

Original Article

Defining Care Needs for Inpatients in the Orthopaedics and Traumatology Clinic

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Abstract

Background: Individuals admitted to the hospital for various orthopaedic problems need nursing care starting from initial diagnosis to being discharged from hospital. Orthopaedic care is delivered across the lifespan from birth to death and in a wide range of community and hospital settings.

Aims: This study was conducted as a cross-sectional type with the aim of determining care needs of patients hospitalized in the orthopaedics and traumatology clinics.

Methodology: Patients of a university hospital hospitalized in Istanbul constituted the study population, and randomly selected 53 patients through improbable sampling were the sample group. Data were collected using "Assessment Form of Patient".

Results: It was observed that 66 % of patients were female with a mean age of 56.45 ± 19.71 years, 58.5 % were married. It was determined that a great majority of patients have problems of Mobilizing (98.1%), Maintaining a Safe Environment (92.5%), and Personal Cleansing and Dressing (81.1%) in their daily life activities. When identified nursing diagnoses were analyzed in terms of nursing diagnosis, principal nursing diagnoses were detected as Acute Pain by 71.7%, Physical Movement Distortion by 47.2%, Change in Sleep Patterns by 30.2%, and Syndrome of Self-Care Deficit by 24.5%.

Conclusions: It was found out that inpatients in the orthopaedics and traumatology clinic have problems in their daily life activities and are in need of nursing care. Accordingly, it is suggested to develop a diagnostic form developed according to a model and theory in orthopaedics and traumatology clinic, and it is recommended to use it actively in nursing care.

Keywords: care needs, patients, orthopaedic nursing, nursing care, orthopaedics and traumatology

Introduction

Nursing is a discipline of health that encompasses the aim of protecting, improving the health of families and societies recovering them from diseases and helping them to overcome inadequacies. The focus of the art and science of nursing is on the care intended to the healthy/sick persons. Care is the reason for the existence of nursing and it is the paramount building block of the profession (Berg et al. 2007, Brilowski & Wendler 2004; Potter & Perry 2009). As for care in nursing, it is located in the center of theoretical nursing knowledge

and practice, in other words, the science and art of nursing (Biol 2005). Providing and maintaining the individuality in nursing is possible through evaluating all the dimensions of the healthy/sick persons, providing help practices to solve the identified problems, applying the practices planned specifically to the individual and the person's agreeing to the decisions made regarding the care (Acaroğlu et al. 2007, Acaroğlu & Şendir 2012, Berg et al. 2007).

Orthopaedic and trauma care are highly specialized aspects of health care focused on the person with musculoskeletal problems, injury and

following orthopaedic surgery (Cameron and Araújo 2011a, Clarke & Santy- Thomlinson 2014, Kneale & Davis 2005). An orthopaedic disease shows progress steadily in a healthy/sick individual and it affects daily activities and diminishes the quality of life while process is painful (Cameron & Araújo 2011a). Individuals admitted to the hospital for various orthopaedic problems need nursing care starting from initial diagnosis to being discharged from hospital (Kneale & Davis 2005).

Orthopaedic care is delivered across the lifespan from birth to death and in a wide range of community and hospital settings (Clarke & Santy- Thomlinson 2014). Orthopaedic nursing is a specialized area of health care in situations. Nursing not only cares for the joint replacement, betterment of joint injury and fracture of the hip but also involves diseases, congenital and developmental process, traumas, metabolism disorders, degenerative diseases, infections and other illnesses affecting the musculoskeletal, articular, support connective system, correction of deformity and spine injury, bone cancer, and plastic surgery (Cameron & Araújo 2011b, Kneale & Davis 2005, Lee et al. 2007). At the same time, orthopaedic nurses assume great roles and responsibilities in trauma units namely clinic, surgery and rehabilitation, outpatient treatment centres, daily surgery interventions, accident and emergency services. Love (1995) determined in his study that orthopaedic nurses are required to possess both general and expert skills to be able to provide holistic care. Basic components of orthopaedic nursing consist of nursing skills, enterprises, attitudes, interaction, and continuity of care (Cameron & Araújo 2011a). Caring of patients with musculoskeletal and subsequent orthopaedic injuries is a challenging one for the nurse (Davidhizar 2001). Therefore, the specialist orthopaedic nurses are often in prime position to lead nursing practice (Kneale & Davis 2005).

