

# Resource Availability, Professional Relationships And Physician Job Satisfaction

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## *Abstract*

*Healthcare professionals are bearing the direct impact of COVID-19 pandemic. A profession which is already regarded as one of the most stressful professions, has become extremely stressful on account of COVID-19 situation. The aim of the present study is to investigate the relationship between co-worker and leadership support and role of availability of resources in predicting the physician job satisfaction. Since the objectives of the study have been pre-defined, the study follows descriptive approach to research. SEM is used for data analysis. The results from the study indicate that all the independent constructs (co-worker support, leadership support and role of resources) have a significant impact upon the dependent construct (job satisfaction).*

*Keywords – Co-workers, Leadership, job satisfaction, physicians*

## **1.0 INTRODUCTION**

Job satisfaction has been defined as “pleasurable or positive emotional state resulting from the appraisal of one’s job or job experiences” (Locke, 1976). It is an evaluation, by an employee, of the job as well as the environment surrounding the job. Two components determine this process of evaluation (a) employee’s actual experiences on the job (b) employee’s desire for rewards from the work. Alignment of these two components leads to job satisfaction (Locke, 1976). Job satisfaction has also been defined as an attitudinal response of an employee towards the job or its constituents (Adams & Bond, 2000; Fraser, 1983; Siu, 2002; Weiss, 2002)

Researchers have adopted conflicting approaches to measuring job satisfaction, while some consider job satisfaction as a unitary concept (Kalleberg, 1977), others regard job satisfaction as a multi-dimensional construct (Hopkins, 1983; Weiss, 2002). The unitary concept is based on the premise that job satisfaction represents “an overall affective orientation on the part of individuals toward work roles which they are presently occupying” (Kalleberg, 1977). While job satisfaction is regarded as a single holistic concept the underlying factors influencing it may be multi-dimensional. In that sense job satisfaction is considered as a sum total of satisfaction of all of these different dimensions (Hoppock, 1935). These dimensions include co-workers (Babin & Boles, 1996; Gountas et al., 2014; Limpanitgul et al., 2013; Witthaya & Kiltisak, 2019), supervisor support (Babin & Boles, 1996; Gordon et al., 2019; Talukder, 2019; Witthaya & Kiltisak, 2019), organizational culture (Gountas et al., 2014; Soomro & Shah, 2019), resources (Cheung et al., 2019), personality (Acuña et al., 2009; Agho et al., 1993), attitude (Burke, 2001; Saari & Judge, 2004), emotional intelligence (Ignat & Clipa, 2012), remuneration and rewards (Froese et al., 2019; Linz & Semykina, 2012; Stater & Stater, 2019; Terera & Ngirande, 2014; Watson et al., 1996), leisure (Suhartanto et al., 2019), autonomy and freedom on the job (Cheung et al., 2019; Iliopoulou & While, 2010; Wang et al., 2015; WEAVER, 1977).

The doctors, nurses and other health staff have been facing most of the fury of the nCov-19 ever since it was reported in the Wuhan city of China (Haleem et al., 2020; A. Kumar et al., 2020; S.

U. Kumar et al., 2020). Doctors being the front-line workers in the COVID 19 pandemic have been exposed to tremendous mental stress, physical burnout, increased risk of infection, morbidity and mortality. As per media reports fatality rates among doctors in India is 10 times higher as compared to common citizens (Dutta, 2020). The fatality rate of doctors some of the other countries across the globe is alarming as well. Italy-44%, Iran-15%, Phillipines-8% (Iyengar et al., 2020). Also, doctors while dealing with this COVID-19 pandemic face multiple issues like – availability of resources, lack of adequate training, long working hours etc.(Chetterje, 2020; Saraya, 2020).

