Workplace Factors, 'Met Expectations' of Healthcare Professionals and Quality of Patient Care in Indian Hospitals

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Public hospitals in India function with scarce resources hence conditions at the workplace play a primary and important role in meeting the expectations of medical professionals. The present study has been conducted with the aim of examining the mediating role of 'met expectations' of healthcare professionals in determining the relationship between certain contextual workplace factors and the quality of patient care in teaching and non-teaching hospitals in India. The study has utilized questionnaire methodology and random sampling technique for a sample of 300 medical professionals in regular employment in teaching (N=150) and non-teaching (N=150) hospitals ranging from physicians, laboratory personnel and nursing staff. Correlation and hierarchical regression analysis in both types of hospitals have shown that the workplace factors, participation in decision making', 'innovative practices', perceived organizational support and role efficacy have a significantly positive relationship with the quality of patient care. Met expectations' of participants, which have a highly positive relationship with quality of patient care, have also significantly mediated the relationship between the workplace factor 'perceived organizational support' and quality of patient care in both types of hospitals. Findings emphasize the need for Indian public hospitals to re-define their human resource policies and work practices in order to ensure supportive working conditions for their workforce that will ultimately enhance the quality of patient care.

Keywords: Quality healthcare, Role efficacy, Perceived organizational support, Met expectations, Innovation, Not-for-profit organizations

1. Introduction

As health care systems globally are experiencing diverse problems, empirical studies that examine human resource practices in terms of their implications for the quality of patient care in Indian healthcare organizations are increasingly needed. Many researchers have looked to improvements in strategic leadership as critical to developing an organization environment conducive to innovation (Waldman et al., 2001; Williams, 2004). Much has been discussed internationally about the implementation of major changes in hospitals from individual experiences with specific projects, under specific circumstances (Madden, 2004; Seddon & Buchanan,

2004). Hospitals' implementations of major changes to improve their processes seem more successful than the reports from the last decade (Caccia-Bava et al., 2005), but risks and implementation problems still abound. Many hospital projects have turned into learning experiences about how organizations can manage major changes. Walston et al., (2000) for example, found that without proper management, major changes alone will not improve the relative-cost competitive position of hospitals. Walston et al. (2001) summarized six years of research on major projects in the 1990s. The results showed that actual hospital reengineering differed substantially from what was initially proposed but significant innovation continued to be implemented by most hospitals in the USA.

2. Quality of Patient Care

Western studies have indicated that despite the hindering factors, some hospitals and other segments of the healthcare industry have attempted to implement total quality management (TQM), benchmarking (BM), process reengineering (PR) and time-based competition (TBC) into their operational service environment (Shaw, 2000; McAulay, 2001; Kilo et al., 2000a, 2000b; White, 2001). Some authors studying quality management supported the position that successful total quality management (TQM) application is facilitated by high levels of both formalization and decentralization. Douglas and Judge (2001) found that successful TQM implementation in hospitals is enhanced by a simultaneous use of two seemingly opposing practices: *structural control*, which implies the use of standard procedures and job descriptions and *structural exploration* that involve empowerment and freedom to depart from past practices in order to adapt to a changing environment. Similar findings were reported by Germain and Spears (1999). In contrast to the inverse relationship between formalization and quality management that they initially hypothesized, the researchers found a significant and strong positive relationship between these variables and also confirmed a positive effect of decentralization on the quality of product. A positive impact of formalization and job standardization on quality was reported both in for-profit (Parasuraman et al., 1991; Cohen & Brand, 1993) and not-for-profit organizations (Hsieh et al., 2002). Meirovich, Brender-Ilan and Meirovich (2007) argued that a paradoxical interaction between formalization and decentralization is related to a similar interaction between the total quality dimensions – quality of design and quality of conformance. The simultaneous need for formalization and decentralization can be explained as means to achieve high levels of both components of quality.

Miller, Yasin and Zimmerer (2006) conducted a study to shed some light on quality improvement practices in for-profit and not-for-profit hospitals. The scope and effectiveness of several quality improvement efforts were examined in a sample of 110 hospitals. The results of the study tended to suggest that for-profit and not-for-profit hospitals were highly similar with regard to the effective utilization of quality improvement initiatives, thus highlighting the utility of quality improvement efforts despite differences in operating characteristics, strategies and operating constraints. The study offered decision-makers in healthcare operational settings empirical evidence of the operational and strategic effectiveness of different quality improvement efforts and justified investments related to the initiation and implementation of such quality improvement efforts. Specialists in the field of hospital administration have pointed out (Donabedian, 2002; Sacanell, 1994) that

there are certain situations in which the patient/resident's wishes or demands cannot be met but which have to be taken into account because they may be counterproductive for the person requesting them. Consequently, service quality assessment in certain situations needs to be made by subject specialist professionals and technicians. It is unlikely that patients have the technical know-how to judge the maximum benefits that could be achieved by welfare (Heras, Cilleruelo & Irad, 2007).

