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Cross – Sectional Study on Job Satisfaction and its Related Factors among Physicians Working in Punjab Health Systems Corporation (PHSC) in Punjab, India

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ABSTRACT

The government of Punjab (India) established Punjab Health Systems Corporation (PHSC) in 1995 as a parallel healthcare system to an existing set up in order to improve the healthcare industry. The aim was to revive the primary and secondary healthcare system. Even after 26 years of establishment, most of the positions of doctors in PHSC hospitals remain vacant. The goal of the survey was to determine how satisfied doctors were with their jobs at PHSC hospitals. These factors were essential to reduce the employee's turnover ratio and important to predict the outcome of the project started by the government a long time ago. Doctors from 30 PHSC hospitals provided primary data. 200 doctors were interviewed to find out how they felt about the hospitals' operations and how satisfied they were with their jobs. The study used Exploratory Factor Analysis to reduce 23 variables into 6 dimensions. The main factors associated with job satisfaction which emerged in the study were "Workplace Relationships", "Financial Gain and Professional Advancements", "Workplace Culture", "Workload Volume", "Interaction with Seniors" and "Degree of Freedom at Workplace". The study found the factors essential for job satisfaction, which were never studied in PHSC hospitals before. Furthermore, "Equal Work Equal Pay," came up as the main demand among new recruits, remains a challenge for the government with limited resources available.

Keywords: Job satisfaction, doctors, exploratory factor analysis, government hospitals, PHSC

1. Introduction

Job satisfaction means one's personal perception towards the work (Weiss, 2002). Job satisfaction of an employee is necessary because an organisation desires increased work performance from their workers (Sibbald et al., 2000). Job satisfaction also had a major correlation with the retention of Health Care professionals (Toh, 2012; Coomber and Barriball, 2007; Pathman et al., 2002; Lu et al., 2002). In the healthcare sector, job satisfaction could be measured by determining personal factors (such as background of an employee, personal expectations, work enthusiasm) and organisational factors (such as working condition, rewards, teamwork, management role) (Liu et al., 2010). Intrinsic and extrinsic factors were two further criteria that could be used to estimate job satisfaction. (Filho et al., 2016). Intrinsic factors were associated with one's work (such as autonomy, conflicts at work

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and family, lack of respect) (Hann et al., 2011) and Extrinsic factors included those dimensions which were not directly related to one's work (Hann et al., 2011; Dogan 2009) (such as income, workload, stress of appointments, relation with staff) (Filho et al., 2016; Hann et al., 2011; Dogan 2009). Additional characteristics related with job satisfaction included promoting possibilities and organisational culture (Roelen et al., 2008), demographic variables of an individual, job characteristics (Hann et al., 2011), incentives for growth, availability of equipment, job competency, working conditions and other facilities (Liu et al., 2010; Tran et al., 2013). High job satisfaction was necessary/ required to get one's best from himself/herself. Satisfied persons could give highly efficient services (Toh, 2012; Romig et al., 2011; Fomba et al., 2010; Fomba et al., 2010; Tuan et al., 2005) and likely to produce better medicinally cured, satisfied patients and the better outcome of healthcare services than those with the lower satisfaction level (Tzeng et al., 2002; Katz, 1999).

According to Maslow's need hierarchy hypothesis, human needs could be divided into five levels, with Physiological Needs requirements at the base and safety, love, esteem, and self-actualization at the top. Based on the perspective of this theory, some researchers such as (Kuhlen, 1963), (Worf, 1970) and (Conrad et al., 1985) gave the definitions of job satisfaction, but this approach was not as popular as Maslow's theory missed the cognitive element involved in satisfaction (Spector, 1997). In between Herzberg and Mausner in Motivation Hygiene theory linked job satisfaction with various other elements of the work (Herzberg and Mausner, 1959).

