

Research Article

# Evaluation of Quality in Hospitals of Haryana: A Perspective of Doctors & Nurses

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## Abstract

**Background:** The evaluation of the quality of healthcare is one of the important ways to determine the success of particular health facility. Thus, there is a need to assess the quality of hospitals as often as possible.

**Aims & Objective:** To evaluate the quality of hospitals in Haryana by determine the perspective of doctors & nurses.

**Material and Methods:** A cross-sectional survey of hospital' doctors & nurses carried using a self administered questionnaire from March, 2016 to April 2016 at Civil Hospitals Ambala, Kurukshetra, Karnal & Panipat.

**Results:** 41.3% doctors & 37.6% nurses said that hospital does not have the modern & advanced equipments available. 28.6% doctors & 16.5% nurses were not satisfied with the diagnostic facilities quality. 52.4% doctors & 45% nurses said that there is lack of enough staff. 23.9% nurses said that they were not provided as much training as needed. 31.7% doctors & 22.9% nurses were not satisfied with the salary. 22.2% doctors & 18.3% were in view that the hospital does provide overall quality of health services to patients.

**Conclusion:** The study revealed the satisfaction of hospital's doctors & nurses with overall structure, processes & outcomes of the hospitals was mild to moderate.

**Keywords:** Healthcare quality, hospitals, structure, processes, doctors, nurses

## Introduction

Quality must be understood before it can be managed. Although people deal with it every day, there is no conclusive definition of quality. The word Quality is derived from the Latin word "qualis", meaning "what kind of". According to Merriam-Webster Dictionary defines quality as "The degree of excellence; superiority of kind; and a distinguishing attribute". Quality, because of its subjective nature and intangible characteristics, is difficult to define. Like beauty, quality exists in the eye of the beholder. To retailers, a quality product is one that has a good combination of price and features and appeals to a majority of customers. To consumers, a quality product is one that meets their individual expectations. What one person perceives to be a quality product might not be considered a quality product to another person. In its broadest sense, quality is an attribute of a product or service. The perspective of the person evaluating the product or service influences his or her judgment of the attribute. Although no universally accepted definition of quality exists, its various definitions share following common elements:

- Quality involves meeting or exceeding customer expectations.
- Quality is dynamic (i.e., what is considered quality today may not be good enough to be considered quality tomorrow).
- Quality can be improved.

## Components of quality

The components of quality in healthcare can be broken down into the following:

- 1) Quantum or the quantity of services: Is it optimum quantity? It is not that doctor sees only three patients per day & says, he is providing the quality services. The quality has to be optimum as per the demand of the situation.
- 2) Cost of the services: It should be in terms of value to cost. Whether the customer is getting the perceived values as per the cost spent, it should be affordable to the common customer also, and then only it could be called as the quality cost.
- 3) Quality products & services: Products & services that totally satisfy customer's needs & expectations in every respect on a continuous basis.
- 4) Customer satisfaction: Whether our customers are really satisfied with the kinds & manner of services?

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Now we are moving one step further, that only the customer satisfaction but, it is the customer dazzle. That will retain our customers with the hospital in future.

### Healthcare Quality

One of the major problems facing healthcare is that quality cannot be measured if it cannot be defined. Quality healthcare is defined as “consistently delighting the patient by providing efficacious, effective and efficient healthcare services according to the latest clinical guidelines and standards, which meet the patient’s needs and satisfies providers”. Definitions of healthcare quality include attributes such as efficiency, efficacy, effectiveness, equity, accessibility, comprehensiveness, acceptability, timeliness, appropriateness, continuity, privacy and confidentiality. Other characteristics that have been included to describe quality health care are provisions of education for the patient and family about health issues, involvement of the patients and family in treatment planning & decision-making, patient satisfaction, ensuring safety and support in the care environment, reducing mortality and morbidity and improving the quality of life and functional health status of the patients. Hundreds of measures can be used to evaluate hospital quality. These measures are grouped into three categories:

- Structure measures
- Process measures
- Outcome measures

These measurement categories were first conceptualized by Dr. Avedis Donabedian (1966). Donabedian contended that the three measurement categories—structure, process, and outcome—represent different characteristics of healthcare service. To fully evaluate healthcare performance, Donabedian recommended that performance in each dimension be measured. The structure of healthcare is measured to judge the adequacy of the environment in which patient care is provided. The process of healthcare is measured to judge whether patient care and support functions are properly performed. Healthcare outcomes are measured to judge the results of patient care and support functions.

