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Effects of Provider-Patient Relationship on the Rate of Patient'S Recovery among Inpatients at Wa Regional Hospital

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Abstract
Effective interpersonal relationship between healthcare provider and patient is an important element for improving patient satisfaction. The primary objective of this study is to examine the psychological impact of provider-patients relationship on patient satisfaction in the Upper West Regional Hospital. An exploratory quantitative research method was adopted to explore the proposed concepts of the study. The targeted population included a cross section of 500 patients who were seeking healthcare in the Wa Regional hospital during the study period. The results of the study revealed that patients in the study had high levels of satisfaction with care given which influenced their rate of recovery. It was also found that satisfaction influenced patients' compliance with medical recommendations among others. There are more emphasis with regards to the level of patient satisfaction with healthcare and medical care service as evidenced by the greater number of empirical and theoretical publications regarding satisfaction in recent years, this emphasis is consistent with broader trend towards holding those who control and provide essential services more accountable to their consumers in ways other than the ones that commonly operate in the market. Patient satisfaction is therefore important because it leads to a higher rate of patient retention and customer loyalty. These also influence the rates of patient compliance with medical recommendation. Policy makers and hospital administrators should therefore pay attention to what their patients' need from their hospitals and do everything within their power to meet those needs.
Keywords: provider-Patient Relationship, rate of recovery, inpatients, level of satisfaction

Background

There is this saying in the business world that "the customer is always right". This means that customers have a choice as to what they want and therefore will continue to use products and services as long as they are convinced of the quality of such services. Healthcare professionals have a task of providing medical services to patients receiving treatment under their care. In other words, Doctors, Nurses, Records officers, Dispensary technicians, and other allied healthcare providers play various roles in providing services to patients. Therefore the way and manner in which they relate with patients greatly contributes to patient satisfaction with services rendered to them. Effective interpersonal relationship between healthcare provider and patient is an important element for improving patient satisfaction (Andaleeb and Simmonds, 1997). Anecdotally, patient satisfaction could translate into treatment compliance, recovery rate and health outcomes. Patients who understand the nature of their illness and its treatment and believe the provider is concerned about their wellbeing show greater satisfaction with the care received and are more likely to comply with treatment regimens. Several studies conducted in developed countries show strong positive health outcomes and improved quality of care associated with effective interpersonal relationship. (Parson, 1975). The mind plays an important role in the wellbeing of a person. As defined by the World Health Organization (WHO) in 1948, "Health is a state of complete physical, mental and social wellbeing and not merely the absence of disease and illness". Being satisfied with treatment and care, gives an individual a sense of wellbeing and this can increase speed of recovery from ill health, since the outcome of treatment has been proven to have both physical and psychological components.

Healthcare is vital for every individual in the treatment of both biological and psychological disorders. Just like any other consumer of services, the greatest expectation of patients from healthcare providers in alleviating such sufferings is in part explained by the dimension of satisfaction. Dissatisfaction certainly results in dispute among service providers and patients since patients are the primary beneficiaries of the services and care that hospitals provide. Patient satisfaction is defined by Pascoe (1983) as the patient's reaction to salient aspects of the context, process and results of their experience. Satisfaction was also defined by Speeding & Rose (1985) as the physician's ability to communicate concern, warmth and interest in the patient as a whole person which evokes a positive response from the patient. Unless the medical encounter is successful in relieving the patient's emotional distress endangered by symptoms of illness and uncertainties of treatment, it may not provide the full measure of satisfaction to the patient.

Patient satisfaction measures the patients' opinion of the quality of healthcare services provided to them and their family members/visitors during their stay in the hospital. There are many important factors that contribute

to the patient's experience with service provision in the hospital. Also, it is important because it leads to a higher rate of patient retention and customer loyalty (Nelson and Larson, 1993) and influences the rates of patient compliance with physician advice (Calnan 1988; Roter, Hall, and Katz 1987). Patients as customers are not homogeneous in what they expect from care providers (Reidenbach and Sandifer-Smallwood 1990), and that different patient subgroups (e.g., old versus young and chronic versus acute) may place different degrees of importance on the various quality dimensions that in turn influence patient satisfaction (Fletcher, 1983).

