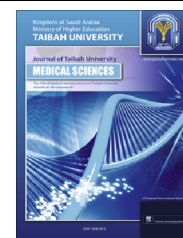




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Clinical Study

Patient perceptions regarding information given on hospital discharge in Almadinah Almunawwarah, Kingdom of Saudi Arabia

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المخلص

أهداف البحث: يجب النظر لحاجة المرضى كأهم العناصر عند التخطيط لعملية الخروج من المستشفى. يتوقع أن يُقوّم الممارسون الصحيون المعلومات التي تعطى للمريض أو مرافقه قبل خروج المريض من المستشفى. وتُعطي هذه المعلومات من حيث الجوانب الجسدية، والنفسية، والاجتماعية المتعلقة بالظروف الصحية المختلفة. وتهدف هذه الدراسة لبحث توقعات المريض والرضى بشأن المعلومات المعطاة عند الخروج من المستشفى.

طرق البحث: دراسة مقطعية تحليلية نفذت في المدينة المنورة، تم أخذ العينات بطريقة الوقت المحدد على فترة ثلاثة أشهر للمرضى أو مرافقيهم مقابلة في العيادات الخارجية في المستشفيات الحكومية والخاصة في المدينة المنورة. حيث تم استخدام الاستبانة الذاتية لتقييم الرضى عن نوعية المعلومات المقدمة للمرضى أو مرافقيهم عند الخروج من المستشفى. كان متوسط العمر لأفراد العينة 34.23 ± 9.34 سنة. وكانت أكثر الحالات تابعة للمستشفيات الحكومية في العينة، حوالي 63% مقابل 37% للمستشفيات الخاصة. وكان الرضى عن المعلومات المقدمة حول ما يحتاج المريض إلى القيام به بعد مغادرة المستشفى وحول المضاعفات المحتملة لمشكلته الطبية في المستشفيات الخاصة أعلى ($P < 0.05$). وكان الرضى عن المعلومات حول خطط الحماية الغذائية والترتيب الذي قام به المستشفى للمتابعة بعد الخروج كان كبيراً للغاية في المستشفيات الخاصة مقابل المستشفيات الحكومية ($P < 0.001$). وأكثر المرضى رضى بالمعلومات حول الشخص الذي يمكن الاتصال به في الحالات الطارئة هم الذين تم إدخالهم لأسباب تتعلق بقضايا التوليد أو أمراض النساء ($P < 0.05$) وحول كيفية رعاية مواقع الجراحة والجروح ($P < 0.01$).

الخلاصة: هناك حاجة ملحة لمخططي الصحة والممارسين لصياغة نماذج لخروج المرضى مفصلة وتحتوي على خطة مكتوبة بالمعلومات قد يحتاج المريض إليها أثناء وبعد خروجه من المستشفى أو العيادة.

الكلمات المفتاحية: الرضى؛ خطة الخروج من المستشفى؛ الجودة في الخدمات الصحية؛ المدينة المنورة المملكة العربية السعودية

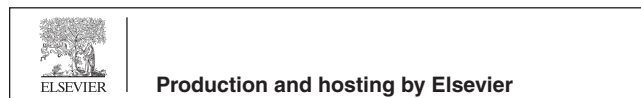
Abstract

Objectives: Patients must be the focus when planning a hospital discharge process. Patient discharge information is what the patients and/or their families expect to receive from the health professionals whom treated them before they are discharged from a hospital or clinic. This information is given in terms of the physical, psychological, and social aspects in relation to the various health conditions. The objective of this study is to investigate patients' perception and satisfaction regarding the information given to them on hospital discharge.

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Methods: This is an observational and analytical cross-sectional study implemented in the city of Almadinah Almunawwarah, Kingdom of Saudi Arabia. Time bound sampling technique was used over a period of three months to interview patients or those who accompany them in the outpatient clinics at public and private hospitals in Almadinah Almunawwarah. A self-administered questionnaire was used to assess the level of satisfaction with the quality of the information given to patients or those who accompany them on their hospital discharge.

Results: The mean age of the participants was 34.23 ± 9.34 years. Public hospitals had more admissions among the sample, accounting for around 63% compared to 37% for private hospitals. Satisfaction with information about what the patients need to do after leaving the hospital and about the potential complications of their medical problems was higher in private hospitals ($P < 0.05^*$). Satisfaction with information about dietary plans and the arrangements done by the hospitals for the follow-up after discharge was highly significant in private hospitals compared to public hospitals ($P < 0.001^{**}$). Patients admitted for causes related to obstetrical or gynecological issues were more satisfied with the information about whom to call in emergency situations ($P < 0.05^*$) and on how to care for surgical or wound sites ($P < 0.01^{**}$).

