Survey of the Patients' Satisfaction with Services provided in an Iranian Naval Hospital in 2019: A Cross-sectional Study

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Research

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Abstract

Background

All hospital services are carried out to serve the patient, which is the main axis in the hospital. Patient satisfaction can be indicative of the right performance service delivery and is considered as a reliable source for evaluating the quality of health care. The present study was conducted to evaluate the satisfaction rate of discharged patients in a Navy hospital.

Methods

The descriptive cross-sectional study was performed on 220 discharged patients who selected by convenience sampling in a Navy hospital during 2019. The data gathering tool was the Patient Satisfaction Questionnaire designed by Amerioon in 2009 and its validity and reliability was confirmed in 2016. The questionnaire assessed patient satisfaction in two health-care sections with 21 questions and three dimensions of hygiene, nursing and physician services, and non-health care with 27 questions and six dimensions of acceptance, staff attitudes, nutrition, welfare, facilities, religious issues and refines evaluation. Data were analyzed by SPSS software version 18.

Results

The patient satisfaction in the medical and non-medical wards was 88.1% and 86.57% respectively. Satisfaction in the medical and non-medical wards was excellent at all dimensions. There was a significant relationship between satisfaction with the cause of referral, and level of education (P < 0.05). Other demographic variables such as age, marital status, patient gender, frequency of hospitalization, type of ward, and type of insurance were not significantly correlated with satisfaction (P > 0.05).

Conclusion

Considering the high level of patients' satisfaction in medical and non-medical services, patient satisfaction in medical services was slightly higher than that of non-medical services, this highlights the need for independent research in this area and the actions taken by hospital managers to improve satisfaction in these sectors. It is also suggested to consider patient satisfaction as part of the discharge process in all hospitals.

Background

Satisfaction as an indicator of the quality of services provided over the past few decades has found a special place. The quality of services provided to patients and the level of satisfaction with the services provided shows the general situation of providing services in that hospital [1]. Evaluating patient
satisfaction is an important source of information to identify problems and desirable programs in the field of health care services and is an indicator of the quality of service delivery in various interpersonal, organizational and technical areas [2]. At present, satisfaction is an important issue in health care, and patient satisfaction plays an important role in increasing accountability among health care providers in terms of advancing the organization's goals [3]. Particular attention is paid to the patient's needs as an intrinsic goal, as well as the fact that this is an important component in improving the quality of care, and should be considered by policymakers. Also, patient satisfaction as a basic system should play an important role in managers' decisions to make that organization successful [4]. Therefore, patient satisfaction is one of the main factors and important indicators in evaluating the quality of health organizations [5].

In the past, to improve the level of health services, the opinion of experts in this field was the most important determinant of how to change the service process. However, recent studies have paid special attention to the views of patients on the provision of health services as an important indicator of the quality of service delivery. Comments that may even differ from or even contradict the views of health professionals and are recognized as a determining indicator for evaluating and improving the quality of services provided by services [6]. The importance of this issue is such that patients' satisfaction with the way health services are provided from the perspective of the World Health Organization, as one of the five indicators of quality of services [7] and according to some researchers, this factor is one of the most important determinants. The quality of health services is important [8].

Patients' views on how to provide health services can include important information about the quality of various aspects of health care delivery. The findings of various studies have shown that various factors affect the patient's satisfaction with the way the medical services are provided in the hospital, such as the way doctors, nurses, staff and even the physical environment of the medical centers' function; also the patient's satisfaction with the hospital complex and its staff. The predictor of future behaviors and behaviors of patients during treatment and even seek discharge from the hospital [9, 10].

Patients' greater satisfaction with care makes them more willing to follow doctor's instructions, follow up on care and treatment, follow more dietary regimens and treatment recommendations, respect health care guidelines, and communicate more deeply with providers. Health services, as a result, reduce recovery time and reduce the number of patient complaints and achieve better health outcomes [11].

Patient satisfaction is also essential for marketing purposes. It provides patient satisfaction information, useful information about the structure, process, and outcome of nursing care, and more, such as staff adequacy, treatment needs, and patient behaviors [12]. Also, a patient who is satisfied with the health care provider often tends to go to the same hospital when he or she needs re-health care. This will increase productivity and profitability for the collection [13].