To cope with the emerging concern about cost containment and cost effectiveness of healthcare interventions, providers must learn how to effectively satisfy the needs and desires of their patients. Consequently, the culture is shifting from emphasizing the efficacy and effectiveness of care outcomes to adapting services in response to patient needs (Donabedian 1996; Williams 1994). In this new culture, providers and policymakers are increasingly using patient satisfaction measures to assess the performance of healthcare organizations (Hibbard and Jewett 1996). Everyone often has positive or negative word-of-mouth upon visiting the hospital. Long waiting time, insensitivity, apparently faulty diagnoses and treatments that have no effect on patients in recent times causes patients dissatisfaction. In Ghana, the issue of satisfactory health services has always been a major challenge. It is therefore not surprising that many organizations which are into health thus governmental, donors/partners as well as non-governmental have throughout these years made attempts to improve on patient satisfaction in healthcare services. The system has also experienced tremendous reforms to tackle problems of rising costs of medical services, inefficiencies in service provision, poor quality of care and inequality in service delivery. In 2005, Ghana reformed its health sector from the traditional user fee, commonly called "the cash and carry system" to introduce the national health insurance scheme (NHIS). The scheme took ground from the successful exercise of the community-based mutual health insurance. This was intended to improve patients' access to health care. However, since its implementation access to health care has been improved with significant compromise on quality.

Patients are sometimes met with unfriendly and provocative language from care providers. From this perspective, poor communication is a hindrance to effective provider-patients relationship. Others are lack of privacy during the interaction encounter, time constraints due to heavy patient loads or family pressures, or fear of lack of confidentiality resulting in low recovery rate of patients, non-compliance to treatment, high re-admission rate. From these issues above, it is imperative to focus on issues of patient satisfaction with particular attention on the psychological impact of provider patient-interaction, hence the need for this study.

Objectives of the Study

The primary objective of this study is to examine the psychological impact of provider-patients relationship on patient satisfaction in the Upper West Regional Hospital. Specifically, the study seeks;

- To assess patients perception of provider attitude
- To examine impact of provider-patient relationship on patient satisfaction
- To examine what constitute patients satisfaction and dissatisfaction.
- To examine the determinants of patient satisfaction

THEORETICAL FRAMEWORK

The Primary Provider Theory (AJMQ, 2003),proposed by Aragon is a generalize theory of how the patient-centeredness of health care providers affects outcomes like patient trust, satisfaction, ratings of quality, and other results. The theory states that, disproportionate to any other variable, patient satisfaction is distinctly and primarily linked to the physician/provider behaviour and secondarily to waiting time. The theory holds that patient satisfaction occurs at the nexus of provider power and patient expectations. More specifically, patient satisfaction is principally the function of an underlying network of interrelated satisfaction constructs-satisfaction with the primary provider, waiting for the provider, and satisfaction with the provider's assistants. Hierarchically linked to patient-centered expectations of provider value, the Theory specifies that primary providers offer the greatest clinical utility to patients. The Theory is operational by patient-centered measures exclusively, where only patients judge the quality of service.

EMPIRICAL LITERATURE

The study of patient satisfaction did not begin in earnest until the late 1970's and early 1980's. This might be attributed to the commercialization of medicine, and by increasing interest in "individual experience" among social scientists. Patient satisfaction is therefore important because it leads to a higher rate of patient retention and customer loyalty and influences the rates of patient compliance with physician advice (Calnan 1988; Roter, Hall, and Katz 1987). A good deal of research has explored a variety of healthcare service quality dimensions that may influence patient satisfaction, such as continuity of care, physician expertise, the concern shown by the physician and other medical staff, and physical facilities (Fletcher, 1983; Ware, Davies-Avery, and Stewart 1978). According to Linder-Pelz, (1982), Components that constitute patient satisfaction are

accessibility/convenience, availability of resources, continuity of care, efficacy/outcomes of care, finances, humanness, information gathering, information giving, pleasantness of surroundings, and quality/competence. However, the author found no theoretical formulation of patient satisfaction and thus began an independent theoretical work by formulating a theory based on theories of job satisfaction, as seemingly little ethnographic work on patient satisfaction had been conducted

