

## Research Article

# Clinical Counseling Provided by Doctors to Patients Admitted in the Medical Wards and It's Relation with the Patient Satisfaction

Chaudhry Saad Sohail<sup>1\*</sup>, Malik Qistas Ahmad<sup>2</sup>, Babar Shehzad<sup>1</sup>, Taimoor Sohail<sup>3</sup>, Muhammad Yasir<sup>2</sup>, and Muhammad Junaid Tariq<sup>2</sup>

<sup>1</sup>Department of Internal Medicine, Allama Iqbal Medical College, Pakistan

<sup>2</sup>Department of Internal Medicine, King Edward Medical University, Pakistan

<sup>3</sup>Department of Internal Medicine, Central Park Medical College, Pakistan

**\*Corresponding author**

Chaudhry Saad Sohail, Department of Internal Medicine, Allama Iqbal Medical College, Lahore, Punjab, Pakistan, Tel: 1347248134; Email: chsaad105@yahoo.com

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• Counseling; Satisfaction; Doctors; Patients; Compliance; Outcome; Health care; Mortality; Morbidity; Behavior

**Abstract**

**Background:** Counseling is the talkative therapy in which doctor provides information about disease and treatment to the patient with empathy and politeness. This information is the need and right of patients. Patient's expectation regarding this need of information should be fulfilled to achieve the goal of patient satisfaction.

**Objective:** To assess the clinical counseling provided to patients admitted in medical wards of Jinnah Hospital Lahore, Pakistan and its effect on patient satisfaction.

**Materials and methods:** Two hundred patients admitted in medical wards of Jinnah Hospital Lahore were interviewed by using a structured questionnaire, and then counseling provided to them was evaluated by using a manual doctor's counseling skill score and it was compared with patient satisfaction.

**Results:** Out of 200 patients, 101 (50.5%) were male and 99 (49.5%) were female. Mean age was  $44.57 \pm 34$  years and mean duration of stay in ward before interview was  $4.62 \pm 7.6$  days. Forty-nine percent were illiterate, 32% were under-matriculation and 19% were matriculation or above. Seventy-seven per cent knew name of their disease and 60% knew cause of their disease, 69.5% were told diagnosis by their doctor, 55% were explained results of their investigations, 77.5% were explained about their treatment, 93.5% were satisfied from their doctors, 90.5% found their doctor co-operative, 99% found their doctor polite and friendly and 69.5% found their doctors available to listen their complaints. Mean counseling score  $6.71 \pm 3.88$ . Significant positive associations were observed for relationship of patient satisfaction to behavior and co-operation of doctor, complaint listening, treatment explaining and counseling skill score.

**Conclusion:** More patients are satisfied if they are counselled better. Main variables affecting patient satisfaction significantly are politeness and co-operation of the doctor, complaint listening by doctor, and explanation provision regarding treatment.

**ABBREVIATIONS**

IMR: Infant Mortality Rate; CVD: Cardiovascular Disease; DF: Degree of Freedom; MI: Myocardial Infarction; HB: Hemoglobin

**INTRODUCTION**

Basic aim of health profession around the globe is to increase wellbeing of the population. In increasing wellbeing or health where there is a role of pharmacological treatments, talkative therapies are also very necessary to achieve personal satisfaction and wellbeing. As according to Holistic theory of medicine a doctor should not only focus on diseased part of body or pathological problems rather he should also treat the patient whole i.e. mind, body, spirit [1].

"Counselling by definition is a type of talking therapy that allows one to talk about their problems and feelings in a confidential and dependable environment to help oneself bring

about effective change or enhance one's well-being" [2].

Decreasing mortality and morbidity is indicator of improving health status of population. Counselling has significant role in achieving this goal. A study done in 2005 showed that post myocardial infarction smoking cessation counselling reduces mortality as 30-day mortality (2.0% vs. 3.0%), 60-day mortality (3.7% vs. 5.6%), and 2-year mortality (25.0% vs. 30%) [3]. Another similar study performed in 2007 also showed that smoking cessation counselling reduces mortality in post MI patients [4].