By using the process of nursing in the orthopaedics and traumatology clinics, which is a problem-resolution strategy, it is possible to provide holistic-humanistic care for the individual, to foster the communication among the members of the health personnel and to maintain the continuity of the care. The first and the most significant step of the nursing process is diagnosis. Using nursing models/theories at the diagnosis stage enables to gather data systematically and comprehensively, identify the primary needs of an inpatient in the orthopaedics

and traumatology clinics, and provide individualized nursing care (Clarke & Santy- Thomlinson 2014, Kneale & Davis 2005).

Orthopaedic patients constitute a unique surgical patient population in that their underlying physical conditions, operative locations, and comorbidities can place them at higher risk for complications or adverse events than many other surgical patients. Orthopaedic patients face intriguing problems, possibly causing deformity, disability and infection affecting individuals' physiological, psychological, social, culture and spiritual domains (Davidhizar 2001, Kneale & Davis 2005, Lee et al. 2007). They require close observation during their hospital stays, and care providers must be prepared to detect and intervene quickly when complications occur (Esoga & Seidl 2012, Clarke & Santy- Thomlinson 2014). Early stabilization, nursing assessments, and interventions are imperative to the patient's functional outcome and rehabilitation (Mamaril et al.2007).

The literature shows that knowing and meeting the needs of healthy/sick individuals and their families have a positive impact on their recovery process (Acaroğlu et al.2007, Acaroğlu and Şendir 2012). The orthopaedic nurse must recognise patients' needs and act accordingly (Kneale & Davis 2005).

Methodology

Design and sample

It was performed as a descriptive and cross-sectional study intended to determine care needs of the inpatients in the orthopaedics and traumatology clinic. Answers to the following questions are sought in the study:

1. What are the individual characteristics of orthopaedic patients?
2. What activities of living do orthopaedic patients experience?
3. How is the dependency-independency continuum of the orthopaedic patients depending on their activities of living?
4. What is the actual diagnosis and Risk Nursing diagnosis of orthopaedic patients?

The study population consisted of patients admitted by a university hospital into the orthopaedics and traumatology clinic in Istanbul in 2015. The sample group was randomly selected 53 patients through improbable sampling

of population in the Orthopaedics and Traumatology Clinic, Istanbul Medical Faculty.

Main Outcome Measures

Data were collected using by the “Assessment Form of Patient”.

Assessment Form of Patient: Through “Patient Diagnosis Form”, which was developed in accordance with Roper, Logan Tierney’s “Model of Nursing” and includes NANDA-I taxonomy, the information belonging to the hospitalized patients regarding the following features was collected: their age, sex, marital status, educational background, occupation, state of living alone, area of residence in Turkey, health insurance, existence of a chronic disease, alcohol or tobacco use, previous hospital experience, arrival process to the hospital and place the patient come from, the days spent as an inpatient, operation history, etc.

Model of Nursing, one of the most commonly exploited models in nursing education and practice, was first designed by Roper (1976); later reached its latest version after Roper, Logan Tierney (1980,1981,1983) carried out further examinations on this study. This model, which can be integrated to all areas of service in Health Care System and deals with and individual-centered care in a holistic approach, emphasises patients’ involvement in the care. Model of Nursing is comprised of five components: activities of living, life span, dependency/independency continuum, factors influencing activities of living and individualized nursing care (Roper, Logan & Tierney 1998, Roper, Logan & Tierney 2003).

