

## Effects of quality attributes of ESI health care services on patient's satisfaction

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What are the Effects of quality attributes of ESI Health Care Services on patient's satisfaction. To determine effects of quality attributes of ESI Health Care Services on patient's satisfaction. Cross-sectional, descriptive ESI dispensary, Shivaji colony Rohtak Percentage, simple proportion, chi square test, linear regression model. 500 Study participants The study population comprised of 500 persons [66.8% males and 33.2% females]. Maximum number of study participants (37.4%) were in the 30-39 years age group followed by 30.6% were in the age group of 20-29 years. Around one third (27%) study participants were dissatisfied with quality of health care services provided under ESI scheme. The study also revealed the reasons for dissatisfaction and most common reasons were found not good quality medicines (52.59%) and complete medicines (41.48%). There is need to strengthen the quality of health care service at ESI dispensary.

Keywords: ESI health care services, patient's satisfaction

Quality is most abused term in health systems. There are several definitions, lots of frameworks, different approaches, multiple players and institutional mechanisms regarding quality of health care. WHO in world health report 2000 defined quality of health care through benchmarks of efficiency, cost effectiveness and social acceptability (Grol, 2001). It is crucial to understand quality from the providers, management, and from the client and community prospective. Quality influences both health status and satisfaction (Shaikh, 2005).

Global patient satisfaction is influenced by several quality dimensions. Most previous studies have taken into account only one or two quality aspects, while this study focuses on several quality aspects with the aim of obtaining a broader perspective and discriminating influences of the different factors. The philosophy of quality of health services, hitherto, may help us finding the answer to the enigma of under-utilization of public sector health services in many developing countries and the flourishing private sector. Therefore, assessing patient perspectives gives users a voice, which can make public health services more responsive to people's needs and expectations (Sekandi et al., 2011).

Employees' State Insurance Scheme of India is an integrated social security scheme tailored to provide social protection to workers in the organized sector and their dependents in contingencies, such as, sickness, maternity, disablement and death due to an employment injury or occupational disease. Towards this objective the scheme of health insurance provides full medical facilities to insured persons and their dependents, as well as, cash benefits to compensate for any loss of wages or earning capacity in times of physical distress (Kishore, 2009). As provided under the ESI Act (1948), the scheme is administered by a duly constituted corporate

body called the Employees State Insurance Corporation (ESIC). Considering the huge number of beneficiaries about 5.55 crores (31.03.2010) the Corporation has set up a wide spread network of service outlets for prompt delivery of benefits in cash and kind that including full medical care (ESI, 2006). The ESIC has the largest team of medical and para-medical personnel in India and also has one of the largest medical infrastructures in the world. Medical facilities are provided through a network of 1427 ESI dispensaries, over 2100 panel clinics, 307 diagnostic centres, besides 144 Hospitals and 43 Hospital annexes with over 27000 beds. Employees of covered units and establishments drawing wages up to Rs.15, 000/- per month w.e.f. 1.05.2010 come under the purview of the ESI Act, 1948 for multi-dimensional social security benefits (Park, 2009).

### Method

*Setting:* In Haryana state, ESI scheme is running in 15 out of 21 districts. The state has 57 ESI dispensaries and 5 ESI hospitals. Rohtak district has two ESI dispensaries one is located at Town Sampla and another at Rohtak city. This study was carried out in ESI dispensary Rohtak city. ESI dispensary of Rohtak was established in the year 1968 and is located in old housing board colony which is almost in the center of city. ESI dispensary Rohtak is approximately 4 km from Pt. BD Sharma PGIMS, Rohtak and 5 km from General hospital Rohtak. The dispensary has approximately 400 establishments registered and 7485 insured persons under ESI scheme.

*Study Design:* Cross-sectional and descriptive

*Study period:* The study duration was one year i.e. 1st June, 2010 to 31st May, 2011.

*Study Subjects:* 500 participants for assessing the quality of health services

*Methodology:* For assessing the quality of health care services the participants were selected through systematic random sampling

among those visiting the outdoor patient department (OPD) in ESI dispensary. Exit interview technique was used and every 5th participant was interviewed. In case of minor patient, the investigator interviewed their guardian. Before starting the interview informed consent was obtained from all participants with understanding so that identity will not be revealed in any form and the information gathered in this interview will be used only for research purposes. Those insured persons who did not give their consent, referred by ESI doctor and coming for other than health care services, not included in study.

*Study Analysis:* The data was collected and analyzed using appropriate statistic test using SPSS version 17.0 software.

**Observations**

*Table I: Profile of study sample (n=500)*

Category	Study participants (%)
IP (Male)	308 (61.6)
IP (Female)	22 (4.4)
Dependent males	26 (5.2)
Dependent females	144 (28.8)
Total	500 (100)

The interviewed respondents comprised of 500 persons, out of these 334 (66.8%) males and 166 (33.2%) were females. Out of total male participants, 308 (61.6%) were insured and 26 (5.2%) were dependents while from total female participants, 22(4.4%) were insured and 144 (28.8%) were dependents (Table-I)

The study revealed that the maximum number of participants (37.4%) belonged to 30-39 years age group and maximum subjects (55.0%) belonged to general caste followed by backward class (30.6%) and 14.4% schedule caste. The maximum number of study subjects (45.6%) educated up to secondary level and majority of study participants were married only 9.2% males were unmarried. Nearly half of the participants (52.2%) had their monthly family income Rs. 5000-10000/-.