The interaction between patients and healthcare providers is very unique. Among other features include an emotional intensity because the healthcare provider is given access to the patients' body and intimate details of the patients' life. Domatteo, (1980) found out that when ill, an emotional dependency can develop. Parson's (1951, 1975) work on the sick role added that, a patient is a willing passive recipient of care provided by a knowledgeable health care provider. The patients freely give up their power to professionals because they have specialized knowledge that the patients do not have and professionals willingly accept this power. In comparison with Parson's sick role, Roth's (1963, 1972) studies of doctor–patient relationships in tuberculosis hospitals found that patients were less likely to remain passive and used negotiation and bargaining to increase their interpersonal power; never, however, to the point of attaining equality. Hewiston (1995) and Johnson and Webb (1995) also studied power dimensions in nurse–patient interactions

Sitzia and Wood (1997) suggest that patient satisfaction could be assessed by measuring 1) the degree to which patients believe that care possesses certain attributes and 2) the patient's evaluation of those attributes. They suggest that satisfaction is not a single concept but made up of multiple determinants and that there exists three independent models of satisfaction, each associated with one determinant. Thus, there is the "need for the familiar," the "goals of help-seeking" and the "importance of emotional needs." Furthermore, there is evidence that there are two states of satisfaction, stable ones related to health care generally and dynamic ones related to specific health care interactions. Components of satisfaction consist of: structural, technical and interpersonal aspects of care. Expectations of patient are critical as they form the basis for the subjective assessment of care in the rating of satisfaction.

There can be different expectations for different aspects of care and patients with lower expectations tend to be more satisfied. Satisfaction should not be interpreted as a measure of quality of care but must be interpreted in the context. The determinants of satisfaction are expectations, patient characteristics, and psychosocial determinants. The structural aspects includes: access, physical setting, costs, convenience, and treatment by non-clinical staff/insurers. The technical aspects include knowledge, competence/quality of care, interventions, and outcomes. The interpersonal aspects includes: communication, empathy, and education. Inui and Carter (1985) study of provider-patient communication, asserts that, even with the vast knowledge available on biological processes and disease mechanisms, communication between health care provider and patient is an extremely important aspect of health care. Attempting to measure this, however, requires interdisciplinary activities, since merely measuring satisfaction at the conclusion of an interaction cannot measure all the nuances of communication (both verbal and non-verbal). They describe methods of systematic analysis of these interactions, citing that many of the methods have generic similarities: strategies utilized direct observation; emphasis on specific processes such as verbal communication; multiple classifications to categorize encounters; and an approach to quantify the events. The authors also argue that it is important to understand pre-encounter state in order to place post-encounter measures into perspective. This could include patient expectations of the encounter, degree of prior exposure to the health care provider, and demographic characteristics, all of which can ultimately effect how a patient interprets the encounter. The authors conclude that it is important to augment measures that categorize a specific type of interaction (verbal communication is given as an example) with measures of other types of interaction, such as body language. They also point out that for chronic diseases, addressing symptoms and providing support rather than a "cure" is often the goal, once again pointing to the importance of communicating effectively with patients through the course of their treatment.

In a study by Linn (1975), on factors associated with patient evaluation of health Care, he relates satisfaction with health insurance coverage, healthcare provider, and "new" (at the time) non-physician health care providers (e.g. physician's assistant) and found out that there were high levels of patient satisfaction. Kane, Maciejewski and Finch. (1997), also asserts that patient satisfaction is not only important as an outcome of the patient's experience with the health care encounter, but as an important determinant of health-related outcomes. They argued that patients that had a more positive health care experience may be more likely to comply with treatment or to keep follow-up appointments that are a component of continued care. A key result was that "patient satisfaction indeed is related to the outcomes of care, but that the relationship is stronger for absolute outcome than for the relative ones". This suggests that how a patient is feeling when assessed is more important to patient satisfaction than the degree of improvement in health status over time.