Ethical Considerations: Prior to the study, patient participants were informed about the aims and benefits of the study and their roles were explained. All agreed to participate. Their written approval was taken on the consent form. No names were entered on the data collection forms and they were kept separately from the consent form to protect the anonymity of the patients. The application was started after the participants were told that they could decide not to continue the study at any time of the data collection process.

Study Limitations: This study involved orthopaedic patients in only one orthopaedics and traumatology clinic. Therefore, the results cannot be generalized to all other orthopaedics and traumatology clinics. Results might not be

representative of the wider orthopaedics and traumatology patients.

Data Analysis: The data were analysed using IBM SPSS Statistic 21. The identified continuous variables were arithmetic average, standard deviation and median values, and categorical variables identified were frequency and percentage.

Results

Individual Characteristics of the Orthopaedics Patients

According the Table 1, upon examining the individual characteristics of the inpatients in the orthopaedics and traumatology clinic, it was found that 66% of the patients were women; the average age was 56.45 ± 19.71 years (17-89), 58.5% of them were married, 39.6% were the graduates of primary school, 52.5% were housewives, 43.4% lived with family. It was also stated that 64.2% of the patients had previous hospital experience and 54.7% of them did not have chronic diseases. It was also found that the patients stayed in the orthopaedics and traumatology clinic on average 6.81 ± 5.55 days due to their current health problem and 58.5% of them underwent an operation

Activities of Living that Orthopaedics Patients had Trouble with

According to the Table 2, when activities of living that orthopaedics and traumatology patients were having trouble with examined, it was observed that 98.1% of them suffered from problems with Mobilising, 92.5% with Maintaining a Safe Environment, 81.1% with Cleansing and Dressing, 56.6% with Sleeping. On the other hand, 96.2% of the patients did not experience any problems with Controlling the body temperature, 92.5% with Expressing Sexuality, 75.5% with Working and Playing, 88.7% with Breathing activity, 84.7% with Communicating, 67.9% with Eating and Drinking, 50.9% with Eliminating (Table 2).

Dependence/Independence Continuum of the Orthopaedics Patients Related to Activities of Living

According to the Table 2, after examining the dependence/independence continuum of the orthopaedics patients related to activities of living, it was detected that 86.4% of the patients were semi-dependent in Mobilizing, 84.9% in Maintaining a Safe Environment, 77.4% in

Cleansing and Dressing, 56.5% in Sleeping, 52.8% in Eliminating. It was also determined that the 92.5% of the patients were independent in Controlling Temperature and Breathing, 86.8% in Communicating and Expressing Sexuality, and 67.9% in Eating and Drinking (Table 2).

Actual and Risk Nursing Diagnosis of the Patients through Nursing

Having examined the nursing diagnosis applied to the patients admitted to orthopaedics and

traumatology patients in accordance with 2015-2017 NANDA-I Nursing Diagnosis, we found out that the patients had primary actual nursing diagnosis: 71.7% had Acute Pain, 47.2% had Impaired Physical Mobility, 30.2% had Disturbed Sleep Pattern and 24.5% had Self-Care Deficit (Table 3). As for the risk nursing diagnosis; 34% of them had Risk for Infection, 26.4% had the Risk for Impaired Skin Integrity and 20.8% had Risk for Falls (Table 3).

Table 1. Activities of living that orthopaedics patients had trouble with (N=53)

Activities of Living (ALs)	Yes		No	
	n	%	n	%
1. Maintaining a safe environment	49	92.5	4	7.5
2. Communicating	8	15.1	45	84.9
3. Breathing	6	11.3	47	88.7
4. Eating and drinking	17	32.1	36	67.9
5. Eliminating	26	49.1	27	50.9
6. Personal cleansing and dressing	43	81.1	10	18.9
7. Controlling body temperature	2	3.8	51	96.2
8. Mobilizing	52	98.1	1	1.9
9. Working and playing	13	24.5	40	75.5
10. Expressing sexuality	4	7.5	49	92.5
11. Sleeping	30	56.6	23	43.4

Table 2. Dependence/independence continuum of the orthopaedics patients related to activities of living (N=53)