*Table II: Quality determinants and satisfaction behaviour with ESI services by linear regression model.*

**Statistical Analysis**

Model	Unstandardized Coefficients		SC	t	S
	B	Std. E.			
(Constant)	11.372	3.634		.129	0.002
Doctor availability	-1.035	0.695	-0.078	-1.490	0.137
Doctor behavior	-1.276	0.602	-0.120	-2.120	0.035
Staffs behavior	0.511	0.588	0.038	0.869	0.385
Clients Privacy	-1.395	1.031	-0.065	-1.353	0.177
Technical competence of doctor	3.403	1.232	0.141	2.761	0.006
Medicines availability	-3.020	0.333	-0.335	-9.059	0.000
Medicines quality	-3.784	0.317	-0.421	-11.928	0.000
Waiting time for registration	3.706	1.947	0.066	1.904	0.58
Average time spent in ESI	1.065	0.298	0.121	3.568	0.000

SC= Standardized Coefficients, S= Significance

Model	R value	R square	ARS	SEE	Durbin-Watson
1	0.687a	0.472	0.462	2.60810	1.965

ARS= Adjusted R square, SEE= Standard error of Estimate

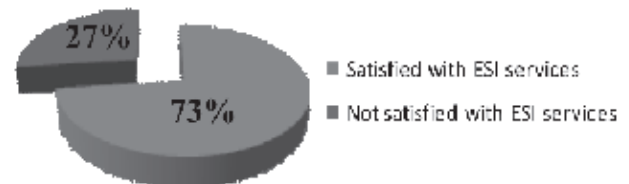
Model	Sum of Squares	Df	Mean Square	F	S
Regression	2974.129	9	330.459	48.581	0.000a
Residual	3333.071	490	6.802		
Total	6307.200	499			

a) *Predictors:* (Constant), availability of doctor, behavior of doctor, staff behavior, technical competence of doctor, privacy maintained at ESI dispensary, availability of medicines & its quality, waiting time for registration and average time spent in ESI dispensary during treatment.

b) *Dependent variable:* overall satisfaction with ESI services.

Table II shows the association between dependent variable i.e. overall satisfaction behaviour with ESI services and independent variables availability of doctor, behavior of doctor, staffs behavior, technical competence of doctor, privacy maintained at ESI dispensary, availability of medicines & its quality, waiting time for registration and average time spent in ESI dispensary during treatment. For this to predict client satisfaction predictor's linear model is used. The R value is 0.687 and adjusted R square is 0.462 meaning thereby 46% client satisfaction is due to variables availability of doctor, behavior of doctor, staffs behavior, technical competence of doctor, privacy maintained at ESI dispensary, availability of medicines & its quality, waiting time for registration and average time spent in ESI dispensary during treatment. The value of Durbin-Watson test is <2 which proves that there is no collinearity among independent variables. The fitness of model is tested with ANOVA which is significant even at 0.001% level of significance. The power of independent variable is measured by their corresponding beta value. Highest beta value is of quality of medicine (0.421) and availability of medicine (0.335) in the ESI dispensary followed by technical competence of doctor (0.141) and behavior of doctor (0.120). Total time spent in ESI dispensary by clients, availability of doctor, privacy maintained during examination at ESI dispensary also play significant role for clients satisfaction.

The study also recorded that majority of study participants (73%) were satisfied and 27% were dissatisfied with ESI health care services (Figure-1).



*Figure-1: Distribution of study subjects in relation to satisfaction with ESI services*

The present study described that nearly half of clients (52.59%) were dissatisfied because of not good quality of medicines at ESI dispensary while 41.48% were not satisfied because of incomplete medicines. However 11.8% subjects were dissatisfied because of shortage of staff and no diagnostic facilities/ lab tests each at ESI dispensary. One of the reasons for dissatisfaction was no specialist doctor available at ESI dispensary which accounts 10.37% and only 0.3% dissatisfied with behavior of doctor (Figure-II).

The present study recorded that 302/500 (60.4%) subjects have given their suggestions to improve the quality of care at ESI dispensary. Maximum participants (45.03%) suggested that there should be provision of diagnostic facilities/ lab tests in ESI

dispensary while 29.47% said that specialist doctor should be required. However 15.89% and 14.56% subjects suggested that there should be provision for good quality medicines & complete medicines respectively. 12.58% study participants said that there should be 24 hours emergency care facility at ESI dispensary. 11.92% clients suggested that there should be provision of smart card, streamline process regarding medical bill reimbursement etc. while 3.31% wanted admission facility and increase staff members at ESI dispensary (Figure-III).