A study done in 2013 showed that health education greatly improves health outcomes and decreases mortality and morbidity [5]. Similarly A study showed that counselling and health education provided to mothers markedly reduces infant mortality and morbidity. IMR (Infant mortality rate) fell by 36% and overall infant morbidity by 42% [6].

Mortality has a direct relationship with patient compliance as shown by a study done in 2006 which concluded that in patients receiving polypharmacy, mortality was increased due to poor patient compliance. The study indicated that counselling improves patient's compliance and hence reduces mortality [7]. A pilot study performed in 2015 showed that pharmacist counselling at time of discharge improves adherence of heart failure patients to the treatment [8]. Another similar study done in 2015 showed counselling in primary care improves treatment adherence of elderly patients with chronic diseases [9]. A study done in 2012 showed counselling and health education improves patient's adherence to the treatment of latent tuberculosis [10]. A study showed that frequent reminders and telephonic counselling intervention by pharmacist improves patient adherence to the treatment and patient perception toward medication [11].

A study conducted on heart failure patients showed that health education and rectification of patient's beliefs by counselling are recommended in order to achieve better compliance [12]. A study was conducted to assess impact of counseling on patients of Diabetes Mellitus type 2. This study showed that counselling regarding medication and life style modification for type 2 diabetic patients can effectively improve important health indicators as BMI and Glycated Hemoglobin (Hb) levels were significantly decreased [13]. A study done in 2015 concluded that several risks of Cardio Vascular Disease (CVD) were improved in patients with recent onset rheumatic heart disease by simple counselling according to national guidelines and follow up for 9 months [14].

Along with these benefits, counseling and patient education has a pivotal role in achieving patient satisfaction. A study done by Muhammad Omar Qureshi in 2012 showed that patient satisfaction is influenced by doctor-patient communication and manner of doctors [15,16]. A study done by Qidawi showed that patients expect explanation of diagnosis and treatment when they come to a doctor so these are necessary to satisfy patients [17-19].

Our study focuses on assessing the clinical counselling provided in a tertiary care hospital and its effect on patient satisfaction. We aim to find how counselling in these hospitals helps the patients and their families build coping skills to help them work through their medical issues and their treatment.

## MATERIALS AND METHODS

Study Design: Observational (Cross-Sectional) Study.

Setting: Medical Wards of Jinnah Hospital Lahore, Pakistan

Sampling Technique: Non-Probability Sampling

Sample Size: Out of population size of 1000, sample size (n=200) was estimated using confidence level of 95% (Confidence Interval 1-7.2) with 10% absolute precision.

Variables

Dependent

- Patient Satisfaction

Independent

- Gender

- Age

Education status

- Socio-economic Status of Patient
- Time spent by doctor for counseling.
- Availability and behavior of doctor

Inclusion Criteria

- Patients admitted to medical wards of Jinnah Hospital
- Both Genders.
- Age equal or more than 15 years.

Exclusion Criteria

- Patients who are severely ill.
- Patients admitted to wards on the day of interview.

The study was carried out by interviewing 200 patients admitted to medical wards of Jinnah Hospital Lahore fulfilling the inclusion criteria (as mentioned above). After informed verbal consent a structured questionnaire (prepared using the literature and WHO guidelines) (Appendix-I) was filled. The questionnaire included variables regarding demographic factors, patient's awareness about his/her disease, and counseling provided by their doctor. Patients were asked whether they were satisfied from their doctor or not in a Yes/No type question. A manual scoring system was used to measure level of counseling provided by doctors. For this purpose, 11 variables were used and a score was designed with vales ranging from zero to 11. Details of this scoring system are provided in Table 1. Statistical analysis was performed using the SPSS version 17.0. The English questionnaire was translated by an interpreter to each and every patient and level of comprehension made sure.

## RESULTS

The study included total 200 patients, among them 101 (50.5%) were male and 99 (49.5%) were female.

### Age

Mean age of male patients was  $46 \pm 38$  years and that of female patients was  $43 \pm 33$  years.

### Duration of stay

Mean duration of stay of male patients in wards was  $4.42 \pm 7$  days and that of female patients was  $4.84 \pm 8.4$  days.

