

Original Article

Learning Needs of Hematology Patients

Aysel Özdemir, RN, PhD

Lecturer in Public Health Nursing, Uludag University School of Health Department of Nursing, Bursa, Turkey

Hicran Yildiz, RN, PhD

Associate Professor in Medical Nursing, Uludag University School of Health Department of Nursing, Bursa, Turkey

Neriman Akansel, RN, PhD

Associate Professor in Surgical Nursing
Uludag University School of Health Department of Nursing, Bursa, Turkey

Correspondence: Neriman Akansel, PhD, RN, Associate Professor, Uludag University School of Health, Surgical Nursing Department, Gorukle Campus, 16059 Bursa, TURKEY e-mail: nakansel@uludag.edu.tr

Abstract

Introduction Accessing learning needs and introducing planned education for the hematology patients is an important intervention in meeting patient learning needs.

Aim The aim of this cross sectional and descriptive study was to determine hematology patients' learning needs.

Methodology Data were collected by using a form designed for this study and patients learning needs were determined by using a Patient Learning Needs Scale (PNLS) developed by Bubela et al. (1990). Statistical analysis were done using SPSS 20.0 program.

Results The mean age of the patients were 54.79 ± 14.68 , close to half of the patients were females (47.4 %). More than half of the patients were elementary school graduates (64.9%). Duration of their current disease is 2.28 ± 1.44 years. Most of the patients (78.9%) are willing to receive patient education. Scores obtained from PLNS were found high. Hematology patients' education needs mostly focus on treatment and complications (36.63 ± 5.43).

Conclusion It has been considered that planning patient education will help patients in managing their disease and reduce disease related complications. Systematically assessing patient learning needs and educating patients according to these results is recommended.

Key words: Hematology, learning needs, patient education, nursing

Introduction

Cancer is one of growing chronic diseases in the world. According to 2014 data from Turkish Statistical Corporation 2014 (TUIK, 2014) and the prevalence of cancer is 221.5 in hundred thousand people. Fourteen million new cancer cases have been expected between the years of 2012-2022 in all around the world (WHO, 2012). In the despite of development in science long treatment process of the cancer itself influence the one's life forever. For this reason it is vital for the cancer patients to have high life quality, develop positive health practices, able to meet

their own needs and solve problems they may face during disease process (Özcan, 2008). Consequently patients are eager to get knowledge to enhance effective coping skills, think objectively (Çatal. E., Dicle, 2008). Wiljer et al (2012) reports that lung cancer patients experienced high level of anxiety during this process; they mainly needed informational and emotional support (Wiljer et al., 2012). There are several studies done on patient education needs, education strategies and effectiveness of these activities. It has been considered that being informed related to disease process and treatment

procedures and prognosis are very important facts for hospitalized patients (Davis et al., 2014; Lovell et al., 2014; Papadakos et al., 2014; Tariman et al., 2014; You et al., 2014; Zirkie et al., 2014), overall they place a highest importance on medical information and procedures (Davis et al., 2014; Papadakos et al., 2014), addressing patient needs providing well developed and structured information for patients are substantial interventions in health care (Özcan, 2008; Van et al., 2013). Patient education is mostly done by health care providers who actually treat and give care to patients (Howland, 2009). Especially the physicians and nurses are responsible to give education related to patients' condition, incorporate them in to their own care, guiding them in gaining their health, prevent complications and also maintain their care at home. (Tan, Özdelikara, Polat, 2013)

Methods

Participants

This study cross sectional and descriptive study was done with hematology patients who were hospitalized in one university hospital during April-May 2013. Participants were patients who were able to communicate, understand instructions and willing to participate in to this study. Data were collected from 57 patients who were meeting the study selection criteria.

Ethical considerations

Ethical approval was taken from Ethical Committee of the University and hospital administration was also informed about the study in written.

Data collection procedure

Data were collected using a tool named Patient Learning Needs Scale (PLNS) developed by Bubela et al. (1990). Content and construct validity of the Turkish version of the PLNS was done by Çatal & Dicle (2008). PLNS is a Likert type scale contains 50 items and 7 sub-groups. Each item receives scores from 1 to 5. An

average score can be obtained from the scale ranges from 50-250.

Data analysis

Data were analyzed using SPSS 20.0 program. Results were given in means, percentages. Pearson correlation, t-test, Mann Whitney U test, Kruskal Wallis (KW) tests were done for statistical analysis.