In the field of patient satisfaction assessment, several studies have been conducted in Iran, but since most studies have measured how to provide medical services or factors affecting satisfaction, and also because satisfaction is affected by various underlying factors such as individual, cultural factors,
economic and religious of patients [14, 15] and considering that most studies conducted in Iran, except for hospitals and special urban areas and the views of residents of those geographical areas, on how to provide medical services and found It has led to many different ones [16–18], and since the studies are limited In hospitals under the auspices of the Armed Forces, patients have been treated with satisfaction, so due to the importance of these hospitals due to a large number of clients, in order to achieve patients' views on how to provide medical and non-therapeutic services, it is necessary to do so. The study is necessary in this case. Therefore, the present study was conducted to investigate patients' satisfaction with the services provided in one of the naval hospitals of the Revolutionary Guards in the city of Chalous.

**Methods**

**Type of study**

The present cross-sectional study was performed on patients discharged from one of the naval hospitals in 1398.

**Sampling And Determining Sample Size**

Sampling was performed by the available method. In order to determine the sample size, the sample size estimation formula was used in the prevalence studies in terms of the inferential test. In terms of the first type of error of five percent, the second type of error of twenty percent and the probability of 50% satisfaction with the maximum sample size estimate, the required number of samples was calculated using the formula below 196; It was calculated that 185 usable questionnaires were returned in the present study, which was more than the minimum acceptable number of calculated questionnaires.

**Input And Output Criteria**

The criteria for entering the study were those over 18 years of age and the desire to participate in the study and not hospitalization in the psychiatric wards of the hospital. The criteria for leaving the study were the reluctance to continue participating in the study.

**How To Complete Research Questionnaires?**

After obtaining a license from the research of Baqiyatallah University of Medical Sciences, he was referred to the selected hospital. After presenting the permit to enter the environment, the researcher entered the research environment and the research questionnaires were completed according to the entry and exit criteria. In cases where the clients were illiterate, the questionnaire questions were read by the researcher to the client and their answers were recorded.
Questionnaire For Satisfaction With Non-therapeutic Medical Services

The data of this study were confirmed by the standard patient satisfaction questionnaire which was designed by Amerioon et al. In 2009 and in 2016 its localization, validity, and reliability were confirmed. The questionnaire included two sections of general information such as age, gender, literacy level, marital status, section, type of insurance, and hospital history. The second part of the questionnaire included 48 questions, the level of patients’ satisfaction with the way of providing services in two therapeutic sections with 3 dimensions and 21 questions, including services provided by the nurse (9 questions), physician (8 questions) and hospital health and cleaning services (4 questions) and the non-therapeutic section with 6 dimensions and 27 questions including services of admission section (2 questions), staff approach (5 questions), nutrition (2 questions), welfare and facilities (9 questions), clearance (4 questions) and observance of issues Shari’a-doctrinal (5 questions) evaluated. Responses were graded based on the Likert 5 spectrum (completely satisfied, satisfied, no comment, dissatisfied, completely dissatisfied). At the end of the questions, two open questions were asked. The content of the first question was related to the person's return to the current hospital in case of illness and the second question was about the current hospital's recommendation to friends and acquaintances. To calculate the satisfaction score, the respondents were given completely dissatisfied and completely satisfied with the score of zero to 100, respectively. Thus, the total scores of each field separately and the overall satisfaction score was determined from a score of 100, with a higher score indicating more patient satisfaction in the context of how services were provided during hospital stay [19]. The criteria for classifying satisfaction were based on four categories: low (scores up to 25 percent), medium (26 to 50 percent), good (51 to 75 percent), and excellent (76 to 100 percent) [15].

Reliability And Validity

The validity and reliability of this questionnaire were evaluated in the country in 2016 by Amerioon and colleagues in the same community and its validity and reliability were confirmed. The overall alpha coefficient of the treatment questionnaire was 0.975 and the non-therapeutic questionnaire was 0.936 [19].

Moral Considerations

This study was approved by the University Research Council with the code 98000238, which was approved by the ethics committee of Baqiyatallah University of Medical Sciences at IR.BMSU.REC.1398.269. Adequate information about the objectives of the study and its importance, maintaining the anonymity and voluntary participation and confidentiality of the information obtained was given to the participants and was completed after obtaining the written consent of the questionnaires.
Statistical analysis

SPSS software version 18 was used to analyze the data. The level of significance in all cases was considered less than 0.05. To describe the qualitative variables, frequency and frequency percentages were used, and to describe quantitative information, mean and standard deviation were used. In order to investigate the research hypotheses, a test of a Smirnov-Kolmogorov sample was first used. The results showed that the distribution of the studied data was normal, so in order to investigate the research hypotheses, parametric t-test, Pearson, and ANOVA tests were used.