Activities of Living (ALs)	Dependent		Semi-Dependent		Independent	
	n	%	n	%	n	%
1. Maintaining a safe environment	5	9.4	45	84.9	3	5.7
2. Communicating	-	-	7	13.2	46	86.8
3. Breathing	-	-	4	7.5	49	92.5
4. Eating and drinking	-	-	17	32.1	36	67.9
5. Eliminating	1	1.9	28	52.8	24	45.3
6. Personal cleansing and dressing	3	5.7	41	77.4	9	17
7. Controlling body temperature	2	3.8	2	3.8	49	92.5
8. Mobilizing	6	11.3	46	86.8	1	1.9
9. Working and playing	2	3.8	19	35.8	32	60.4
10. Expressing sexuality	-	-	7	13.2	46	86.8
11. Sleeping	-	-	30	56.6	23	43.4

Discussion

Caring for the orthopaedic patient has an interdisciplinary responsibility, and the care team consists of the primary surgeon, specialty physician(s), the physical therapist, and the nurse (Davidhizar 2001, Esoga & Seidl 2012). Nurses are one of the integral members of the team. Orthopaedic and trauma nursing is a dynamic specialty with a history of changing, often dramatically in reaction to developments in society, healthcare provision, disease patterns technology, medical and nursing developments and of course, patient needs (Kneale & Davis 2005). Identifying the dependence/independence continuum of the sick individual accounts for the main framework of individualized care. Care and treatment needs of the inpatients in the orthopaedics and traumatology clinics must be fulfilled to enable them to solve their health problems and take control of their own lives by being self-sufficient psychologically, physically and socially again. The study was conducted to determine the care needs of inpatients in the orthopaedics and traumatology clinic.

It was discovered that the inpatients in the orthopaedics and traumatology clinic suffered from problems with biological-based activities mainly such as Mobilisation, Maintaining a Safe Environment, and Sleeping; as for the activities aimed to increase the quality of life, they faced problems about Cleansing and Dressing. Roper and colleagues determined 12 life activities under ALs. A part of these activities consisted of biological-based activities that are necessary to survival (such as Maintaining a Safe Environment, Breathing, Eating and Drinking, Eliminating, Sleeping, Controlling Temperature and Mobilizing), while the rest encompasses the activities that boost the quality of life (such as Cleansing and Dressing, Working and Playing, Expressing the Sexuality and Communicating) (Roper, Logan & Tierney 1998, Roper, Logan & Tierney 2003). It takes long time for the inpatients in the orthopaedics and traumatology clinic to carry out the activities of living and go back to their previous lifestyles and this depends on the individual's characteristics as well. The main problem of the orthopaedic patients is the distortion of movement. The capacity for movement is a characteristic of all living things and the ability to move the body freely is a necessary and much valued human activity. Every-day living involves a multitude of complicated body movements in innumerable

combinations, many of them internal and unseen and many of them not at conscious level (Roper, Logan & Tierney 2003). In this process, orthopaedic patients face intriguing problems, possibly causing deformity, disability and infection affecting individuals' physiological, psychological, social, culture and spiritual domains (Lee et al. 2007, Davidhizar 2001). This finding of the study illustrates that the illness-sickness of the patients mainly affects the movement most; as a result, other activities of living are affected negatively, too.

It was found out that the inpatients in the orthopaedics and traumatology clinic were semi-dependent in Mobilizing, Maintaining a Safe Environment, Cleansing and Dressing, in Sleeping, and Eliminating. It was also demonstrated that they were independent in Controlling Temperature, Breathing, Communicating and Expressing Sexuality, and Eating and Drinking.