Results

Mean age of the hematology patients were 54.79 ± 14.68 years. Close to half of them (47.4%) were females and most of them were married (79.8%). Subjects were mainly elementary school graduates (64.9%) and high percentage of them reported that they have an average income (80.7%). Duration of their previous illness was 2.28 ± 1.44 years. Some demographic variables of patients and variables related to disease process were presented in table 1.

Close to half of the hospitalized patients (47.4%) reported receiving education at the time of their previous hospitalization. Face to face method was mostly selected method for patient education (92.6%). Patients are eager to be informed and they prefer to receive their education using a face to face method (Table 2). PLNS score were calculated as high as 193.08 ± 30.62 ; treatment and complications subscale received highest score among all others (Table 3).

Socio demographic variables such as age, gender, education, socio economic level are not correlated with patients' learning needs ($p > 0.05$). Effects of having another chronic disease, duration of the hospitalization on patients learning needs scores were statistically insignificant. However significant differences were found between the duration of treatment and complications subscale and the length of disease ($p < 0.05$). Previous hospitalization significantly affected the scores obtained from activities of living, community and follow up, enhancing quality of life, skin care subscales ($p < 0.05$) (Table 4).

Table 1. Socio demographic variables of the hematology patients (n=57)

Age (Mean \pm SD)	54.79 \pm 14.68 (Range 21-57 years)	
Length of the current disease (Mean \pm SD)	2.28 \pm 1.44 (Range 1-5 years)	
Length of the hospitalization (Mean \pm SD)	12.72 \pm 10.32 (Range 1-60 days)	
	n	%
Gender		
Male	30	52,6
Female	27	47,4
Marital status		
Married	45	78,9
Single	4	7,0
Widowed	8	14,0
Education level		
Illiterate	2	3,5
Primary school	37	64,9
Middle school	7	12,3
University	4	7,0
Other	7	12,3
Employment status		
Self-employed	12	21
Retired	17	29,8
Not employed	28	49.1
Income level		
Good	5	8,8
Fair	46	80,7
Bad	6	10,5
Accompanying person		
Available	51	89.5
Not Available	6	10.5
Hospitalisation experience previously		
Yes	37	64.9
No	20	35.1

Table 2. Distribution of hematology patients' expectations from patient education

Patients' expectations from patient education	n	%
Request for education (n=57)		
Yes	45	78.9
No	12	21.1
Preferance of the time for education (n=57)		
Just before discharge	13	28.9
During hospitalisation	18	40.0
Before each intervention	5	11.2
Others	9	19.9
The preferred method for education (n=45)		
Face to face	29	64.4
Only by using brochures/ pamphlets	16	35.6
Education topics requested by patients (n=27)		
About their diet	3	11.1
About medications/ treatment	5	18.5
About the disease	19	33.3

Table 3. Distrubition of scores obtained from PLNS sub-groups

Sub-groups of PLNS	Mean \pmSD	Min	Max
Medications	33.78 \pm 5.97	12.00	40.00
Activities of living	33.57 \pm 6.56	18.00	45.00
Community and follow ups	20.57 \pm 4.06	6.00	28.00
Fellings realted to condition	17.78 \pm 4.32	5.00	25.00
Treatment and complications	36.63 \pm 5.43	13.00	45.00
Enhancing quality of life	33.45 \pm 5.05	15.00	40.00
Skin care	17.26 \pm 4.27	5.00	25.00
Total score obtained from PLNS	193.08\pm30.62	74.00	241.00

Discussion

This study focused on patient learning needs of hematology patients and aimed to determine factors affecting the learning needs in a special group of patients. PNLN was calculated as 193.08 ± 30.62 . The maximum total score of PNLN was 241. Previous studies indicate that mean PNLN scores of patients range from 165.95- 204.26 which is congruent with the results of our study (Polat et al., 2011). According to sub groups of the scale it has been determined that treatment and complications subscale 36.63 ± 5.43 received the highest score overall. In this study demographic variables such as age, gender, marital status and education level did not significantly affect the learning needs variable and total scores obtained from PNLN. According to current literature age is considered as an important determinant on learning needs of patients. In a study conducted in coronary artery bypass patients age significantly affected the total learning needs (Alkubati, Al-Zaru, Khater, Ammouri, 2013) Particularly younger and middle aged patients were eager to get more information than older ones (Fredericks, 2009; Eshah, 2011; Alkubati, Al-Zaru, Khater, Ammouri, 2013) On the contrary there are some studies represent that older patients need more information than younger patients (Alkubati, Al-Zaru, Khater, Ammouri, 2013; Tan, Özdelikara, Polat, 2013) However the results of this study failed to show any relationship between patients' age and their learning needs which is consistent with some previous studies (Bubela et al., 1990). Gender is another fact that may trigger the learning needs of patients according to results of previous research. Particularly females tend to address more learning needs than men do so (Bubela et al., 1990; Henderson, Zernike, 2001; Fredericks, 2009; Uzun, Ucuzal, Inan, 2011). Johansson et al. (2002) showed that women were in need of more information than men before discharge from hospital (Johansson, Hupli, Salantera, 2002). There are also some other studies reporting that men have higher education needs than women (Eshah, 2011; Alkubati, Al-Zaru, Khater, Ammouri, 2013). Gender did not affect the PNLN scores in this study which is congruent with the results of Şendir et al. (2014) (Şendir,

