Factors Associated with Clients' Satisfaction on Hospital Service Management of Province 1, Eastern Nepal

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Abstract
Satisfaction is both the internal happiness and sadness which is the major result of the correlation between the desires and expectations of people and also the services received. The direct relation is with the health services provided to the people which are effectively used where the fulfillment of patient is always kept on the list of high priority. This satisfaction of people directly links with the major factors like healthy communication with the staffs of hospitals like doctors, nurses and other personnel, nature of quality services and other facilities provided by the hospital. The study of this is the descriptive and huge study which is currently carried out in province 1 of the eastern Nepal in 10 hospitals in different locations. Based on the random sampling, the hospitals were selected from the province 1 which resulted in 18 government hospitals and 40 private hospitals which are running currently. Among the 18 government hospitals, 6 government hospitals and 40 private hospitals, 4 private hospitals were chosen at random using the simple random sampling method. Client's perspective and service provider's perspective are the two perspectives which is the result of both the qualitative and the quantitative analysis. The results of both bivariate and multivariate analysis for the statistical significance of quantitative data have been presented which mainly focuses on the group discussion of it that is also reported. A survey was conducted which mainly involved the patients. The majority of patients were satisfied with the number of doctors available and the result of the diagnosis which ranged from 70.88% to 92.5% of the participants. However, there were patients; almost 30% who were not satisfied for longer period to visit doctors, 26.4% of clients were dissatisfied for the approach of doctors specialist in time.

Keywords: *Client Satisfaction, Hospital Management, Public Hospital, Private Hospital*

Introduction

Every organization has a goal. Desired Goals are achieved by organizational activities. They refer to the future destination of an organization. Effective and efficient management is a means to achieve predetermined goals. All organizational activities are directed in the accomplishment of such goals. The organization cannot be successful unless it satisfies the clients. Modern marketing is client/consumer oriented. Thus, client satisfaction is the key to achieve organizational goal. The main responsibilities of any organization toward consumer are to understand clients' needs and to take necessary steps to satisfy these needs, to improve the efficiency of the organization quality of services, cost effectiveness, easily accessible services, right time services, to response after services, and to conduct research for the improve quality of

services. The clients' complaints and inquiries need to be tackled very carefully and solved the problems for the entire satisfaction of clients (Shrestha, 2007).

Health care marketing should not be taken lightly as today's patients have more options than before. It is important to have a planned, budgeted health care marketing strategy. *(http://www.healthcareuccess.com)*. Patient satisfaction is determined to realization of health care marketing. In order to meet client's expectations from increased frustration due to medical commercialization, health care marketing should be significantly increased in terms of quality health care facility. Health care facility should develop marketing with patient addressing the actual need of clients'. Therefore client satisfaction in medical services reveals good planning, research tool and administration (Habbal, 2013). The main goal of marketing is to deliver value and satisfaction to consumers. Modern marketing is mainly concerned with understanding consumers' needs, wants, and preferences and deliver appropriate products and services that delight consumers (Koirala, 2005).

Quality is the outcome of the experience that the patient have in the hospital while having treatment. It is determined by the way patient are treated and behaved by the medical personal. People evaluate about the quality of their health care according to the hospital atmosphere and responsiveness of the nurses, doctors and other medical staff. (*https://www.stanfordhealthcare.org/about-us/quality.html*). It has been one of the most challenging tasks for all the hospitals to satisfy patients in today's ultra-competitive healthcare environment. Hospitals must go through all the possible efforts to ensure their patients continue to choose them as their medical treatment providers. No doubt, a satisfied patient is always willing to keep the same spirit in regards visiting the same hospital than search for another facility. The research clarifies that people who are satisfied with their hospital stay are more likely to tell others about their experience, which can help healthcare facilities to keep new patients coming through the doors. Hospital physicians, staff members play a vital role to main relation with the patients to build trust and increase the likelihood of the patient regarding their treatment recommendations. Patients who are satisfied with the level of care provided by a hospital are less likely to experience an unsatisfactory clinical outcome *(https://www.rn.com/rn-news/the-importance-of-the-patient-experience/).*

Therefore, it is very necessary to determine and understand the various dimensions of service quality in the perspective of hospital. Despite having deep study over these dimensions of hospital service quality by many researchers, all the possible areas of service quality management in a hospital have not been covered yet. The hospital should understand and manage well different dimensions: infrastructure, resource availability, waiting time, food, clinical procedures, administrative procedures, price, trustworthiness, information availability, patient safety, continuity, personalized attention, and staff attitude, quality of outcome and religions needs. All these dimensions can be used for measuring service quality management in both private and public hospitals *(Swain & Kar, 2017).* Clients will share positive experience that satisfied by hospital services, if not satisfied and any complain about services, the hospital can correct the drawbacks. Dissatisfaction increase loss of investment and risk. Client satisfaction survey provides real time feedback for organization. Quality of services is another important fact which helps to satisfy and motivate clients to follow the same organization in the future. Clients

are aware of health services, positive feedback of clients creates goodwill and sustain organization long run.