According to (Lai Wan, 2007), achievement of satisfaction at the job was the primary goal of any organisation. A satisfied individual could contribute better to the organisation and could produce better results. On the contrary, a dissatisfied individual could create negative impact on the efficiency of the organisation which in turn could lead to dissatisfied customers. Similarly, if the hospital workforce was not satisfied with their job and was not motivated towards their work, then automatically they might not provide the same medical results which they were capable of delivering to the patient and actual things could turn tragic one (Nemmaniwar & Deshpande, 2016).

In an important study, (Shrivastva et al., 2019) explored how Quality of Work had the mediating role on job satisfaction and job burnout. It was observed that in the presence of QWL, with the increase of job burnout, job satisfaction decreases. The study further suggested that the support of the supervisors (seniors) which was an important constituent of QWL could be helpful in decreasing job burnout and thus increasing job satisfaction. (Wang, 2010) studied two provinces of China to examine and understand the job satisfaction in the Township Health Centre (THC) employees. It was found that the employees' degree of satisfaction with their jobs in regard to working conditions, awards and recognition and promotion opportunities was very low. The factors like good working conditions, better rewards and better professional development opportunities could contribute to enhance the job satisfaction among employees. Other different factors like structure and management of organisation, society, work, internal

and external environment, welfare policies including individual characteristics of employees contribute to improve the quality of work and productivity of employees (Bagheri et al., 2012). (Filho et al., 2016) while examining the level of satisfaction and motivation towards work among physicians of clinical hospitals, School of medicine, Brazil revealed that the major factors of job satisfaction was a cordial relationship with colleagues followed by high prestige of the institution in the society. Main causes of dissatisfaction among employees were inadequate pay scales and incursion into personal time. Improvement was also needed on other various factors such as working conditions, workload, human resource management, incentives and rewards (Tran et al., 2013)

As the population around the globe was increasing, the World Health Organisation (WHO) had predicted a global inadequacy (shortage) of 13 million skilled healthcare personnel (including doctors, nurses and midwives) by 2035. The severe deficit of professionals was expected in the parts of Asia (more than 40 per cent) and Africa (25 per cent) (Truth, 2013). Therefore, the retention of staff specially newly recruited who had more service years, should be the key priority area.

2. Need of the study

In Punjab, India, Secondary Healthcare System was differentiated by three levels: District Hospital (DH), Sub-Divisional Hospital (SDH) and Community Health Centres (CHC). Community Health Centers were the backbone of any country's health system, and play a critical role in meeting as such as 80 percent of local/rural medical treatment demands on a regular basis. (Ladinsky et al., 2000). The employment satisfaction of doctors working in these hospitals had never been evaluated since the formation of the Punjab Health Systems Corporation, a dream project of the Punjab government started with funding from the World Bank. No valid evidence was found which could help us to determine the factors for measurement of job satisfaction of doctors in relation to other concepts such as working environment, functionality, team workers, rewards, income etc. in PHSC hospitals. In this study, we looked into the viewpoints of doctors on a variety of factors that influence job satisfaction. It is worth mentioning here that 71% of the specialty doctor positions in CHCs were empty when the field study was conducted. Similar patterns were seen in District and Sub-Divisional Hospitals, where more than 50% of the Medical Officer positions remained unfilled. The study looked into a number of new parameters that may be used to measure job satisfaction among hospital employees, particularly the doctors working in PHSC hospitals. This could help policymakers to set priority for certain aspects of improving the quality of public health care in Punjab as well as employee retention.

3. Methodology

The information has been gathered from 30 hospitals in the six districts of Tarn Taran, Amritsar, Hoshiarpur, Jalandhar, Bathinda, and Ludhiana in the province of Punjab. All three of Punjab's geographical regions – Malwa, Doaba and Majha are given the proper weightage.

Data collection has been done for the period of one year starting from August, 2020. 2 districts have been chosen from each area. Five hospitals in each district have been chosen. Ten hospitals in all were selected from each region. The districts with a sizable section of the border area with Pakistan, the inter – state borderline with Himachal Pradesh and the centre part of Punjab, were all taken into consideration when choosing these districts. At the initial stage, hospitals were chosen using a proportionate stratified random selection technique. The doctors were chosen at the second step using the convenience random sampling procedure.