Conclusion: There is an urgent need for health planners and professionals to formulate detailed, written patient discharge information plans that have all the information the patients may need during and after their discharge from the hospital/clinic.

Keywords: Almadinah Almunawwarah; Hospital discharge plan; Kingdom of Saudi Arabia; Quality in Healthcare; Satisfaction

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Introduction

Patient discharge preparation has progressively become a major determinant of patient outcomes and satisfaction.¹⁻³ Patient discharge information is what patients or those who accompany them expect to receive from health professionals before their discharge from the hospital/clinic. This information is given in terms of the physical, psychological, and social aspects related to different health conditions.^{2,4} Planning for discharge is an assessment process performed by the hospital through identifying and evaluating the needs of individual patients before their exit from the hospital.^{1,4-6} What every patient needs is information, including education about their medical problems, how to respond to any health problems encountered after their discharge and how to deal with their current health state. Receiving information regarding their health conditions and how to cope with them will help patients and their families on how to better deal with the medical problems and their effects after discharge.^{1,4,7,8} The effectiveness of the discharge information is doubtful due to a number of reasons²: (1) time limitation and constraints on how to give information adequately to the patients or their guardians due to the hospital workload¹⁰; (2) chance of the information being poorly understood by the patients or their guardians^{3,11}; (3) nurses' lack of acknowledgment of patients' needs for information and its effective role in the discharge policy¹²⁻¹⁴; and (4) chance of the irrelevancy of the information given to individual patient's needs due to the "one size fits all" package of discharge instructions and processes.^{15,16} Hospital readmissions are to some extent common and costly in both human resources and finances and is preventable.¹⁷ Studies have shown that patients who get detailed post-discharge instructions and information from hospitals are 30% less likely to be readmitted to a hospital or to be brought to the emergency room compared to those who did not receive post-discharge information.¹⁸ Another study showed that approximately 12% of patients develop worse or new symptoms a few days after their discharge.¹⁹ Adverse drug events can develop in 23-49% of cases after hospital discharge.²⁰ According to the

Agency for HealthCare Research and Quality (AHRQ; 2012), within three weeks of discharge, nearly 20% of patients experience adverse events, of which 75% could have been prevented. In addition, failure to understand the discharge information has become one of the top eight patient dissatisfiers in health care. Among hospital-acquired medical complications, infections, and procedural complications, adverse drug events are the most common post-discharge complications. Almost 40% of discharged patients need to complete a diagnostic workup in outpatient settings, and a comparable portion is discharged with pending test results. Minimizing post-discharge adverse events has thus become a priority in the U.S. health care system.²¹

The objective of this study is to investigate patients' perception and satisfaction regarding the information given to them on their hospital discharge as an indicator of health care quality. The Kingdom of Saudi Arabia is honored by the presence of the two holy cities Makkah Al Mukarramah and Almadinah Almunawwarah.²² Such honor necessitates the provision of a high level of quality of health care services during the Hajj and Omrah seasons, where pilgrims in those holy cities may reach more than 3 million over a period not exceeding a month. The Ministry of Health records show that 916,430 pilgrims sought medical care in health care facilities in the Hajj season of 2010. This indicates that there is a need to provide the necessary resources to deliver quality health care services in a timely, effective, and efficient fashion and to reach the highest preventive and curative rates for both the people of Makkah Al Mukarramah and Almadinah Almunawwarah, as well as for the increasing numbers of pilgrims during the Hajj and Omrah seasons.²² Almadinah Almunawwarah has thirteen hospitals²² that serve a population of 1,100,093, of which eight are public and function either as general hospitals or as specialized facilities, such as the maternity and children's hospital, the rehabilitation hospital, the psychiatric hospital, and the infectious diseases hospital, with a total bed capacity of 1763. Five of the thirteen hospitals are general private hospitals, which have a total of 584-bed capacity combined.