As far as our knowledge, there was no study on client satisfaction toward services of hospital which represents hospitals of province 1 in the eastern Nepal. The present study is therefore designed to examine the factors associated with clients' satisfaction in health service management in province 1 of Nepal.

Materials and methods
Study design:
This is a descriptive research design in which a cross-sectional study was carried out.

Study area and Population:
The seven provinces established by the new constitution of Nepal which was adopted on 20 September 2015, province one is situated in the eastern part of Nepal. The province one has three-fold geographical division: Himalayan in the north, Hilly in the middle and Terai in the southern part of Nepal, covers area of 25,905 km² and comprises around 4.5 million populations. There are all together 14 districts in this province, the capital is Biratnagar. There were 18 government hospitals and 40 private hospitals currently running in province no one. All the clients visited to those hospitals for the treatment were the study population.

Sample size:
The sample size was calculated on the basis of a study conducted by *Sigdel (2015) et al,* in Morang district reported that percentage of client satisfaction in a private health institution the satisfaction was 37.27%, which is very less than a public health institution. Based on proportion of 37.27%, the sample size was determined as 680 clients adding 5% of non-response rate using one proportion at 95% CI with 10% permissible error. A total of 680 clients were interviewed from 10 health institutions.

Sampling methods:
The random sampling design was used to select the hospitals from province number 1. Out of 18 government hospitals and 40 private hospitals, 6 government hospitals and 4 private hospitals were chosen randomly using simple random sampling method respectively. Sixty eight clients were consecutively selected with alternative selection of clients from each randomly selected hospital and interviewed them with the help of questionnaire which consisted of 83 questions related to client satisfaction.

Data collection tool:
The pretested semi structure questionnaire was the tools for data collection of primary data, which includes socio-demographic variables and questions regarding satisfaction of hospital services. There were a total of 93 questions for the client interview, the client satisfaction consisted of 71 questions in which hospital diagnosis satisfaction contained 14 questions, service quality satisfaction contained 18 questions, nursing care satisfaction contained 6 questions, laboratory and radio-diagnosis contained 8 questions, satisfaction on emergency service contained 8 questions, satisfaction of hygiene and sanitation contained 10 questions and

satisfaction on cost of treatments contained 7 questions. All the questions were in 5 point likert scale as highly satisfied, satisfied, neutral, dissatisfied, and highly dissatisfied.

Reliability and Validity of tools:
The pretesting was done among 70 clients in Morang Shahakari hospitals, Biratnagar which was excluded into study samples. Initially there were 74 items for the satisfaction assessment scale. During the analysis, Cronbach's alpha found to maximum after deleting three items. Thus, the alpha coefficient (reliability coefficient) for 71 items was 0.96, suggesting that the items have relatively high internal consistency.

Measures taken to enhance validity were use of few modifications on the standard scales, use of pre-tested questionnaire, giving sufficient time to remember and respond confidential one-to-one interview and more than one question in some cases asking for the same information. The content validity of the instrument was established by seeking opinion of the research guide and co- guides and then assessed through reviewing the questionnaire items by the three experts; a psychiatrist, a management expert and an epidemiologist. Constructive feedback from the faculty, seniors and colleagues were also incorporated.

Data entry and analysis:
The collected data was entered into Microsoft Excel software. Every 50 entry, the cross check was done to correct false entry if occurred. The data was converted into SPSS software 22.0 version and analysis was done.

For the descriptive analysis; frequency, percentages, means, and standard deviations (S.D) were computed. Graphical methods were demonstrated the characteristics of client and hospitals. For inferential statistics, Chi-square test was used to find out the association between categorical independent variables and dependent variables. Independent variable having p-value less than 0.20 was considered for the appropriate multivariate analysis to observe the strong predictors of Child marriage. Binary logistic regression was performed to estimate Odds Ratio (OR) with 95% confidence interval (C.I.).

Ethical consent
Ethical clearance was taken from Nepal Health Research Council, Ramshahpath Kathmandu and also from each selected hospital administration. Verbal consent was taken from each individual after informing him (or her) the purpose of the study. They were also provided assurance of anonymity and confidentiality of data. The participants were compensated for their time by providing refreshment.

Operational definition:
   a) Patient/Client: a person receiving or registered to receive medical treatment under health care.
   b) Satisfaction: An act of fulfilling a need, desire or the pleasant feeling gained from such fulfillment. It is an experience of sense of fulfillment or state of being satisfied. It was assessed with the reliable and valid scale prepared for study purpose

c) Hospital management: It is one of the latest concepts in the management field related to the management health care system, leadership, hospital networks and administration of hospitals.

d) Client satisfaction: it is an attitude a person's general orientation towards a total experience of health care. Satisfaction comprises both cognitive and emotional facts and relates to previous experiences, expectation and social networks.