Originally, it was intended to contact 300 doctors, but due to a large number of unfilled posts and a low doctor-to-patient ratio in the chosen hospitals, we ended up with a sample of 200 doctors. The chosen hospitals for the current investigation are listed in Table 1.

Table 1
Chosen Hospital List

Sr. No	Region	District	Hospital
1.	Majha	Amritsar	DH, Amritsar
2.			SDH, Ajnala
3.			SDH, Baba Bakala
4.			CHC, Lopoke
5.			CHC, Majitha
6.		Tarn Taran	DH, Tarn Taran
7.			SDH, Khadoor Sahib
8.			SDH, Patti
9.			CHC, Kairon
10.			CHC, Sur Singh
11.	Doaba	Jalandhar	DH, Jalandhar
12.			SDH, Nakodar
13.			SDH, Phillaur
14.			CHC, Kala Bakra
15.			CHC, Kartarpur
16.		Hoshiarpur	DH, Hoshiarpur
17.			SDH, Dasuya
18.			SDH, Mukerian
19.			CHC, Bhol Kalota
20.			CHC, Tanda
21.	Malwa	Ludhiana	DH, Ludhiana
22.			SDH, Jagraon
23.			SDH, Samrala
24.			CHC, Machiwara
25.			CHC, Sahnewal
26.		Bathinda	DH, Bathinda
27.			SDH, Rampura Phool
28.			SDH, Talwandi Sabo
29.			CHC, Maur
30.			CHC, Bhagta Bhai Ka

Source: Field Survey

3.1 Physician's Profile

Table 2 displays the doctors' demographic profile. According to the data, males made up 65.00% of respondents while females made up 35.00%. Most of the respondents (37.5%) were

between the age group of 41 to 50 years and 28.00 percent of the respondents were between the ages of 31 and 40. Only 7.50% of respondents were over 50 and 27.00% of respondents falling between the ages of 21 and 30. Additionally, the profile also stated that 58.50% of the doctors had either an MD or MS degree and 31.50 percent of the respondents were MBBS. 37.50% of the sample's respondents were from the rural sector, while 62.50% were from the urban sector.

Table 2
Physician's Profile

Sr. No	Attribute		Number	Percentage
1.	Sex	Male	130	65.00
		Female	70	35.00
2.	Age	21 to 30 years	54	27.00
		31 to 40 years	56	28.00
		41 to 50 years	75	37.50
		Above 50 years	15	7.50
3.	Qualification	MBBS	63	31.50
		BDS	16	8.00
		MD	56	28.00
		MS	61	30.50
		Others	4	2.00
4.	Origin	Urban	125	62.50
		Rural	75	37.50

Source: Field Survey

3.2 Research Schedule building

Variables were collected from previous studies by (Liu et al., 2010), (Tran et al., 2013), (Filho et al., 2016), (Chang et al., 2017) and (Bagheri et al., 2012) to establish a suitable scale for investigation.

3.3 Exploratory Factor Analysis

EFA was utilised to look at the different dimensions of 23 statements. As we all know, EFA was mostly useful to turn a vast number of items into a small set of dimensions that reflect the key determinants. SPSS version 19 was the software used to cut down on the number of items. Principal Component Analysis was used with the Varimax Rotation Method, which was believed to be the best because it explains all the variations between the statements (Field, 2000).

A few data assumptions were verified before the factor analysis. If the ensuing premises were false, the factor analysis could not be performed.

3.4 Normality

Skewness and kurtosis measurements were used to determine whether the data was normal. All of the variables' values were discovered to be within the suggested range, demonstrating their normalcy.

3.5 Reliability & Validity

To validate the internal consistency of data, a reliability analysis was performed on it. It establishes if identical settings and circumstances would be used to conduct the same research in the future and get the same results (Hair et al., 1992). A score of Cronbach's Alpha greater than 0.70 was also regarded as a reliable marker for identifying strong internal consistency. When Cronbach's Alpha was calculated, a value of 0.831 was recorded, which indicated that the data was trustworthy.

