfaction is suitable to measure the job satisfaction among doctors.
- On the basis of the Explorative factor analysis this study dropped out one statement such as I have opportunity practice the way I want to do as they failed to cross out the factor loading criterial (more than 0.50) and communalities value (more than 0.4).
- The result of reliability analysis shows that this one statement such as I can take off time without feeling guilty they failed to cross out the squared multiple correlation criteria (more than 0.3) so on the basis of squared multiple correlation value criteria this study dropped out one statements.
- After the reliability analysis, exploratory factor analysis again run and result shows that all the 34 statement of job satisfaction scale survey full-fill the all criteria of explorative factor analysis and all the statement merged in 10 dimension of job satisfaction scale.
- The result of the confirm factor analysis shows job satisfaction scale consist 10 dimension model with 34 statements demonstrated well construct, **Discriminant validity and model fitness** (GFI=0.799, NFI=0.846, TLI=.941, CFI=.950, RMR=.092, RMSEA=.052). so on the basis of the above analysis this study finalised the 10 dimension model to measure the job satisfaction among doctors of public hospitals in contrast with the bovier and perneger (2003) identified 5 dimension for physician satisfaction, ozaki et al (2008) identified 6 dimension and faye et. al (2013) identified 8 dimension for physician satisfaction.

### Conclusion

To sum of the discussion the main objective of the identified the job satisfaction scale among doctors of public hospitals in two district of Uttarakhand such as Dehradun and Haridwar. In order to examine the scale's validity, exploratory factor analysis, confirmatory factor analysis as well as the value of Cronbach's Alpha were applied in order to test the reliability. in contrast, refer bovier and perneger (2003) identified 5 dimension for physician satisfaction, ozaki et al (2008) identified 6 dimension and faye et. al (2013) identified 8 dimension for physician satisfaction, this study on the basis of exploratory and confirmatory factor analysis result identified Ten dimension of job satisfaction scale to measure the job satisfaction among Physician. These factors include, resources, relation with patients, payment/compensation/income, relationship with staff, relationship with co-workers, community, intrinsic factors, administration and personal time.

### 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.

**References:**

- ❖ Aidas Permina (2011) Job Satisfaction Survey: A Confirmatory Factor Analysis Based on Secondary School Teachers' Sample, *International Journal of Business and Management*, Vol. 6, No. 5; May 2011
- ❖ Alasmari, Hajar Ali M., and Clint, Douglas (2012). Job satisfaction and intention to leave among critical care nurses in Saudi Arabia. *Middle East Journal of Nursing*, 6(4), 3-12.
- ❖ Azash, Smd. et al. (2017). Scale For Measuring Job Satisfaction – A Review Of Literature. *EPRA International Journal of Economic and Business Review*, 5, 3.
- ❖ Bagheri, Shokoufe (2013). Job Satisfaction Differences between Primary Health Care and Treatment Sectors: An Experience from Iran. *Health Promot Perspect*. 3(1), 90–101.
- ❖ Bovier & Perneger (2003). Predictors of work satisfaction among physicians. *Eur J Public Health*, 13(4):299-305.
- ❖ CAS, Araújo and KF, Figueiredo (2012). How to Manage and Generate Positive Attitudes and Behaviors in Physicians, *International Journal of Advances in Management and Economics*, 1, 5, 85-94.
- ❖ Eric, W. MacIntosh & Doherty, Alison (2009). The influence of organizational culture on job satisfaction and intention to leave. *Published by Elsevier, Sport Management Review*, 13, 106–117.
- ❖ Eker, levent et al (2004). Predictors of Job Satisfaction among Physiotherapists in Turkey. *J Occup Health*, 46, 500-505.
- ❖ Faye et al. (2013). Developing a tool to measure satisfaction among health professionals in sub-Saharan Africa. *Human Resources for Health*,
- ❖ Ghazali, Syed Shakir Ali et al (2007). job satisfaction among doctors working at teaching hospital of bahawalpur, pakistan. *J Ayub Med Coll Abbottabad*, 19,3.
- ❖ Kebriaei1 and M.S. Moteghed1, Eastern Mediterranean (2009). Job satisfaction among community health workers in Zahedan District, Islamic Republic of Iran, A. *by Health Journal*, Vol. 15, No. 5,
- ❖ Kaur, Et, al. (2009). A study of job satisfaction and work environment perception among doctors in a tertiary hospital in Delhi. *Indian J Med Sci*. 63(4), 139-44.
- ❖ Kaur, Suminder (2009) A Study Of Job Satisfaction And Work Environment Perception Among Doctors In A Tertiary Hospital In Delhi, *Indian J Med Sci*, Vol. 63, No. 4, April 2009.
- ❖ Konrad et al. (1999). Measuring Physician Job Satisfaction in a Changing Workplace and a Challenging Environment. *MEDICAL CARE*, 37, 11, 1174-118.
- ❖ Ng, Sik Hung (1993) job satisfaction scale for nurses, *New Zealand journal of psychology*, 22, 46-53.
- ❖ Mehata, prashant & Kiran, Ravi (2014). An Empirical Analysis of Job Content and Contextual Factors: A Case Study of Indian Physicians. *Studies on Ethno-Medicine*, 9, 3.
- ❖ Mehta, P., & Kiran, R. (2014). Indian physician job satisfaction scale: development and validation. *Studies on Ethno-Medicine*. 8(3), 293-304.

- ❖ Miryala and Thangella (2012). A Study of Job Satisfaction Among Doctors Working in Government and Private Hospitals in the State of Andhra Pradesh. *Pragyaan: Journal of Management*, 10, 1.
- ❖ Ozaki, Makiko et al. (2008). Developing a Japanese hospital physician satisfaction scale. *International Journal of Health Care Quality Assurance, emerald insight*, 21, 5.
- ❖ Paul E. Spector (1985). Measurement of human service staff satisfaction: development of job satisfaction survey, *american journal of community psychology*, 13,6.
- ❖ Patrick, A. Bovier and Thomas, V. Perneger (2003). Predictors of work satisfaction among physicians. *EUROPEAN JOURNAL OF PUBLIC HEALTH*, 13: 299–305.
- ❖ Rout, U. (1999). Gender differences in stress, satisfaction and mental wellbeing among general practitioners in England. *PSYCHOLOGY, HEALTH & MEDICINE*, 4, 4.
- ❖ Sharma et.al, 2004. Measuring Physician Job Satisfaction in a Changing Workplace and a Challenging Environmen, *medical care volume 37*, number 11, pp 1174-1182 01999 lippincott williams & wilkins, inc.
- ❖ Wada et al. (2009). Physician Job Satisfaction and Working Conditions in Japan. *Journal of Occupational Health*, 51(3):261-6.