Materials and Methods

This is an observational and analytical cross-sectional study implemented in Almadinah Almunawwarah, Kingdom of Saudi Arabia. A time bound sampling technique over a period of three months beginning January 2012 until the end of March 2012 was used to interview patients or those who accompany them in the outpatient clinics in public and private hospitals in Almadinah Almunawwarah. The participants were asked to fill out a questionnaire if they were admitted to a hospital or have accompanied relatives during their hospital stay and experienced a patient discharge plan within 3 months. Assistance was offered to participants who were not able to fill the questionnaire by themselves. Two public hospitals and two private hospitals were randomly selected. Between two and three visits per week were done to the outpatient clinic waiting areas over a period of three months.

The inclusion criteria were: (1) hospital admission to any public or private hospital in Almadinah Almunawwarah within three months (not necessary the same hospital where the interview took place), (2) questionnaire completion by the patients or those who accompany them after reading and understanding the introductory paragraph and explaining the objectives of the study, and (3) voluntary consent to participate in the survey.

A self-administered questionnaire was used to assess satisfaction with the quality of information given to patients or those who accompanied them on hospital discharge. The questionnaire was drafted in the Arabic and pretested before data collection.

The questionnaire consisted of 3 parts: Part I: Introduction of the study, the inclusion criteria, and details on voluntary participation and privacy of information. Part II: Sociodemographic and general data, including gender, age, educational level, type of hospital, duration of admission, main reason for admission, person who offered the information at hospital discharge, and reason for selecting the hospital for admission. Part III: Information on the level of satisfaction. A 5-point Likert response scale was used, ranging from 1 (very dissatisfied) to 5 (very satisfied). In the data analysis stage, this scale was transformed into a 3-point response scale ranging from 1 (not satisfied) to 3 (satisfied), with 2 representing uncertain response.

The study was approved by the Research Ethics Committee of the College of Dentistry, Taibah University. The waiver of written informed consent process was approved based on the nature of the questionnaire, which was anonymous, self-administered, and contained no hospital identifier except for public or private.

The data were coded and keyed into the Statistical Package for the Social Sciences (SPSS Inc., Chicago, IL) version 19 for Windows 7. Descriptive analysis followed by inferential statistics was done. The mean percentages and standard deviations were calculated for qualitative and quantitative data, respectively. Chi-square (χ^2) and Fisher's exact tests were performed to statistically analyze qualitative data. A *P*-value of 0.05 was considered to control for alpha (type 1) error.

Results

A response rate of 83.01% (176/212) was obtained among eligible subjects who were consented to participate in the study representing a total number of 176 participants.

Table 1: General and demographic characteristics.

Item	<i>N</i> = 176	(%)		
<i>Gender</i>				
Male	70	39.8		
Female	106	60.2		
<i>Educational level</i>				
School	58	33		
University	104	59		
Postgraduate	14	8		
<i>Person filling out the questionnaire</i>				
Patient	82	46.6		
Accompanying person	94	53.4		
<i>Type of hospital</i>				
Governmental	112	63.6		
Private	64	36.4		
<i>Reason for admission</i>				
Nonsurgical	66	37.5		
Surgical	64	36.4		
Obstetrics/Gynecology	46	26.1		
<i>Person who offered the information on hospital discharge^a</i>				
Physician	118	67		
Nurse	42	23.9		
Social worker/nutritionist	4	16	2.3	9.1
Pharmacist	2	1.1		
Others ^a	10	5.7		
<i>Reason for selecting the hospital</i>				
Health insurance	18	10.2		
Geographic accessibility	52	29.5		
Reputation of physician	50	28.4		
Reputation of hospital	26	14.8		
Other factors ^b	34	19.3		

^a Other persons who offered information included specialized health educators.

^b Other factors affecting hospital selection include: referral, being the only place offering the required service, availability of beds, and knowing a person inside the hospital who can facilitate administrative procedures and hospital admission.

The mean age of the participants (patients or those who accompanied them) was 34.23 ± 9.34 years. There were no statistically significant differences in the satisfaction level on all the information given when related to age.

As shown in Table 1, there was a slight preponderance of female participants (60.5%) in the sample. In addition, the questionnaires were filled out by the patients themselves in 46.6% or by their guardians (53.4%) in case the patient is a child or disabled and unable to complete the questionnaire themselves. Around 60% of the participants held a university degree.

Public hospitals had more admissions among the sample, accounting for around 63% compared to 37% for private hospitals. There was an almost equal distribution of reasons for admission between nonsurgical, surgical, and obstetric/gynecology (Ob/Gyn) causes at 37.5%, 36.4%, and 26.1%, respectively.