HYPOTHESES

- A positive relationship exist between patient satisfaction and recovery

- Age, sex and educational level of patient will positively influence patient satisfaction
- Satisfied patients will be more likely to follow medical recommendations than unsatisfied patients
- Communication, infrastructural and psychosocial factors will impact positively on patient satisfaction

METHODOLOGY

An exploratory quantitative research method was adopted to explore the proposed concepts of the study. The targeted population included a cross section of the patients who were seeking healthcare in the Wa Regional hospital during the study period and consisted of both outpatients and inpatients. A convenience sampling design was adopted to obtain participants for the study. In all, 100 participants in all consisting 50 inpatients and 50 outpatients were covered. The proportion of the sample of each group is considered using the staff- patient ratio in the hospital. Data was collected using a semi-structured interview questionnaire. The measure was adapted form of McCloskey/Mueller satisfaction scale (1990), a 31 item multidimensional instrument, 5 point Likert scale with Cronbach's alpha of 0.89. It was originally developed to rank rewards that nurse's value and that encourage them to remain in their jobs; the McCloskey/Mueller Satisfaction Scale (MMSS) is being used extensively in research and practice to measure nurse job satisfaction. A pilot study was first conducted to check the appropriateness of the questionnaire. Administration of questionnaires was done under confidential conditions. The questionnaire will comprise of four sections: Section A: demographic information, Section B: Patients satisfaction as a result of the provider-patient relationship, Section C: Psychological impact of provider-patient relationship, Section D: Recommendation on a better provider-patient relationship. Attaching a score of 1-5 to a Likert scale (from 1very dissatisfied- 5 very satisfied) will score the data. A mark of one(1) will be awarded for every 'Yes' answer if the question is phrased to mean a positive relationship like "Does the healthcare provider give a good reception?" whilst a mark of zero(0) will be given for all 'No' answers in the same question. Questions with three (3) possible choices will be rated on a scale of Very Good, Good, or Poor" A mark of three (3) or one (1) will be given to extreme choices.

RESULTS

The study empirically examines the effects of provider-patient relationship and the rate of patient's recovery specifically involving inpatient of the medical unit of the upper west regional hospital. In the analysis, five hypotheses were tested; the hypotheses are measured around the extent and the nature of patient satisfaction as a result of provider-patient relationship. Results obtained are captured under five headings; the first part displayed results on satisfaction and rate of recovery. The second part illustrated the findings obtained on education and how it influences satisfaction. Thirdly, the study was also interested in finding out how age influences satisfaction. The fourth looked at Gender and Satisfaction and finally, the study examine satisfaction and compliance with medical recommendations.

Demographic Characteristics

Demographic data for the entire sample (N=500). The survey made a conscious effort to achieve an equal gender representation. However, the inpatient response data result indicates that about 32% of the fifty respondents were males and rest of the 68% was females. This shows that majority of the patents on admission at the medical unit that were interviewed were females. The survey defined six age groups. Young people less than 20 years formed 16% of survey respondents, 32% and 36% were young adults between the ages of 21-30 and 31-40 respectively, 4% and 2% were also older adults between the ages of 41-50 and 51-60 respectively, and only 4% were aged above 60 years. A majority of respondents had some form of formal education. 16 % of the respondents had university education and above, 8% had Polytechnic education, 4% with training college certificate, 14% had some form of secondary education, 16% had a middle/ JHS school leaving certificate. Only 7% had some primary education and 38% of the respondents had no education at all.

Hypothesis one: Satisfaction and rate of recovery

Hypothesis one stated that satisfied patients are more likely to recover faster than dissatisfied patients. Table one below shows the frequencies observed under the various recovery and satisfaction conditions. The chi-square was then used to analyze the data

Table 1: Satisfaction and rate of recovery

		Level of Satisfaction			df	χ^2	P
	Rate of Recovery	Very Satisfied	Satisfied	Not Satisfied			
	Very fast	90	10	0	4	37.49	0.00
	Fast	10	130	10			
	Slow	10	150	80			

Source: Field Survey, 2010

The calculated Chi-Square value revealed [χ^2 (4) = 37.49, p < 0.05]

The expectation was that patients who are more satisfied with treatment are more likely to have faster rate of recovery from their illness. The result presented above suggests that the Chi-square value is statistically significant and this implies that the test support the hypothesis that patients that are very satisfied with treatment at the hospital are more likely to recover faster than their counterparts who are not satisfied.