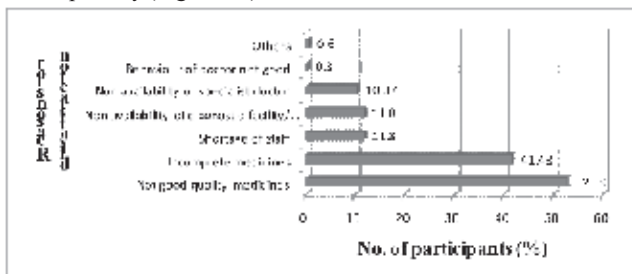


Figure-II: Reasons for dissatisfaction to quality of care among non-satisfied subjects



Figure-III: Suggestions given by study subjects to improve the quality of health care services at ESI dispensary

## Discussion

Quality of care was recognized as a key element for improved health outcomes and efficiency in the World Health Organization's (WHO) widely adopted framework for health system strengthening in resource-poor countries. Although modern approaches to improving quality are increasingly used globally, their adoption remains sporadic in developing countries (Sharma, 2009).

The distribution of study subjects in relation to satisfaction with ESI services (Figure-I) showed that majority of participants 365(73.0%) were satisfied and 135(27.0%) were dissatisfied with ESI services. Similar observations were made by Bedi, Arya, Sharma, and Sharma on "What it costs and what they get - A study of perceived costs and benefits among ESIS beneficiaries" in year 2005. They found that 63.34% beneficiaries were satisfied with ESI-HCF. However, a study was carried out in Palestine (1999) observed that 33% households were satisfied with the health services available under the insurance scheme. The authors explored the reasons for dissatisfaction and found that there was continuous civil war in Palestine that's why not much health facilities available under insurance scheme (Leatherman, 2010).

The present study also explored the reasons for dissatisfactions with ESI health care services (Figure-II). Similar observation made by El Shabrawy Ali M in year 1992 on "Patient satisfaction as an evaluation parameter for utilization of primary health care services." He observed the reasons for dissatisfactions were health care facility too far away, working hours not suitable and absence of specialist

clinic (Bedi et al., 2005). Another study conducted by Bedi, Arya, Sharma, Sharma on "What it costs and what they Get - A study of perceived costs and benefits among ESIS beneficiaries" in year 2005. They found that reasons for dissatisfactions were more time spent per visit, lengthy queues and shortage of staffs (Leatherman, 2010). A study carried out by Sharma, Ahmed, Bhatia on "Health care services in Punjab: findings of a patient satisfaction survey" in year 2008. Similar findings observed by the authors that important reasons for dissatisfaction were non-availability of medicines and its quality (El-Shabrawy, 1992).

The present study also recorded the suggestions made by study subjects to improve quality of ESI health care services (Figure-III). Similar findings made by Mashego and Peltzer on "Community perception of quality of (primary) health care services in a rural area of Limpopo Province, South Africa" in year 2005. The authors observed that three main priorities for enhancing perceived quality of health care i.e. improving drug availability, interpersonal skills (including attitudes towards patients) and technical care. 12 Similar observations were also made by Bedi, Arya, Sharma, Sharma on "What it costs and what they Get - A study of perceived costs and benefits among ESIS beneficiaries" in year 2005. They authors recorded the suggestions from clients to improve the ESI services and found that majority of beneficiaries wanted to be procedures at ESI HCF to reduce time spent per visit by streamlining processes so as to decrease queue numbers and queue lengths, by increasing counters and increasing staff (Leatherman, 2010).

From this study it was recorded that 46% client satisfaction is due to variables availability of doctor, behavior of doctor, staffs behavior, technical competency of doctor, privacy maintained at ESI dispensary, availability of medicines & its quality, waiting time for registration and average time spent in ESI dispensary during treatment. Quality of medicine, availability of medicines in ESI dispensary, technical competency of doctor, behavior of doctor, total time spent in ESI dispensary by clients, availability of doctor and privacy maintained during examination at ESI dispensary plays significant role in client satisfaction (Table-II). Similar findings were recorded in an international study conducted by Sekandi Makumb, Kasangaki, Kizza, Tugumisirize, Nshimye, Mbabali and Peters on "Patient satisfaction with services in outpatient clinics at Mulago hospital, Uganda" in year 2011. The authors explored that the strongest predictor of client's perceived satisfaction were technical competency of doctor, accessibility and availability of services especially prescribed medicines and manpower (Sekandi, 2011).

## Conclusion and Recommendations

Health services are also public goods, where there is a definite potential to improve the level of patient satisfaction. A responsive service would be where all patients regardless of their origin, status and background receive prompt attention by the hospital staff with courtesy and cooperation. Waiting time is appropriate and not bothersome. The factor of assurance is reflected from the reliance of the patients on doctor and hospital staff, and the confidence on their qualification and competence. The dimension of empathy could be seen as the individual attention given to the patients, calling by name and showing caring attitude towards them. Tangibles account for the cleanliness in the health facility, use of clean instruments and standard procedures in the facility and lastly the prescription, which should be easy to understand for the patients.

In nutshell, it is imperative to state that quality of health care services at ESI dispensary will definitely improve if along with the availability of doctors including specialists, good quality medicines, basic laboratory/diagnostic tests/radiological investigations and water and sanitation cleanliness are made available at ESI health care facilities. Further, the emergency services and the delivery services should be made available round the clock for satisfaction of the insured persons.

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