

Patient Safety in Primary Care: A Concept Analysis in Nursing

سلامة المريض في الرعاية الأولية: تحليل المفهوم في التمريض

Jihad Jawad Kadhim *

الخلاصة:

خلفية البحث: سلامة المريض كانت ولا تزال المكون المعرف للرعاية الصحية ذات الجودة العالية. الدراسات التي قد أجريت فيما يتعلق بسلامة المريض ركزت بشكل كبير على الأخطاء الدوائية، السقوط وحوادث السلامة. في ٢٠١٢، مع ذلك، ذكرت منظمة الصحة العالمية أن الغالبية العظمى من التفاعلات يحدث بين مقدم الخدمة الصحية والمريض في أماكن الرعاية الصحية الأولية.

الهدف: يهدف التحليل إلى مراجعة الأدبيات حول مفهوم سلامة المرضى في الرعاية الأولية، وتوضيح السمات المحددة، وتحديد السوابق والعواقب المترتبة على المفهوم باستخدام طريقة ولكر وايفانت لتحليل المفهوم.

المنهجية: لغرض تحليل المفهوم تم البحث في قواعد البيانات الرئيسية وهي: CINAHL, MEDLINE, PSYCHOINFO and ProQuest. وأستخدمت المعايير التالية للبحث: (أ) المقالات العلمية المستعرضة من قبل الأقران، (ب) باللغة الانكليزية، (ت) النص الكامل، (ث) للفترة الزمنية من ٢٠٠٨ إلى ٢٠١٣. الكلمات الرئيسية التي استخدمت هي (أ) السلامة، (ب) سلامة المريض، (ت) الرعاية الأولية، (ث) و التمريض. تم اختيار ١٨ مقال علمي بصورة عشوائية لهذه الدراسة. تحليل المفهوم المستخدم لهذه الدراسة يتبع طريقة ولكر وايفانت لتحليل المفهوم (٢٠١١).

النتائج: تعريف السمات المحددة للمفهوم والتي هي: المعرفة، التحرر من الأذى، والالتزام. وسوابق المفهوم لسلامة المريض في الرعاية الأولية تشمل: حوادث السلامة، التفكير الذاتي، التوظيف، الاتصالات، التوثيق، التعلم أثناء الخدمة، ثقافة السلامة. في حين أن عواقب المفهوم تشمل: تحسين نوعية الرعاية، الوقاية من الإصابة، وتحسين رضى المرضى.

الإستنتاج: قدم التحليل تعريفاً واضحاً لسمات مفهوم سلامة المرضى في الرعاية الأولية والتي تشمل: (أ) المعرفة، (ب) التحرر من الأذى، (ت) والالتزام بسلامة المرضى.

التوصيات: توصي بالدراسة بضرورة إجراء المزيد من البحوث بشأن العواقب الطويلة الأمد لحوادث السلامة على صحة المريض والأسرة.

مفردات البحث الرئيسية: سلامة المريض، الرعاية الأولية، ولكر وايفانت لتحليل المفهوم.

Abstract:

Background: Patient safety has been and is going to be the defining component of high quality health care. Studies have been performed regarding patient safety with much focus on medication errors, falls and safety incidents. In 2012, however, the World Health Organization stated that majority of the patient-provider interaction occurs in the primary care settings.

Objective: The analysis aimed at reviewing the literature on the concept patient safety in primary care, clarifying the defining attributes, and identifying the antecedents and consequences of the concept by using Walker and Avant's method of concept analysis.

Methodology: For the purpose of concept analysis, the major databases were searched namely CINAHL, MEDLINE, PSYCHINFO, and ProQuest. The following criteria were used for search: (a) peer-reviewed scholarly articles (b) English language (c) full text (d) date range from 2008 to 2013. Out of these hits, 18 articles were randomly chosen for the study. The analysis follows walker and Avant's method of concept analysis (2011).

Results: The identified defining attributes of the concept are: knowledge, freedom from harm, and commitment. The antecedents of the concept patient safety in primary care include safety incidents, self-reflection, staffing, communication, documentation, in-service education and training for providers, and safety culture, while the consequences are: improved quality of care, prevention of injury, and improved patient satisfaction.