Dependence/independence continuum' concept of the model is closely related to the lifespan and to the ALs (Roper, Logan & Tierney 2003). Movement, one of the major activities in the model, enables the individual to gain mobilization, thus supports his/her independence in a way. It is accepted that there are phases of life in which the individual cannot fulfill some of the activities of living (Vicdan et al.2015). Individuals can develop semi-dependence or complete dependence on the tools or people to fulfill one or more than one activities of living in the cases of a problem, sickness or illness (Bulut & Demir 2016). Due to the problems such as deformation, injuries, infections, the continuum of dependence/independence is affected when the orthopaedics patients attempt to realize the activities of living. For this reason, it is of huge importance for the nurses to assess the continuum of dependency/independency of the inpatients in the orthopaedics and traumatology clinics when providing the care (Roper, Logan & Tierney 1998, Roper, Logan & Tierney 2003). As a consequence, by getting the orthopaedics patient involved in the care, the patient's level of independence and the satisfaction with nursing care would increase and the quality of the care would expand. This finding of the study is in parallel with the literature and emphasises the important role of mobilisation in the continuum of dependence/independence.

Examinations of the main nursing diagnosis of the inpatients in the orthopaedics and traumatology clinics showed that Actual Nursing Diagnosis included Acute Pain, Impaired Physical Mobility, Disturbed Sleep Pattern and Self-Care Deficit; while Risk Nursing Diagnosis included Risk for Infection, Risk for Impaired Skin Integrity and Risk for Falls.

Nursing diagnoses provide the basis for planning, implementing, and evaluating nursing care. Nursing diagnoses are based on the assessment and analysis of patients nursing needs (Korhan et al.2015, Ehnfors 1993). NANDA-I is the standardized language of nursing which enables to use a common terminology in nursing diagnosis, practice and education (Karadakovan & Yeşilbalkan 2004, Korhan et al. 2015, Orkun & Yücel 2017, Şendir & Büyükyılmaz 2012, Turan et al. 2017). Accurate documentation of NANDA-I nursing diagnoses is vital in daily hospital practice to help nurses correctly assess nursing care needs in order to plan and perform nursing interventions for individual patients; and nursing diagnoses are a prerequisite to provide optimal care and patient safety (Korhan et al.2014, Acaroğlu & Kaya 2018). Silva et al. (2008) found in their study that the most frequent NANDA-I diagnoses were: severe pain, self-care deficit relating to bathing and basic hygiene, impaired physical mobility, risk for infection, skin integrity, tissue integrity, lack of knowledge, risk for peripheral neurovascular dysfunction. In their study on the use of NANDA-I nursing diagnosis, Salgado and Machado (2011) found that in Intensive Care Unit, 28 different nursing diagnosis are used and 7 of these diagnosis are used with a rate of more than 50%, among which are Self-Care deficiency and Risk for Infection. Also, according to the study conducted by Turk et al. (2013), most commonly used nursing diagnoses are Acute Pain, Risk for Infection, Disturbed Sleep Pattern, and Impaired Physical Mobility. In Karadovan and Yeşilbakan's study (2004), it was shown that the most commonly used NANDA-I nursing diagnoses by nursery students are Impaired Physical Mobility, Self-Care Deficit, Impaired Sleep Pattern and Risk for Infection.

It has been determined that almost all the nursing diagnoses illustrated above are the actual and risk nursing diagnosis which deals with the patient's bio-physiological problems. It has been illustrated that the problems of the patients in the orthopaedics and traumatology clinic affects bio-

physiological domain rather than psychological, social and cultural domains. This leads us to think that by focusing on physiological needs, the problems regarding other domains has been ignored and the data about those ignored domains was not considered to be significant.

Conclusion

It was determined that inpatients in the orthopaedics and traumatology clinic had problems in their daily life activities, changed their dependence/independence in life activities and needed nursing care. Patients requiring orthopaedic or trauma care needed skilled nursing intervention throughout their pathway of care from initial diagnosis through to long-term follow-up. Therefore, orthopaedic care must evolve and develop to meet the challenges and needs of society, healthcare and patients. In this respect, orthopaedic nurses need to develop their skills to evaluate evidence, adapt, meet challenges and continue to lead healthcare developments in the future.

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