# Roles and Responsibilities of the Home Care Liaison Nurse: A Review of the literature

#### Rafat Rezapour Nasrabad

Ph.D, Nursing Management Department, School of Nursing and Midwifery, Shahid Beheshti University of Medical Sciences, Tehran, Iran

# Correspondence:

Rafat Rezapour Nasrabad Nursing Management Department, School of Nursing and Midwifery, Shahid Beheshti University of Medical Sciences, Valiasr St, Cross Niayesh Highway,

Tehran, Iran

Tel:+98 21-88655366

Email: rezapour.r@sbmu.ac.ir

# **Abstract**

Introduction: The purpose of this study was to explore the roles and responsibilities of the liaison nurse as a new member of the health care team.

Methods:. Six scientific databases were reviewed for articles published between 2007 and 2017 in English language among peer-review journals. A total of 80 articles were obtained. After applying the inclusion and exclusion criteria, 5 articles were retained. These articles propose some tasks, roles and responsibilities for the liaison nurse to provide continuous care. But to address these issues, structural and educational changes are necessary to improve nurse performance.

Results: The results showed that liaison nurse roles are defined differently from the common roles of nurses.

Conclusion: The caring gap has always been a concern for the health system. The role of liaison nurses has been defined to maintain continuous patient care.

Key words: liaison nurse, continuity of care, home care, caring gap, nurse performance

Please cite this article as: Rafat Rezapour Nasrabad. Roles and Responsibilities of the Home Care Liaison Nurse: A Review of the literature. 2018;16(2):352-357. World Family Medicine.

DOI: 10.5742/MEWFM.2018.93284

#### Introduction

Today, the number of clinical nurses' roles has expanded in various areas of health and treatment (1). These roles vary from primary care provider to specialist nurses in different domains. However, the main roles of the nurse include providing patients with services, facilitating the admission and discharge of patients, making clinical decisions, supporting, directing, coordinating, organizing care plans, and providing mental and psychological support to patients. Here is the question: what can be done to increase the effectiveness of nurses and consequently increase the quality of care provided especially after discharge? Evidence suggests that a large group of specialized nurses called liaison nurses play specific roles in the hospital and community. A liaison nurse is supposed to be a patient advocate at the time of the patient's admission to the hospital and thereafter in the field of continuing care(2). They provide special care for sedation, diabetes, asthma, stoma wound, infection control, AIDS and intensive care units. The provision of these care services will result in a nurse's association with the community and the continued provision of care, especially in chronic diseases (3). The clinical function of these nurses is at two basic and advanced levels(4). At these levels, nurses collaborate and communicate with the patient and his or her family as well as different groups to meet the patients' mental and psychological needs, diagnose diseases, plan, implement, and assess nursing care. The most important actions of these nurses focus on promoting mental health, preventive measures, training for patients with self-care, implementing and monitoring prescribed therapies, health education, performing specific actions in critical cases, and specific patient counseling and management. Research has shown that the presence of a liaison nurse improves the quality of care, increases the knowledge of nurses, and creates better communication between the hospital and the community(5). The liaison nurse is not solely responsible for providing conventional nursing services, but is also responsible for providing information, as well as pastoral care to the patient at the time of diagnosis

and subsequent therapies. In fact, the liaison nurse is to provide a reliable communication channel between the treatment team, patients and their families (6). Liaison nurses are also responsible for the psychological and emotional support of patients and their families.

Liaison nurses can play an effective role in providing the necessary care at home, as well as providing recommendations for changing lifestyle and behavioral risk factors for the patient and family in addressing the concerns of the disease.

Liaison nurses are also able to facilitate early discharge from the hospital by providing care at home and acting as the main pillar between hospital and home and even replacing certain specific needs that are more relevant to nursing(7). Actually, the Liaison nurse position was established in the clinical setting to support integrated care of the patients by coordinating and encouraging inter-professional and interorganizational collaboration to address the patient's needs (8). The purpose of this literature review was to explore the details of the roles and responsibilities of the liaison nurses.

# Methods

In the present study, the literature was reviewed using the five-step protocol of conducting a systematic review process described by Khan et al, 2003. These steps included, (1) framing questions for a review, (2) identifying relevant work, (3) assessing the quality of studies, (4) summarizing the evidence and, (5) interpreting the findings (9).