Kelley and Hurst (2006) have highlighted certain popularly considered dimensions of quality of patient care by specialists. A key performance dimension is *effectiveness* which refers to the degree of achieving desirable outcomes. The dimension of *safety* indicates the degree to which health care processes avoid, prevent, and ameliorate adverse outcomes or injuries that stem from the processes of health care itself. *Responsiveness refers* to how a system treats people to meet their legitimate non-health expectations (WHO, 2000; WHO, 2000b). Another term that is often used synonymously with responsiveness is *patient-centeredness*. *Accessibility* is a fifth dimension that indicates the ease with which health services are reached. *Equity* (or equitability) defines the extent to which a system deals fairly with all concerned. *Efficiency* is the system's optimal use of available resources to yield maximum benefits or results. *Acceptability* is conformity to the realistic wishes, desires and expectations of healthcare users and their families. *Appropriateness* is the degree to which provided healthcare is relevant to the clinical needs, given the current best evidence. *Competence or capability* assesses the degree to which health system personnel have the training and abilities to assess, treat and communicate with their clients. *Continuity* addresses the extent to which healthcare for specified users, over time, is coordinated across providers and institutions. *Timeliness* includes both timely access to care (people can get care when needed) and coordination of care (once under care, the system facilitates moving people across providers and through the stages of care).

3. Review of Literature

Psychological Contract fulfillment and Healthcare

Employee turnover continues to be an important challenge facing health-care systems globally. Here the role **o**f 'unmet expectations' of healthcare professionals working in hospital organizations in terms of psychological contracts and their fulfillment can be analyzed (Rousseau, 1995). Schein (1980) suggested that psychological contracts are key determinants of employees' attitude and behaviors in the work place. When the parties' expectations meet each other, performance is likely to be good and satisfaction level high. So long as the values and loyalty persist, trust and commitment will be maintained. But a negative psychological contract can result in employees becoming disenchanted, de-motivated and resentful of authoritarianism within the organization which in turn will result in increasingly inefficient workforce and decreased quality of work. The psychological contract is a major variable which generates works effectiveness, commitment, loyalty, and enthusiasm for the organization and its goals. The concept of the psychological contract was first used by Argyris (1960) and has been developed further by the works of many researchers like Schein (1980), and most recently by Rousseau (1995; 2000). According to Rousseau (1989) psychological contracts consist of the beliefs employee hold regarding the terms of the informal exchange agreements between

themselves and their organizations. Employer-employee expectations are embedded in psychological contracts, which define the terms of exchange between the employer and employee.

In this context, Louis (1980) examined the focus or content of expectations. In the first dimension, Louis proposed that there were two focuses for new hires: the job organization and the individual. In the second dimension, Louis assessed the degree to which individuals are aware of their expectations. Finally, challenging the common assumption, Louis proposed that expectations are not simply 'met' or 'unmet' but can exceed what was expected or fall short of what was expected. In other words, expectations can be undermet, met or overmet. Louis also proposed that the relationship between expectations and variables such as commitment may not be linear. In fact met expectations may be more positively associated with commitment than either undermet or overmet expectations. In a longitudinal study for investigating Louis's ideas, Dean, Ferris and Konstans (1988) found a consistent negative relationship between unmet expectations and organizational commitment. They then split the unmet variable into 'overmet' and 'undermet' expectations and re-analyzed the relationship between commitment and expectations. In this analysis, they found an even stronger relationship between undermet expectations and commitment but a nonsignificant relationship between overmet expectations and commitment. They concluded that it may not be worthwhile to manage overmet expectations.

Although these two concepts are seen as related, perceived obligation are seen by Rousseau (1989) as being stronger than expectations. Robinson and Rousseau (1994) have suggested that the psychological contract is characterized not only by expectation, but by 'promissory and reciprocal obligation'. The fact that the psychological contract builds on promises separates it from 'expectations' which play an important role in research such as regarding services marketing (Voss et al. 1998). Rousseau (1990) notes that "psychological contracts differ from the more general concept of expectations in that contracts are *promissory* and *reciprocal*." The psychological contract thus relates to a specific 'stronger' form of expectations. Hence, when these obligations are broken, they produce more emotional and extreme reactions then when weaker expectations are broken. Broken expectations produce feelings of disappointment, anger and a reassessment of the individuals' relationship with organization.

Psychological contract 'violations' occur when an employee perceives that the organization has failed to fulfill one or more of its obligations comprising the psychological contracts (Rousseau & Parks, 1993). Morrison and Robinson (1997) defined 'psychological contract breach' as the employee's cognition that the organization has failed to meet one or more of its obligations and psychological contract violation as the emotional or affective state that frequently follows such a perception.

Turnley and Feldman (2000) suggested that in order to survive major upheavals caused by environmental changes, it is necessary for organizations to understand the conditions which are capable of promoting perception of psychological contract fulfillment among their members. Flood, Turner, Ramamoorthy and Pearson (2001) developed a model of psychological contract incorporating both causes and consequences in an effort to investigate the hypothesis that the psychological contract and organizational processes relating to procedural justice would have a

direct impact on two critical organizational outcomes, namely, organizational commitment and the intention to remain with the organization. Flood et al reported that organizational commitment had a positive impact on the intention to stay. Among the two psychological contract variables, met expectations had a positive and significant impact on organizational commitment. Among the two organizational process variables, meritocracy positively affected commitment but equity did not have any impact on commitment. However, equity had an indirect effect on commitment through the intervening variable of 'met expectations'. Thus equity perceptions had only a moderate link in the model. These results indicated that the most important aspect of the psychological contract relates to the role of 'met expectations'.

Coyle-Shapiro and Kessler (2002) presented evidence that fulfillment of the contract had positive effects on employees' performance. In their study of British civil servants, it was found that employees' self-reported fulfillment of their obligations, such as working extra hours and volunteering to do non-required tasks, was an increasing function of how well the employees believed the organization had fulfilled its obligations to them. Devidson (2001) examined employee expectations that involve reward for work/effort, safe and comfortable working conditions, opportunities for personal development and career progression, and equitable personnel policies. She concluded that employee expectations involve productivity for reward, working diligently in pursuing organizational objectives and a few other factors. Though Devidson's model is simplified, it provides a good insight into psychological contract fulfillment.