Büyükyılmaz, Muşovi, 2014). Although statistically no significance was detected; mean scores obtained from each sub scale were high among females in this study. Similarly marital status of the haematology patients did not have any effect on their PNLN scores. However mean score obtained from subscales PNLN show that single patients are more concerned about their health. A connection between learning needs and education does exist according to literature (Bubela et al., 1990; Johansson, Hupli, Salantera, 2002). Educational level of the patients' is considered as an important fact in adhering the treatment process successfully. Although the educational level of the patients did not have any effect on PNLN's in our study, studies show that education level of patients is one of the determinants in patients' learning process (Johansson, Hupli, Salantera, 2002; Clark, Lan, 2004; Şendir, Büyükyılmaz, Muşovi, 2014). Especially undereducated patients were more willing to receive information on medications, activities of living, treatment and complications, enhancing quality of life although no significant results were obtained in our study. Employment status is thought as a triggering factor in increasing patient learning needs employment status did not influence the learning need scores of haematology patients in our study. According to literature learning needs of patients either increase (Clark, Lan, 2004) or decreases with working status of patients (Fredericks, 2009). Johansson et al. (2002) reported that that after discharge, retired hip replacement patients had stronger learning needs than those who still working (Johansson, Hupli, Salantera, 2002). This result show that the concept of the disease may influence the learning needs of patients in either way. Because of the cultural structure in Turkey, family members and or professionals' are usually reluctant in telling the truth to the patient especially in diseases with poor prognosis. Based on the results of current study it was assumed that haematology patients are not aware of their diagnosis and disease process thus may affected their attitudes towards learning. However patients legally have a right to be informed about their disease and treatment procedures done to cure it. Previous research

indicate that patients are willing to be informed about medications, complications and symptoms, treatment and activities of daily living (Johansson, Hupli, Salanterä, 2002). Patients are usually curious about getting practical information about their condition, causes of the disease and prevention methods. Although patients' demographic variables (age, gender, marital status, educational status etc.) did not have any influence on their learning needs ($p>0.05$), patients were eager to be informed and they prefer to receive an education. Mostly the treatment and complications subscale received the highest score among all others. For seriously ill patient such as our study population preventing complications is an important part in management of disease process. Studies done with different patient groups show that avoidance from complications are really important for patients (Şendir, Büyükyılmaz, Muşovi, 2014). Since complications tends to reverse treatment effort of the disease and makes it hard to control patients' need of avoidance from complications is understandable. Effect of previous hospitalization was examined and it was noted that the total score was higher in cases that were previously hospitalized. Previous hospitalizations might in a way cause the patients to be more interested about the disease and this might cause to increase the learning needs. The variables of activities of living, community and follow-up, enhancing quality of life, skin care were significantly different in previously hospitalized patients. However in Şendir's (2014) study, having previous surgery did not affect the mean PNLN scores significantly (Şendir, Büyükyılmaz, Muşovi, 2014). In our study the total PNLN scores were not affected by the economic status of the cases. In a study done by Eshah et al. (2011) reveals those patients with low socioeconomic status requested less information than others. Fifty four point four percent (54.4%) of the cases have a family member with a chronic disease and having a family member with chronic disease did not influence the variables and the total PNLN scores. Among the study group 64.9% had previous hospitalization. When the disease process was taken into the consideration duration of the disease itself affected the

treatment and complications variable of the total PNLN scores.

Conclusion

Having another chronic disease, duration of the hospitalization did not affect PNLN in our study. Similarly socio demographic variables also did not correlate with PNLN scores of the patients.