Conclusion: the analysis provided well-clarified defining attributes of the concept patient safety in primary care which include: (a) knowledge, (b) freedom from harm, (c) and commitment to the patient safety.

Recommendation: The study concluded the need for further research on the long-term consequences of safety incidents on patient and family health.

Keywords: patient safety, primary care, Walker and Avant concept analysis.

*MSN-NED, Assistant Lecturer at Adult Health Nursing Department-College of Nursing/ University of Kufa.

E-mail: jihadj.alsudani@uokufa.edu.iq

Introduction

Patient safety in nursing has a direct influence on the quality of care in health care settings, the competency of health care providers, and overall patient satisfaction. The number of diseases, treatments, and new interventions in primary care has steadily increased overtime, which raised many questions about the safety and risks of the patient associated with these new developments in primary care⁽¹⁾. Gehring et al. (2012) stated that most research studies have been focused on patient safety in the secondary care, but medical errors and adverse events also occur in the primary care settings, which could cause a serious threat for patients⁽²⁾. According to the patient safety statistics of 1999, issued by the Institute for Health Care Improvement (2013) the number of Americans die each year due to medical errors in different health care settings is as high as 98,000⁽³⁾. It has been found out that medical errors are the eighth leading cause of death in America⁽⁴⁾. In most of the patient safety incident cases it is the systems, conditions, procedures, constraints, and environment that patients often face, that lead to safety issues⁽⁵⁾. Lack of committed management and organizational personnel would also lead to an increased rate of patient safety incidents in health care settings⁽⁶⁾. It has been found that it is important for the primary care providers and managers to recognize the risk of unnecessary physical or mental harm or potential harm for the patient and act appropriately on time to avoid the injury⁽¹⁾.

There is a very little literature available on possible risks for the patients in primary care and the influence of these risks on patient's health in the long run. It is evident in the research that the safety incidents in primary care are overwhelmingly high, ranging from medication errors, wrong diagnosis, wrong treatment, to possible patient death. The safety literature commonly defines an error as "an act of commission (doing something wrong) or omission (failing to do the right thing) leading to an undesirable outcome or significant potential for such an outcome"⁽⁷⁾. Based on this evidence the researcher realized that a concept analysis on patient safety is the first step in developing a knowledge base in nursing on safety to conduct clinical trials. The factors that are responsible for patient safety incidents in primary care settings are medication errors, wrong diagnosis, and lack of safety measures⁽⁷⁾. The majority of patient and health care provider interaction takes place in primary care settings (WHO, 2012).

Objectives

The present analysis provides (a) an investigation into the usage of the concept patient safety in primary care (b) and contributes to the enhancement of nursing knowledge. This concept analysis also aimed at finding the defining attributes of the concept patient safety in primary care and providing the gaps in the literature for possible future research in nursing.

Methodology

For the purpose of concept analysis, the major databases were searched namely CINAHL, MEDLINE, PSYCHINFO, and ProQuest. The following criteria were used for the search: (a) peer-reviewed scholarly articles, (b) English language, (c) full text, and (d) date range from 2008 to 2013. The key words used were: (a) safety, (b) patient safety, (c) primary care, and (d) nursing. When the researcher ran a search using the above-mentioned key words and criteria, the researcher has received 62 hits in CINAHL, 50 in Medline, 9952 in ProQuest (9034 in nursing and allied health sources & 918 in sociology), and 27 hits in PSYCHINFO. Out of these hits, 18 articles were randomly selected for the study (7 from CINAHL; 2 from Medline; 5 from ProQuest nursing and

allied sources and 2 from sociology; 2 from PSYCHINFO). The method is further explained the findings and main ideas of the most relevant literature were illustrated in Table 1. The analysis follows Walker and Avant's method of concept analysis (2011)⁽⁸⁾. According to Walker and Avant (2011), the concept analysis is a way to describe phenomena in nursing, as it "allows the theorist, researcher, or clinician to come to grips with the various possibilities within the concept of interest" (Walker & Avant, P.163). The method is clearly defined in eight steps: (1) selecting a concept, (2) stating the purpose of the analysis, (3) identifying the uses of the concept, (4) identifying the defining attributes, (5) identifying/creating model case, (6) identifying/creating borderline, related, contrary, invented, and illegitimate cases, (7) identifying antecedents and consequences, and (8) defining empirical/observable referents.