It is contended here that an unrealistic emphasis on the concrete transactional aspects of the job are much more liable to induce perceptions of 'unmet expectations' in the psychological contract between the hospital and healthcare professionals in public hospitals. *Transactional psychological contracts* (Rousseau, 2004) include such terms as narrow duties and limited or short term duration. Workers with transactional contracts tend to adhere to its specific terms and to seek employment elsewhere when conditions change or when employers fail to live up to their agreement. Transactional contracts characterize workers whose contributions are less critical to the firm's comparative advantage and employers who operate in highly unstable markets (e.g., entertainment, fashion). Both workers and employers are likely to immediately terminate a transactional arrangement that fails to meet their needs. Transactional contracts shift the risk associated with economic uncertainties from the employer to workers. And the risk to workers can be particularly significant if they have few alternatives elsewhere. The archetypal transactional employer is a Call Center where workers who can easily be replaced often toil anonymously, performing narrow, limited duties. With transactional contracts, workers tend to perform in ways consistent with the contributions they are paid to make. Employers receive a specific level of contribution from workers and incur few, if any, future obligations to them. Such arrangements can be effective when workers are individual contributors, performance can be explicitly monitored, and there is little need to coordinate with others. Transactional contracts are less functional when they are a by-product of violated or poorly managed relational contracts. In such cases, either workers or employers have lost trust in the other, resulting in a more wary arms' length relationship (Rousseau, 2004).

Regarding the hospital context, Kohn, Corrigan and Donaldson (1999) suggested that a different possible psychological contract between physicians and their organization is a 'no-blame' contract in which both sides agree that errors are because of systemic flaws, which must be detected and corrected. This removes the fear of personal liability and eliminates incentives to hide errors. Hence, one would voice an error to avoid potential hazards and to improve the system. It has often been observed that a 'no-blame' psychological contract exists within groups, for example within a team, a ward, or a profession. Ambiguous professional work is executed within the in-group (Weick, 1979), hence the professionals and the profession perceive an error as an opportunity to learn and develop. However, although the profession supports internal learning and change, it blocks externally- oriented sources of change and learning (Ferlie, Fitzgerald, Wood & Hawkins, 2005). This occurs because a psychological contract of 'blame' may tend to exist between groups, for example between management or regulators and those who are managed or supervised. As a result, reports will not cross the profession's borders. For example, physicians tend to be suspicious about external monitoring because 'they don't understand our work' whereas they are ready to conduct fierce internal reviews of failures and to publish them in a different learning format such as Morbidity and Mortality Meetings, and Clinical Pathological Conferences. In general, the shared implicit psychological contract in health care organizations is a contract of blame in which an error is believed to be the responsibility of the employee who commits the error(s). Indeed, a recent trend in the health care industry is to use 'cards' that publicly report physicians' success and error rates. Werner and Asch (2005) argue that by publicly reporting error rates, physicians may compromise their employability and may also expose themselves to malpractice lawsuits. Hence healthcare professionals at various levels are likely to quit their job under fear of being exposed for errors and the possibility of being asked to leave the organization.

4. Healthcare in India

Indian healthcare has seen standards rising over the past decade. Strategic foreign investment and collaboration opportunities have already arrived in the sector. Indian health professionals are exploring possibilities of offering a variety of health services to its customers hailing largely from India and from the neighboring countries like Pakistan, Nepal and Bhutan. Customers from developed countries are also heading to India for their growing health needs. The combination of high quality services and low cost facilities is also attracting a stream of international patients as cost of advanced surgery in India is 10 to 15 times lower than anywhere in the world.

The Indian healthcare sector has undergone a radical transformation phase in the last decade and is one of the most promising sunrise industries in terms of revenue, growth and employment. Contributing around 6% to India's GDP, employment-wise, the healthcare industry is the second largest employer, first being the education sector. The industry aims to touch US$ 280 billion by 2020 on account of increasing demand for specialized and quality healthcare facilities. However, the healthcare industry is in its initial expansion phase. Together, this health infrastructure serves a population of over one billion, growing at about 2 percent annually (Bisht, Pitchforth & Murray, 2012). The need of the hour is the development of appropriate hospital practices that are conducive for high quality of patient care. Assessment of patient care quality usually focuses on technical concerns as well as the process through

which care is delivered. This assessment becomes more authentic and legitimate if based on the application of professional standards (Sajid & Baig, 2007). The quality of patient care service can be measured by the accuracy of the diagnosis, the effectiveness of medicines prescribed, the effectiveness of any surgery performed, the effectiveness of any measures or treatment described, and the effectiveness of any regimen recommended.