### Socio-economic status

Among male patients, 49 (48.5%) patients were of lower socio-economic status, 51 (50.5%) were of middle and 1 (1%) was of higher socio-economic status. Among female patients, 65 (65.7%) patients were of lower socio-economic status, 33 (33.3%) were of middle, and 1 (1%) was of higher socio-economic status.

### Education

Among male patients, 44 (43.6%) patients were illiterate, 1 (1%) had only Islamic education, 9 (8.9%) were primary pass, 22

**Table 1:** Manual Scoring System For Doctor's Counseling Skill.

Sr. #	Variable	Response	Score
1	Has doctor told diagnosis?	a: Yes b: No	a: 1 b: 0
2	Time Taken by Doctor while explaining diagnosis?	a: Less than 2 min. b: 2-5 minutes c: More than 5 min.	a: 0.3. b: 0.6 c: 1.0
3	Privacy provided?	a: Yes b: No	a: 1 b: 0
4	Does doctor listen to your complaints?	a: Yes b: No	a: 1 b: 0
5	Do you know cause of your disease?	a: Yes b: No c: Partially Know	a: 1 b: 0 c: 1 <sup>a</sup>
6	Has doctor explained benefits of investigation?	a: Yes b: No	a: 1 b: 0
7	Has doctor explained results of investigation?	a: Yes b: No	a: 1 b: 0
8	Has doctor explained your treatment regimen?	a: Yes b: No	a: 1 b: 0
9	Has doctor told any side effect of treatment?	a: Yes b: No	a: 1 b: 0
10	Is doctor co-operative?	a: Yes b: No	a: 1 b: 0
11	Is doctor polite and friendly?	a: Yes b: No	a: 1 b: 0
	Total Score:		11

a: In questionnaire question was asked directly from the patient whether he knows cause of the disease or not but during scoring this variable was assumed as "Has doctor told you cause of the disease?". So if patient knew the cause even partially we assumed that it was told by doctor and gave it score of "1".

(21.8%) were middle pass, 18 (17.8%) had done matriculation, 6 (5.3%) had done intermediate, and only 1 (1%) was having master degree. Among female patients, 55 (55.6%) patients were illiterate, 1 (1%) had only Islamic education, 13 (13.1%) were primary pass, 18 (18.2%) were middle pass, 9 (9.1%) had done matriculation, 3 (3%) had done intermediate and none was graduate or above (Figure 1).

**Awareness and disclosure**

Out of 200 patients, 118 (59%) knew which disease they were suffering from, 37 (18.5%) knew it partially, and 45 (22.5%) didn't know. 139 (69.5%) were told about diagnosis by doctor and 61 (30.5%) were not told diagnosis. Among the patients who were told about their diagnosis, doctor spent less than two minutes on explaining diagnosis for 6 patients (4.32%); 2-5 minutes for 28 patients (20.14%) and more than five minutes for 105 patients (75.54%) (Figure 2).

Out of 200 patients, none (0%) was provided privacy during explanation of the diagnosis. For 188 (94%) patients, doctors listened to their complaints while for the remaining 12 (6%) they did not. 86 patients (43%) knew cause of their disease; 34 (17%) knew it partially and 80 (40%) did not know it. Doctors explained benefits of investigations to 91 patients (45.5%) and did not

explain to 109 patients (54.5 %). After investigations were done, reports of investigations were explained to 110 patients (55%) and were not explained to 90 patients (45%). One hundred fifty five (77.5%) patients were explained their treatment by doctors however 45 (22.5%) patients were not. Thirty eight (19%) patients knew side effects of their treatment and 162 (81%) did not.

**Patient satisfaction**

Out of 200 patients, 187 (93.5%) patients were satisfied from their doctors. However 13 (6.5%) were not satisfied.