Physicians along with police, fire fighting personnel, miners and social workers belong to high stress professions (Cooper et al., 1988). Studies relate high level of stress in the medical profession to the fact that acts and omissions are directly related to patient welfare (Antonioni et al., 2003; Rees, 1995). The profession which is otherwise inherently stressful has been made more stressful by COVID-19 pandemic. Literature further reveals that dissatisfied doctors are more likely to leave the medical profession completely (Hann et al., 2011; Pathman et al., 1996) and physician dissatisfaction can lead to patient dissatisfaction and non-compliance as well as riskier prescribing habits (DiMatteo et al., 1993; Linn et al., 1985; Melville, 1980). It is therefore important to understand the factors which lead not only to lower level of stress but also bring about job satisfaction among doctors.

The present study is aimed at investigating the relationship between co-worker, supervisory support and job satisfaction mediated by availability of resources. Since, in the present circumstances many of the doctors are required to work long hours with restricted availability of resources, the only support they have is in the form of the co-workers and seniors.

## **2.0 REVIEW OF LITERATURE**

### **2.1 Physician Satisfaction**

Literature review reveals contrasting and contradicting findings with regards to satisfaction of doctors. While some studies indicate higher levels of satisfaction among female physicians (O'Leary et al., 2009; Swanson et al., 1998) others have reported male physicians to be more satisfied (Bovier & Perneger, 2003). Also, some of the studies have linked physician job satisfaction with income, security, office resources, relationship with staff (Hann et al., 2011; Lepnurm et al., 2007; Samad, 2006), others have linked it to autonomy, recognition, opportunity for personal development (Breslau et al., 1970; Malik et al., 2010; MUUS et al., 1998). Physician satisfaction has been found to be strongly linked to variety and complexity of work (Duffy & Richard, 2006; Lepnurm et al., 2007) and vice-versa (Breslau et al., 1970; Malik et al., 2010; Swanson et al., 1998). Additionally, physician satisfaction has been found to be influenced by individual spirituality (Komala & Ganesh, 2007), use of information technology and specialised technology (Janus et al., 2007; Menachemi et al., 2009).

Studies have reported physician satisfaction to vary across specialties (Bovier & Perneger, 2003; Janus et al., 2007), while some other have reported no variation across specialties (O'Leary et al., 2009; Swanson et al., 1998). Physician satisfaction has been found to be strongly and positively linked to patient satisfaction (Linn et al., 1985) as well as physical and mental well-being of the physicians (Lavanchy et al., 2004; Ofili et al., 2004) and negatively linked to burnout (Diez-Pinol et al., 2008) and turnover intentions (Hann et al., 2011; Samad, 2006; Von Vultée et al., 2007).

#### **2.1.1 Co-Worker Support And Job Satisfaction**

Co-worker support refers to assistance in the task, knowledge and expertise provided by the workers working together in an organization or department (Zhou & George, 2001). Review of literature indicates that co-worker support can lead to job satisfaction (Babin & Boles, 1996; Gountas et al., 2014; Limpanitgul et al., 2013; Witthaya & Kiltisak, 2019). In case of physicians as well as the literature indicates a positive co-relation between job satisfaction and co-worker support(Hann et al., 2011; Lepnurm et al., 2007; Samad, 2006).

H1: Co-worker support has a positive impact upon physician job satisfaction

### 2.1.2 Leadership And Job Satisfaction

Effective leadership is one of the key components that has an impact upon the organizational effective ness and functioning. Supervisor support has been reported to be associated with job satisfaction of the subordinates (Babin & Boles, 1996; Gordon et al., 2019; Talukder, 2019; Witthaya & Kiltisak, 2019). In case of physicians as well, effective leadership has been found to be associated with job satisfaction of the subordinates (Shanafelt et al., 2015; Shanafelt & NoseworthyJ.H, 2017).

H2: Leadership support has a positive impact upon physician job satisfaction

### 2.1.3 Resource Availability And Job Satisfaction

Job resources have been defined as “those physical, psychological, social or organizational aspect of the job that are either/or: functional in achieving work goals; reduce job demands and the associated physiological and psychological costs; stimulate personal growth, learning and development” (Bakker & Demerouti, 2007). In the present study only physical resources are considered for investigation. A review of literature indicates that job resources have been found to mediate relationship between organizational citizenship behaviour and job crafting (Shin & Hur, 2019).