Structure refers to the relatively stable elements of a health care delivery system that promote or prevent access to and provision of services. The structure of a health care delivery system includes community characteristics, organizational characteristics, staffing patterns, ownership, provider characteristics, and population characteristics. Structural quality is most commonly assessed through organizational accreditation. Organizations such as the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO), the National Committee for Quality Assurance (NCQA), and the American

Accreditation Healthcare Organization (AAHO) accredit various structural aspects of the health care system ranging from hospitals and clinical laboratories to managed care and utilization review programs. In general, research has shown that structural factors are often associated with differences in the process of care, but not with significant differences in outcomes.

Process refers to what occurs during the patient-provider interaction, and consists of both technical excellence and interpersonal excellence & personal characteristics. One group of experts advocate assessing the appropriateness of an intervention through a rigorous procedure of reviewing the literature, developing a list of indications, convening a panel to select indications, rating the indications, and ultimately evaluating the appropriateness of interventions. Another way of assessing the process quality of health care is to examine the degree to which care parallels practice guidelines or professional standards. A third method of process assessment is by practice profiling which compares the patterns of cost, utilization and/or quality processes among providers to a pre-established standard. Profiling is distinct from the other process methods outlined in that it is not necessarily conducted specific to a clinical condition. Fourth, process assessment, and more specifically, the interpersonal quality of care, may be evaluated through consumer ratings. Such ratings are typically obtained through surveys of health plan enrollees, and consist of measures of both care received and satisfaction with care received.

Outcome, the third dimension of quality, refers to the effect of the care on the health status of both patients and populations; it includes the results of efforts to prevent, diagnose, and treat health problems, and is often viewed as the bottom-line of health care quality assessment. Three approaches to outcome assessment include the condition-specific approach, the generic approach, and the adverse events approach.

In general, good structure increases the likelihood of good process, and good process increases the likelihood of good outcomes. It is possible to measure quality at any of the three levels proposed by Donabedian, and all three levels refer to important pieces of the health care quality puzzle. However, because the relationship between the structure of the health care services delivery system and the processes or outcomes is indirect, structural measures are generally less useful to policy makers than process or outcome measures. Process data are thought to be more sensitive measures of quality than outcome data because a poor outcome does not necessarily occur every time the provision of care is substandard and/or may not be captured because it may take a long time to track. This said, it is important to note that process measures may be viewed as proxies for outcomes if a link has been demonstrated. For example, the process measure of an adult receiving an immunization against measles, mumps, and rubella is a proxy for the desirable outcome of preventing these diseases.

## Review of literatures

Ehsan Zarei, (2015) in his study on, 'Service quality of hospital outpatient departments: patients' perspective' conducted a cross-sectional study in Tehran, Iran. The study samples included 500 patients who were selected by multi-stage random sampling from four hospitals. The data collection instrument was a questionnaire consisting of 50 items, and the validity and reliability of the questionnaire were confirmed. For data analysis, exploratory and confirmatory factor analysis, Friedman test, and descriptive statistics were used through SPSS 18 applications. Eight significant factors were extracted for outpatient service quality, which explained about 67 per cent of the total variance. Physician consultation, information provided to the patient, and the physical environment of the clinic were the three determining factors of the quality of outpatient services.

Dr.Satpal Singh & Dr.Vikas Kumar (2015) carried their study on 'Satisfaction level of patients in outpatient department at a general hospital, Haryana' showed that highest percentages of the patients were not satisfied with the cleanliness of the hospital. More than half patients had fair attitude towards the washroom facility and waiting area. Mean response of male were  $2.73 \pm 0.53$ , female were  $2.73 \pm 0.55$  and overall mean response was  $2.73 \pm 0.57$ . This shows that there is good level of patient satisfaction according to hospital structure. The mean response of patient's attitude towards hospital process was based on questions regarding queue system for registration, waiting period, time taken for reporting and availability of prescribed medicine. Mean response of male were  $2.029 \pm 0.86$ , female mean response  $2.312 \pm 0.95$  and overall mean response was  $2.176 \pm 0.93$ . This shows that there is fair level of satisfaction according to hospital process.