Studies conducted on quality of patient care in India have been by and large directed at examining the effects of financial resources on the level of service quality provided by hospital organizations. For example, Bhat, Verma and Reuben (2001) compared the efficiency of grant-in-aid hospitals and public hospitals. The findings suggested that the efficiency variations were more significant within district hospitals than within the grant-in-aid institutions. The overall efficiency levels of grant-in-aid institutions were higher than the district level hospitals. The grant-in- aid institutions were relatively more efficient than the public hospitals. Shah and Dhar (2007) identified the factors of HRD in health care and compared them across India and the USA. Twenty factors emerged which were analyzed in terms of their varying importance, weightage and role in health care. Out of the 20 factors, only nine were commonly perceived by all doctors and all nurses. These factors were: IT applications, relationship, efficiency, openness, and quality, elements of development, competence, effectiveness and ethics. Out of these nine, three were commonly perceived by all doctors, nurses and patients. Concern, commitment, consideration, spirituality and housekeeping were perceived significant by all the patients. Transparency was perceived as significant by all doctors, while appraisal was perceived only by nurses. It is also interesting that four factors, namely, responsiveness, welfare, recognition and empathy, were not perceived significant by all doctors, all nurses or by all patients. Indian doctors perceived responsiveness and welfare as independent factors, while nurses in India perceived recognition, and patients in the USA perceived empathy. They suggested that IT applications and promoting much higher investment in the core health care sector should be strengthened and widened; quality circles should be set up in hospitals as part of a well-designed TQM plan in consultation with HRD experts. Quality circles may ensure promoting not only technical quality, but also functional and infrastructural quality in the hospitals in India. Special attention needs to be paid to improve teamwork and team spirit, as well as more interactive communication between doctors and nurses with a view to promoting a more collaborative environment and devise persuasive methods of creating awareness and collaborative sense of responsibility among doctors and nurses to voluntarily and steadily reduce the incidence of medical errors through extra care and concern at all stages.

A study by Mehta (2011) yielded three factors of service quality, namely promptness, medical aid and patient interest for service quality and amenities, clinical services and physical services. The study revealed that while service quality and patient satisfaction were more strongly associated with adherence and continuity of visit; service quality was positively associated with patient satisfaction which can be important for improving the outcomes in health care settings.

5. Rationale and Hypotheses

Faced with stiff competition from the private sector healthcare industry, the public healthcare sector in India is currently experiencing an acute shortage of medical

professionals due to increased turnover rates of professionals. Turnover leads to the loss of human capital as medical professionals leave, and the lost productivity associated with new medical professionals being oriented (O'Brien-Pallas, Murphy & Shamian, 2006). An issue that has gained significance for public healthcare organizations in India, is: Why do medical professionals perceive the human resource practices in 'not-for profit' public hospitals' as unfavorable? An answer may lie in the perceived fulfillment of the psychological contract by the hospital organizations for employed healthcare professionals. Based on the review of researches, the present study investigates the potential mediating role of fulfillment of the psychological contract in terms of 'met expectations' of healthcare professionals for examining the nature of the relationship between hospital workplace factors and the quality of patient care in public hospitals in India. Certain positive workplace factors such as, participation in decision-making, innovative practices, perceived organizational support and role efficacy have been included in the study as determinants of the perceived quality of patient care in public hospitals.

However, contextual differences in the work conditions of not-for-profit public hospitals are to be expected among those affiliated to a teaching institute and those not so affiliated. Hence the study has been conducted with the purpose of comparing the role of workplace factors in determining the quality of patient care as an outcome variable in the two categories of public hospitals namely, teaching and non-teaching hospitals (Figure 1).



Figure 1 *Hypothesized Model of Relationships between Hospital Workplace Factors,'Met Expectations' and Quality of Patient Care in Public Hospitals*

Based on the proposed model it was hypothesized that

1. (a) Hospital workplace factors such as participation in decision-making, innovative practices, perceived organizational support and role efficacy would be positively associated with the quality of patient care in both the teaching and non-teaching hospitals. However, this relationship would be observed to a greater degree in the teaching hospital.
   (b) Also, demographic variables such as the age, salary, duration of service and number of promotions received by medical professionals would be positively related with the quality of patient care.
2. Secondly, 'met expectations' through the hospitals' human resource practices as an indication of psychological contract fulfillment for healthcare professionals would be positively related with the quality of patient care. Additionally, this relationship would be stronger in the teaching hospital.
3. The positive nature of the relationship between the hospitals contextual factors and quality of patient care would be mediated by the extent to which the

expectations of the healthcare professionals have been 'met' by the hospital organizations. Considering the fact that there is a relative paucity of resources in non-teaching public hospitals, the mediating role of 'met expectations' would be observed to a greater degree in the relationship between the workplace factors and quality of patient care in the non-teaching hospitals as compared to the teaching hospital.

6. Method

Sample: The sample consisted of 300 healthcare personnel who were regular and permanent employees in the hospitals under (1) the central railways medical services located in a north Indian state, namely Uttar Pradesh (N=150), and (2) in the central government hospital attached to a university (N=150) also in the northern state of Uttar Pradesh in India. The non-teaching hospitals consisted of six units of the hospitals run by the railways department situated in Uttar Pradesh. The sample from each hospital comprised of healthcare professionals at different levels ranging from physicians, nursing care, lab-technicians, x-ray technicians and staff engaged in operations in each type of hospital. Resident doctors who were not regular employees of the teaching hospital at the physician levels and non-technical and maintenance staff at the lower levels in both the hospitals were excluded from the study as many of them are contractual and hence cannot be subsumed under the category of permanent employees.