H3: Resource availability has a significant positive impact on physician job satisfaction.

### 3.0 Research objectives

The research objectives of the present study include:

1. Investigating the relationship between co-worker support and physician job satisfaction
2. Investigating the relationship between leadership support and physician job satisfaction
3. Investigating the impact of resource availability on physician job satisfaction.

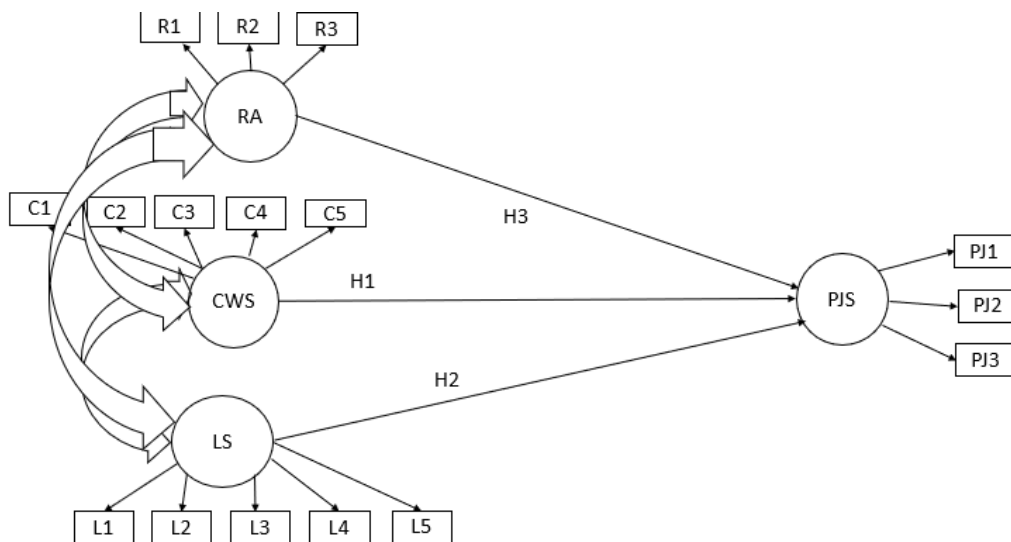


Figure 1- Hypothesised Model

#### 4.0 RESEARCH METHODOLOGY

##### 4.1 Survey Instrument and Profile of Respondents

The present study employed closed ended questionnaire for the collection of data. The questionnaire was divided into two parts: one part collected the demographic information of the respondents, while second part collected information pertaining to the constructs under study. The constructs of the study were adopted from standardized source and adopted to meet the requirements of present research. The items constituting the constructs were measured on a 5-point Likert's scale. A pilot study was conducted to remove the redundant items. The final survey instrument is mentioned as annexure 1.

The sample was freed from outliers and a total of 634 responses were considered for analysis of data. The data for the study was collected through physical distribution of questionnaires as well as through google forms. The time period for data collection was August 2019 to December 2019. Nine hundred seventy-six properly completed responses were received. 142 responses were removed as outliers and 634 responses were considered for data analysis. The demographic profile of the respondents is shown in Table 1.

**Table 1 – Demographic details of the respondents**

	Count	Percent
<i>Gender (n=500)</i>		
Male	420	66.2
Female	214	33.8
<i>Qualification</i>		
Post Graduate	590	93.0
Doctorate	44	7
<i>Practice type</i>		
Own hospital	89	14
Employed in Pvt. Hospital	290	45.8
Employed in Govt. Hospital	255	40.2
<i>Experience</i>		
0 > 3 years	191	30.2
3 years > 6 years	147	23.2
6 years ≥	295	46.6
<i>Time in current position</i>		
0 > 3 years	285	45
3 years > 6 years	120	19
6 years ≥	228	36
<i>Specialty</i>		
Orthopedics	75	11.8

Surgery	110	17.4
Medicine	275	43.4
Pediatrics	84	13.2
Gynecology	90	14.2

## 4.2 Data Analysis

Confirmatory factor analysis was used to verify the item loadings on the appropriate constructs. This was followed by reliability and validity analysis. SEM was used to check the conceptual model.