#### Inclusion and exclusion criteria

Only original articles published on the subject of liaison nurses including quantitative, qualitative, and systematic reviews were included in this review. The search was carried out using specific key words such as liaison nurse, care gap and after care in combination with terms such as role, task and responsibility. Likewise studies which included liaison nurse positions in hospitals and official liaison nurse responsibilities were included in this review literature.

# Search and selection

Searching in six scientific databases such as ISI, Scopus, PubMed, EBSCO, CINAHL and Cochrane database was conducted. A total of 80 related original articles between July 2007 and May 2017 were retrieved. Based on the study objectives and relevance of the research title, 20 articles were selected by the researcher for further review. Selected articles were reconciled across the two reviewers for assessing the quality of studies until a consensus was reached. Finally 5 full text articles were approved for study inclusion. A narrative summary of the selected articles follows below.

The results of a 2016 US interventional study on the role of liaison nurses in hospitals suggest that liaison nurse interventions (counseling, informing, supporting the patient and family) have a major impact on the patient's recovery and the speed with which the patient returns to social activities. Clinical studies on the impact of the liaison nurse

as a coordinator to provide care for patients who are at the end of their illness emphasize the cost-effectiveness of services provided to patients with a life expectancy of less than a year, by the nurse (10).

In the context of the role of the liaison nurse in the hospital, an interventional (case-control) study was conducted at the Clinical Research Center of the Griffith University in 2007. The purpose of this study was to investigate the effect of liaison nurses on patient and family anxiety experiences before transferring from the intensive care unit to the normal ward. This interventional study, with a pre and post test design along with the control group, was conducted for four months. In the intervention group, the liaison nurse prepared the patient and family to transfer to the normal ward, but in the control group, the patient was transferred to the ward in the usual way. The results of the study showed statistically significant anxiety reduction among patients and their families in the intervention group (11).

In 2010, another study was conducted in Australia. The purpose of this study was to identify the effect of ICU liaison nurse on reducing the complications and possible injuries after the discharge of the patient from the ICU. The research method was case-control. In this study, the control group did not receive any care after discharge from the ICU, but in the case group, patients were visited by the ICU liaison nurse at least three times in three days. Patients were evaluated for three possible post-discharge incidents, including unexpected death, need for surgical procedures, and improved care. The data collection tool was a researcher-made questionnaire. In this study, 388 patients (201 controls and 187 cases) participated. After controlling other incidents, patients who received liaison nurse interventions achieved 1.82 times higher levels of care (p = .028) and needed surgery 2.11 times less (p = .006). These results indicate that the interventions performed by the liaison nurse are effective in preventing post-discharge incidents and improving their health (12). A similar case control study was conducted in 2007 at the pediatric ICU Melbourne Hospital, Australia. In this study, it was assumed that a liaison nurse would reduce the readmission of children in an intensive care unit within 48 hours after discharge from this department. After a year (July 2004 to June 2005), 1.388 children were discharged from ICU. During this period, 67 patients were never readmitted; overall, the rate of children's re-admission decreased from 5.4 to 4.8%. After a year, staff and patients were asked about the impact of the liaison nurse. A majority of staff members (98.5%) in ICU believed that the liaison nurse's measures are positive and useful, and 99% of the parents of the children considered the idea of liaison nurse as a positive role (3).

Objectives of the interventional study that was conducted by Carson and his colleagues in 2014 was to develop job descriptions and standards of care for the liaison nurse in preoperative settings. In this study, liaison nurse was a health care team collaborator, patient and families councellor, coordinator and manager for 12 months. Research results showed improvement in patient satisfaction and increased patient responsibility in their own health care during the twelve month without quality of care sacrificing. Staff nurses, patients and their families found that the liaison nurse role was essential in the heath care team (Carson, 2014).

#### **Studies Characteristics**

To determine the level of evidence of the selected articles, using the Melnyk Pyramid (2011) for hierarchy of evidence.

#### Levels of Evidence

**Level 1** - Systematic review & meta-analysis of randomized controlled trials; clinical guidelines based on systematic reviews or meta-analyses

Level 2 - One or more randomized controlled trials

**Level 3** - Controlled trial (no randomization)

Level 4 - Case-control or cohort study

**Level 5** - Systematic review of descriptive & qualitative studies

Level 6 - Single descriptive or qualitative study

Level 7 - Expert opinion

**Source:** Melnyk, B.M. & Fineout-Overholt, E. (2011). Evidence-based practice in nursing and healthcare: A guide to best practice. Philadelphia: Lippincott, Williams & Wilkins.(13)

The table includes seven levels of evidence, Level IV ideally describes a well-designed case-control or cohort study. In the present study, Methodology in all five studies were interventional (case-control) that reflected level 4 of the evidence in this rating system.