Dr. Manish Madan & Mr. Nitin Goel (2015) in their study on "Assessing quality of health – care services offered by private hospitals using Servqual model" concluded that various statements like Physical Facilities, Appearance of doctors and staff of hospital, Obtaining feedback and keeping the patients informed and Staff and doctors of hospital understanding the specific needs of the patients were found to be significant. From the Servqual Model, it is observed that there is a requirement of improvement in all the 23 factors on service quality aspects. There are certain factors where the service quality gap is more than 0.5 i. e. more than 10 % as the scale taken here is five point Likert's scale. The factors which have more than 0.5 service quality gap are: written materials are easy to understand, same level of service experienced day and night, and staff and doctors show willingness to answer question of patients and their family members. Same level of service at all times of the day and staff willingness to answer customer's questions are critical here. The factor 'easy to understand written materials' is not that critical as written material is in medicinal

terms and decision makers here are different from the users.

Mr. Sudip Ghosh(2014), in his study concluded that most of the respondents were not satisfied with the services regarding the sign boards showing direction, assistance at entrance by the ward attendants and the time taken between admission and initiation of treatment which was more than 20 minutes in most of the cases. 43% of the respondents are unsatisfied with no. of visits of senior doctors or consultants. Most of the respondents are not satisfied with the time devoted by the doctors. 84% of the respondents perceived the efficiency of the doctors of the hospital in managing the condition of the patient as satisfactory. The survey indicates that 94% of the respondents are satisfied with the service provided by nursing and paramedical staff at the hospital. 69% of the respondents affirmed that they were provided medication in timely manner by the nurses. Communication and behavior of the nurses as pleasant and satisfactory in 46% and 32% of the cases respectively, but 22% of the respondents described their behavior as harsh/ rude/avoiding. 71% of the respondents reported availability of investigation results on scheduled time. Regarding the availability of basic amenities and services at the hospital shows that 66% of the respondents stated unavailability of medicine; 78% of the respondents reported unavailability of drinking water; 51% of the respondents are not satisfied with the toilets and hand wash facility in the wards. 35% stated inadequacy of fans and lights in the wards. 57% were dissatisfied by the cleanliness in the toilets and wards at the hospital. 99% of the respondents were satisfied with the convenience of parking and ATM facility provided in the campus of the hospital.

Dr. Satpal & Dr. Pankaj (2014) in their study of a tertiary care hospital' in emergency department found that Mean satisfaction of respondents towards physical facilities provided for public & staff in the emergency department was  $3.562 + 0.952$  with coefficient of variation 26.726. 32 % said acceptable with overall mean satisfaction  $3.678 + 0.77$  with coefficient of variation 20.93 showing that there is scope for improvement. The study points out that 54% of the respondent doctors and nurses have found the treatment facilities to be adequate, and 38% rate it as fair, whereas 8% of the respondents found the treatment facilities to be acceptable with mean satisfaction  $4.45 + 0.64$  & coefficient of variation 14.382 which shows that there is very less variation in response of doctors and nurses towards treatment facilities. From the study, it was also found that 19% of the respondent doctors and nurses found the supportive facilities for treatment provided in the E.D. to be adequate, whereas 61% rated it as fair and 20% have rated it as acceptable. Mean satisfaction of respondents towards supportive facilities for treatment in emergency department was  $3.99 \pm 0.62$  with coefficient of variation 15.73 which shows some of the areas can be improved like availability of all life

saving medicines. 25% of the respondent doctors and nurses strongly agreed with the point that the E.D. was manned by sufficient staff strength, while 72% agreed with the staffing pattern and teamwork in E.D. Minority of the respondents (1.5%) has no opinion and 1.5 % was disagreeing with the staffing pattern & Mean satisfaction was  $4.2 \pm 0.546$  with coefficient of variation 13 which shows deviation in response of doctors and nurses in part of relationship with other department.

Dr. Akshay Rana (2014) in his study identified the various factors that influence the job satisfaction level among healthcare employees of public and private hospitals in Punjab. The relationship between healthcare employees job satisfaction with pay and type of hospitals was found to be statistically significant (Pearson Chi-Square=26.53556,  $df=2$ ,  $p=0.00085$ ,  $\alpha=0.05$ ). It means employees who are working in public hospital are more satisfied with pay than private hospitals employees. The relationship between healthcare employees job satisfaction with promotion and type of hospitals was also found to be statistically significant (Pearson Chi-Square=7.26938,  $df=2$ ,  $p=0.026392$ ,  $\alpha=0.05$ ). It means employees who are working in private hospitals are more satisfied with promotion chances than public hospitals employees. The results also showed that employees who are working in private hospitals are more satisfied with supervision or with their supervisors & their coworkers than public hospitals employees. The healthcare employees who are working in public hospital are more satisfied with pay & fringe benefits than private hospitals employees.