### 4.2.1 Checking the normalcy

The data was examined for skewness and kurtosis and it was found to be within acceptable threshold values (+/- 3). Data was also examined for multi-collinearity and VIF values were reported to be less than 3. Thus, establishing the normality of the data.

### 4.2.2 Common method bias

In order to eliminate the possibility of fake or false covariances the data was tested for common method bias by Harman's single factor method. The variance explained by single factor was found to be 30.25% which is far below the threshold level of 50% (Podsakoff and Organ, 1886).

### 4.2.3 Validity and reliability analysis

The reliability of the construct was confirmed on the basis of values obtained for Cronbach's alpha as well as composite reliability. In both the cases the values were well above the threshold level of 0.7, thus establishing the reliability of the survey instrument. Confirmatory factor analysis that was carried out to verify the loading of various items on their respective factors gave a factor loading of more than 0.7 for each of the items on their respective constructs (Hair et al., 2016) (Table 2).

Average Variance Extracted (AVE) for all the constructs was found to be above the threshold value of 0.5, further the composite reliability values were greater than the AVE values. The convergent validity was thus established (Table 3). In order to establish the discriminant validity, the inter-construct correlation values were compared with and found to be lesser than the square root of AVE of all the constructs (Table 4). Finally, the model fit values were also examined, and it was found that all the values were within the recommended level (Hair et al., 2010). The values were CMIN/DF = 1.858, CFI = 0.831, TLI = 0.826, and RMSEA = 0.038, which was well below the threshold value for the model fit (Hair et al., 2010).

**Table 2: Reliability Estimates and Factor Loadings**

Factors	Scale Items		Factor Loading	No. of Items retained	Cronbach's Alpha
CWS	1	C1	.856	5	0.913
	2	C2	.775		
	3	C3	.703		
	4	C4	.684		
	5	C5	.647		
LS	1	L1	.921	5	0.899

	2	L2	.893		
	3	L3	.829		
	4	L4	.784		
	5	L5	.711		
RA	1	R1	.896	3	0.893
	2	R2	.719		
	3	R3	.677		
PJS	1	PJ1	.891	3	0.868
	2	PJ2	.837		
	3	PJ3	.792		

**Table 3: Evaluation of the Measurement Model (Fornell & Larcker)**

	CR	AVE	MS V	IOD	HP	DF	ITT
<b>CW S</b>	0.87 5	0.67 3	0.18 7	<b>0.82 0</b>			
<b>LS</b>	0.89 6	0.70 3	0.19 9	0.28 1	<b>0.838</b>		
<b>RA</b>	0.84 2	0.61 4	0.21 3	0.31 3	0.146	<b>0.78 3</b>	
<b>PJS</b>	0.91 1	0.59 7	0.14 4	0.36 4	- 0.183	0.11 3	<b>0.77 2</b>

Source: Amos Output/ Developed by author

**Table 4: Amos goodness-of-fit measures for SEM**

<i>Absolute Fit Measures</i>	CMIN/DF	2.148
	Goodness-of-fit Index (GFI)	.842
	Adjusted goodness-of-fit Index (AGFI)	.835
	Root mean square residual (RMSR)	.027
	Root mean square error of	.048
<i>Incremental Fit Measures</i>	Relative Fit Index (RFI)	.812
	Tucker-Lewis Index (TLI)	.803
	Normed Fit Index (NFI)	.817
	Comparative Fit Index (CFI)	.801
<i>Parsimonious Fit Measures</i>	Parsimonious goodness of fit index	.714
	Parsimonious normed fit index (PNFI)	.738
	Parsimonious Comparative fit index	.752