Results and discussions

The clients' satisfaction was assessed with 71 items questions including hospital diagnosis, service quality, nursing care, laboratory and radio-diagnosis, emergency service, hygiene and sanitation and cost of treatments in 5 point likert scale i.e. highly dissatisfied (1), dissatisfied (2), neutral (3), satisfied (4) and highly satisfied (5). The overall score was dichotomized at the cut off value of 60%; that means, above 60% was satisfied and otherwise not satisfied. The result shows that overall satisfaction of the clients visiting to the hospitals of Province 1 in the eastern Nepal. Around 94% of clients were satisfied

Figure 1. Client satisfaction in the hospital service management in Province 1 (n=680)
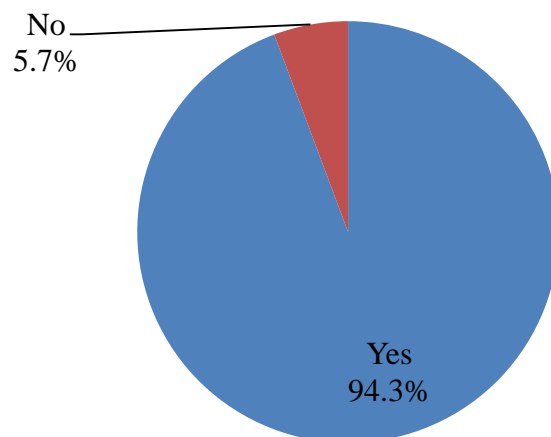
The socio-demographic characteristics of the study sample comprise 54.3% of female, 69% of below 40 years of age, 26.5% of illiterate, and 78.7% were married. More than 31% of participants were housewife, followed by agricultural occupation (25.9%). More than one-third of clients were Adhibasi. Around 68% had family size of 5-10 members in the family. Maximum participants were in below poverty line.

Table 1 demonstrates the overall satisfaction based on two categories i.e. satisfied vs. not satisfied with respect the different socio-demographic factors. The satisfaction of the clients was not significantly associated with the gender, education, caste/ethnicity and poverty. The lowest number of clients was reported to be satisfied among 40-60 years of age group, where as maximum clients reported to be satisfied among more than 60 years clients. The age group was significantly associated with satisfaction level (p=0.019). Similarly there was significant association of satisfaction of clients with marital status (p=0.032), occupation (0.025), and family

size (p=0.007). Almost 99% of students were satisfied, followed by agriculture (96.6%) and business occupation (94.4%). Relatively Labors, skilled or unskilled were less who reported to be satisfied in comparison to the other categories (86.3%). The clients having other occupation were almost more than 94% who reported to be satisfied.

Table 1. Association of overall satisfaction (%) of clients visiting hospitals with different factors

Factors	Satisfied (n=641)	Not satisfied (n=39)	Total (n=680)	χ^2 value	P value
Sex					
Male	95.2	4.8	45.7	0.882	0.348
Female	93.5	6.5	54.3		
Age group (yrs)					
<=20	94.3	5.7	12.9		
20-40	95.8	4.2	56.1	9.946	0.019*
40-60	88.6	11.4	19.4		
>60	96.2	3.8	11.6		
Education					
Illiterate	95.0	5.0	26.5		
Literate	91.5	4.5	8.7		
Primary	93.0	7.0	10.4	2.764	0.736
Secondary	97.2	2.8	10.4		
SEE/SLC	92.9	7.1	16.6		
Plus 2 and above	94.6	5.4	27.4		
Marital status					
Married	93.3	6.7	78.7	4.582	0.032*
Single	97.9	2.1	21.3		
Occupation					
Agriculture	96.6	3.4	25.9		
Business	94.4	5.6	7.9		
Housewife	93.9	6.1	31.2	12.85	0.025*
Student	98.6	1.4	10.3		
Government/Private	93.7	6.3	14.0		
Un/Skilled Labor	86.3	13.7	10.7		
Caste/Ethnicity					
Brahmin/Chhetry	92.8	7.2	20.4		
Adhibasi	93.8	6.2	35.6	1.267	0.737
Madhesi	95.2	4.8	27.6		
Others (Muslim/dalit)	95.5	4.5	16.3		
No. of Family Member					
<=5	89.6	10.4	24		
5-10	96.1	3.9	68.2	9.922	0.007*
>=10	92.5	7.5	7.8		
Income				1.408	0.235
Below Poverty (<=$1.9)	94.9	5.1	72.4		

Above Poverty (>$1.9)	92.6	7.4	27.6		

A study concludes that ethnicity and low education status were associated with choice of public health facilities. The facilities were chosen because of financial and physical accessibility rather than better health care delivery (*Karki & Kadariya, 2013*). Satisfaction of the patients not only depends upon the type of hospitals, there are multiple factors which influence the patients' satisfaction. To understand the relationship of patients' satisfaction with the choice of private or public hospitals for the treatment, one should consider the multivariate analysis for the effects of other possible variables on the clients' satisfaction.