Ahmad H. Abu Raddaha, Jafar Alasad, Zainab F. Albikawi, Khulood S. Batarseh, Eman A. Realat, Asia A. Saleh & Erika S. Froelicher, (2012) in their study found the mean satisfaction for all nurses was 3.44 out of 6 (SD = 0.51), thus 57 percent (i.e. 3.44/6.00) was the average satisfaction level among the critical care nurses. Nurses assigned higher scores to the items: "I like the people I work with", "I enjoy my coworkers", and "I like my supervisor". Conversely, nurses assigned lower scores to the items: "I have too much to do at work", "There are benefits we do not have which we should have", and "I feel unappreciated by the organization when I think about what they pay me". The answers for the one-item question "Looking to your career goals, are you going to change your work setting in the coming year?" to measure the nurses' intention to quit are shown in Table IV. The mean score on this item was 2.56 (SD =0.89), with 59 percent reporting that they were "Likely" or "Very Likely" to leave their work settings.

Graham Lowe (2012) in his study asks employees to assess 36 features of their job, training and development opportunities, their team, their supervisor, senior management and how the organization supports its employees. Consistent with the distribution of engagement scores, which is skewed slightly toward the low end of the scale, 33% of all

respondents are in the low category, while 39% are in the medium- and 29% are in the high-engagement categories, respectively. Survey respondents under age 30 years and those 60 years and older are more likely to be highly engaged than their coworkers between the ages of 30 and 59 years. Also notable is that engagement levels are slightly higher among part-time employees and those employed other than in full-time positions. These findings suggests that more-engaged employees are better able than their less-engaged colleagues to achieve organizational goals/ outcomes i.e. retention, quality of patient care or services provided by the respondent's team/unit, patient safety culture and patient-centered care.

Rajinder Singh (2010) in his study found that 55 percent patients were dissatisfied, 12 percent were neutral, 29 percents were satisfied, while 3.5 percent were highly satisfied with the examination and checking by the doctor. 80 percent patients are dissatisfied, 15 percent patients are highly dissatisfied and 10 percent are neutral with the cleanliness of bed sheets, pillow cover. 75 percent patients are dissatisfied with the condition of ward / room while 70 percent are found satisfied with the corridors. 90 percent patients are dissatisfied with the sitting arrangement at OPD. About hygiene and condition of drinking water area 45 percent are dissatisfied, 30 percent are satisfied . 75 percent are dissatisfied and 25 percent are highly dissatisfied with the condition of toilets and bathrooms. 70 percent patients are satisfied and 30 percent are neither satisfied nor dissatisfied with ultrasound facility. 75 percent patients are satisfied 20 percent are neutral and 5 percent are dissatisfied with X Rays. 60 percent are satisfied, 30 percent are neutral and 10 percent are dissatisfied with the canteen. 65.5 percent patients are dissatisfied and 34.5 percent are neutral with hospital dispensary.

Patrick O'Leary, Natalia Wharton & Thomas Quinlan (2009) in their study found that Male doctors reported higher levels of satisfaction than female doctors. This finding is based on a comparison of the ideal job questions (expectations) from the survey versus the satisfaction questions (perceptions). On this basis, most differences are expected to be negative, and in this survey, all are negative. higher levels of satisfaction than those employed by hospitals (the means are positive or less negative). However, most of these differences are not statistically significant except for compensation and colleague relationships. This is based on a comparison of the ideal job questions (expectations) versus the satisfaction questions (perceptions). On this basis, most differences are expected to be negative. On this survey, only one is positive, meaning that perceptions actually exceeded expectations with respect to patient relationships in the polyclinic environment. Female physicians are more satisfied in their relations with patients and colleagues than their male counterparts. The majorities of physicians are dissatisfied with administration and time constraints.