Concept analysis

Purpose and Uses

The purpose of this concept analysis is to examine and analyze the concept 'patient safety in primary care', identify the defining attributes of the concept found in the research literature, and clarify the meaning of the concept based on the evidence found in the nursing and related literature. This analysis also aimed to identify how the researchers in the literature have used the concept. The analysis is also helpful in the development and evaluation of the tool to measure the concept 'patient safety in primary care'.

The term 'safety' has been used not just in nursing and health care literature but also in various other fields of study ranging from sociology to business management. The origin of the term 'safety' dates back to the Fourteenth century Middle English 'salvus', which means 'safe'. Mariam-Webster's dictionary (2011) defines safety as 'freedom from harm'⁽⁹⁾. Moreover, according to Oxford dictionary (2013), safety is 'the condition of being protected from or unlikely to cause danger, harm or injury'⁽¹⁰⁾.

Patient safety in nursing is defined as "the avoidance, prevention, and amelioration of adverse outcomes or injuries stemming from the process of health care"^(11, 12). The concept patient safety is also used in medicine, and it is defined as "the reduction and mitigation of unsafe acts within the health-care system, as well as through the use of best practices shown to lead to optimal patient outcomes" by Royal College of Physicians and Surgeons of Canada (2003)⁽¹³⁾. In addition, WHO (2006) defined patient safety as "the reduction of risk of unnecessary harm associated with health care to an acceptable minimum", whereas the Department of health (2000) defined it as "freedom from harm whilst receiving health care"⁽¹⁴⁾. The term patient safety is also used in psychology and it has been defined as "the freedom from accidental or preventable injuries produced by medical care"⁽¹⁵⁾. In sociology, the term safety has been defined as "shared respect, shared meaning, shared knowledge and experience, of learning together with dignity, and truly listening" (Clarke as cited in Brauer, Sergeant, Davidson, & Dietrich, 2012; Feng, Bobay, & Weiss, 2008)^(16,17). In business management, it has been used as employee or consumer safety⁽¹⁸⁾ and in education as culture safety⁽¹⁹⁾. Most recently in 2010, the National Patient Safety Foundation defined 'primary care' as the first contact of the person with the health care providers, which provides a multidisciplinary approach to health in a range of diversity of professionals⁽¹²⁾.

Defining attributes

According to Walker and Avant (2011), defining attributes are the most important part of the concept analysis and are identified by the characteristics of a concept that repeat over and over again⁽⁸⁾. The following three characteristics of the

concept patient safety in primary care were determined during the literature review: (a) knowledge, (b) freedom from harm, and (c) commitment. The defining attributes are further described in the following sections.

Knowledge: In the literature, knowledge has been repeated a significant number of times as an important attribute of the concept 'patient safety in primary care' in order to provide patient care that is safe. Knowledge about safe practices is an essential attribute (among healthcare providers) to deliver safe patient care in primary care (20). The Oxford English Dictionary (2013) defines knowledge as "facts, information, and skills acquired by a person through experience or education". The knowledge of patient safety in primary care is measured by the provider's knowledge of wound treatments, vaccinations, safe uses of medications and prevention of medication errors, communication and proper documentation. Knowing a different language to communicate with the patient of non-English descent and the knowledge about nursing procedures are considered important in ensuring safety for the patient in the primary care setting(18,21).

Freedom from harm: Freedom from harm is arguably the most commonly repeated characteristic of the concept "patient safety in primary care". Patient safety, as defined by Dulmen et al. (2011), is delivering patient care in an injury free environment(22). The primary care practices that ensure health care delivery that is free from harm include proper diagnosis of the patient's problem, right prescription, right use of technology, incident reporting, prognosis of the patient, competence among providers, and their compliance to policies and procedures of the organization (1, 23, 24, 25).