#### **Thematic Analysis**

The five articles shared commonalities about the roles and responsibilities of the liaison nurse. Themes across the articles were identified. In total, the five articles covering four principle roles for the liaison nurse included caring, educational, counselling and managerial roles. Also selected studies showed several tasks and responsibilities for the liaison nurse in the area of each of the liaison nurse's roles.

#### Results

In this review article, exploring the role and responsibilities of the home care liaison nurse, five case control studies were reviewed and the results of the selected articles are summarized in Table 1.

Table 1: Roles of the Liaison Nurse

Brief Bibliography	Research Objectives	Results (liaison nurse roles)
Hanson et al (2016)	Achieve the impact of the liaison nurse	Liaison nurse has a positive role in counseling, informing, coordinating, supporting the patients and their families.
Carson et al (2014)	Develop a job description, guidelines and a standard of care for the nurse liaison in the perioperative setting	The liaison nurse is a manager, coordinator, supporter, teacher, collaborator in the health care team.
Endacott (2010)	Identify the role of ICU liaison nurse in reducing the complications and possible injuries after the discharge of the patient from the ICU	Liaison nurse is effective in preventing post- discharge incidents and improving patients' health through caring, counselling, training, coordinating, supporting and managing the patient
Caffin (2007)	Identify the role of liaison nurse in preventing rehospitalization of the pediatric patient in ICU units after discharge.	Improving communication between parents and health care staff and community services after discharge, improving the quality of training provided in the department, improving patient outcomes and reducing re-hospitalization
Chaboyer et al (2007)	Effects of the liaison nurse in intensive care unit	Support the patient and relieve patient stress and anxiety

Based on the above table and the results of the selected articles, generally, the liaison nurse has four principal roles that the researcher classified as caring, educational-counseling and managerial fields. Also there are some documents that support this classification. For example Jowett in 2000 classified the roles of the liaison nurse in three levels, educational, training and counseling(14). This classification and the definitions are summarized in Table 2.

Table 2: Roles of the Liaison Nurse

Liaison Nurse roles to provide home care	Essentials	Definitions
Educational- Counseling Role	Ability and knowledge to provide necessary training for patients and their families	Patient and family education is a set of experiences a nurse gives the patient and their family with a positive impact on their knowledge, performance, and attitude of self-care.
Caring Role	Assessing the patient's condition at home to meet patient's care needs	Determining the patient's educational needs is the first step in educational planning at the time of discharge and then at home
	Ensuring the receipt of home care services	Ensuring that patients at home receive the best health care services upon request such as physiotherapy and nutrition therapy
	Availability part-time or full-time	Effective performance of liaison nurses will be achieved when patients have the best access to them at different times and in different ways. Liaison nurses must be present in person or available by phone and telegram full-time to patients.
	Professional competency	A liaison nurse must have the proper qualifications to provide home care and have completed the relevant course and be committed to his/her profession.
Managerial Role	Communicate with social health services	In order to provide patients with better services, liaison nurses must recognize and communicate with the community-related social services so that patients can be referred to these centers if necessary.
	Organizational affiliation	The main place of liaison nurses is in the hospital. They are hired by the hospital and trained to provide home-based services and have the necessary authority in this area.
	Meeting organization and patients' needs	For more efficacy, the liaison nurse needs to be flexible in her/his role so that s/he can respond to changing needs of organization and patients.

based services in the healthcare system of all countries and also on the basis of the long-term program of this organization, liaison nurses play a role in the following forms:

- As a skilled general practitioner who is the primary point of contact of the patient with the hospital and, if necessary, the referral of the patient to the relevant specialist, patient support during the hospital admission and the design of the discharge plan
- As a health professional who cares about health more than illness and carries the role of patient and family guidance in disease prevention and health promotion as well as care provision.
- As a skilled caregiver focusing on the principle of patient care at home.

Obviously, changes in roles and responsibilities of nurses require a change in their educational programs during education or the development of short-term educational programs in the form of continuing education programs in the field of nursing at home, as well as changes in the structure of hospitals and the establishment of a post for liaison nurse(5, 15).

According to the liaison nurse' roles and based on the research results, there are some tasks and responsibilities in the area of each of the liaison nurse roles. The liaison nurse's tasks for providing home care are described in Table 3 (4, 11, 16).