Hypothesis two: Level of Education and rate of recovery

Hypothesis two predicted that educated patients would be more satisfied than uneducated patients. The chi-square was used to analyze the data.

Table 2: Level of Education and Satisfaction

Level of Education	Satisfaction			df	χ^2	P
	Very Satisfied	Satisfied	Not Satisfied			
No education	60	100	30	12	12.67	0.39
Primary	0	10	10			
Middle/JHS	20	60	0			
SHS	10	50	10			
Training College(NTC) or /Teacher training)	10	0	10			
Polytechnic	0	40	0			
University and above	10	40	30			

Source: Field Survey, 2010

From the table above chi-square results revealed [χ^2 (12) = 12.67, p>0.05] rejecting the hypothesis regarding this test that educated patients are more satisfied than uneducated patients. The results in table two above suggest that the Chi-square is statistically not significant and therefore do not support the hypothesis. Despite this fact the that the Chi-squared did not support the hypothesis (calculated P=0.39 > critical P=0.05), it can be observed from our frequencies in table 2 above, that educated patients (primary up to university education and above) responded to be more satisfied than their counterparts with no educational at all.

Hypothesis Three: Age of Respondents and Level of Satisfaction

Hypothesis three also predicted that older patients would be more satisfied than younger patients. Again the chi-square was used.

Table 3: Age and level of satisfaction

Age of Respondent	Level of Satisfaction			df	χ^2	P
	Very Satisfied	Satisfied	Not Satisfied			
Less than 20	0	50	30	10	9.289	0.505
21-30	30	110	20			
31-40	60	80	40			
41-50	0	20	0			
51-60	10	30	0			
60 and above	10	10	10			

Source: Field Survey, 2010

From the table above, chi-square results revealed [χ^2 (10) = 9.29, p>0.05] rejecting the hypotheses that older patients are more satisfied than younger patients. From the discussion above, the chi-squared is statistically insignificant since the calculated p=0.505 is greater than the critical p=0.05. Operationally, older patients are defined as persons aged 41 years and above while younger patients are those aged 40 years and below at their last birthday. Following the discussion, it can be seen that younger patients are more satisfied with inpatient treatment than older patients at the Wa regional hospital.

Hypothesis four: Gender and Satisfaction

The fourth hypotheses suggest that male patients will be more satisfied than female.

Table 4: Gender and Satisfaction

Gender	Level of Satisfaction			df	χ^2	P
	Very Satisfied	Satisfied	Not Satisfied			
Male	30	110	20	2	0.81	0.67
female	80	190	70			

Source: Field Survey, 2010

The chi-square value revealed [χ^2 (2) = 0.81, p>0.05]. The rule of thumb is that if the calculated P-value (P=0.67) is greater than the critical p-value (P=0.05), then we reject the null hypothesis and conclude that the chi-square is statistically insignificant. The results suggest that female patients are more satisfied with treatment at hospital than male patients. The possible reason that can be given for the rejection of the null hypothesis could be that the sampling did not get equal representation in gender. In general, it was observed that female (27) were more satisfied with treatment than their male (14) counterparts at the inpatient wards

Hypothesis five: Satisfaction and Compliance with treatment

Hypothesis stipulated that satisfied patients will be more likely to follow medical recommendations than dissatisfied patients.

Table 5: Satisfaction and Compliance with treatment

Compliance rate	Level of Satisfaction			df	χ^2	P
	Very Satisfied	Satisfied	Not Satisfied			
Yes	100	300	70	2	9.27	0.010
No	0	0	20			

Source: Field Survey, 2010

From table 5 above, the chi-square value showed [χ^2 (2) = 9.27, p<0.05]. This implies that the chi-square is statistically significant at a 5% level of significance. This is because the calculated p-value (P=0.010) is less than the 5% significance level. From table 5 above, the results suggest that patients that were satisfied (very satisfied) complied with treatment at the hospital.