Source: Amos Output/ Developed by the author

#### 4.2.4 Hypothesis testing

The result extracted from the path analysis specified a proper model fit, and all the values were within the cut-off value (Hair et al., 2010). The values of model fit were CMIN/DF = 2.148, CFI = 0.801, TLI = 0.803, and RMSEA = 0.046 (Table 4). Thus, all the hypotheses of this study were supported (Table 5). Co-worker support had a positive and significant association with job

satisfaction; hence, H1 was accepted ( $\beta = 0.05, p < 0.01$ ). The results from the study also confirmed there was a positive and significant relationship between leadership support and job satisfaction; hence, H2 was supported ( $\beta = 0.84, p < 0.01$ ). There was also a positive relationship among resource availability and job satisfaction hence, H3 ( $\beta = 0.74, p < 0.01$ ) were accepted. In a nutshell, all the hypotheses from H1 to H3 were accepted (Table 5). All these constructs were able to explain 34% towards job satisfaction (Fig. 2).

**Table 5: Standardized Regression Weights**

Hypothesis	Hypothesized Relationship		Estimate	Significant/ Insignificant	Accepted/ Rejected	
H1	CWS	→	PJS	.74**	Significant	Accepted
H2	LS	→	PJS	.11*	Significant	Accepted
H3	RA	→	PJS	.02*	Significant	Accepted

\*\*p < 0.01; \*p < 0.05

Source: Amos Output/ Developed by the author

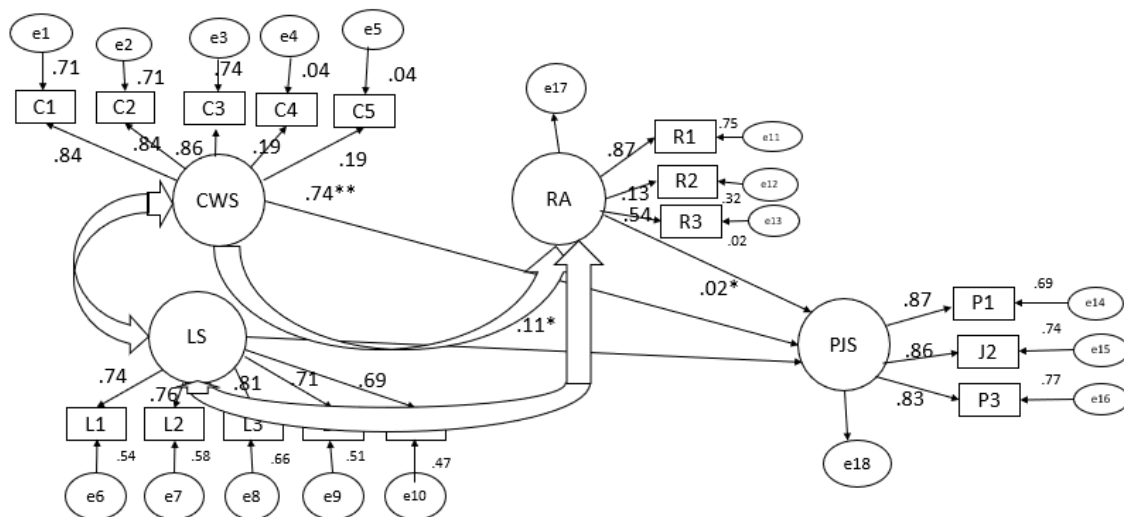


Figure 2: SEM Model

### 5.0 RESULTS AND DISCUSSION

Healthcare personnel are bearing the brunt of COVID 19 pandemic in a manner that no other profession is exposed to – facing emotionally charged and exhausted patients and their relatives, long and extremely strenuous work hours, no or little family support, constant fear of infection. In such circumstances there is a distinct possibility that dissatisfaction with work may creep in. In case of doctors dissatisfaction can turn out to be costly, as they are dealing with life, any distraction or carelessness can be extremely costly. Literature review indicates that physician dissatisfaction can lead to patient dissatisfaction as well as non-compliance (DiMatteo et al., 1993; Linn et al., 1985; Melville, 1980). Literature further indicates that dissatisfied physicians are likely to quit the profession as such (Von Vultée et al., 2007).