**Doctor's behavior**

According to 181 (90.5%) patients, doctors were co-

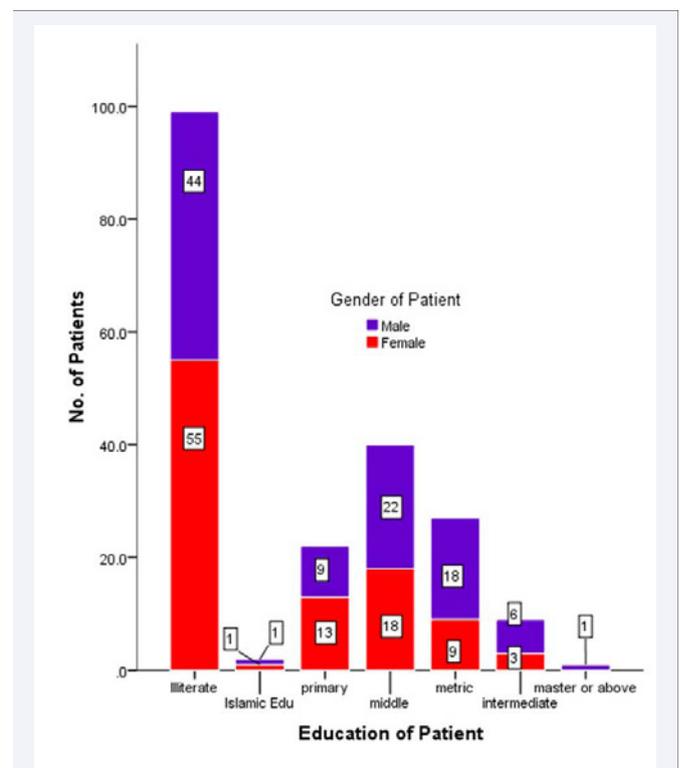


Figure 1 Education of Patients.

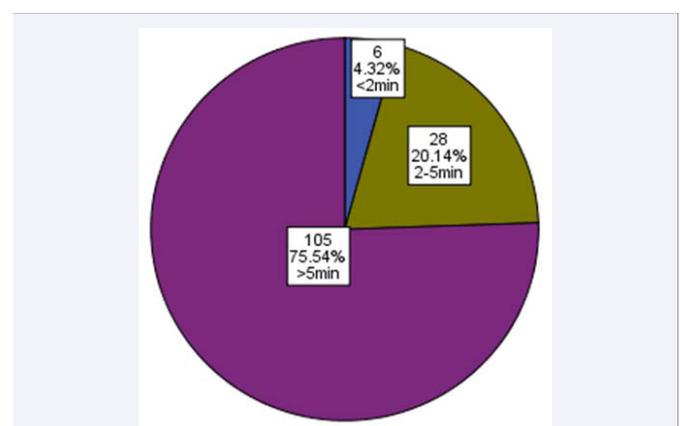


Figure 2 A-Diagnosis told or not? B-Time Spent on explaining.

operative while according to remaining 19 (9.5%) patients, they were not. According to 198 (99%) patients, doctors were polite and friendly while according to 2 (1%) patients, they were not. 22 (11%) patients were willing to visit another doctor and 178 (89%) were not. 189 (94.5%) patients were following medicine schedule, 2 (1%) were following most of it but not completely, 4 (2%) were following some of it and 5 (2.5%) were not following it at all. Mean value of our manual doctor's counseling skill score was  $6.72 \pm 3.88$  (Figure 3).

### Other patient's statistics

Patients of younger age group (20-45years) were more satisfied than those of older age group(45-85) however this association is not significant ( $t=-1.513$ ,  $df=198$ ,  $p=0.132$  i.e.  $p < 0.05$ ). Among 101 male patients, 94 (93.1%) were satisfied and 7 (6.9%) were not. Among 99 female patients, 93 (93.9%) were satisfied and 6 (6.1%) were not. Patient satisfaction is not associated with gender. ( $\chi^2 = 0.062$ ,  $df = 1$  &  $p = 0.803$  i.e. " $p > 0.05$ "). Age was patient was not significantly associated with patient satisfaction ( $\chi^2=10.661$ ,  $df=13$ ,  $p=0.639$  i.e.  $p > 0.05$ ). Mean duration of stay in ward before interview for satisfied patients was  $4.64 \pm 7.8$  days while that of unsatisfied patients was  $4.46 \pm 6.1$  days. The association between patient satisfaction and duration of stay in ward is not significant. ( $t=0.157$ ,  $DF=198$ ,  $p=0.875$  i.e.  $p > 0.05$ ) (Table 2).