Results

Part I

Description of population-cognitive information

220 questionnaires were completed and returned, which was more than the minimum acceptable number of calculated questionnaires (215 questionnaires). The average age of the participants in the study was 44/17 ± 13/53 years. Most of the male research samples (62.2%) and most of the participants in the study were married (67%) (Table 1).

Second Part

Information in medical departments

The mean and standard deviation was the overall score of patients' satisfaction with the 95 ± 9/12 treatment sections. The mean score of satisfaction in terms of health and cleanliness was 18/54 ± 1/92 in the nursing dimension 26/94 ± 3/11 and in the medical dimension 49/52 ± 5/23.

The percentage of patients' satisfaction in the health and cleaning sector was 90/87 in the nursing ward, 87/25, and in the physicians' ward, 87/55, and the overall satisfaction with the treatment ward was 88/1 (Table 2).
| Variable                  | Abundance | Percentage |
|---------------------------|-----------|------------|
| Gender                    |           |            |
| Female                    | 70        | 37/8       |
| Man                       | 115       | 62/2       |
| marital status            |           |            |
| Married                   | 124       | 67         |
| Single                    | 61        | 33         |
| education                 |           |            |
| High school               | 62        | 33/6       |
| Diploma and postgraduate  | 85        | 45/9       |
| Bachelor's degree and higher | 38    | 20/5       |
| Type of insurance         |           |            |
| Treatment services        | 47        | 25/4       |
| Armed Forces              | 54        | 29/2       |
| Social Security           | 46        | 24/9       |
| Other insurances          | 17        | 9/1        |
| Uninsured                 | 21        | 11/4       |
| Inpatient ward            |           |            |
| Men                       | 105       | 56/8       |
| CCU                       | 3         | 1/6        |
| Maternity hospital        | 3         | 1/6        |
| Obstetrics and Gynecology | 59        | 31/9       |
| children                  | 1         | 0/5        |
| Emergency                 | 14        | 7/6        |
| Hospital history          |           |            |
| first time                | 120       | 64/9       |
| second time               | 22        | 11/9       |
| Third time                | 8         | 4/2        |
| Fourth time               | 4         | 2/2        |
| More than four times      | 31        | 16/8       |
| The cause of hospitalization |         |            |
| Contract with the hospital| 89        | 48/1       |
| Being close to home       | 34        | 4/18       |
| Variable                          | Abundance | Percentage |
|----------------------------------|-----------|------------|
| Hospital facilities             | 29        | 15/7       |
| Observance of religious values   | 6         | 3/2        |
| Satisfaction in previous visits  | 9         | 4/9        |
| Offer others                     | 12        | 6/4        |
| References from other centers    | 2         | 1/1        |
| Doctor's advice                  | 4         | 2/2        |

Table 2
Distribution of patient satisfaction in the study participants

| Satisfaction of medical departments | Minimum score | Maximum | Percentage | Standard deviation | Average |
|-------------------------------------|---------------|---------|------------|--------------------|---------|
| Cleanliness and hygiene             | 11            | 20      | 18/54      | 1/92               | 90/87   |
| Nursing services                    | 18            | 30      | 26/94      | 3/11               | 87/25   |
| medical services                    | 28            | 55      | 49/52      | 5/23               | 87/55   |
| The total score of the dimensions of the questionnaire | 65 | 105 | 95 | 9/12 | 88/1 |

Third Part:

Information on non-therapeutic sections

In the non-therapeutic part, the mean and standard deviation of the overall score of patients' satisfaction was 120/50 ± 12. The mean and standard deviation of the satisfaction score in the admission dimension was 8/84 ± 1/34, in the employee attitude dimension it was 22/36 ± 2/52, in the nutrition dimension it was 9/02 ± 1/24, in the welfare dimension and the facility 39/99 ± 4/42. 39, in the dimension of clearance 18/08 ± 2/13, and the dimension of Observance of religious values, it was 22/20 ± 2/85. The mean and standard deviation of the total score of the clients' satisfaction with the non-therapeutic sections was 120/50 ± 12.
The percentage of patients' overall satisfaction with non-treatment services was 86/57%, which was 85/33% according to the satisfaction level of the admission department, 86/14 employees, 87/83 nutrition, 86/09 welfare facilities, clearance and subsequent observance of religious issues - Belief was 86/02 (Table 3).