The present study was carried out to understand the role of co-workers, supervisors and resource availability as constructs affecting physician job satisfaction. Given the circumstances it is highly likely that these constructs may be involved in physician satisfaction. Results from the study indeed indicate towards the significant role of the se constructs in predicting physician satisfaction. These findings are in line with earlier findings which have pointed towards the significant role of co-workers and leaders in job satisfaction. However, this is probably the first study that investigates the relationship in the wake of ongoing pandemic. This is something that makes this study unique. As anticipated results further indicate that availability of resources plays a significant role in influencing physician job satisfaction. Resource availability on its own may not have a profound impact upon satisfaction, their non-availability may however cause dissatisfaction. Stated otherwise their availability may not have an impact upon satisfaction but dissatisfaction arising out of their non-availability may not even be offset by co-worker or leadership support.

As sated earlier, the findings from this study synchronise with earlier findings, which stress upon the role of co-workers in influencing physician satisfaction(Hann et al., 2011; Lepnurm et al., 2007; Samad, 2006), as also the role played by leadership support (Shanafelt et al., 2015; Shanafelt & NoseworthyJ.H, 2017). The findings from the study can help the policy makers to ensure that the emotional and social support that physicians draw from each other's presence is nurtured and developed. In the present circumstances this may be the only way to keep them motivated.

## 6.0 CONCLUSION AND LIMITATION

The results from the study indicate that all the hypotheses are accepted. Co-worker support, leadership support and resource availability all have a significant positive impact upon physician job satisfaction. There, however, remain some limitations. Firstly, the study is limited to physicians from north-western region of India; including other regions into the study may provide more depth to the study. Secondly, Although, a sample size of 634 is substantial a larger sample size involving multiple specialities may through up interesting results. Thirdly, present study only investigates the role of co-workers and leadership support and role of resource availability on job satisfaction, including other variable of job satisfaction like organizational culture, remuneration, working hours etc. may make the study more enriching.Finally, the study does not take into consideration the cultural differences impacting job satisfaction, a more inclusive approach that includes the impact of culture should make up an interesting research topic.

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### Annexure 1

	<b>Co-worker support</b>
C1	I am at ease in discussing difficult cases with co-workers (Lichtenstein 1984; Stamps and Cruz 1994; Konrad et al 1998).
C2	I am at ease in communicating with physicians with whom I share patients (Lichtenstein 1984; Stamps and Cruz 1994; Konrad et al 1998).
C3	I am treated with respect in the local medical community (Konrad et al 1998).
C4	I share harmonious relations with my co-workers (Ozaki, Bito, and Matsumara 2008).
C5	My co-workers support me in maintaining work family balance (Stamps and Cruz 1994; Konrad et al 1998; Ozaki, Bito, and Matsumara 2008).
	<b>Leadership support</b>
L1	There is an atmosphere of mutual help and support (Konrad et al 1998; Cooper, Watts and Kelly 1987).
L2	I share harmonious relations with my superior (Konrad et al 1998).
L3	I am treated with respect by my superior.
L4	My superiors support me in maintaining work family balance (Konrad et al 1998).
L5	My superiors provides me with professional stimulation (Konrad et al 1998; Williams et al 1999; Ozaki, Bito and Matsumara 2008).
	<b>Resources</b>
R1	I have sufficient nurses, aides or technicians to perform the requisite functions (Lichtenstein 1984).
R2	Pharmaceutical supplies are available when I need them (Lichtenstein 1984, Konrad et al 1998; Williams et al 1999).
R3	Examination room equipment is in working order (Lichtenstein 1984; Konrad et al 1998; Williams et al 1999).

	<b>Job Satisfaction</b>
P1	Overall I am satisfied with my work (Stamps and Cruz 1994; Konrad et al 1998; Ozaki, Bito, Matsumara 2008).
P2	Knowing what I know now, I would, without any hesitation choose the same position if I had to decide all over again (Cooper, Watts and Kelly 1987; Konrad et al 1998).
P3	The position I am in measures up to the sort of position I had aspired (Konrad et al 1998).