*Original Article*

# Post-Discharge learning needs of General Surgery patients

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**ABSTRACT**

***Objective:*** To determine whether the post discharge information needs of general surgical patients were fulfilled according to the Patient Learning Needs Scale (PLNS).

***Methodology:*** This cross-sectional and descriptive study was conducted on patients in General Surgery Department of a university medical center in Malatya, Turkey. The sample included 90 patients. Data were accumulated using by Patient Information Form and PLNS, between January-February, 2010.

***Results:*** The PLNS mean total score of patients was 196.99±36.14 with an importance level of 3.94 were found to be very important for patients learning needs. Before discharge, 50% of patients did not have sufficient information about their discharge. Physicians supplied 43.3% of discharge information whereas nurses supplied 15.6% of such information. Female patients' mean total score was statistically significantly higher than that of male patients ($p < 0.05$).

***Conclusions:*** Results of this study showed that participants had significantly high needs for discharge education concerning home care after discharge. Results suggest a need for implementation of enhanced patient education needs in meeting.

**KEY WORDS:** Patient learning needs, Post-discharge, General surgery, Nursing.

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## INTRODUCTION

The purpose of the discharge teaching of surgical patients is to encourage patients to take the highest level of responsibility for their own health and have them return to normal life in short-term.[1] It has been reported that planned discharge education for patients contributes to: reduced length of hospital stay; continuity of care between hospital and home or community services; reduced rate of post-discharge complications and readmission; improved quality of care at hospital and home; enhanced patient satisfaction; increased adherence to self-care routines; and, reduced cost of care.[2,3]

Today, advances in anesthetic and surgical technology and health care economic demands leads to earlier discharge for many patients.[4] The shortened length of the hospital stay necessitates a shorter period of time available for nurses to administer discharge education, and the expectation that surgical patients are expected to complete healing process

extend into home setting.[2,5,6] This means that much of the postoperative care and monitoring is performed at home by patients and their families.[7] Fagermoen and Halmilton[8] suggest that patients have not been provided with sufficient information about such areas such as possible complications, pain and symptom management, nutrition, wound care, sleep, allowable activity levels and potential psychological reactions before leaving the hospital.

Discharge education administered to patients who planned to recover mainly at home is a major duty of surgical nurses. At most hospitals in Turkey, generally, at the time of discharge, the doctor or nurse gives short verbal instructions to patients about areas of care such as home bathing, wound dressing when necessary, diet (when pertinent) and, movement restriction. Previously, we showed in an evaluation of satisfaction with nursing care in our hospital's inpatient surgery unit, the discharge education for home care was ranked with the lowest level of patient satisfaction.[9] In Turkey, studies about patient discharge education and their learning needs have mostly been undertaken in the general population and are therefore not specific to surgical patients. In this context, it is important to research the information needs of general surgery patients relating to priority areas for post-discharge.

It is important to determine the patient's priority of learning needs by appropriate instruments because to give an effective education to patient. There are various instruments related to evaluation of patient's needs. One of the instruments developed to be used in the identification of learning needs of patients is the Patient Learning Needs Scale (PLNS). The PLNS is a self-administered questionnaire developed by Bubela et al to measure medical or surgical patients' perceptions of learning needs at discharge and priorities. The scale consists of 50 items and seven subscales (Medications, Activities of living, Community and follow-up, Feelings related to condition, Treatment and complications, Enhancing quality of life, Skin care).[10] The validity and reliability study of the Turkish form of the PLNS were tested by Catal and Dicle.[11] The objective of this study was to determine whether the post discharge information needs of general surgical patients were fulfilled according to the PLNS.

## METHODOLOGY

This was a cross-sectional and descriptive pilot study. The sample included 90 patients. The study was conducted on patients in General Surgery Department of Inonu University Turgut Ozal Medical Center (TOMC) between January-February, 2010, in Malatya, Turkey. Inclusion criteria consisted of: age 17 Year or over, having an inpatient stay for at least two days following surgery, being literate (who can read and write but had no formal school diploma). Patients being without serious pain was included in this study through patients being serious pain didn't want to fill the questionnaire.