Measures and Procedure: Participants' responses were measured through the administration of questionnaires related to the variables understudy. Information related to age, years of service, salary and promotion of each participant was obtained by four items in the questionnaire. The following scales were utilized for measuring the variables understudy

Hospital workplace factors: The variable ***participative climate*** was measured by the scale reported by Gupta (2006) which was modified to suit the requirements of the sample in the hospital for measuring the extent of their participation in the decision-making process in hospitals. It had ten items. The reliability coefficient for this scale was .79. The scale constructed by Eisenberger et al. (1986) was utilized for measuring levels of ***perceived organizational support***. It had eight items, and the reliability coefficient for this scale was .56. The scale for measuring ***role efficacy*** was developed on the basis of Pareek's (1993) role efficacy scale. The scale contained 10 items. The reliability coefficient for this scale was .82. The scale used by Lewis-Beck (1977) containing three items was used to measure ***innovative practices*** in hospitals. The reliability coefficient for this scale was .70.

Psychological Contract Fulfillment: 'Met expectations' as a measure of psychological contract fulfillment of healthcare professionals by the hospitals' human resource practices were measured by the scale consisting of 11 items constructed by Bose and Agarwal, (2003) on the basis of measures used by Turnley and Feldman (1998). Responses were taken on Likert-type five point scales. The reliability coefficient of the scale was 0.75 (Refer Appendix).

Quality of Patient Care: This scale was developed by the researchers (Agarwal & Sharma, 2010) based on the dimensions outlined by Kelley and Hurst (2006). This scale contained 11 items. Responses were taken on Likert-type five point scales. The reliability coefficient for this scale was .93 (Refer Appendix).

The participants were approached individually in their hospitals after prior permission from the respective chief medical superintendents as also after duly obtaining their consent for participating in the study. The purpose of the study was explained to them and they were assured about the anonymity of their responses.

7. Results

Data have been statistically analyzed for examining the hypothesized patterns of relationships between process variables at the hospital workplace, met expectations and the quality of patient care in teaching and non-teaching government hospitals through correlation and hierarchical regression analysis. For analyzing the mediator effects of 'met expectations' on the relationship between the contextual variables and QPC in the two types of hospitals as hypothesized, the procedure outlined by Baron and Kenney (1986) have been followed. Mediating effects of 'met expectations' on the relationships between the contextual factors and the quality of patient care in teaching and non-teaching hospitals have been examined through hierarchical regression analysis performed in three stages. They have suggested that three conditions must be met in order to demonstrate mediation:

1. First, the independent variable and the proposed mediator must each be significantly related to the independent variable.
2. Second, the independent variable must be significantly related to the proposed mediator.
3. Third, the relationship between the independent variable and the dependent variable should be significantly weaker (partial mediation) or non-significant (full mediation) when the proposed mediator is included in the equation.

Following Turnley and Feldman (2000) a series of hierarchical regression analyses have been performed using SPSS (version 17) to examine the mediator effects of 'met expectations' on the prediction of quality of patient care by the workplace contextual factors in the two types of hospitals. In the first stage, the prediction of QPC by the demographic variables was examined through the first block of the multiple regression equation. Subsequently, the demographic variables were entered as controls with the hospital process factors in the second stage of the analysis while 'met expectations' was entered as the mediator variable in the third stage of the hierarchical regression analysis.

Findings are presented following the model of hypothesized relationships. Results of correlational and regression analysis (Table 1) have largely supported hypothesis 1(a). Correlation analysis and hierarchical regression analysis highlight the positive relationship between the contextual workplace variables with quality of patient care (QPC) in both types of hospitals. All the workplace factors, namely, participation in decision-making, innovative practices, role efficacy and perceived organizational support are positively correlated with QPC in the teaching and non-teaching hospitals. Results of hierarchical regression analysis (Table 2) shows that innovative practices and perceived organizational support have emerged as strong positive predictors of QPC (Table 2) in the teaching hospital with a beta of .28 and .31 respectively ($p<.001$) while participation in decision-making, innovative practices

and role efficacy emerged as strong positive predictors of QPC in the non-teaching hospitals with beta coefficients of .39, .31 and .27 respectively (p<.001).

Results partially support hypothesis 1 (b). Among the demographic variables, salary is a positive correlate of QPC only in the teaching hospital while the duration of service and promotions received are negative correlates of QPC in this type of hospital. None of the demographic variables have significant correlation with QPC in the non-teaching hospitals.

Table 1 *Means, Sd and Correlations of Variables with Quality of Patient Care in Teaching and non-Teaching Hospitals*

Type of Hospitals	**Teaching**	**Non-Teaching**	**Teaching**	**Non-Teaching**	**Teaching**	**Non-Teaching**
Statistical analysis	Means	Means	Sd	Sd	r (QPC)	r (QPC)
Salary	2.43	2.62	1.298	1.25	.22**	-.02
Duration of service	14.51	15.25	11.04	7.49	-.25**	.01
Promotions	1.15	1.65	1.16	1.05	-.18*	-.11
Age	42.36	44.31	10.75	7.81	-.08	.05
Participation	32.32	34.67	7.60	7.67	.22**	.54**
Innovation	9.15	9.07	3.36	3.22	.52**	.45**
Role efficacy	33.07	35.29	6.74	6.88	.22**	.49**
Perceived organizational	24.95	26.10	6.25	6.69	.54**	.31**
'Met expectations"	34.60	36.02	9.39	9.80	.49**	.59**
Quality of Patient care (QPC)	34.85	40.74	10.11	8.15	1.00	1.00

*****p<.001; **p<.01; *p<.05**

Results have also supported hypothesis 3. Findings for the mediating effects of 'met expectations' are compared as they occur in the teaching and non-teaching hospitals in that sequence (Table 2).