Out of 114 poor patients, 108 (94.7%) were satisfied. Among 84 moderate patients, 78 (92.9%) were satisfied; while among 2 rich patients, 1 (50%) was satisfied. This shows that as the socio-economic status improves, patient satisfaction toward their doctors is reduced. This association is significant as proved by  $\chi^2$  test ( $\chi^2_{(2)} = 6.571$ ,  $DF = 2$ ,  $p=0.037$  i.e. " $p < 0.05$ "). Out of 99 illiterate patients, 93 (94%) patients were satisfied from their doctors while 6 (6.1%) were not and out of 101 literate patients, 94 (93.1%) patients were satisfied and 7 (6.9%) were not. Patient satisfaction is not associated with patient's educational status ( $\chi^2 = 4.22$ ,  $DF = 6$  &  $p = 0.646$  i.e. " $p > 0.05$ ").

Out of 155 patients who knew what disease they were suffering from, 143 (92.25%) were satisfied and among 45 patients who did not know anything about their disease, 44 (97.78%) were satisfied. However this association of awareness

to disease and satisfaction is not significant ( $\chi^2=1.7438$ ,  $DF=1$ ,  $p=0.186$  i.e.  $p > 0.05$ ). Among 139 patients to whom doctor told their diagnosis, 131 (94.2%) were satisfied and among 61 patients to whom doctor did not told their diagnosis, 56 (91.8%) were satisfied. This association between provision of information to the patients about their diagnosis and patient satisfaction from their doctor is not significant ( $\chi^2=0.416$ ,  $DF=1$ ,  $p=0.519$  i.e.  $p > 0.05$ ). Out of 139 patients to whom doctor told their diagnosis, proportion of satisfied patients increases with time taken by doctor during educating the patient about diagnosis i.e. 83% (five out of six) of those who were told diagnosis in less than two minutes, were satisfied; 89.3% (25 out of 28) of those who were told about their diagnosis in two to five minutes were satisfied and 96.2% (131 out of 139) of those who were told diagnosis in more than 10 minutes were satisfied. However this association was not significant ( $\chi^2=3.319$ ,  $DF=2$ ,  $p=0.190$  i.e.  $p > 0.05$ ).

Out of 188 patients whose complaints are listened by their doctors, 180 (95.7%) were satisfied and among 12 patients whose complaints are not listened, 7 (58.3%) were satisfied. This association between complaint listening by doctor and patient satisfaction is significant ( $\chi^2_{(1)}=25.97$ ,  $DF=1$ ,  $p=0.000$  i.e.  $p < 0.05$ ). The association of patient's awareness about cause of their disease and patient satisfaction is not significant ( $\chi^2=0.377$ ,  $DF=2$ ,  $p=0.828$  i.e.  $p > 0.05$ ). Out of 91, patients to whom doctor explained benefits of investigations before recommending these, 88 (96.7%) were satisfied while among 109 patients, who were not told about benefits of investigations 99 (90.8%) were satisfied. This association is not significant ( $\chi^2=2.819$ ,  $DF=1$ ,  $p=0.093$  i.e.  $p > 0.05$ ). Out of 110 patients who were told results of their investigations, 105 (95.5%) were satisfied while among 90 patients who were not told about reports of their investigations, 82 (91.1%) were satisfied. This difference is not significant ( $\chi^2=1.537$ ,  $DF=1$ ,  $p=0.215$  i.e.  $p > 0.05$ ).

Out of 155 patients to whom their treatment regimen was explained, 151 (97.4%) were satisfied while among 45 patients to whom treatment regimen was not explained, 45 (80%) were satisfied. This difference of patient satisfaction among these two groups is significant ( $\chi^2=17.412$ ,  $DF=1$ ,  $p=0.000$  i.e.  $p < 0.05$ ) hence there is association between treatment education and patient satisfaction. Out of 38 patients to whom side effect of their treatment were told, 35 (92.1%) were satisfied while among 162 patients to whom side effect were not told, 152 (93.8%) were satisfied. This difference is not significant ( $\chi^2=0.150$ ,  $DF=1$ ,  $p=0.698$  i.e.  $p > 0.05$ ).