Data were accumulated through administration of a Patient Information Form by prepared researchers and Turkish version of the PLNS. Furthermore patients were asked the following questions: Did you receive information about self care at home before hospital discharge? Who gave you this post-discharge information? The PLNS is scale a Likert-type, and possible replies for each item ranging from: 1(not important) to 5(extremely important). Results analysis included assessment of scores for each sub-scale and total scale (possible range 50-250 and importance level of learning needs). Scale scores of patients is rising with increasing their education needs.[10,11] For the current study, the Cronbach alpha value was 0.97 for the total scale, and ranged from 0.78 to 0.88 for sub-scales. Data collection instruments were given to the patient at discharge before leaving the clinic; forms were returned to the researcher after being filled out by the patient.

*Ethic considerations:* Participant was voluntary in this study. The purposes of study were explained to patients, and all participants gave oral and writing informed consent prior to participation in this study. Permission was obtained in writing from the General Surgery Department for the implementation of this study.

*Statistical analyses:* The data were analyzed using Statistical Package for Social Sciences (SPSS) for Windows 15.0. To comparison descriptive characteristics of patient according to the PLNS scores (mean, standard deviation) was used Student-t, Mann-Whitney U and Kruskall-Wallis, and Pearson correlation tests. The results was evaluated with $p<0.05$ significance level.

## RESULTS

The mean age of patients in this study was 48.61y (range, 17 to 85 years), the average length of hospital stay was 6.66 days (range, 2 and 20d). There was no statistically significant relationship between patients' age and length of hospital stay and PLNS total score ($r=0.96$, $r=-0.71$, $p>0.05$; respectively). A comparison of The PLNS total scores according to other characteristics of patients is shown in Table-I. There was no statistically significant difference between PLNS

and characteristics of patients (p>0.05); excluding gender status. The total scale scores for female patients were higher than in male patients; this difference is statistically significant in favor of men (t=2.064, p<0.05).

Before discharge, 50% of patients said that they did not have sufficient information about their discharge. Physicians supplied 43.3% of discharge information whereas nurses supplied 15.6% of such information. The PLNS total and subscale scores and the level of importance is shown in Table-II. The PLNS mean total score of patients was 196.99±36.14 with an importance level of 3.94 were found to be very important, as well as being close to the level. The mean score for the 'treatment and complications' subscale were 36.59±6.73 and 'medications' subscale yielded a mean score of 32.32±5.97 meaning that study subjects felt these were that these were very important areas for patient education.

Table-I: Comparisons of PLNS total scores according to characteristics of patients (N=90).

| *Characteristics* | *n* | *%* | *PLNS total scores Mean±SD* | *Significance Test P* |
|---|---|---|---|---|
| Gender | | | | |
| Female | 58 | 64.4 | 202.72±32.51 | t=2.064 |
| Male | 32 | 35.6 | 186.59±40.41 | P=0.042 |
| Education level | | | | |
| Only literate | 32 | 35.6 | 203.43±30.80 | $KW_x^2$=2.10 |
| Primary education | 39 | 43.3 | 195.33±42.07 | P=0.550 |
| High school education | 11 | 12.2 | 183.45±37.28 | |
| University education | 8 | 8.9 | 197.87±17.66 | |
| Marital status | | | | |
| Married | 70 | 77.8 | 197.57±38.44 | $KW_x^2$=1.66 |
| Single | 14 | 15.5 | 190.00±29.95 | P=0.435 |
| Widowed/Divorced | 6 | 6.7 | 206.50±16.37 | |
| Place of residence | | | | |
| City center | 56 | 62.2 | 201.00±31.66 | $KW_x^2$=0.66 |
| Town | 11 | 12.2 | 195.54±24.96 | P=0.720 |
| Village | 23 | 25.6 | 187.91±48.63 | |
| Caregiver in home | | | | |
| Present | 78 | 86.7 | 196.96±34.03 | |
| MWU=23.000 | | | | |
| Absent | 12 | 13.3 | 197.16±49.58 | P=0.493 |
| Cause of admission to hospital | | | | |
| Intestinal diseases | 28 | 31.1 | 193.57±42.59 | $KW_x^2$=3.69 |
| Liver-biliary disease | 17 | 18.9 | 202.41±36.63 | P=0.594 |
| Hernia | 16 | 17.8 | 202.43±23.76 | |
| Thyroid disease | 15 | 16.7 | 195.73±31.70 | |
| Stomach disease | 5 | 5.5 | 213.00±5.43 | |
| Other (breast, pancreatic, splenic) | 9 | 10.0 | 180.88±47.65 | |
| Comorbid diseases | | | | |
| Yes | 37 | 41.1 | 200.46±32,25 | t=0.759 |
| No | 53 | 58.9 | 192.36±38.02 | P=0.450 |
| History of previous surgery | | | | |
| Yes | 40 | 44.4 | 202.78±33.21 | t=1.365 |
| No | 50 | 55.6 | 192.36±38.02 | P= 0.176 |
| Receiving information about post-discharge | | | | |
| Yes | 45 | 50.0 | 198.00±39.61 | t=0.264 2 |
| No | 45 | 50.0 | 195.98±32.72 | P=0.79 |