**Table 3: Tasks of the Liaison Nurse** 

Liaison Nurse Roles	Liaison Nurse Tasks
Educational –Counseling Role	-Solving patients' problems by consulting with patient care-providers to provide standard care at home, collecting relevant information, consulting with other colleagues and assessing the needs of the patient at home.  - Providing self-care education to patients, especially patients with common chronic diseases (diabetes, cancer, cardiovascular diseases, trauma and chronic obstructive pulmonary disease)  - Using Tele Nursing Care 'remote contact with patients and their families using ICT' to provide family education and family preparation  - An effective company in the home care program by identifying the short and long term problems that need to be addressed, recommending different actions and providing information and interpreting its relevance to the patient's existing conditions.  -Updating information and knowledge through participation in relevant training courses, studying papers and scientific documents, maintaining a professional information network with other members of the treatment team, participating in professional organizations
Caring Role	-Transferring patient services from hospital to home through establishing and maintaining contact with the reference hospital, hospital staff and consulting with nurses as well as other services.  - Improving the results of home-based care by studying, evaluating and re-designing the care program and measuring the results  - Adhering to professional standards in the home care program, maintaining local and national policies in the home care program.  - Filing a case for patients covered in order to follow up health issues  - Assessing patient's progress in health  - Surveying the ability of the family to care for patients  - Drug administration based on specific protocol and defined instructions  - Working with the health team to provide a patient care plan
Managerial Role	<ul> <li>Providing an effective and interactive collaboration between the family and the providers of health care and educational services.</li> <li>Establishing a patient care plan in collaboration with the treatment team</li> <li>Effective and mutual cooperation with social organizations such as the welfare organization, support units, refugee and drug addiction centers, the relief committee, and emergency centers</li> <li>Providing information in response to a hospital request, communication with a doctor and care team, categorizing and distributing messages and documents, answering questions and requests</li> <li>Informing the relevant physician about the patient's condition by monitoring and reporting the services provided at home, monitoring patient progress, reporting on emergency patient visits at home, anticipating other home-based care needs</li> <li>Establishing home care policies at home similar to hospital through consultation with hospital staff, facilitating group discussion on the patient's condition, and social survey on this care method.</li> </ul>

The liaison nurse has some responsibilities in the area of his / her tasks. The main responsibility of the liaison nurse is to increase the continuity of care through meetings and establishing a relationship between the hospital, the physician and the patient's family(3, 4, 17). Other responsibilities of the liaison nurse include:

- **1.** Promoting patient care quality, expanding nurse presence in the hospital and easy access to counseling at any time.
- **2.** Developing, training, implementing, and patient counselling. Also, palliative care, and pain management.
- **3.** A nurse as a liaison in the admission and clearance of patients from the hospital

- **4.** Ensuring that care plans are implemented during the hospitalization of the patient.
- **5.** Collaboration with physicians, nurses, social workers and other personnel (forming a liaison team) to ensure that palliative care is provided to patients in accordance with the instructions.
- **6.** Evaluation of any counseling in order to provide the best and most suitable program for each patient based on personal criteria.
- **7.** Providing proper information to the patient and their family about the philosophy, goals and services of the hospital
- **8.** Giving appropriate guidance and complete patient evaluation in accordance with existing protocols

- 9. Proper patient referral for discharging
- **10.** Collaboration with the hospital staff, patient and family, and doctors to ensure that the discharge process is facilitated.
- **11.** Consultation with other patients involved in the process to facilitate decision-making and strengthen communication and team collaboration.
- **12.** Recording and monitoring and maintaining clinical information systems including: duration of hospitalization, referral cases, number of patients covered at home, evaluations, therapeutic outcomes and patient satisfaction rate and other related activities.
- **13.** Cooperating and participating in studies on palliative and end-of-life care or other fields, as the case may be.
- **14.** Collaborating with hospital managers in order to examine the daily statistics of patients and to find appropriate cases to provide counseling and follow up of patients, and provide home care and make necessary coordination.
- **15.** Considering the timely encouragement by the hospital authorities for members of the liaison team to assist in identifying patients with the aim of correcting and relieving symptoms and supportive care for patients who need home care.

# Conclusion and Discussion

Certainly, nurses, along with other medical professions, must work to reduce costs by designing, modifying and promoting care systems and processes. Therefore, in order to provide quality care at an affordable cost, best practice should guide all service delivery (5, 18). In this regard, one of the interventions that has recently been considered for specialist nurses, which encourages nurse involvement with the community as well as continuity of high quality care, is liaison nursing.