Table 3
Distribution of patient satisfaction in the study participants

| Satisfaction with non-therapeutic areas | Minimum score | Maximum | Percentage | Standard deviation | Average |
|----------------------------------------|---------------|---------|------------|--------------------|---------|
| the reception                          | 3             | 10      | 8/82       | 1/34               | 85/33   |
| Staff                                  | 14            | 25      | 22/36      | 2/52               | 86/14   |
| Nutrition                              | 4             | 10      | 9/02       | 1/24               | 87/83   |
| Facilities-welfare                     | 26            | 45      | 39/99      | 4/42               | 86/09   |
| Clearance                              | 12            | 20      | 18/08      | 2/13               | 88      |
| Observance of religious issues         | 12            | 25      | 22/20      | 2/85               | 86/02   |
| The total score of the dimensions of the questionnaire | 81 | 135 | 120/50 | 12 | 86/57 |

Pearson correlation coefficient showed that there was no significant relationship between age with the overall score of satisfaction with medical services (P = 720 and r = 0.026) and the overall score of satisfaction with non-therapeutic services (P = 0.897 and r = 0.010). Independent statistical t-test between sex with an overall score of satisfaction with health services (P = 0.581) an overall score of satisfaction with non-therapeutic services (P = 0.922) and between marriages with an overall score of satisfaction with health services (P = 0.653) an overall score of satisfaction with Non-therapeutic services (P2 = 0.238) did not show a significant difference.

The one-way analysis of variance test did not show a significant difference between the type of insurance with the overall score of satisfaction with medical services (P22 = 0.222) and the overall score of satisfaction with non-medical services (P = 0.251); However, there was a significant difference between the reason for visiting the hospital with the overall score of satisfaction with medical services and the overall score of satisfaction with non-medical services (P < 0.0001). Regarding the difference between the overall score of medical services satisfaction and the reason for visiting the hospital, Tuki's follow-up test showed that this difference was related to having a contract with the hospital (P = 0.005), the hospital's
proximity to the place of residence ($P_00 = 0.009$), and others' suggestions ($0.0001 > P$) and the doctor's recommendation ($P = 0.026$), although the difference between satisfaction and hospital facilities and facilities ($P = 0.062$) and referral from other centers ($P = 0.095$) was not significant; this difference was close to the level of significance. You had. The one-way analysis of variance test did not show a significant difference between the number of visits to the hospital with the overall score of satisfaction with medical services ($P = 0.225$) and the overall score of satisfaction with non-medical services ($P = 0.961$).

The one-way analysis of variance test showed a significant difference between the variable of education and the overall score of satisfaction with medical services ($P = 0.002$) and the overall score of satisfaction with non-therapeutic services ($P = 0.006$). Regarding the overall score of satisfaction with medical services, Tuki's follow-up test showed that this difference was related to the level of diploma with post-diploma ($P = 0.005$) and diploma with bachelor's degree and above ($P = 0.011$). Regarding the overall score of dissatisfaction with non-medical services, Tuki's follow-up test showed that this difference was related to the level of diploma with post-diploma ($P = 0.012$) and diploma with bachelor's degree and higher ($P = 0.025$). Sideways showed that there was no significant difference between the variable type of hospital ward with the overall score of satisfaction with medical services ($P = 0.161$) and the overall score of satisfaction with non-therapeutic services ($P_2 = 0.230$).

In general, the findings showed that there was no significant statistical relationship between age, marriage, patient gender, type of insurance, type of hospital ward, number of hospital visits, and an overall score of satisfaction with medical and non-therapeutic services. However, there was a statistically significant difference between the reasons for visiting this center and the satisfaction with medical and non-therapeutic services ($P < 0.05$), so that people who had a contract with the hospital or the hospital was close to their place of residence, as well as people who Others suggested a doctor's recommendation and had a higher percentage of satisfaction. Also, the statistical test of one-way analysis of variance showed that there is a significant statistical relationship between education and an overall score of satisfaction with medical and non-therapeutic services so that the percentage of satisfaction decreases with increasing education.