Commitment: Commitment is an important personal characteristic of a health care provider. It has been defined by the Oxford English dictionary (2013) as 'a state or quality of being dedicated to a cause or activity'. Commitment is a major attribute associated with patient safety in primary care. A primary care provider who is committed to patient safety would demonstrate their commitment by learning from medication errors and not repeating them, or sharing their knowledge about safety incidents with their colleagues (26). Commitment can also be demonstrated through the timely reporting of patient safety incidents by providers without the fear of punishment or disciplinary action (27). A safe patient environment would result from higher levels of nurse reported patient safety. Open and transparent reporting of patient safety incidents and sharing knowledge regarding patient safety incidents greatly minimizes the reoccurrence of those events (28). A health care organization can show its commitment towards patient safety by making patient safety and quality of health care one of the top priorities among health care leaders (1).

Model case

A model case, according to Walker and Avant (2011) must be a real life instance, that can describe how the concept is used, and it must include all of the defining attributes(8). Toni is a family nurse practitioner at Valparaiso University Student Health Center. JP visits her office for his yearly flu shot. The physical assessment by Toni reveals that JP is running a temperature. Toni makes sure that JP is taking some kind of medication for his fever. She explains to him why it is not safe for him to get flu shot at this point and she asks him to visit her office for a follow up after three days. She gives him a call two days later and enquires about how he is doing and if he is ready to get a flu shot.

In this case, Toni, the primary care nurse practitioner, has knowledge about the indications and contraindications of the flu shot. Flu shots are usually contraindicated in

patients with fever because it might lead to side effects or anaphylactic reaction. Toni is committed to JP's safety and makes sure he is taking medicine for his fever and asks him to follow up with her in three days so that she can screen him again to see if his fever has subsided and he is able to take his flu shots. Toni explained the situation and provided enough information to JP before he left. She demonstrated commitment towards the safety of JP by calling him to make sure he was doing well and to see if he was ready to get a flu shot. As a result, it is evident in JP's experience of health care that he was free from harm.

Borderline Case

A borderline case can be constructed by purposefully excluding some of the defining attributes so that the reader will be able to understand the concept that is not fully represented in this case (8). Matt, an LPN, on his first day of work at Indiana University Health Physician's office, takes the vital signs of the first patient of the day who had an appointment with the physician and he asks how to document the vital signs in the computer electronically.

In this case, Matt demonstrated commitment by wanting to learn how to document patient data in the computer. He was delivering nursing care in an area that was free from harm by documenting the care he had delivered, however he lacks the knowledge on electronic documentation of the patient data.

Related Case

In the literature, competency is often viewed synonymously with safety so we have selected competency as a related term for safety. Oxford English Dictionary (2013) defines competency as "the ability to deal with the subject and as the sufficiency of the qualification". Therefore, JS has been experiencing 'hives at night' for the past one week. He visits a nurse practitioner's office for treatment. After taking a medical history and complete head to toe assessment, Tyler, the NP, diagnoses his condition as an allergic reaction from a bug bite that JS had a week back. Tyler prescribes Zyrtec, 10 mg once a day to relieve symptoms. JS enquires and realizes that his insurance cannot cover Zyrtec or any other over the counter allergic medication. JS refuses the treatment and leaves the practitioner's office.

In this case, Tyler is competent enough to screen out the problem, diagnose the disease, and prescribe appropriate treatment. Since, JS's insurance cannot cover the over the counter allergic medication, JS refused the treatment and left practitioner's office and he suffered from the symptoms of allergic reaction. Thus, competency is the provider's ability to perform competent care but safety is the patient's experience with the health care.

Contrary Case

A contrary case is defined as a case that lacks all of the defining attributes and is certainly not an example that describes the concept (8). JP, a 45 year-old, visits physician's office for throbbing chest pain that radiates to the left arm. Sarah, the NP, who works at the physician's office, gives JP Nitroglycerin (0.5 mg) and indicates that she is ready to see the next patient.