Creating a position for liaison nurses with several roles and responsibilities in the hospital that can fill the gap between the hospital and home could potentially improve the efficiency and continuity of the provided care, bridge the care gap and establish a relationship between the hospital and the patient's home, increase satisfaction of patients, increase patient safety due to the presence of nurses at the bedside of the patients at home, increase nurses' satisfaction by improving their experience and skills in providing hospital care, increase their commitment to advanced processes, professional development, increase patients' access to care and treatment, and also decrease hospitalization costs and shorten the length of stay in the hospital(12).

But the liaison nurses should have been trained and certified to gain required skills and competencies to play their effective roles and responsibilities in health care and community settinges. Liaison nurses must have an RN or LPN degree. Since it is necessary for the liaison nurse to meet the needs of patients in different areas, having training and experience in specialized areas is very important and helpful and may be evaluated by some medical centers for the use of liaison nurses. In some countries such as the United States, liaison nurses need

to pass a one-year course on home care and receive an end-of-course certificate (3, 19). Liaison nurses who are interested in their work can enter the undergraduate degree program at the hospital or faculty and complete the theoretical and practical / clinical course and acquire the necessary skills. After completing the training course, the liaison nurses will be required to take part in the home work permission exam that is held in each country internally and obtain the necessary permission to provide care at home. At the moment, a 4-year liaison nursing course is held in a limited number of countries. According to the Association of American Nursing Colleges, four years of liaison nursing education for providing nursing care at home is a great potential for advancing nursing knowledge and thus increasing the accountability of nurses to the growing need of the community (20).

Among the general skills required for the liaison nurse, the following appear to be critical:

Drug therapy, creating a safe and effective environment for the patient and family, maintaining and improving the patient's health, having nursing skills, communicating effectively, listening to the patient, confidentiality of patient information, self-confidence and self-control, and skill in doing team work (10, 21)

According to the World Health Organization, the ultimate goal for liaison nurses is that they can play a key role in promoting the health of the people and society with the participation of families, communities and other professionals in the health sector(22).

In this regard, and according to the World Health Organization, the competencies expected of the liaison nurse responsible for providing home care include five main areas:

- Care provider
- Decision maker
- Communication establisher
- Community leadership
- Care management

Despite the importance of the role of liaison nurse in health care setting, and based on evidence, currently, in most of countries there is no position for liaison nurse in the organizational hospital structure, but with the development of the role of the liaison nurse as the link between the hospital and the home, and subsequently the change in the duties and roles of the medical staff, changes are required in clinical posts and a place for liaison nurses should be considered in the organizational structure of the hospital in order to stabilize the role and continuity of care at home. In each unit, it is also necessary to identify the number of liaison nurses, the scope of activities, and their contact numbers for ease of communication, and provide for the patients in need (23, 24).

In addition to the importance of establishing a position for the liaison nurse in the hospital structure, evidence shows that continuity of care requires major changes in nursing education. Although many educational programs have been developed at the macro level for nurses, there is a need to make changes to these programs based on the needs of each educational institution, in order to assess the educational needs of home care and other social care. Results of the studies required three types of changes in nursing education in order to prepare nurses to play the role of liaison nurse in the future, including:

- **1.** Introduction of home-based care in theory and practice in a basic nursing education program
- **2.** A home care study should be added to educational courses and developed over time
- **3.** It is necessary to include the concept of continuity of care and its various aspects as a central and dominant concept in all basic nursing education programs.

A change in the continuity of education program is also suggested. Experience has shown that nurses who complete a course of social care or home-based education are knowledgeable and skilled and have different social behaviors (16, 25). In addition, in order to change the educational curriculum, nurturing skilled nurses in social care is necessary to develop this kind of care. In the changes to the curriculum, it is necessary for the liaison nurses to have a separate educational program to prepare them for their roles in the future.