Rubin Pillay, (2008), in his study titled "Work satisfaction of medical doctors in the South African private health sector", revealed that Doctors were satisfied with the social and personal aspects of their work and dissatisfied with the practice environment pressures and work setting issues. Overall, doctors were dissatisfied with their work and their careers. Females, working in large groups, having been in practice for 20 years or more, having a high proportion of insured patients and being incentivized to conserve resources were significant predictors of lower overall satisfaction. Clinical freedom, positive perceptions of managed care strategies, remuneration on a fee-for-service basis and working in small groups were predictors of greater overall satisfaction. Nimit Chowdhary & Monika Prakash, (2007) in their study found that Generalization of quality dimensions was not possible among all types of services taken together, however important insights were available pertaining to each service type. Tangibility is more important for services with more tangible actions. Further, the importance reduces as one shifts from services targeted at people to service targeted at possessions. Need for reliability is more for services with intangible nature of service act Services targeted at possessions of the customers will also require more reliability. Services targeted at the customer require more assurance than those targeted at their possessions. Further, more assurance will be needed for services with intangible act. Responsiveness did not allow for any kind of clustering. Customers ranked it last on priority across different service types. Perhaps, they are less expectant for this service dimension. Information- and people-processing services require more empathy as compared to other two types. Prices were considered relatively more important by consumers of possession and mental-stimuli processing services.

Hong Lu, Alison E. While & K. Louise Barribal (2007) in a study titled "Job satisfaction and its related factors: A questionnaire survey of hospital nurses in Mainland China" found that regarding overall job satisfaction, more than half of respondents were satisfied (53.7%). Most respondents were satisfied or very satisfied with their immediate manager (81.2%) and their fellow workers (80.7%). On the other hand, almost three quarters of the sample felt dissatisfied or very dissatisfied with the rate of pay for nurses (72.9%). Although nurses with a bachelor degree reported a lower level of job satisfaction compared to those with an associate degree or diploma, there was no significant difference in total job satisfaction of respondents from the different educational programmes. Just under two-thirds of respondents reported experiencing light to moderate stress at work (60.8%) while one-quarter reported no to light stress (24.2%), followed by less than one-sixth reporting moderate to extreme stress (15.0%). Scores of moderate to extreme stress reported by respondents related to workload (77.8%), time pressures and

deadlines (65.4%), difficult patients (60.4%), staff shortages (60.1%) and involvement with life and death situations (53.9%).

## Research methodology

### Aims and objectives

#### Aims

The Aim of this study was "To evaluate the quality of hospitals in Haryana".

#### Objectives

1. To explore the quality of healthcare services offered by Government Hospitals of Haryana.
2. To determine the attitude & perception of Doctors towards the existing Structure, Procedures & Outcome of hospitals & their healthcare services in Government Hospitals of Haryana.
3. To determine the attitude & perception of Nurses towards the existing Structure, Procedures & Outcome of hospitals & healthcare services in Government Hospitals of Haryana.

### Researches Design of the Present Study

Research Design of the Present study is exploratory in nature. The present study is descriptive also as it involves findings about quality attributes for "Evaluation of quality of hospitals in Haryana".

### Sample Design

The researcher has taken 172 samples of Healthcare Professionals which included 63 doctors & 109 nurses selected randomly from four district civil hospitals of Haryana state. The sample design is shown in Table.

**Table 1:** Sample Design

Sr. No	Name of Hospitals	Number of Doctors	% of Doctors	Number of Nurses	% of Nurses	Total no. of doctors & nurses	Total Doctors & Nurses (%)
1	Civil Hospital, Ambala	15	23.8	26	23.8	41	23.8
2	Civil Hospital, Kurukshetra	15	23.8	28	25.6	43	25
3	Civil Hospital, Karnal	17	27	27	24.7	44	25.5
4	Civil Hospital, Panipat	16	25.3	28	25.6	44	25.5
	Total	63	100	109	100	172	100

The present research study is based on the Four District civil hospitals of Haryana. These hospitals are chosen from Haryana because the lesser amount of research work done to evaluate quality of hospitals in Haryana.

*Sampling Tools*

A pre-structured questionnaire was used to gather information on socio-demographic characteristics & respondent’s attitude & perceptions about hospital’s structure, processes & outcomes services.

*Data Collection Method*

After choosing the sample the next step in research programmes, is data collection. To ensure the relevance of the data collected, care is taken to minimize the erosion the cost and human involvement affects the reliability of the data collected. The present study is based on two types of data.

- 1) Primary Data
- 2) Secondary Data

For present study, primary data are collected by personal interviews, observation and questionnaires which are filled up by healthcare professionals of four civil hospitals. A number of questions pertaining to the problems are framed and these questions are in proper sequence. Most of the questions are of multiple choices and close ended type and filled by using survey method.

*Unit under study*

The present study is based on healthcare professionals of selected four different civil hospitals of Haryana – Ambala, Kurukshetra, Karnal & Panipat. These four hospitals were chosen because of large no. of patients coming to these hospitals & specialty of treatments available.