Out of 181 patients for whom doctors were co-operative, 178 (98.3%) were satisfied while among 19 patients for whom doctors were not co-operative, only 9 (47.4%) were satisfied. This difference is significant ( $\chi^2=73.515$ ,  $DF=1$ ,  $p=0.000$  i.e.  $p < 0.05$ ) hence there is strong association between co-operation of doctors and patient satisfaction. Out of 198 patients to whom doctors were polite and friendly, 186 (93.9%) were satisfied while among two patients to whom doctors were polite and friendly, one (50%) was satisfied. This difference is also significant ( $\chi^2_{(1)}=6.290$ ,  $DF=1$ ,  $p=0.012$  i.e.  $p < 0.05$ ) hence there is association between doctor's politeness and patient satisfaction.

For satisfied patients, mean of manual doctor's counseling skill score was  $6.86 \pm 3.96$  and that for unsatisfied patients

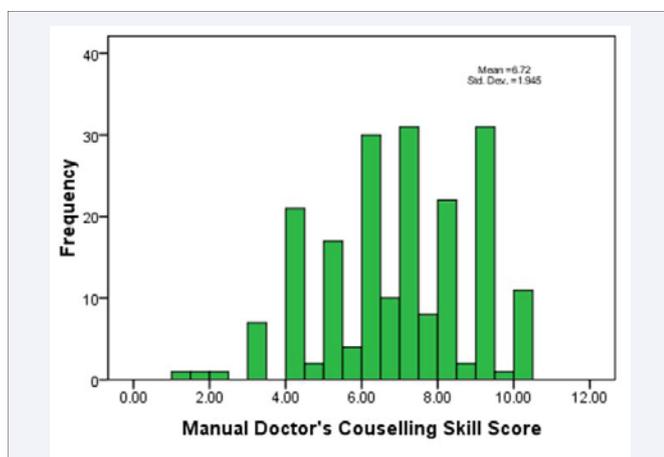


Figure 3 Frequency distribution according to manual counseling.

**Table 2:** Frequency of Factors of Counselling in Satisfied and Unsatisfied Patients.

Questions	Responses	Satisfied (Total: 187)		Unsatisfied (Total: 13)		Significance		
		N	% <sup>a</sup>	N	% <sup>b</sup>	$\chi^2$	df	p <sup>c</sup>
Has doctor told diagnosis?	a: Yes	131	70.1%	8	61.5%	0.416	1	0.519
	b: No	56	29.9%	5	38.5%			
Time Taken by Doctor while explaining diagnosis?	a: Less than 2 min.	5	2.7%	1	7.7%	3.378	3	0.337
	b: 2-5 minutes	25	13.4%	3	23.1%			
	c: More than 5 min.	101	54%	4	30.8%			
Privacy provided?	a: Yes	0	0%	0	0%	--- <sup>d</sup>	1	1.000
	b: No	187	100.0%	13	100%			
Does doctor listen to your complaints?	a: Yes	180	96.3%	8	61.5%	25.977	1	<b>0.000</b>
	b: No	7	3.7%	5	38.5%			
Do you know cause of your disease?	a: Yes	81	43.3%	5	38.5%	0.377	2	0.828
	b: No	75	40.1%	5	38.5%			
	c: Partially Know	31	16.6%	3	23.1%			
Has doctor explained benefits of investigation?	a: Yes	88	47.1%	3	23.1%	2.819	1	0.093
	b: No	99	52.9%	10	76.9%			
Has doctor explained results of investigation?	a: Yes	105	56.1%	5	38.5%	1.537	1	0.215
	b: No	82	43.9%	8	61.5%			
Has doctor explained your treatment regimen?	a: Yes	151	80.7%	4	30.8%	17.412	1	<b>0.000</b>
	b: No	36	19.3%	36	69.2%			
Has doctor told any side effect of treatment?	a: Yes	35	18.7%	3	23.1%	0.150	1	0.698
	b: No	152	81.3	10	76.9%			
Is doctor co-operative?	a: Yes	178	95.2%	3	23.1%	73.515	1	<b>0.000</b>
	b: No	9	4.8%	10	76.9%			
Is doctor polite and friendly?	a: Yes	186	99.5%	12	92.3%	6.290	1	<b>0.012</b>
	b: No	1	0.5%	1	7.7%			

a: This percentage is from satisfied patients (187) not from total sample(200).