Table 1 also shows that the persons who offered health information at hospital discharge were mostly physicians (67%), followed by nurses (24%). The main reason for the

Table 2: Satisfaction with verbal and written information on hospital discharge.

Item	Not satisfied <i>N</i> (%)	Uncertain <i>N</i> (%)	Satisfied <i>N</i> (%)
Information about what the patient needs to do before discharge from hospital	78 (44.3)	30 (17.1)	68 (38.6)
Information about what the patient needs to do after he/she leaves the hospital	80 (45.5)	20 (11.4)	76 (43.2)
Having been given the chance to ask questions about the medical problem or condition	80 (45.5)	18 (10.2)	78 (44.3)
Information about the potential complications of the patient's medical problem or condition	82 (46.6)	22 (12.5)	72 (40.9)
Information about the signs and symptoms that the doctor should know immediately	82 (46.6)	18 (10.2)	76 (43.2)
Information about whom to call if assistance is needed in case of complications	122 (69.3)	12 (6.8)	42 (23.9)
Have you been given the chance to ask questions about the laboratory investigation and other investigations done?	60 (34.1)	22 (12.5)	94 (53.4)
Have you been given the chance to ask questions about how to use the medication and if this is different from that before admission?	62 (35.2)	14 (8)	100 (56.8)
Information about the reason for taking each medication and how this helps with your condition	92 (52.3)	30 (17)	54 (30.7)
Information about the possible occurrence of medication side effects (gastritis, change in urine color, nausea, poor concentration, etc.)	122 (69.3)	20 (11.4)	34 (19.3)
Information about patient post-discharge dietary plans	82 (46.6)	20 (11.4)	74 (42)
Information about follow-up care plan	92 (52.3)	26 (14.8)	58 (33)
Information about how medical conditions impact the patient and his/her family	106 (60.2)	24 (13.6)	46 (26.1)
Arrangement done by the hospital for the follow-up after discharge	80 (45.5)	58 (33)	38 (21.6)
A written discharge document explaining the patient's medical problem and further post-discharge instructions	120 (68.2)	16 (9.1)	40 (22.7)
In case of surgery or wounds, information about how to care for the surgical or wound site	72 (41)	30 (17)	74 (42)
The use and clarity of the language of health care providers by which all post-discharge information are delivered	74 (42)	122 (12.5)	80 (45.5)

Table 3: Relation between type of hospital and satisfaction with information given on hospital discharge.

Item	Satisfied <i>N</i> (%)	Type of Hospital		<i>P</i> -value
		Public <i>N</i> = 112 (%)	Private <i>N</i> = 64 (%)	
Information about what the patient needs to do after he/she leaves the hospital	76 (43.2)	38 (33.9)	38 (59.4)	0.034*
Information about the potential complications of the patient's medical problem or condition	72 (40.9)	38 (33.9)	34 (53.1)	0.029*
Information about patient post-discharge dietary plans	74 (42)	42 (37.5)	32 (50)	0.009**
Arrangement done by the hospital for the follow-up after discharge	38 (21.6)	22 (19.6)	16 (25)	0.009**

hospital selection for admission was geographical accessibility (29.5%) and the physicians' reputation (28.4%).

Table 2 indicates that the level of satisfaction with various information offered at hospital discharge did not exceed 50% except on items seven and eight, which showed a slightly higher level of satisfaction compared to other items (53.4% and 56.8%, respectively).

Table 3 indicated a statistically significant difference in the satisfaction level on 4 items between private and public hospitals. Satisfaction with information about what the patient needs to do after leaving the hospital and about the potential complications of the patients' medical problems was higher in private hospitals ($P < 0.05^*$). Satisfaction with information about dietary plans and the arrangement done by the hospital for the follow-up after discharge was highly significant in private hospitals compared to public hospitals ($P < 0.01^{**}$).

Table 4 shows that there were no statically significant differences between educational level in satisfaction with most of the information given at hospital discharge, except for that on the possible occurrence of medication side effects, on which the postgraduate level showed the highest satisfaction ($P < 0.01^{**}$). Table 4 also indicated that participants with school-level education were more satisfied with the information about dietary plans (65.5%; $P < 0.01^{**}$), about follow-up care plans (51.7%), and on how the medical conditions affect the patients and their family (44.8%; $P < 0.05^*$).