The percentage of satisfaction scores was divided into four categories: low (up to 25%), medium (26 to 50%), good (51 to 75), and excellent (76 to 100). There were no scores in the lower category. The highest satisfaction scores were in the top category. Regarding the two open questions at the end of the questionnaire, the results showed that 74.1% of people choose this hospital again for treatment in case of illness, and 72.4% recommend this hospital to their friends and acquaintances.

**Discussion**

This study aimed to examine patients' satisfaction with the services provided in one of the naval hospitals. According to the results, the general satisfaction of patients in the medical and non-therapeutic
sectors in all dimensions, including health and hygiene, nursing, medicine, admission, discharge, staff services, facilities, observance of religious and religious issues and discharge at the highest level.

Patient satisfaction is one of the most important tools in evaluating the quality of treatment and planning to improve the health system [20]. Despite the large number of clients in hospitals under the auspices of the Armed Forces, especially in cities where only one hospital may provide services to the military and their families, a limited number of studies have been conducted on patient satisfaction in these centers [21, 15, 22, 23]. While examining satisfaction in hospitals of the Armed Forces due to their important role in providing services, can improve the quality of services and reflect the performance of these centers to the community and public acceptance of the services of these hospitals. Play a huge role. Therefore, the present study is new in terms of measuring the satisfaction of patients discharged from the Marine Corps Hospital of the Islamic Revolutionary Guard Corps.

The level of satisfaction with nursing services in this study was excellent, similar to this finding in most studies assessed patients' satisfaction with optimal nursing services [24, 25]. In the Riskuz study in Spain, the level of patients' satisfaction with the desired nursing care was also reported [26]. In Al-Asad study, the mean score of patients' satisfaction with nursing care was 90.67% and very high (27). In the Jannati study, the percentage of patient satisfaction was lower than in our study, so that 77% of patients were dissatisfied with nursing services [28].

According to research, nurses' satisfaction is an important factor in patient satisfaction. In various studies, it has been emphasized that there is a direct relationship between nurses' job satisfaction and patients' satisfaction with their services and any issue that leads to a decrease in nurses' job satisfaction. Including unfavorable work environments, lack of manpower in the field of nursing, inappropriate care, moral, social, and organizational values can make efforts to improve patient satisfaction by nurses ineffective. Satisfaction with nursing services plays an important role in the overall satisfaction of the patient, and other studies emphasize the satisfaction of nursing services as one of the determinants of overall patient satisfaction [29, 30]. Akbari said in his study that because nursing medical care plays a pivotal role in restoring patients' health, it has the greatest impact on patient satisfaction [31], so since most care providers in hospitals are nurses and This group is in the first line of patient care, the quality of their care has a great impact on patient satisfaction, and therefore it is necessary to draw the attention of officials to improve the conditions for improving the quality of nursing and medical services. The difference in the results of various studies can be justified by the fact that the cultural and social context can determine the expectations and expectations of people in society from services. For this reason, health policymakers should pay special attention to the job satisfaction of nurses and, consequently, patient satisfaction with medical services. Conversely, in studies that were highly satisfied with nursing services, appropriate organizational culture, including employment standards, financial benefits, and retention of qualified and committed nursing workers, were cited as reasons that may have led to high patient satisfaction [27].
The high satisfaction of medical services in this study was similar to the results of Heydari and Ansari studies, which reported patients' satisfaction with medical services at an excellent level [32]. Similar to this finding, the overall satisfaction of patients with medical services in the study of Azizi [33], 29.5%, in the study of Noor Al-Sana, 50% [34] and in the study of Alidosti was equal to 56.4% [35], which is the result of the present study. It's not true. Considering the 6 to an 8-year interval between these studies and the recent study, it can be concluded that due to the holding of medical ethics workshops in recent years and the importance of medical ethics and the impact of these workshops, physicians' treatment of patients has improved and patients' satisfaction has increased. Therefore, in older studies, the rate of physician satisfaction was lower than in a recent study.

In the present study, satisfaction with non-therapeutic services in all dimensions was excellent (85.33%). In a study conducted in another hospital under the auspices of the Navy, the satisfaction of the admission department was excellent and similar to this study [15]. In studies conducted by ZafarGhandi, patients' satisfaction with the admission of hospitals under the auspices of Tehran University of Medical Sciences is 44% [36] and in the study of Rudbari in Zahedan 64% [37] is reported. In all these studies, satisfaction with admission services is less than Our study has found that the reason for this difference is the better location of admission to the hospital under study, as well as the lower number of clients than educational hospitals covered by the university and therefore more speed of admission and better treatment processes and proper communication with clients by staff.