Table 2 *Hierarchical Regression Analysis for Measuring Mediator Effects of 'Met' Expectations' on the Prediction of Quality of Patient Care by Workplace Factors in Teaching and Non-Teaching Public Hospitals*

Variables	**Teaching (N=150) Beta Coefficients**			**Non-teaching (N=150) Beta Coefficients**		
Step I. Control variables	Block 1	Block2	Block3	Block 1	Block2	Block3
Salary	.27**	.26***	.24***	.03	.15	.09
Duration of Service	-.50***	-.43***	-.42***	.16	.16	.19
No. of Promotions	-.13	-.04	-.03	-.30*	-.27**	-.30***
Age	.29	.17	.16	.11	-.05	-.02
Step II Process Variables						
Participation		.13	.15		.39***	.31***
Innovation		.28***	.28***		.31***	.22***
Role efficacy		-.07	-.16		.27***	.16*
Perceived org. support		.31***	.20*		-.17	-.18*
Step III Mediator						
Met expectations.			.27***			.37***
R	.43	.70	.73	.20	.67	.73
Adjusted R Square	.16	.46	.50	.01	.42	.51
R Square Change	.19	.30	.05	.04	.41	.09
F Change	8.32***	20.59***	13.62***	1.54	26.41***	26.04***

*****p<.001; **p<.01; *p<.05**

Teaching Hospital Results are partially supportive of the hypothesized relationship (Hypotheses 3) between the workplace factors, 'met expectations' and quality of patient care in the teaching hospital (Table 2)**.** Whereas the demographic variables are treated as control variables in the second and third stages of the hierarchical regression equation for both categories of hospitals, results show 'met expectations' have emerged as a strongly positive predictor of 5% variance in QPC in the teaching hospital with a beta of .27 ($p<.001$) in the teaching hospital.

Mediator analysis results indicate that when 'met expectations' enter the equation, the strong positive effect of 'perceived organizational support' on prediction of QPC decreases significantly to a beta of .20 ($p<.05$). The finding indicates a tendency for 'met expectations' to partially mediate the positive nature of the relationship between the workplace factor 'perceived organizational support' and QPC in the teaching hospitals.

Non-Teaching Hospitals Findings largely support hypothesis 3 (Table 2). The mediator variable 'met expectations' has emerged as a strong positive predictor of QPC contributing 8% to the total variance in QPC with a beta of .37 ($p<.001$) in the non-teaching hospitals.

Mediator analysis has shown significant reduction in the positive effects of the variable 'role efficacy' on prediction of QPC (beta .18, ($p<.05$) when met expectations are entered into the equation. Further, 'perceived organizational support', an insignificantly negative predictor of QPC in the second equation, has emerged as a significantly negative predictor of QPC with a beta of -.18 ($p<.05$) in the third equation, indicating suppressor effects of the mediating variable on the negative nature of the relationship between the predictor and criterion variables. These findings partially support hypothesis 3 regarding stronger mediating role of met expectations in determining the nature of the relationship between workplace factors and QPC in the non-teaching hospitals as compared to the teaching hospitals.

8. Discussion

The study has investigated the relationship between hospital' workplace factors, 'met expectations' as indication of fulfillment of the psychological contract for healthcare professionals and the quality of patient care in teaching and non-teaching hospitals. Most studies to date have examined these issues in the context of industrial organizations which are profit-making and hence have clearly stated expectations from the organizations regarding the nature and quality of the work that has to be performed by members at different hierarchical levels. However, the issues take on a different hue when we consider organizations that are not-for-profit but which are nonetheless responsible for the healthcare of the entire society which they serve. Healthcare professionals working at various levels in Indian healthcare organizations such as large-sized hospitals that are run by the government and are hence not-for-profit, perform under high stress conditions which are undefined and yet have to manage the health of the patients with scarce resources. This has implications for the quality of patient care that is expected to be delivered by professionals working in such hospitals. The present study has been conducted in two types of 'not-for-profit' public hospitals in India in which all professionals were in regular employees of the central government and therefore had comparable salaries and opportunities for promotions at different hierarchical levels. It was assumed that the quality of patient care delivered by such hospitals would be determined largely by the hospital

workplace factors and the 'met' expectations of these professionals as an indication of fulfillment of the psychological contract, rather than by differences in the terms and conditions of service.

The results showed that although there were some similarities in the positive relationship between perceived workplace factors and quality of patient care in the two types of hospitals, notable perceptual differences have been emerged in the relationship between workplace factors and the quality of patient care in the teaching and non-teaching hospitals.

The factor, 'innovative practices' at the workplace has emerged as the sole dimension that positively predicts quality of patient care in both the teaching and non-teaching hospitals. The need for innovation is undeniable in most business sectors but seems to be even more so among hospitals. An unprecedented degree of required changes is creating a powerful and urgent worldwide need for hospitals to explore alternative approaches to designing and managing their hospital environments (Raths, 2007; Rauner and Heidenberger, 2002; Kam-Shim, 1999). The present findings support Wiggins' (2007) contention that the healthcare industry continues to face challenging business conditions which compel healthcare organizations to seek new tools and technologies that help them optimize scarce resources.

'Participation in decision-making' has emerged as a positive predictor of quality of patient care only in the non-teaching hospitals but not in the teaching hospital. The findings from the present study tend to suggest that increasing participation in decision making at the workplace might have more positive consequences for the quality of patient care in the non-teaching hospitals where there are fewer number of specialized departments that require staff with specialized skills. In contrast, the teaching hospitals may require a more centralized decision making approach rather than participative decision-making in order to ensure the co-ordination of functions across several specialized departments in providing high quality of treatment and patient care. The findings are in contrast to the series of studies conducted by Karmer and Schmaleberg (1991) in USA that investigated the so-called 'magnet' hospitals. These institutions have been identified as being successful in recruiting, retaining and motivating nursing staff. The key characteristics of magnet hospitals include participatory and supportive management style, decentralized organizational structure and emphasis on continuing learning.