*Tools of the Study*

The data from present study is analyzed by different statistical methods like mean, standard deviation and standard error and chi-square test. For this analysis SPSS and MS EXSCEL is used.

**Data analysis and interpretations**

**Table 2** Doctors’ views regarding the overall structure of the hospitals

	Mean	S.D	S.E	Chi-Square	Asymp. Sig.
The hospital has modern & advanced equipments available?	2.71	.888	.112	13.889	.003
Physical working conditions (heat, light, dust, noise, clearness, etc) are generally satisfactory?	3.29	1.038	.131	44.222	.000
The facilities provided for diagnosis of diseases (e.g. X-ray, laboratory facility, USG, CT, ECG etc) are satisfactory?	3.27	1.003	.126	44.222	.000
The hospital facilities of the sanitation e.g. Toilet facility, Biomedical waste collection & disposal & cleanliness of the hospital are satisfactory?	3.43	.979	.123	35.175	.000
The hospital has availability of enough manpower i.e. working staff?	2.62	1.069	.135	22.952	.000
Total	3.06	.996	.125	32.092	.000

**Table 3** Doctors’ views regarding the overall processes of the hospitals

	Mean	S.D	S.E	Chi Square	Asymp. Sig.
The policy & procedures for quality patient care in the hospital are clear?	3.30	.873	.110	19.222	.000
The patients are given enough information about their disease, examinations and treatment?	3.67	.861	.109	50.889	.000
Hospital’s rules & policies are equally applied to all the employees?	3.46	1.189	.150	15.968	.003
The hospital provides the freedom to choose your own working methods?	2.92	1.140	.144	20.095	.000
Management is supportive of the applicable work-standards which govern the hospital?	3.35	1.124	.142	26.444	.000
TOTAL	3.34	1.03	.131	26.526	.000

Mean response of the doctors for the quality of overall structure of the hospitals came out to be 3.06±.996 indicating the satisfaction with the structure of the hospitals. Doctors mean response for the quality of equipments available was 2.71±.888, meaning that doctors were not satisfied with the quality of equipments available. Mean response for the quality of sanitation facilities was 3.43±.979, indicating higher

level of satisfaction. There was a mean response of 2.62±1.069 for the doctors’ views regarding the availability of enough manpower, indicating lack of availability of staff in the hospitals.

Mean response of the doctors for the quality of overall processes of the hospitals came out to be 3.34±1.03 indicating the satisfaction with the processes of the hospitals.

**Table 4** Doctors' views regarding the overall outcomes of the hospitals

	Mean	S.D	S.E	Chi-Square	Asymp. Sig.
Hospital considers the delivery of quality healthcare services over financial considerations?	3.10	1.05	1.120	28.984	.000
Hospital provides the safety at work environment & eliminates safety hazards?	3.24	1.08	1.180	38.190	.000
There is perfect cooperation & collaboration within the staff of the hospital?	3.63	0.972	.945	56.762	.000
The hospital "pays" adequate salary considering the responsibilities & duties you have?	3.05	1.142	1.304	35.968	.000
The hospital provides overall quality of health services and better working conditions to patients?	3.24	0.995	.991	33.429	.000
Total	3.25	1.05	1.108	38.666	.000

**Table 5** Nurse's views regarding the overall structure of the hospitals

	Mean	S.D	S.E	Chi-Square	Asymp. Sig.
The hospital has modern & advanced equipments available?	3.09	1.206	.116	21.963	.000
Physical working conditions (heat, light, dust, noise, clearness, etc) are generally satisfactory?	3.44	1.158	.111	57.101	.000
The facilities provided for diagnosis of diseases (e.g. X-ray, laboratory facility, USG, CT, ECG etc) are satisfactory?	3.50	.949	.091	50.404	.000
The hospital facilities of the sanitation e.g. Toilet facility, Biomedical waste collection & disposal & cleanliness of the hospital are satisfactory?	3.72	1.028	.098	52.697	.000
The hospital has availability of enough manpower i.e. working staff?	2.94	1.307	.125	10.220	.037
Total	3.34	1.130	.108	38.447	.000