Also, in this study, the satisfaction of the clearance section at the highest level (88%) and dissimilar to this finding in the Ansari study, the clearance section had the lowest level of satisfaction (38.6) [38]. Excellent satisfaction with nutrition services in this study was another finding that was obtained similar to this finding in a large study. 90% of patients were satisfied with the nutrition service [39] Satisfaction with nutrition services in Ansari study [38] and Mousavi [40] and Gholi Zadeh [41] were average and less than our study. In his study, Gholizadeh stated that the nutrition sector has been ignored as one of the pillars of patients' health in hospitals or has played a small role in the treatment process. Therefore, hospital managers need to take steps to increase the awareness of foodservice personnel about health and food quality, increase the number of nutrition experts and their more active presence in patients' beds, and give patients the right to choose.

Patients' satisfaction with high-level and non-similar welfare services and facilities was studied by Abbasi [15], Karimi [42], and Zol Havariyeh [43]. He noted the cold in some areas, the poor health of the health services, the deteriorating condition of some of the patients' boards, and the deterioration of the elevator. It should be noted that the use of patient feedback to increase the level of medical services and improve hospital hotels is very important in order to increase patient satisfaction [43]. Similar to this finding, patients' satisfaction with facility-welfare services in a cross-sectional descriptive study on 131 hospitalized patients in 6 military hospitals across the country reported patient satisfaction with 98.2% of hospital services [23].
In this study, the level of satisfaction with observing religious issues was excellent. However, in the satisfaction studies, this case was not considered and one of the advantages of the questionnaire used in this study is to consider this item because according to Hassan Tehrani’s qualitative study, it was found that privacy protection is one of the basic human needs and the most important concepts of nursing ethics. One of the dimensions of privacy is the patient's spiritual and religious privacy, which should be taken into account when caring for the patient, which was excellent in this study [44].

Another finding of this study was a significant relationship between education level and patient satisfaction so that with increasing level of education, the level of satisfaction decreased. Similar to this finding, in July and Farahani and Farzianpour's studies, the patient's level of education was an effective factor in the level of satisfaction [25, 29, 45]. Thus, people with higher education are less satisfied for reasons such as higher expectations of the treatment system, greater social communication, and greater access to information resources, and greater ability to identify system deficiencies and defects [45]. In Quintana and Findick's research, patients with higher levels of education were less satisfied with nursing care [46, 47]. Contrary to this finding, in the study of Mozaffari [48] and Khezri [49], with increasing patient education, his satisfaction with nursing care services increased. In Abbasi’s study, there was no relationship between education and satisfaction.

In terms of the reason for the visit, there was a significant relationship between satisfaction and the reason for the visit, so that having a contract with the hospital, the doctor's suggestion and the advice of acquaintances, as well as the hospital's welfare facilities, had a significant relationship with satisfaction. The results of the study in one of the military hospitals are the most important reasons for patients to choose the hospital in terms of the ability to use the appropriate insurance benefits of the hospital, the presence of experienced physicians, the suggestion of others. Eventually, the center was easily accessible to patients [22].

Another finding of the recent study was the significant lack of relationship between the patient's gender and his satisfaction. This finding is consistent with the studies of Hajjian [17] and Rudbari [37] and can indicate that the quality of service is determined by satisfaction and not the sex of the patient. [28] Also in Johnson’s [13] and Elnager’s [51] research, this relationship was significant and male patients had a more positive experience and satisfaction with nursing care than female patients. Differences in satisfaction between men and women may be due to behavioral differences between men and women, or men may receive more information from nursing staff than women. The relationship between marriage and satisfaction was not significant in the present study, but the study of Goodarzian [52] and Akbari [22] showed that there is a significant relationship between marital status and satisfaction. In the present study, the relationship between insurance type and satisfaction was not significantly similar to this finding, Study of Farzanpour [45] and Moin [53] Health insurance was reported as one of the factors affecting patient satisfaction. In this study, there was no relationship between the type of section and the level of satisfaction, but in Akbari’s study, this relationship was significant [35].
The provision of the same services and facilities to the wards and the existence of optimal medical and nursing services have been effective in creating patient satisfaction regardless of the type of ward so that in hospitals that have a significant relationship between satisfaction and type of ward, the percentage of satisfaction with medical and nursing services is less.