Findings from the present study also reveal unusual trends with regard to 'perceived organizational support' which has emerged as a significantly positive predictor of quality of patient care in the teaching hospital but a significantly negative predictor of quality of patient care in the non-teaching hospitals. The findings emphasize the significance of member perception regarding the nature of the support received at the workplace. The importance of employee perceptions regarding the role of organizational support in the realization of personal goals which ultimately leads the way to achievement of organizational goals has been demonstrated by Eisenberger, Huntington, Hutchison, and Sowa (1986). Individuals tend to "form global beliefs concerning the extent to which the organization values their contributions and cares about their well-being" (p. 504). Specifically, individuals evaluate the behaviour of organizational agents towards them and infer the general motive underlying that treatment, with the categories that are considered important varying considerably between organizations and between persons. Some

individuals might base their sense of perceived organizational support (POS) upon such factors as the organization members' willingness to provide them with special assistance or special equipment in order to complete a project. Others might develop a strong sense of POS based upon the organizational members' willingness to provide them with additional opportunities for training in an area that was of particular interest to them. Furthermore, employees are frequently sensitive to relevant environmental and organizational constraints that might limit the ability to provide them with desired rewards (Eisenberger, Cummings, Armeli, & Lynch, 1997). In the healthcare context, the findings from the present study suggest that since the teaching hospitals have more funds to invest in training professionals and supporting projects perceived organizational support is perceived by healthcare professionals as providing them with opportunities for developing specialized skills, and this in turn is vital for enhancing the quality of patient care. On the other hand, professionals from non-teaching hospitals are required to provide treatment to large number of outdoor as well as indoor patients, and may consequently find such programs an additional burden on their workload which is perceived to be associated with lower levels of the quality of patient care in these hospitals.

In a related finding, perceptions of role efficacy by medical professionals is positively associated with the quality of patient care in the non-teaching hospitals but is negatively although insignificantly related with the quality of patient care in the teaching hospital. This apparently indicates apathy among highly qualified medical staff towards providing high quality patient care in teaching hospitals as compared to the situation in the non-teaching hospitals. The finding is an indication of the high attrition rate in teaching hospitals which face problems of retention of skilled staff and qualified professionals. Here it should be pointed out that role efficacy involves an estimation of individual's self-sufficiency for handling various situations in a perceived role. It appears from the results that higher the perceptions of role efficacy among their staff, the greater the turnover rate in teaching hospitals as qualified and skilled professionals find better opportunities in large private hospital chains with state-of-the-art treatment facilities and large pay packages. As a reflection of the impact of human resource policies in healthcare organizations, the control variable 'salary' is positively associated with the quality of patient care as an outcome for the teaching hospital. But the variable 'duration of service' shows a negative relationship with the quality of patient care in the teaching hospital. This again endorses the view that medical professionals who have served a longer term and acquired the efficacy and competence in their careers in public hospitals would prefer to work in the private healthcare sector which offers modern treatment facilities and higher pay packages.

Results emphasize the mediating role of perception of 'met expectations' in fulfillment of the psychological contract for healthcare professionals in enhancing quality of patient care as an outcome for both the teaching and non-teaching hospitals. The findings have largely supported the hypothesis that mediating effects of 'met expectations' on the relationship between workplace contextual factors and quality of patient care, would be observed to a greater extent in the non-teaching hospitals as compared to the teaching hospital. Mediator analysis highlights the significant role of 'met expectations' in mediating the positive nature of the relationship between perceived organizational support and the quality of patient care in the teaching hospital. Conversely, met expectations have suppressed the negative

relationship between perceived organizational support and the quality of patient care in the non-teaching hospitals. 'Met expectations' have also significantly mediated the positive relationship between 'role efficacy' and quality of patient care as an outcome for the non-teaching hospitals. Non-teaching hospitals would do well to concentrate on providing opportunities for increasing the role efficacy of their professionals along with the desired rewards through their human resource practices so as to maintain high levels of quality of patient care.

The findings from the study further point to the fact that the quality of patient care was reported to be higher by participants from the non-teaching hospitals. Professionals working at both the para-medical and medical levels in not-for-profit public teaching hospitals have limited human resources to cope with a huge rush of patients from rural areas that creates a high stress condition, work overload, inability to meet work schedules and little time for relaxation. Teaching hospitals add to the burden of the staff by attending to referred cases as well from the surrounding areas but simultaneously provide more opportunities for developing role efficacy through teaching and training programs, acquisition of modern technologies for diagnosis and surgery, research facilities, etc. These activities may have negative consequences for maintaining the standards for quality of patient care in such hospitals. On the other hand, non-teaching public hospitals like the railway hospitals in this study have fewer opportunities to offer for skill development and the medical staff has lower workload problems. Specialty cases for treatment are mostly referred to the nearby teaching hospitals. Hence they may be better positioned to attend to the procedures for enhancing the standards of quality of patient care.