Content validity was established using expert guidance and a review of the literature. A group of experts were asked to review the research schedule. The questionnaire was enhanced using the panel's recommendations. The legitimacy of the content was established as a result.

3.6 Kaiser Meyer Olkin Measure of Sampling Adequacy

Before doing an EFA, it was essential to compute the values of KMO and Bartletts test of sphericity. These tests were used to evaluate if sample size that was taken was fair enough (Hair et al., 1998). Table III displays the outcomes of the KMO and Bartlett sphericity test. KMO value was recorded 0.718, indicating that the sample was sufficient to be analysed using factor analysis. Bartlett's test of sphericity was also determined to be significant because the p value was less than 0.001, which suggested that there was a connection between the variables and further analysis was allowed.

3.7 Factor Extraction

As already mentioned, the six factors were extracted using the Principal Component Analysis method and Varimax Rotation. A factor loading that was closer to 1 indicated a strong connection between the statements and its factor, whereas loading that was nearer to zero indicated a weak association. As indicated by Hair et al., 1998, the extraction procedure produced factor loadings for all 23 assertions that were equal to or greater than 0.5. Three criteria – Eigenvalue > 1, Scree plot, and variance explained–were used to extract the components. Following the factor extraction, each dimension was given a name based on the variables that lie under it.

3.8 Variance Analysis

Acceptable AVE values should be 0.50 or higher (Cheah et al., 2018 & Hair et al., 2010). The total AVE value of the six factors that were extracted was roughly 80.14%. This indicated that these six factors were sufficient to outweigh the other factors.

4. Factor Loadings

The study's factor loadings are displayed in Table 3. Loadings close to one explained a high degree of correlation and that they could be factored together. Less than 0.40 loading values were ignored and weren't utilised in that particular dimension. Every value and loading that was more than 0.40 was accepted. There was no cross loading of the variables in the study.

Table: 3
Rotated Component Matrix

Items	Components					
	1	2	3	4	5	6
X1			0.834			
X2			0.829			
X3			0.718			
X4			0.649			
X5		0.706				
X6					0.756	
X7					0.649	
X8				0.867		
X9				0.837		
X10				0.688		
X11				0.521		
X12						0.712
X13						0.638
X14			0.613			
X15						0.560
X16		0.662				
X17		0.660				
X18	0.861					
X19	0.832					
X20	0.765					
X21		0.568				
X22		0.547				
X23			0.516			
Eigen Values	6.791	2.979	2.492	1.537	1.203	1.028
Variance Explained	17.432	14.841	14.680	13.899	10.020	9.277
Reliability Analysis (Cronbach's α)	0.831					
Kaiser-Meyer-Olkin Measure	0.718					
Bartlett's Test of Sphericity	1819.946					
Df	190					
Sig.	.000					

Source: Calculated value through SPSS

4.1 Summary and naming the factors

The listing of the factors was entirely subjective. Table 4 details the six dimensions with their corresponding Cronbach's alpha values and item labels.

Table 4
Factors Explained

Sr. No	Factor Name (Variance Explained)	Cronbach's α	Items
F1	Workplace Relationships	.956	Co-workers help one another by sharing their experiences. Co-workers are a valuable resource for psychological support. The staff is very helpful.
F2	Financial gain and professional advancement	.779	According to my obligations and work requirements, my monthly salary is reasonable. Given my education and expertise, I receive a good salary. The hospital offers the doctors sufficient financial and non-financial perks. The hospital offers sufficient prospects for advancement. The hospital's promotion policy is clear and uncomplicated.
F3	Workplace Culture	.747	The hospital's physical working conditions are satisfactory. There is enough room to see my patients. The necessary tools to treat the patients were given. The hospital has quality restrooms. There is a choice to dwell in a hospital residence. The hospital's operating theatre is quite satisfactory.
F4	Interaction with Seniors	.946	My seniors are kind to me. My seniors give me enough chances to participate in the hospital's decision-making process. My seniors commend and appreciate the wonderful work I've done. Suggestions are always appreciated.
F5	Workload Volume	.654	My work schedule allows me to spend ample time with my family. I'm content with the hours I work (per day)
F6	Degree of Freedom at Workplace	.870	When necessary, I am free to recommend patients. I am given complete autonomy by the hospital to care for my patients. I am free to select or reject my support workers at the hospital based on their competence.