Also, in the study of Akbari [35] and Salehian, the type of insurance showed a significant relationship with satisfaction. The reason for the difference in the results of studies is that in this medical center, no insurance or organ has a special priority and all patients benefit from the same amount of facilities and medical services. The association between hospitalization and patient satisfaction was not statistically significant; similar to the results of the present study, satisfaction increased in a study with increasing hospitalization [54].

In general, the reason for the difference in satisfaction results in recent studies and other studies can be considered the difference in the type of staff, hospital environment, and how to provide services in different centers, which greatly affects the quality of staff work and subsequent satisfaction. But, factors such as differences in the characteristics of the study population and, most importantly, the different methods of assessing satisfaction and overcrowding in metropolitan hospitals should also be considered. Also, people's cultural conditions, such as proper etiquette and communication, prevent the reflection of real opinions and their criticisms. In addition, dissatisfied patients usually do not cooperate in completing the questionnaires and do not want to participate in the study, which increases participation. Satisfied people are satisfied and as a result, the percentage of people's satisfaction increases falsely. Another important difference between patients' satisfaction in this study and other studies is that other hospitals may be educational due to the prevailing atmosphere in university hospitals, such as the centrality of education, research, and training of human resources, as well as the multiplicity of decisions and crowded sections. Various consequences have negative consequences, such as the lack of justice for patients in terms of access to medical facilities; While in the hospital under study, the focus has been on patient management by experienced staff, not students, and there is no overcrowding in university hospitals, and therefore patient satisfaction has been further ensured.

In the present study, a high percentage of patients announced that they would choose this hospital for their next visit and would also recommend this center to friends and acquaintances. This finding is consistent with the results of a genetic study that found that 85% of patients' satisfaction could lead to a recurrence of about 92% of them and the hospital's recommendation to others at 89% (28).

**Strengths**

One of the advantages of this research is that it provides a sufficient questionnaire to the patient and there is no need for the questioner to be present with the patient to check the level of satisfaction and also its compliance with the conditions, rules, and culture of the hospital. As much as possible, an attempt was made to use the patient's comments during the discharge and when the discharge was performed by the companion so that the patient could respond calmly. In this study, we have tried to
consider all the factors affecting patient satisfaction in compiling the questionnaire and therefore the results of satisfaction with this questionnaire can identify key factors affecting the management of the hospital in improving hospital conditions in order to obtain more patient satisfaction.

Limitations

One of the limitations of the research is the use of only one military hospital to measure satisfaction and non-comparison with other centers, so the results of this study cannot be generalized to the entire health care system in Iran. Also, the reluctance of dissatisfied people with the services to complete the questionnaire may have created a measurement bias in the results. In order to eliminate this limitation, an attempt was made to provide complete explanations and the purpose of the research and to mention the importance of the dissatisfied patients' point of view in order to improve the performance of the hospital. As much as possible, participants should be encouraged to participate in the research in order to complete the questionnaire.

Conclusion

Given that patient satisfaction is of great importance as a measure of the quality of care, the results can provide a wealth of information about the success rate of programs in achieving the values and expectations of patients. It can also help with higher levels of management in planning, policy-making, and program evaluation. The results of the study showed that the level of client satisfaction with the hospital is excellent and the level of satisfaction in the treatment department is slightly higher than in non-therapeutic departments. In this regard, in order to improve the performance of the hospital and improve patient satisfaction, it is necessary to conduct an independent study to investigate the causes of dissatisfaction. Use more advanced statistical methods such as structural equations to determine the contribution of each of the measured areas to patient satisfaction. Finally, it can be stated that by using the results of this study and determining the prioritization of executive measures to provide better services, more patient satisfaction can be achieved.

Declarations

Ethics approval and consent to participate

This study was approved by the University Research Council with the code 98000238, which was approved by the ethics committee of Baqiyatallah University of Medical Sciences at IR.BMSU.REC.1398.269. Adequate information about the objectives of the study and its importance, maintaining the anonymity and voluntary participation and confidentiality of the information obtained was given to the participants and was completed after obtaining the written consent of the questionnaires.

Consent for publication
Informed consent was obtained from the patient. There is no data contained within the manuscript from which individual patients or participants may be identified.

**Availability of data and materials**

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

**Competing interests**

The authors have no conflicts of interest.

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**Authors' contributions**

All Authors' equally contributed to this study.

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