Table 5 shows that patients admitted for causes related to obstetrical or gynecological issues were more satisfied with the information about whom to call in emergency situations ($P < 0.05^*$) and on how to care for surgical or wound sites ($P < 0.01^{**}$).

Table 4: Relation between respondent's education level and satisfaction with information given on hospital discharge.

Item	Satisfied <i>N</i> (%)	Educational level			<i>P</i> -value
		HS <i>N</i> = 58 (%)	UD <i>N</i> = 104 (%)	GD <i>N</i> = 14 (%)	
Information about possible occurrence of medication side effects	34 (19.3)	18 (31)	10 (9.6)	6 (42.9)	0.02*
Information about patient post-discharge dietary plans	74 (42)	38 (65.5)	32 (30.8)	4 (28.6)	0.013*
Information about follow-up care plan	58 (33)	30 (51.7)	24 (23.1)	4 (28.6)	0.011*
Information about how medical conditions impact the patient and his/her family	46 (26.1)	26 (44.8)	16 (15.4)	4 (28.6)	0.038*

High School or Less (HS) University Degree (UD) Graduate Degree (GD).

Table 5: Relation between reason for admission and satisfaction with information given on hospital discharge.

Item	Satisfied <i>N</i> (%)	Reason for admission			<i>P</i> -value
		Nonsurgical <i>N</i> = 66 (%)	Surgical <i>N</i> = 64 (%)	Ob/Gyn <i>N</i> = 46 (%)	
Information about whom to call if assistance is needed in case of complications	42 (23.9)	10 (15.2)	16 (25)	16 (34.8)	0.047*
In case of surgery or wounds, information about how to care for the surgical or wound site	74 (42)	16 (24.2)	24 (37.5)	34 (73.9)	0.004**

Discussion

Patients must be considered as the focus when planning a hospital discharge process.²³ The failure to fulfill patients' information needs during hospital discharge is an important quality indicator that leads to dissatisfaction and poor quality outcomes. Thus, continuous research on patients' information needs is recommended.^{3,24,25} Lack, delay, and ambiguity of patient information during discharge are common among hospitals and leave patients at risk of adverse outcomes.^{1,14,16,26} The results from this study show an alarming situation, with all patient information needs at hospital discharge receiving low percentages of participants' satisfaction ranging between 19.3% and 50%, except on two items on which the percentages fail to exceed 60% as well (53.4% and 56.8%, respectively), which can also be considered alarming. Others have shown similar results in highlighting the importance of patient discharge information.^{4,25,27,3} However, this study differs in that the percentages of satisfied participants were less than 50% on all questionnaire statements and were very low on some items, such as on information about whom to call if assistance is needed in case of complications (23.9%), information about the possible occurrence of medication side effects (gastritis, change in urine color, nausea, poor concentration, etc.) (19.3%), information about how medical conditions impact the patient and his/her family (26.1%), arrangement done by the hospital for the follow-up after discharge (21.6%), and a written discharge document explaining the patient's medical problem and further post-discharge instructions (22.7%). This strongly indicates the need for a detailed discharge plan that has all the information that any patient may need at hospital discharge. Such a plan is worthless, however, if the staff are not trained and educated to value its goals and content and to fit the plan to each individual patient's conditions.^{17,18,28-32} The plan should also be continuously monitored and assessed for patient satisfaction as an indicator of its effective and efficient use.

The results also illustrate that admission is higher in public hospitals compared to private ones. This is due to the fact that public hospitals have a larger bed capacity and provide medical services free of charge, whereas the services in private hospitals are not free. Though, in terms of statistical significance (Table 3), satisfaction on 4 items was found to be statistically significant in private hospitals compared to public hospitals. These items include: information about what the patient needs to do after leaving the hospital, information about the potential complications of the patient's medical problem, information about dietary plans, and arrangement done by the hospital for the follow-up after discharge, which all showed highly significant satisfaction in private hospitals compared to public hospitals. Because private hospitals are business-oriented health institutions, this result may lead them to continuously search for ways to increase their profit through improving their services to satisfy their customers. Nevertheless, this level of satisfaction in private hospitals is regarded as insufficient because satisfaction on more than four items was expected. In summary, this indicates the need for both public and private hospitals to effectively consider patient instructions during the discharge process as a determinant of their success and service quality.