## DISCUSSION

In this study, findings show that half of the patients did not receive a planned or sufficient discharge education, while half of the patients had received unplanned general verbal information meaning that the learning needs of patients at the desirable level were not adequately met. Similarly, results of the previous studies also showed that half of patients experiencing abdominal surgery did not receive adequate patient education or were taught incorrectly before discharge from physicians or nurses.[12,13]

As stated in the results section, only 15.6% of discharge education was administered by nurses; these results were consistent with Coskun and Akbayrak's study[14] in which they report that 18% of discharge training was administered by nurses.

The results of the current study indicate that these nurses did not take an active role in discharge education. However, nurses are required to teach planned discharge instructions in order to prevent

Table-II: Importance levels of learning needs and mean scores of total PLNS.

| *Total scale/subscales* | *Item number* | *Minimum - Maximum scores* | *Mean±SD* | *Importance level* |
|---|---|---|---|---|
| Treatment and complications | 9 | 11-45 | 36.59±6.73 | 4.07 |
| Medications | 8 | 8-40 | 32.32±5.97 | 4.04 |
| Quality of life | 8 | 8-40 | 31.96±6.28 | 3.99 |
| Activities of daily living | 9 | 11-45 | 35.02±6.66 | 3.89 |
| Skin care | 5 | 5-25 | 19.47±4.00 | 3.89 |
| Community and follow-up | 6 | 7-30 | 22.94±5.08 | 3.82 |
| Feelings related to condition | 5 | 6-25 | 18.69±4.48 | 3.74 |
| Total | 50 | 57- 250 | 196.99±36.14 | 3.94 |

postoperative problems, maintaining proper home care, enhance the quality of life in the postoperative period.[3,15] Individuals who suffer stress of surgery need information to ensure compliance with the post-operative care and for development of effective coping behaviors[11]. In this study, the high PLNS total score can be seen as an indicator of information seeking behavior in these patients, with a significance level deemed as "important", and also close to the level identified as very important.

Total scale and subscale scores were lower in the Jacobs' study[5] that was conducted to determine post-discharge learning needs of abdominal laparoscopic surgical patients. In the present study, findings suggest that patients were discharged from the hospital with unanswered questions indicating that the physicians and nurses paid insufficient attention to discharge education. The highest sub-scale scores were for 'treatment and complications' the 'medications', in other words, indicating high learning needs in these areas; these next subscales in rank were 'quality of life' 'activities of daily living' and 'skin care'. Patients may have assigned a higher level of importance to the 'treatment and complications' subscale because they feel responsible for coping with complications at home, maintenance care and follow-up and felt they weren't given adequate information to do so. This result is in agreement with results of the previous studies.[7,16-18]

In the present study, female patients' mean total score was statistically significantly higher than that of male patients. This result is in confirmity with result of study of Bubela et al.[19] Our finding suggests that female patients have higher expectation of receiving information about in-home care after discharge than men.

## CONCLUSIONS

Results of this pilot study showed general surgical patients had significantly high needs for discharge education concerning home care after discharge especially about treatment and complications, medications, enhancing quality of life, life activities and skin care. This result probably arises from the fact that physicians and nurses were not given adequate training for administration of patient education before discharge. Results of this study suggest a need for implementation of enhanced patient education needs in meeting. For effective patient education, individual patient characteristics must be taken into account; appropriate discharge education should be implemented verbally and supplemented with written or visual materials.

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