**Table 6** Nurse's views regarding the overall processes of the hospitals

	Mean	S.D	S.E	Chi-Square	Asymp. Sig.
The policy & procedures for quality patient care in the hospital are clear?	3.58	1.003	.096	56.092	.000
The patients are given enough information about their disease, examinations and treatment?	3.82	.925	.089	82.697	.000
Hospital's rules & policies are equally applied to all the employees?	3.47	1.206	.116	30.220	.000
The hospital provides the freedom to choose your own working methods?	3.10	1.036	.099	40.037	.000
Management is supportive of the applicable work-standards which govern the hospital?	3.66	.784	.075	53.752	.000
Total	3.52	.991	.095	52.559	.000

Doctors mean response for the quality of policy & procedures in the hospitals was  $3.30 \pm 0.873$ , meaning that doctors were not satisfied with the quality of policy & procedures. Mean response for the quality of information given to the patients was  $3.67 \pm 0.861$ , indicating higher level of satisfaction. There was a mean response of  $2.92 \pm 1.140$  for the doctors' views regarding the freedom to choose your own working methods, indicating lower level of satisfaction.

Mean response of the doctors for the quality of overall outcomes of the hospitals came out to be  $3.25 \pm 1.05$  indicating the satisfaction with the outcomes of the hospitals. Doctors mean response for the quality service delivery over financial constraints was  $3.10 \pm 1.05$ , meaning that doctors were not satisfied. Mean response for the quality of cooperation & collaboration within the staff was  $3.63 \pm 0.972$ , indicating higher level of satisfaction. There was a mean response of  $3.05 \pm 1.142$  for the doctors' views regarding the salary paid to them, indicating lower level of satisfaction.

Mean response of the nurses for the quality of overall structure of the hospitals came out to be  $3.34 \pm 1.130$ . Nurses mean response for the quality of equipments available was  $3.09 \pm 1.206$ , meaning that nurses were not satisfied with the quality of equipments available. Mean response for the quality of sanitation facilities was  $3.72 \pm 1.028$ , indicating higher level of satisfaction. There was a mean response of  $2.94 \pm 1.307$  for the nurses' views regarding the availability of enough manpower, indicating lack of availability of staff in the hospitals.

Mean response of the nurses for the quality of overall processes of the hospitals came out to be  $3.52 \pm 0.991$ . Nurses mean response for the quality of policy & procedures in the hospitals was  $3.58 \pm 1.003$ , meaning that nurses were satisfied with the quality of policy & procedures. Mean response for the quality of information given to the patients was  $3.82 \pm 0.925$ , indicating higher level of satisfaction. There was a mean response of  $3.10 \pm 1.036$  for the nurses' views regarding the freedom to choose your own working methods, indicating lower level of satisfaction.

**Table 7** Nurse's views regarding the overall outcomes of the hospitals

	Mean	S.D	S.E	Chi-Square	Asymp. Sig.
Hospital considers the delivery of quality healthcare services over financial considerations?	3.53	.939	.090	22.339	.000
Hospital provides the safety at work environment & eliminates safety hazards?	3.60	1.028	.099	55.541	.000
There is perfect cooperation & collaboration within the staff of the hospital?	3.97	.887	.085	110.862	.000
The hospital "pays" adequate salary considering the responsibilities & duties you have?	3.52	1.206	.116	73.156	.000
The hospital provides overall quality of health services and better working conditions to patients?	3.56	.966	.093	64.165	.000
Total	3.64	1.005	.096	65.212	.000

Mean response of the nurses for the quality of overall outcomes of the hospitals came out to be  $3.64 \pm 1.005$ . Nurses mean response for the quality service delivery over financial constraints was  $3.53 \pm .939$ , meaning that nurses were not satisfied. Mean response for the quality of cooperation & collaboration within the staff was  $3.97 \pm .887$ , indicating higher level of satisfaction. There was a mean response of  $3.52 \pm 1.206$  for the nurses' views regarding the salary paid to them, indicating lower level of satisfaction.

### Conclusions

The total no. of respondents was 172, out of which 63 i.e. 36% were Doctors & 109 i.e. 64% were Nurses. Out of total Doctors 65.1% were male & 34.9% were female respondents. 12.7% doctors were from Medicine, 7.9% were from Surgery, 3.2% were from Anesthesia, 4.8% were from Obs & Gynae, 6.3% were from Ophthalmology, 7.9% were from Ortho, 7.9% were from Pediatrics, 11.1% were from Dental, 12.7% were from Ayush & 25.4% were from other departments. 23.9% of respondent doctors were from Ambala, 25.7% of respondent doctors were from Kurukshetra, 24.8% of respondent doctors were from Karnal & 25.7% of respondent doctors were from Panipat. 39.4% of doctors were from 0-5 yrs duration of services, 22.0% of respondents were from 5-10 yrs duration of services, 3.7% of respondents were from 10-15 yrs duration of services & 34.9% of respondents were from more than 15 yrs duration of services.