Table 2 shows that clients satisfaction towards hospital service is significantly associated with the type of hospitals visited. Clients have less chance to be satisfied in public hospital than in private hospitals (P<=0.001) even after adjusting the effect of different possible factors. Males are almost 2.8 times more satisfied than females (P=0.014). Clients between the age of 30 to 40 years were more likely to be satisfied than those age of more than 60 years (P=0.003). Illiterate clients seem to be more satisfied than the clients whose education was more than plus two. However, there was no significant relationship of satisfaction with marital status. Unskilled or skilled workers were significantly associated with different types of occupation. Caste (or ethnicity) and economic condition of the clients did not found to be associated with the satisfaction of clients approached to the different hospitals of province 1.

The results of a study conducted in a private teaching hospitals contradicts the present finding that gender is not significantly associated with the satisfaction of the patients. However, the study also reports that the illiterate respondents were found to be more satisfied than any other categories of patients. The results of the present study shows that illiterate clients were more than 13 times likely to be satisfied than those clients' whose education were plus two and higher than the Plus two.

Table 2. Logistic regression showing adjusted effect of different factors with satisfaction of clients in the hospitals of (n=680).

Variables	B coefficient	SE (B)	OR	95% CI for OR		P value
				Lower	Upper	
Type of hospital						
Public	-1.901	.486	.149	.058	.387	**<0.001**
Private	Reference					
Sex						
Male	1.045	.424	2.842	1.237	6.530	**.014**
Female	Reference					
Age group						
<=20 years	-.052	.755	.950	.216	4.172	.945
20-40 years	1.527	.520	4.604	1.663	12.745	**.003**
40-60 years	-.474	.579	.623	.200	1.936	.413
>60 years	Reference					
Education		.582	4.251	1.359	13.295	
Illiterate	1.447	.664	1.884	.513	6.917	**.013**

Literate	.633	.677	2.726	.723	10.284	.340
Primary	1.003	.875	9.197	1.654	51.119	.139
Secondary	2.219	.579	2.495	.802	7.764	**.011**
SEE/SLC	.914					.115
Plus 2 & above	Reference					
Marital status						
Married	-.274	.612	.761	.229	2.522	.655
Single	Reference					
Occupation						
Agriculture	2.567	.603	13.021	3.991	42.481	**.000**
Business	2.061	.786	7.857	1.683	36.691	**.009**
Housewife	2.132	.573	8.430	2.742	25.922	**.000**
Student	4.347	1.287	77.278	6.200	963.181	**.001**
Government/Private	2.147	.632	8.556	2.481	29.498	**.001**
Un/Skilled Labor	Reference					
Caste/Ethnicity						
Brahmin/Chhetry	.074	.621	1.076	.319	3.633	.906
Adhibasi	.131	.539	1.140	.396	3.282	.807
Madhesi	-.045	.585	.956	.304	3.010	.939
Others (Muslim/dalit)	Reference					
Poverty line (1.9$)						
Below poverty	.698	.395	2.009	.926	4.356	.077
Above poverty						

In order to determine quality service relationship with customer satisfaction various researchers have identified quality service dimensions both for public and private hospital management. Parasuraman et al. (1985, 1988) developed SERVQUAL, the mostly used service quality measurement tool. This model proposes the disconfirmation of perception from expectation in five dimensions; reality, tangibles, responsiveness assurance and empathy. Critics were made on these five dimensions some added 3 more dimensions while others found no need of modified dimensions. Factors analysis related a three factor solution namely; reliability- confidence, empathy and tangibles. Finally, logistic regression findings indicated that these three dimensions can play a vital role on patient satisfaction both on public and private sector (Yesilada & Direktör, 2010)

Conclusion:
This study concludes that there is significant association of satisfaction of clients towards hospital management system in between private and public hospitals. Satisfaction of the patients not only depends upon the type of hospitals, there are multiple factors which influence the patients' satisfaction. Thus the result of the multivariate analysis shows types of hospital, gender, age group, education and occupation were the significant predictors for the patients' to be satisfied of the health service management of hospitals. In fact, the final regression model shows the strong association of types of hospital with clients' satisfaction even after adjusting the effect of other possible factors like gender, education, caste/ethnicity, poverty, marital status, occupation and family size of clients.

The discrimination of the gap of satisfaction level between two sectors may be fulfilled by the national health insurance system. Ministry of health and department of health service of the government of Nepal should be prioritized the health insurance policy not only in a document but also in action to implement from the grass root where community people are living under the poverty line.

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