DISCUSSION

The study investigates into the psychological impact of provider-patient relationship on patient satisfaction (a study involving inpatients of the medical unit of the upper west regional hospital, Wa). The first hypothesis sought to investigate satisfaction among patients with regard to provider-patient relationship and the effect of such satisfaction on the rate of recovery.It stipulated association between level of satisfaction and rate of recovery. Results of the data analysis supported this hypothesis. Satisfied patients were reported to have a faster rate of recovery than dissatisfied patients. Patients found that their experience at the hospital was satisfactory. In this situation, satisfaction of patients pertained to their interaction with care providers and the ward environment. The level of patients' satisfaction with the provider-patients relationship was based on providers' attitude, competence and waiting time for patient. This hypothesis was supported by Joos (1990), which noted that the relationship between patient and staff predicts patient satisfaction. This satisfaction further has a significant influence on various treatment outcomes and recovery. From a psychological point of view therefore, it is apparent from this present research findings that cognitive factors such as perception of patients is key to their responses to clinical or therapeutic procedures.

Another hypothesis in this study predicted that males would be more satisfied than females. This hypothesis was not supported. The results suggested that female patients were more satisfied with treatment at the unit than male patients. In general, it was observed that female were more satisfied with treatment than their male counterparts at the inpatient wards. Earlier research in this area also found sex difference in satisfaction among hospital patients. In a study by Hardy, West and Hill (1996), men were found to report significantly greater satisfaction on the health scale than women. A possible explanation for this contrary finding could be that the sampling did not get equal representation in gender this present study used a smaller sample size.

It was also hypothesized in this work that educated patients would be more satisfied than their uneducated counterparts. The results revealed that the Chi-square value was statistically not significant and therefore do not support the hypothesis. Despite this fact that the Chi-square did not support the hypothesis (calculated P=0.39 > critical P=0.05), it was observed from the frequencies in table 2, that educated patients (primary up to university education and above) responded to be more satisfied than their counterparts with no educational at all. This hypothesis was based on findings of Liu and Wang (2007), and Charalambos and Dimitris (2005). They found

Patients' level of education, among other factors such as age, occupation, methods of payment, and hospital wards as the main factors influencing patient satisfaction with nursing care. Thus educated patients were satisfied with care than uneducated patients and thus support the results of the data analyzed.

Calnan (1988); Roter, Hall, and Katz (1987), in their studies found patient satisfaction as important because it leads to a higher rate of patient retention and customer loyalty and also influences the rates of patient compliance with physician advice. Comparative to this study, the data gathered on patient satisfaction and compliance confirmed the hypothesis which stated that "that satisfied patients will be more likely to follow medical recommendations than dissatisfied patients". Practically, Patients who understand the nature of their illness and its treatment and believe the provider is concerned about their wellbeing show greater satisfaction with the care received and are more likely to comply with treatment regimens.

Summary and conclusion

This study analyzed the psychological impact through an examination of provider- patient relationship and patients' satisfaction. The results of the study revealed that patients in the study had high levels of satisfaction with care given which influenced their rate of recovery. It was also found that satisfaction influenced patients' compliance with medical recommendations among others. There are more emphasis with regards to the level of patient satisfaction with healthcare and medical care service as evidenced by the greater number of empirical and theoretical publications regarding satisfaction in recent years, this emphasis is consistent with broader trend towards holding those who control and provide essential services more accountable to their consumers in ways other than the ones that commonly operate in the market. Patient satisfaction is therefore important because it leads to a higher rate of patient retention and customer loyalty. These also influence the rates of patient compliance with medical recommendation. Policy makers and hospital administrators should therefore pay attention to what their patients' need from their hospitals and do everything within their power to meet those needs. The results of this research could be used to develop policies that could lead to an improvement in patients' satisfaction and therefore ensure better provider-patient relationship in the upper west regional hospital, Wa.