All the respondent Nurses were female. Out of total nurse respondents 11.9% nurses were from Medicine, 7.3% were from Surgery, 6.4% were from OPD, 28.4% were from Obs & Gynae, .9% were from Ophthalmology, 17.4% were from IPD, 4.6% were from Ortho, 6.4% were from Pediatrics, 11.0% were from Emergency & 5.5% were from other departments. 23.9% of respondent nurses were from Ambala, 25.7% of respondents nurses were from Kurukshetra, 24.8% of respondents nurses were from Karnal & 25.7% of respondent nurses were from Panipat. 39.4% of nurse respondents were from 0-5 yrs duration of services, 22.0% of were from 5-10 yrs duration of services, 3.7% of were from 10-15 yrs duration of services & 34.9% of were from more than 15 yrs duration of services.

7.9% doctors strongly disagree & 33.3% doctors disagree, with the the quality of equipments. 49.2% doctors agree & 6.3% doctors strongly agree with the quality of working conditions. 49.2% doctors agree & 4.8% doctors strongly agree with the quality of diagnostic facilities. 46% doctors agree & 9.5% doctors strongly agree that the hospital facilities of the sanitation are satisfactory. 14.3% doctors strongly disagree & 38.1% doctors disagree, that the hospital does have availability of enough manpower. 22.2% doctors strongly disagree & 30.2% doctors disagree, that the policy & procedures for quality patient care in the hospital are clear. 52.4% doctors agree & 12.7% doctors strongly agree that the patients are given enough information about their disease, examinations and treatment. 89.1% doctors agree & 19.0% doctors strongly agree that the hospital's rules & policies are equally applied to all the employees. 11.1% doctors strongly disagree & 30.2% doctors disagree that the hospital does provides the freedom to choose own working methods. 44.4% doctors agree & 11.1% doctors strongly agree that the Management is supportive. 39.7% doctors agree & 3.2% doctors strongly agree that the Hospital consider the delivery of quality healthcare services over financial considerations. 49.2% doctors agree & 4.8% doctors strongly agree that the Hospital provides the safety at work environment & eliminates safety hazards. 57.1% doctors agree & 12.7% doctors strongly agree that there is cooperation & collaboration within the staff of the hospital. 14.3% doctors strongly disagree & 17.5% doctors disagree that the salary paid to them is adequate. 6.3% doctors strongly disagree & 15.9% doctors disagree that the hospital does provide overall quality of health services to patients.

9.2% nurses strongly disagree & 28.4% nurses disagree, with the the quality of equipments. 43.1% nurses agree & 17.4% nurses strongly agree with the quality of working conditions. 40.4% nurses agree & 13.8% nurses strongly with the quality of diagnostic facilities. 44% nurses agree & 22% nurses strongly agree that the hospital facilities of the sanitation are satisfactory. 13.8% nurses strongly disagree & 31.2% nurses disagree that the hospital does have availability of enough manpower. 45.9% nurses agree & 15.6% nurses strongly agree that the policy & procedures for quality patient care in the hospital are clear. 52.3%



nurses agree & 21.1% nurses strongly agree that the patients are given enough information about their disease, examinations and treatment. 2.8% nurses strongly disagree & 27.5% nurses disagree that the hospital's rules & policies are equally applied to all the employees. 3.7% nurses strongly disagree & 30.3% nurses disagree that the hospital does provides the freedom to choose own working methods. 52.3% nurses agree & 11.0% nurses strongly agree that the Management is supportive of the applicable work-standards which govern the hospital. 43.1% nurses agree & 13.8% nurses strongly agree that the Hospital does consider the delivery of quality healthcare services over financial considerations. 45.9% nurses agree & 17.4% nurses strongly agree that the Hospital provides the safety at work environment & eliminates safety hazards. 56.9% nurses agree & 25.7% nurses strongly agree that there is perfect cooperation & collaboration within the staff of the hospital. 10.1% nurses strongly disagree & 12.8% nurses disagree that the hospital "pays" adequate salary considering the responsibilities & duties they have. .9% nurses strongly disagree & 17.4% nurses disagree that the hospital does provide overall quality of health services and better working conditions to patients.

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