Previous hospitalization significantly affected the scores obtained from activities of living, community and follow up, enhancing quality of life, skin care subscales. These results show that patient do have some unmet learning needs related to their current condition. Education is an important part of patient care. One of the important point in patient education is to arrange it according to patient needs and providing it in a planned schedule. Health care professionals play an important role in patient education which places them in a key position. Assessment of learning needs of hospitalised patients are therefore important and can guide health care staff in planning the education. Especially during the discharge of patients information about medications, potential complications, and daily living activities should be introduced. Assessment of patient learning needs with validated instruments is a valuable intervention in organising effective educational activities and help reduce recurrent hospitalizations and complications.

Conflicts of interests

The authors declare that there are no conflicts of interest.

References

- Alkubati, S.A., Al-Zaru I.M., Khater, W., Ammouri, A. A. (2013). Perceived Learning Needs of Yemeni Patients After Coronary Artery Bypass Graft Surgery. *J Clin Nursing*, 22(7-8), 930–938.
- Bubela, N., Galloway, S., Mccay, E., Mckibbin, A., Nagle, L., Pringle, D., et al. (1990). The Patient Learning Needs Scale - Reliability and Validity. *J Adv Nursing*, 15(10), 1181–1187.
- Clark, J.C., Lan, V. (2004). Heart Failure Patient Learning Needs After Hospital Discharge. *Applied Nursing Research*, 17(3), 150–157.
- Çatal, E., Dicle, A. (2008). Content and Construct Validity of Patient Learning Needs Scale in

- Turkey. Dokuz Eylül University Nursing School Journal, 1(1), 19–32.
- Davis, L.A., Ryszkiewicz, E., Schenk, E., Peipert, J., La See, C., Miller, C., et al. (2014). Lung transplant or bust Patients' recommendations for ideal lung transplant education. *Prog Transplant*, 24(2), 132–141.
- Eshah, N. F. (2011). Jordanian Acute Coronary Syndrome Patients' Learning Needs: Implications For Cardiac Rehabilitation and Secondary Prevention Programs. *Nursing Health Science*, 13(3), 238–45.
- Fredericks, S. (2009). The Relationship Between CABG Patient Characteristics and Perceived Learning Needs: A Secondary Analysis. *Canadian Journal of Cardiovascular Nursing*, 19(1), 13–9.
- Henderson, A., Zernike, W. (2001). A Study of the Impact of Discharge Information for Surgical Patients. *J Advanced Nursing*, 35(3), 435–41.
- Howland, R. H. (2009). What Should Patients Be Told About Their Medications? *Journal Of Psychosocial Nursing*, 47(2), 17–20.
- Johansson, K., Hupli, M., Salanterä, S. (2002). Patients' learning needs after hip arthroplasty. *J Clinical Nursing*, 11(5), 634–9.
- Lovell, M.R., Luckett, T., Boyle, F.M., Phillips, J., Agar, M., Davidson, P. M. (2014). Patient education, coaching, and self management for cancer pain. *J Clinical. Oncology*, 1, 32(16), 1712–1720.
- Organisation(WHO), W. H. (n.d.). Cancer Report. Retrieved from <http://www.who.int/world-cancer-reports>, November 2014.
- Özcan, H. (2008). The use rates of patients' discharge education by patients given by the nurse after open heart surgery. *Trakya University Master Thesis*, Trakya.
- Papadakos, J., Urowitz, S., Olmstead, C., Jusko Friedman, A., Zhu, J., Catton, P. (2014). Informational needs of gastrointestinal oncology patients. *Health Expect*. doi:10.1111/hex.12296 (published ahead of print)
- Polat, Ş., Çelik, S., Erkan, A.A., Kasali, K. (2014). Identification of learning needs of patients hospitalized at a University Hospital. *Pak J Med Sci*, 30(6), 1253–1258.
- Şendir, M., Büyükyılmaz, F., Muşovi, D. (2014). Patients' discharge information needs after total hip and knee arthroplasty: a quasi-qualitative pilot study. *Rehabilitation Nursing*, 38(5), 264–71.
- Tan, M., Özdelikara, A., Polat, H. (2013). Determination of patient learning needs. *Journal of Florence Nightingale Nursing Faculty*, 21(1), 1–8.
- Tariman, J.D., Doorenbos, A., Schepp, K.G., Singhal, S., Berry, D. (2014). Information needs priorities in patients diagnosed with cancer. *J Adv Parac Oncol*, 5, 115–122.
- TUIK. (2014). "Hematoloji." Retrieved from <http://www.tuik.gov.tr>, november, 2014
- Uzun, Ö., Ucuzal, M., Inan, G. (2011). Post-Discharge learning needs of General Surgery patients. *Pak J Med Sci*, 27(3), 634–637.
- Van Weert, J.C., Bolle, S., van Dulmen, S., Jahnsen, J. (2013). Older cancer patients' information and communication needs: what they want is what they get? *Patient Education Couns*, 92(3), 388–397.
- Wiljer, D., Walton, T., Gilbert, J., Boucher, A., Ellis, P.M., Schiff, S., et al. (2012). Understanding the needs of lung cancer patients during the pre-diagnosis phase. *J Cancer Education*, 27(3), 494–500.
- You, G.Y., Li, X., Xu, Y., Hu, X.L., He, L., Wang, Y.L., et al. (2014). Learning needs of Chinese patients before undergoing elective percutaneous coronary intervention. *Contemp Nurse*, 47(1-2), 152–158.
- Zirkie, E.J., Ndsi, M.E., Vlieland, T.P., Meesters, J. (2014). Measuring educational needs among patients with systemic lupus erythematosus (SLE) using the Dutch version of the Educational Needs assessment Tool. *Lupus*, 23(13), 1370–1376.