In general, patients prefer to get their instructions from the most senior person in the treating team. This study showed that the major source of patient discharge information was physicians (67%), followed by nurses (24%). However, this could be one of the reasons for the remarkable percentages of dissatisfaction on all the questionnaire items; that is, the physicians do not have available time to spend giving clear, meaningful information during patient discharge. This concept has been explained in other studies.^{1,2} Among the respondents, 24% said they received discharge information from nurses, which is in contrast to other studies reporting that the nurse is the primary source of patient discharge information.^{1,4,18,33,34} Despite the low percentages of satisfied participants, the effect of educational level on satisfaction can be

discussed according to the data in Table 4, which indicate that there were no statically significant differences between educational levels on all except four statements. In particular, satisfaction with information about the possible occurrence of medication side effects was highest in the postgraduate level, whereas participants with school-level education were more satisfied with information about dietary plans, information about follow-up care plans, and information on how medical conditions affect the patients and their family. Considering this significance, one would expect the effect of education to be visible on aspects related to major issues, such as medication side effects, which showed high satisfaction among people in the graduate level showing that they were more educated and knowledgeable than the others and therefore more likely to ask questions about the detailed aspects of the discharge information.^{27,35} In general, the effect of education is also more visible among participants with a lower educational attainment than a university degree, which represent 33% of the sample, and on issues that people are normally concerned about, such as post-discharge medical complications, dietary plans, and post-discharge follow-up plan. This indicates that less educated people are concerned with such items, but participants with higher educational levels ask questions to address their concern about these issues. This result agrees with those in other studies.³⁶ Maloney and Weiss (2008) found that there was no statistically significant difference between satisfied or dissatisfied participants in relation to educational level.¹ However, for this result as a whole, emphasis should be placed on providing the necessary discharge information in a way that fits individual patient's educational level.

The reason for admission was considered as one of the factors that can impact respondent satisfaction or dissatisfaction. In this study, gynecological issues were added as an independent reason for admission, besides surgical and medical (non-surgical) causes. Table 5 shows that there was a statistically significant difference between reasons for admission on three questionnaire statements and that patients admitted for causes related to obstetrical or gynecological issues were more satisfied with information about whom to call in emergency situations and on how to care for surgical or wound sites. By instigating discussion, this result becomes a multidimensional result as it reflects directly the relation between the reason for admission and the satisfaction of the respondents and, indirectly, the female perception as gynecological issues are mainly related to females. Maloney and Weiss (2008) pointed out that there was a statistically significant difference between the participants' satisfaction and the medical reason for admission.¹ The indirect indication of this result, that is, considering the view of female respondents, has been explained and documented in another study,³⁷ which reported that females tend to be more satisfied than males. The reason for this is that females tend to ask more questions than males and have more partnership building with their health professionals.³⁷ Nevertheless, this study shows that there was no statistically significant difference between participants' age and gender, reason for selecting the hospital for admission, and identity of the respondent (whether the person who filled out the questionnaire was the patient or those who accompany them during the discharge process) with regard to all the information given at hospital discharge cited in the different questionnaire statements. This result matches that of another study,¹⁶ which

found no significant difference between different age groups and the information given during the discharge process.

Conclusions

As there is no similar study has been published, this study might be the first study in Kingdom of Saudi Arabia considering the issue of patient discharge information. It investigates one of the major determinants of patient satisfaction and outcomes. The results showed very low percentages of satisfaction ranging from 19.3% and 50% with regard to all necessary information given to the patient or his/her guardian during discharge process. The failure to fulfill patients' information needs during hospital discharge is an important quality indicator that leads to dissatisfaction and poor quality outcomes. Although business oriented health institutions showed a statistically significant difference in satisfaction than public health institutions, thus both public and private hospitals need to effectively consider patient instructions during the discharge process as a determinant of their success and service quality.

Recommendation

This study may serve as a guide to develop local policies and to lead further specialized studies with larger focus in a special setting such as private hospitals or certain patient's conditions such as medical or surgical conditions. There is an urgent need for health planners and professionals to formulate a detailed, written patient discharge information plan that has all the information the patient may need during and after discharge from the hospital. Staff training on the effective and efficient use of such a discharge plan and continuous assessment and monitoring of patient satisfaction with the quality of information given to them are quality measures that should be adopted.

The results of this study present a promising opportunity for health system leaders to improve the quality of their health care service by assessing the effectiveness of their health care policies.

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