Source: Calculated value through SPSS

Factor 1: Workplace Relationships

Three statements were placed on this factor, which emerged as the most significant determinant. All of the variables that were placed on this component had significant factor loadings, demonstrating the importance of this factor. Statements X18, X19 and X20 were loaded.

Factor 2: Financial gain and professional advancement

Five statements made up the second factor, "Financial gain and professional advancement" and all of the variables on it had strong correlation values (higher than 0.5), indicating that they were all closely associated to the factor. Statements which were placed on this dimension were X5, X16, X17, X21 and X22.

Factor 3: Workplace Culture

Six statements represented the majority in the third component, making it the most critical. This characteristic was determined based on doctors' response regarding their satisfaction with the workplace environment.

Factor 4: Interaction with seniors

Interaction with seniors was the fourth component that had resulted from factor analysis, and it had four items placed on it. This aspect made it easier to comprehend the need of medical professionals working together. Statements that were placed on this factor were X8, X9, X10 and X11. Teamwork and interaction of doctors could be considered crucial in the medical field since the majority of diseases have multiple dimensions.

Factor 5: Workload Volume

This component accounted for 10.02 percent of the variation and was labelled "Workload Volume." It was related to the amount of stress doctors experienced while performing their jobs and the amount of time they had for their personal lives. This factor had two elements, X6 and X7, loaded onto it.

Factor 6: Degree of Freedom at Workplace

The final factor was loaded with three statements. Freedom referred to the degree of autonomy a worker granted to fulfil his or her duties. On this factor, the statements X12, X13, and X15 were loaded.

Thus, EFA assisted us in achieving our objective of identifying various factors from a significant number of variables that represented essential job elements and could be used for future research.

4.2 Physician's overall Job Satisfaction

In addition to the other factors, doctors were asked to rate their job satisfaction in general on a Likert scale using a single sentence. The mean response was 3.62, indicating that the majority of physicians were content with their professions. However, when we assessed the level of job satisfaction among MBBS physicians, the mean score plummeted to 2.93, showing that satisfaction level was low among MBBS physicians. This could be due to the poor pay structure and increased workload for new hires. It was vital to notice that the government of Punjab did not pay all of its employees the full compensation to which they were entitled. A newly hired employee must work on a contract basis for the first three years and only paid a basic salary.

5. Policy Implications

This study's findings could aid policymakers and administrators in government hospitals in identifying the criteria essential for fostering a healthy workplace environment. These characteristics may also lead to an improvement in employee job satisfaction. During the field investigation, researchers inquired about vacant hospital posts and observed that more than 70% of specialty doctor positions in CHCs were unoccupied. Similarly, more over fifty percent of the Medical Officers (MBBS) jobs at DH and SDH were vacant. Consequently, these criteria might be used to explore why the majority of doctors did not join or leave government hospitals, as well as how satisfaction levels could be increased to make their stays at public hospitals more enjoyable. The most important aspects to evaluate that were emerged

comprehensively in the study were financial benefits and professional progress, connections with co-workers/supervisors, level of workload and workplace freedom, etc.

6. Conclusion

Formerly, the wealthiest state in India, Punjab now owes more than 3 lakh crores to various authorities. The ever-increasing debt had hurt government investment in every sector, particularly education and health care. This was one of the primary reasons why freshly hired employees did not receive the full pay scale. This study examined the factors that were essential for fostering workplace harmony and, as a result, raising the level of happiness among physicians and other employees. In addition to monetary compensation, the study revealed that the volume of labour, freedom at work, and interaction with coworkers/superiors were significant factors. If explored, these traits could assist officials in creating policies to foster a sense of pleasant relationships at work and filling vacancies in PHSC hospitals.

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