Table 4. Effects of some variables of patients on their PLNS scores (n=57)

	Medications	Activities of living	Community and follow ups	Feelings related to condition	Treatment and complications	Enhancing quality of life	Skin care	Total score obtained from PLNS
Gender	t=-0.649, p=0.519	t=-0.943, p=0.350	t=-0.347, p=0.730	t=-0.407, p=0.686	t=0.196, p=0.845	t=-0.348, p=0.729	t=-0.178, p=0.859	t=-0.479, p=0.634
Age	r=-0.093, p=0.492	r=0.079, p=0.561	r=0.121, p=0.370	r=-0.006, p=0.963	r=0.031, p=0.821	r=-0.029, p=0.830	r=-0.083, p=0.540	r=0.003, p=0.982
Marital status	KW=0.874,p=0.646	KW=1.541, p=0.48	KW=0.189, p=0.90	KW=1490,p=0.475	KW=0.310,p=0.857	KW=0.952,p=0.618	KW=3.629,p=0.163	KW=1.051,p=0.591
Education	KW=4.717,p=0.318	KW=5.330, p=0.255	KW=1.870, p=0.760	KW=1.730,p=0.785	KW=7.081,p=0.132	KW=2.722,p=0.605	KW=4.446,p=0.349	KW=4.872,p=0.301
Employment status	KW=5.861,p=0.210	KW=9.010,p=0.061	KW=3.,375, p=0.497	KW=2.553,p=0.635	KW=6.412, p=0.170	KW=6.619, p=0.157	KW=6.431,p=0.169	KW=5.490, p=0.241
Economic status	KW=2.017, p=0.365	KW=1.129, p=0.569	KW=0.631, p=0.729	KW=0.798, p=0.671	KW=1.813, p=0.404	KW=3.638, p=0.162	KW=1.171,p=0.557	KW=1.505, p=0.471
Chronical disease in family	t=0.023, p=0.982	t=0.606, p=0.547	t=-0.516, p=0.608	t=-0.395, p=0.694	t=-0.417, p=0.678	t=0.621, p=0.537	t=0.052,p=0.959	t=0.45, p=0.964
Duration of hospitalisation	r=0.017, p=0.902	r=-0.008,p=0.955	r=0.156, p=0.246	r=-0.023, p=0.865	r=-0.012, p=0.929	r=-0.020, p=0.880	r=0.059,p=0.664	r=-0.022,p=0.872
Duration of the disease	r=-0.218, p=0.103	r=0.013, p=0.926	r=-0.171, r=0.205	r=-0.193, p=0.151	r=-0.289*, p=0.029	r=-0.172, p=0.202	r=-0.024, p=0.861	r=-0.172, p=0.200
Hospitalisation experience	t=1.592, p=0.117	t=3.224, p=0.002	t=2.308, p=0.025	t=1.545, p=0.128	t=1.641, p=0.107	t=2.349, p=0.022	t=2.233, p=0.030	t=2.531, p=0.014
Willing to receive patient education	U=272.500, Z=0.049, p=0.961	U=316.500, Z=0.913, p=0.361	U=290.500, Z=0.403, p=0.687	U=279.000, Z=0.177, p=0.860	U=239.500, Z=-0.599, p=0.549	U=327.000, Z=1.120, p=0.263	U=324.500, Z=1.071, p=0.284	U=297.000, Z=0.529, p=0.597