#### References

- 1. Alberto L, Zotárez H, Cañete ÁA, Niklas JEB, Enriquez JM, Gerónimo MR, et al. A description of the ICU liaison nurse role in Argentina. Intensive and Critical Care Nursing. 2014;30(1):31-7.
- 2. Baker DL. The Role of the Medical Science Liaison in Industry. AORN Journal. 2010;91(3):394-8.
- 3. Caffin CL, Linton S, Pellegrini J. Introduction of a liaison nurse role in a tertiary paediatric ICU. Intensive and Critical Care Nursing. 2007;23(4):226-33.
- 4. Carson D, Wilson K, Jenkins M, Merenda R. The Role of the Nurse Liaison in the Perioperative Setting. Journal of PeriAnesthesia Nursing. 2014;29(5):e7.
- 5. Eliott S, Chaboyer W, Ernest D, Doric A, Endacott R. A national survey of Australian Intensive Care Unit (ICU) Liaison Nurse (LN) services. Australian Critical Care. 2012;25(4):253-62.
- 6. Masso M, Thompson C. Australian research investigating the role of nurse practitioners: A view from implementation science. Collegian. 2017;24(3):281-91.
- 7. Gemici, K., Okuş, A., Tanrıkulu, Y. (2016). The control of the port site bleedings with Foley catheter in obese patients. European Journal of General Medicine;13(4):101–102
- 8. Wilkes L, Doull M. The role of the General Practice Liaison Nurse as integrated care coordinator: A Delphi study. Clinical Nursing Studies. 2016;4(3):67-77.
- 9. Al-Sharif, F.M. (2016). Association between insulin resistance and inflammatory cytokines among obese Saudi type 2 diabetic with vitamin D deficiency. European Journal of General Medicine;13(4):91–96
- 10. Hanson-Heath CA, Muller LM, Cunningham MF. Evaluating Enhancements to a Perioperative Nurse Liaison Program. AORN Journal. 2016;103(4):414-20.

- 11. Chaboyer W. The effect of an ICU liaison nurse on patients and family's anxiety prior to transfer to the ward: An intervention study. Intensive and Critical Care Nursing. 2007;23(6):362-9.
- 12. Endacott R. Impact of an ICU Liaison Nurse Service on major adverse events in patients recently discharged from ICU. Resuscitation. 2010;81(2):198-201.
- 13. Melnyk BM, Fineout-Overholt E. Evidence-Based Practice in Nursing and Healthcare: A Guide to Best Practice. Philadelphia: Wolters Kluwer Health | Lippincott Williams & Wilkins.; 2011.
- 14. Jowett S, Armitage S. Hospital and community liaison links in nursing: the role of the liaison nurse. Journal of advanced Nursing. 2007;13(5):579-87.
- 15. Söllner W, Diefenbacher A, Creed F. Future developments in consultation-liaison psychiatry and psychosomatics. Journal of Psychosomatic Research. 2005;58(1):111-2.
- 16. Oetgen J. Court liaison nurses: Balancing justice and health. Nursing New Zealand (Wellington, NZ : 1995). 2015;21(6):39.
- 17. Alberto L, Gillespie BM, Green A, Martínez MdC, Cañete A, Zotarez H, et al. Activities undertaken by Intensive Care Unit Liaison Nurses in Argentina. Australian Critical Care. 2017;30(2):74-8.
- 18. Stefan KA. The Nurse Liaison in Perioperative Services: A Family-Centered Approach. AORN Journal. 2010;92(2):150-7.
- 19. Deselms J, Duvall L, Ruyle S. Family Visitation in the Postanesthesia Care Unit: Implementation of a Nurse Liaison Role. Journal of Perianesthesia Nursing. 2016.
- 20. LBhatia, U., Panchal, M., Gupta, N. (2016). To evaluate the role of Gabapentin as preemptive analgesic in patients undergoing total abdominal hysterectomy in spinal anesthesia. European Journal of General Medicine;13(4):97–100
- 21. McBride J, Russo A, Block A. The Refugee Health Nurse Liaison: a nurse led initiative to improve healthcare for asylum seekers and refugees. Contemporary Nurse. 2016;52(6):710-21.
- 22. Gürel, M., Eser, O., Sarı, E., Sönmez, A. (2016). Femoral nerve palsy due to Iliopsoas hematoma, European Journal of General Medicine; 13(4):103–105
- 23. Jowett S, S A. Hospital and community liaison links in nursing: the role of the liaison nurse. Journal of advanced Nursing. 2000;13(5):579-87.
- 24. Sharrock J, Happell B. The role of a psychiatric consultation liaison nurse in a general hospital: a case study approach. The Australian journal of advanced nursing: a quarterly publication of the Royal Australian Nursing Federation. 2002;20(1):39-44.
- 25. Armutcu, F., Aras, S., Üstünsoy, S. (2016). Subscapular skinfold thickness is a handy tool till body mass index in the evaluation of obesity. European Journal of General Medicine;13(4):106–108