9. Limitations and Implications

It is universally assumed that there are always HR activities that are better than others and that affect employee commitment and motivation. The high costs associated with excessive voluntary turnover rates of medical professionals are frequently cited as a key management issue for health care administrators. As health care systems in many nations are experiencing similar issues, the need for empirical studies that examine the relationship between organizational factors, human resource practices in terms of their implications for the outcomes (e.g. quality of care, organizational commitment and turnover intentions) and need for intervention strategies in Indian healthcare organizations are increasingly needed.

The study has analyzed the differences in the relationship between the workplace factors and quality of patient care in two types of public hospitals but due to time constraints among working professionals it has not been possible to interview the participants for seeking their suggestions regarding their perceptions of the transactional and relational aspects of the psychological contract for restructuring work practices in the two types of hospitals. In this context, Berman and West (2003) proposed that workload, work schedules, responsibility and authority, quality of work, working relationship with immediate supervisors, interpersonal relations, specific behaviour of employees and managers, individually preferred working styles, job security, rewards, promotion, career development, and loyalty leading to organizational commitment could be part of psychological contract involving employees and employers. Most studies on psychological contract fulfillment and violation have been conducted in the context of manufacturing organizations but the healthcare sector has largely been ignored. Findings from the present study are

limited in their applicability as the role of 'met expectations' of healthcare professionals in determining the quality of patient care was examined mostly in connection with the transactional aspects of the psychological contract and provides insufficient basis to infer the extent to which the psychological contract in terms of promises and obligations have been fulfilled in the employer-employee relationship in the public healthcare sector. Private sector profit–making hospital chains in India have begun to take a serious note of such concerns for their employees and medical consultants. But public hospitals are still plagued by bureaucratic procedures and delays which hinder the adoption of new policies and practices with fast developing technologies for medical treatment and management of hospital procedures. The study however throws light on the role of some positive dimensions of factors at the workplace which may have differential implications for the quality of patient care in both teaching and non-teaching hospitals as mediated by 'met' expectations of employed healthcare professionals.

Many hospitals and healthcare providers are struggling with out-dated information technology in India today. Some of the major challenges faced currently by the industry are highlighted. A major challenge for the nation and the healthcare industry is not only to retain the healthcare workforce but also to develop an environment, which would attract those abroad to return (reverse brain drain). The growing demand for quality healthcare and the absence of matching delivery mechanism pose a great challenge. There is an acute shortage of faculty of medical teachers all over the country. One of the pivotal factors to sustain the projected growth of the healthcare industry in India is the availability of a trained workforce, besides cheaper technology, better infrastructure, etc. Another challenge is to find good talent in India to provide the ancillary healthcare services; especially the voice based ones which require not only good English communication skills but also very good analytical skills. Amidst all the growth, the sector is also suffering from internal as well as external challenges; the major one being failure of human resource practices to decrease turnover of medical professionals in healthcare organizations. The high costs associated with excessive voluntary turnover rates of medical professionals are frequently cited as a key issue for the government and health care administrators.

10. Conclusion

The country faces several challenges in the areas of socio-economic development, socio-economic infrastructure, and healthcare infrastructure. As a reaction to the weak infrastructure available in the public hospitals the private sector has emerged as a vibrant force in India's healthcare industry, lending it both national and international repute. Private hospitals and continued investment in the public health programs are driving growth. The private sector accounts for more than 80% of total healthcare spending within India (Ram-Persaud, 2007).

In conclusion, it may be asserted that although findings from the study are limited in their applicability to a densely populated country like India, a large chunk of the population is still deprived of modern medical facilities for treatment in the absence of resources and it is necessary for public hospitals to maintain high standards of patient care. The role of the government should be to formulate positive policies that fulfill the expectations of the healthcare professionals so that such hospitals are able to retain the highly qualified and skilled workforce. Policies for human resource development in the government medical services also need to be reformulated

keeping in view the needs and requirements of the public sector healthcare organizations so as to simultaneously meet the demands of the competitive environment in the country and maintain high quality of patient care.

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13. Appendix

Scale items

'Met' expectations To what extent do you feel that the organization has given you

1. The job security you want in your job
2. The participation you want in decision-making at the work place
3. The opportunities you want for advancement and promotions in your job
4. The responsibility and power you want in your job
5. The salary you want in your job
6. The number of pay raises you want in your job
7. The amount of challenge and novelty you want in your job
8. The amount of support you want from your seniors for solving work problems
9. The number of general benefits you want in your job
10. The opportunities for training you want in your job
11. The bonuses/rewards you want for exceptional work

Quality of patient care

1. *Effectiveness* : The health care system in this hospital effectively delivers improvements in health to those who require treatment
2. *Safety* The system of delivering health care does not result in injuries or complications for the patients
3. *Responsiveness* In this hospital the health care system places the patient/users at the centre of the treatment process
4. *Accessibility* In this hospital patients of all categories can easily reach the health care services
5. *Equity* In this hospital the system does not discriminate in distribution of health care services among patients of different categories
6. *Efficiency* The health care system of this hospital is able to function efficiently at low costs without reducing the quality of patient care
7. *Acceptability* The health care system of this hospital responds favourably to the reasonable wishes, desires and expectations of their patients and their families
8. *Appropriateness* The health care system of this hospital effectively provides relevant treatment to the patients based on their clinical requirements
9. *Competence* The health care personnel in this hospital have the training and capabilities to assess, treat and communicate with the patients
10. *Continuity* The health care system of this hospital is able to co-ordinate with other hospitals for providing clinical treatment to patients who might require prolonged care.
11. *Timeliness* Patients in this hospital are able to obtain, prompt and coordinated care from various specialties during emergencies

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