Recommendation

Although this study yielded important results about provider-patient relationship and patient satisfaction, there is much more research to be done. One recommendation is to conduct a further research using a much larger, randomized sample and more standardized test to measure the level of patient satisfaction. This will help to improve the likelihood of achieving statistically significant results that could be generalized to a larger and more diverse population. There are many other studies that could further patients' understanding satisfaction. One would be to do a qualitative study that examines which factors are most important to patients' satisfaction. Further study to determine the role of provider-patient relationship in patients' satisfaction would be valuable to hospital administrators when developing benefits related to quality of care and satisfaction

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Appendix

Age of Respondent	**Frequency**	**Percentage**
Less than 20	80	16
21-30	160	32
31-40	170	34
41-50	20	4
51-60	40	8
Above 60	30	6
Total	**500**	**100**
Gender		
Male	160	32
Female	340	68
Total	**500**	**100**
Marital Status		
Married	310	62
Single	160	32
Widowed	30	6
Divorced	0	0
Total	**500**	**100**
Educational level		
No education	190	38
Primary	20	4
Middle/Junior High School	80	16
Senior High School	70	14
Training College (NTC /Teacher training)	20	4
Polytechnic	40	8
University and above	80	16
Total	**500**	**100**

1) Level of satisfaction and rate of recovery

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.289[a]	10	**.505**
Likelihood Ratio	12.175	10	.274
Linear-by-Linear Association	3.530	1	.060
N of Valid Cases	500		

a. 16 cells (88.9%) have expected count less than 5. The minimum expected count is .36.

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	-.268	.108	-1.931	.059[c]
Ordinal by Ordinal	Spearman Correlation	-.264	.117	-1.899	.064[c]
N of Valid Cases		500			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Age of respondents and level of satisfaction

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	37.492[a]	4	.000
Likelihood Ratio	34.703	4	.000
Linear-by-Linear Association	25.059	1	.000
N of Valid Cases	500		

a. 5 cells (55.6%) have expected count less than 5. The minimum expected count is 1.84.

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.678	.083	6.322	.000[c]
Ordinal by Ordinal	Spearman Correlation	.651	.096	5.880	.000[c]
N of Valid Cases		500			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Gender and Satisfaction

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.641[a]	4	.020
Likelihood Ratio	10.206	4	.037
Linear-by-Linear Association	3.952	1	.047
N of Valid Cases	500		

a. 5 cells (55.6%) have expected count less than 5. The minimum expected count is .54.

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	-.284	.141	-2.052	.046[c]
Ordinal by Ordinal	Spearman Correlation	-.147	.151	-1.028	.309[c]
N of Valid Cases		500			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Education and level of satisfaction

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.664[a]	12	.394
Likelihood Ratio	15.803	12	.200
Linear-by-Linear Association	1.802	1	.179
N of Valid Cases	500		

a. 20 cells (95.2%) have expected count less than 5. The minimum expected count is .36.

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.192	.142	1.354	.182[c]
Ordinal by Ordinal	Spearman Correlation	.191	.144	1.345	.185[c]
N of Valid Cases		500			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Level of Satisfaction and compliance with treatment

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.267[a]	2	.010
Likelihood Ratio	7.177	2	.028
Linear-by-Linear Association	5.491	1	.019
N of Valid Cases	490		

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is .37.

	Column2	Column3	Column4	Column5	Column6
		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	0.338	0.111	2.464	.017[c]
Ordinal by Ordinal	Spearman Correlation	0.335	0.112	2.442	.018[c]

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

ANOVA

ANOVA

how do you assess your level of satisfaction with treatment at the hospital

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	10.060	20	5.030	23.471	.000
Within Groups	9.858	460	.214		
Total	19.918	480			

ANOVA

did you conply with the instructions given to you by the provider (nurse, doctor)

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.025	20	.012	.297	.744
Within Groups	1.892	450	.042		
Total	1.917	470			

ANOVA

Gender

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.250	20	.125	.566	.572
Within Groups	10.158	460	.221		
Total	10.408	480			

Determinants of patients satisfaction

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	10.144	50	2.029	8.925	.000[a]
	Residual	9.775	430	.227		
	Total	19.918	480			

a. Predictors: (Constant), how do you assess your rate of recovery at the hospital, Gender, highest level of educational attainment, marital status, Age of respondent

b. Dependent Variable: how do you assess your level of satisfaction with treatment at the hospital