b: This percentage is from unsatisfied patients (13) not from total sample (200).

c: Significant values are bold.

d: Privacy was behaving like a constant so it was not possible to perform  $\chi^2$  test. And p value is 1 showing 100% chances that null hypothesis is proved right.

was  $4.62 \pm 4.6$ . The association between patient satisfaction and manual doctor's counseling skill score is highly significant. ( $t=4.179$ ,  $DF=198$ ,  $p=0.000$  i.e.  $p<0.05$ ). Similarly for patients willing to seek second doctor's advice this manual doctor's counseling skill score was  $5.85 \pm 4.44$  and that for patients not willing to seek second doctor's advice was  $6.82 \pm 3.76$ . There is significant negative association between patient satisfaction and willingness to seek second doctor's advice ( $t=-2.229$ ,  $DF=198$ ,  $p=0.027$  i.e.  $p<0.05$ ). This shows patients who are counseled better about their disease are not willing to second doctor's advice. For patients following medicine schedule, mean of manual doctor's counseling skill score was  $6.77 \pm 2.88$  and that for those not following their medicine schedule was  $5.8 \pm 4.32$ . The association between counseling of patients and medicine schedule following is not significant ( $t=1.094$ ,  $DF=192$ ,  $p=0.275$  i.e.  $p>0.05$ ).

## DISCUSSION

Generally people think that most patients being treated in public hospitals are not satisfied from their medical care, but frequency of patients satisfied from their doctors was found to be 93.5%. Other studies i.e. Ahmed's [20], Gani's [21] and Mishra's, Patro's [19, 22] also showed higher percentage of patients being satisfied from their doctors i.e. 100%, 90.7% respectively. Chimbindi's study showed percentage of patients satisfied from the doctors was 95% and 97% respectively in two different programs. Kumari's study [23] compared patient

satisfaction proportion of five hospitals and these were 73.3%, 68.0%, 66.1%, 60.5%, 69.6% respectively. Iftikhar Ahmad [24] measured patient satisfaction in his study by using 5 point Likert scale and an average patient satisfaction according to him was 4.02. Our study indicated a strong association between doctor's behavior and patient satisfaction. In our study, 99% patients were satisfied from doctors' behavior, similar results were seen in Ahmad's [20] and Qureshi's [15] studies where the percentage was 100%, 90%, 76.6% and 94% respectively. Kumari's study [23] showed patient's satisfaction from behavior of their doctors in five different hospitals as 97.5%, 98.2%, 98.5%, 98.0% and 97.9% respectively. According to Iftikhar Ahmad [24], mean patient satisfaction from behavior of doctor was found to be 4.19 as measured by Likert's score.

Our study showed relationship between patient satisfaction and explanation of disease and treatment by doctors is not significant. Few work has been done previously on this to compare overall patient satisfaction from the doctor, with explanation about disease and treatment provided by doctor, however studies has showed a significant frequency of patients getting this explanation from their doctors. Ahmad's study [20] showed 90% of patients were satisfied from explanation of illness and 84% were satisfied from that of treatment, Alam's study [25] showed only 60% patients were informed about their disease and treatment, Qidwai's study [17] showed only 27.1% patients' expectation about explanation about diagnosis

and treatment were fulfilled during consultation; while our study showed diagnosis was explained to 69.5% patients and treatment was explained to 77.5% patients. This difference was because of Qidwai's study [17] was performed on outdoor patients where there is lesser time to deal with patients whereas our study was conducted on indoor patients who had been in the wards for several days giving the doctors sufficient time for proper explanation of diagnosis and treatment and adequate counseling. However this difference can also be explained on the basis of difference in counseling skills of doctors. Treatment was explained to 100% and 96% patients of two different programs included in Chimbindi's study [16].

Our study showed that the relationship between explanation of benefit and results of investigations is also not significant. No such association between overall satisfaction and explanation of investigations were measured previously, however some frequencies of patients getting this explanation are observed. Our study found that only 45% patients were told benefits of investigation before recommendation and 55% were explained about results of their investigations. Ahmad's study [20] showed 56% were very satisfied from explanation of investigations, 42% were satisfied and 1.4% was dissatisfied. This higher frequency of patients satisfied from explanation of investigation also shows that most patients (98.6% in this case) are satisfied from this explanation, this is similar to our study where the results of investigations were told to only 55% while 99% patients were satisfied overall from their doctor. This relationship shows low level of expectation of patients and easily satisfaction even if investigations were not explained. Alam's study [25] showed that 47% patients were explained results of investigation by doctor or staff. Kumari's study [23] found proportion of patient receiving explanation regarding results of investigations in five different hospitals as 52.5%, 79.5%, 64.5%, 57.1%, 59.4%.

Complaint listening by doctors was found significantly associated with overall patient satisfaction in our study. No such association between overall satisfaction and complaint listening were measured previously, however some frequencies of patients whose complaints are listened appropriately are observed. Our study showed complaints of 94% patients are listened by their doctors. Kumari's study [23] found percentage of patients getting their complaints listened by the doctors in five different hospitals as 95.2%, 93.3%, 92.1%, 92.2%, 93.9%. In Chimbindi's study [16] complaints of 85% patients were listened. Our study found that relationship between patient satisfaction and awareness of patient about name and cause of disease is not significant. No such association between overall satisfaction and awareness of patient about were measured previously however some frequencies of patients whose complaints are listened appropriately are observed. Our study found 59% knew name of their disease and 18.5% knew it partially and 43% patients knew cause of their disease and 17% knew it partially. Alam's study [25] found that 70% patients knew name of the disease and 32% knew cause of their disease. Ifikhar Ahmad measured patient's awareness about disease using Likert's scale and gave mean score of 3.98.

Our study found that information of side effects is also not associated with patient satisfaction. In our study, only 19%

patients were told side effect while in Kumari's study [23] this proportion for five different hospitals was 1.9%, 0.5%, 0%, 0.5%, 1%. This high proportion of patient satisfaction in spite of such low percentage of information provided on side effect is because of lack of expectation from patient. Secondly, doctors only told serious and potential side effects to the patient and did not tell side effects of every treatment to save patient from unnecessary tension.

Our study found that quality of counselling, as depicted by manual doctor's counselling score used in our study, has significant influence on patient satisfaction. Similar result was seen in Otten's study [18]. Our study found that effect of age, gender and patient's education on patient satisfaction is not significant. Our study showed that with an increasing age, patient satisfaction is decreased (however the association is not significant) similar findings were seen in Ahmad's [20] and Gani's [21] studies. They reported significant association between patient's age and satisfaction and satisfaction level being decreased with an increasing age. A study done by Fenton [14] showed opposite results i.e. increasing satisfaction with age; however his observations were not statistically significant. Our study observed that patients with lower literacy and economic levels are more satisfied than those with higher levels (however this association is also not significant). This difference may be due to unawareness of illiterate and poor patients from their rights and lower expectation level. However a study done by Fenton [14] showed that with an increasing education or average income, frequency of satisfied patients also increases. Gani's study [21] also showed no association between socio-economic status and patient satisfaction. Our study found that there is no association between gender of patient and satisfaction; similar findings were seen in Gani's study [21].

Our study has certain limitations. We didn't address the psychotherapy part in our study. Similarly the accessibility of online counseling was not assessed. We assessed the variables in a government tertiary care hospital, with no comparison made with any private sector hospital. Our study provides no light on the roadblocks patients face when trying to find a counselor.

## CONCLUSION

We concluded from the study that more patients are satisfied if they are counseled better. Main variables affecting patient satisfaction significantly are politeness & co-operation of the doctor, complaint listening and explanation provision regarding treatment. Our Study also gives a comparison of different variables with overall patient satisfaction to find out associations between these variables and overall patient satisfaction. We need to have creation and usage of a scoring system to evaluate overall counseling skills of a doctor.

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