The case lacks all of the defining attributes and it represents the concept 'risk' or 'threat'. Risk is defined as "a situation involving exposure to danger" (Oxford English Dictionary, 2013). In the analysis of this case, it is important for Sarah, the nurse practitioner, to check systolic blood pressure before giving Nitroglycerin (0.5 mg) because it can suppress the blood pressure if the systolic blood pressure is less than 90 mm of hg. Sarah has no knowledge about checking his blood pressure before giving the

Nitroglycerin. If his systolic blood pressure were less than 90 mm of hg, then it would have resulted in possible cardiac arrest. Sarah put him under the risk of injury. Sarah asked that she was ready to see next patient, which clearly says that she lacks commitment towards JP's safety.

Invented Case

According to Walker and Avant (2011), an invented case is a case that has all the critical attributes but is used in an invented scenario⁽⁸⁾. Tulu fish species of Atlantic Ocean go under a cave in the water every night for the warmth. It is important for the Tulu fish species to be warm at night because it keeps their metabolism active. The father fish of a group of Tulu fishes makes sure every Tulu fish of the group gets under the cave before he goes under the cave. He also helps newborn Tulu fish babies to get under the cave.

To analyze this case, the father fish has the knowledge that it is important and safe for Tulu fishes to be warm at night to keep their metabolism active. He also has shown the commitment by ensuring every last Tulu fish gets under the cave before he goes under the cave. This way, the father fish ensured that the Tulu fishes are free from harm every night.

Illegitimate Case

Walker and Avant (2011) described an illegitimate case as “an inappropriate use of the concept”⁽⁸⁾. Tom, NP states that if he eats while his patients are watching him that he will make sure the patients will practice safe eating at home. To analyze this case, it is obvious that the concept of patient safety is vaguely described here by stating that a nurse eating his lunch in front of a patient would ensure that the patient practices safe eating at home and the critical attributes of the concept patient safety in primary care do not apply at all.

Antecedents and Consequences

According to walker and Avant's method of concept analysis (2011), identifying the antecedents and consequences will help in further refining the critical attributes and providing additional insight about the concept's critical attributes⁽⁸⁾. Antecedents and consequences are present when the concept occurs and help in explaining the concept in different contexts.

The antecedents according to walker and Avant (2011) must be in place prior to the occurrence of the concept⁽⁸⁾. The antecedents that were revealed in the literature for the term 'patient safety in primary care' are: (a) documented safety incidents so as to share knowledge and learn from the errors or safety incidents ⁽¹⁾ (b) self-reflection of the healthcare providers is important to introspect the past experiences and know what needs to be learned (c) adequate staffing is necessary because understaffing would lead to delayed delivery of care and cause a potential harm to the patient ⁽¹⁾, (d) proper communication is necessary to coordinate and communicate safe patient care ⁽²⁹⁾, (e) facilitating proper documentation is mandatory in primary care setting to ensure use of confidential data to plan and implement care, (f) in-service education and training for providers is needed in a constantly changing health care environment to deliver care that is free from harm and (g) presence of safety culture among leaders and providers would tremendously ensure patient safety in an institution ⁽³⁾.

The consequences are the events that occur after the concept or the outcomes of the concept ⁽⁸⁾. The consequences associated with patient safety in primary care are improved quality of care, prevention of injury or harm, and improved patient satisfaction. It has been noted in the literature that with the practice of incident

reporting, proper communication among health care providers, and safety culture as part of the organizational structure, it was possible to minimize medication errors and safety incidents, thus improving quality of care in the primary care services (4). It is possible to prevent injury or harm to the patient by in-service education and training of the providers (18). The key in improving the patient satisfaction is proper provider-patient communication and the outcome of the health care delivery (5).

Empirical and Observable Referents

The event that demonstrates the existence of the concept is determining empirical referents, which is the final step in Walker and Avant's method of concept analysis. This step defines how the concept is measured or how the phenomenon is observed in reality. From the concept analysis of patient safety in primary care, the defining attributes are measurable and observable. Various nursing scholars used different instruments. One of the most preferred tools by most studies to measure patient safety is administering a questionnaire to the participants that contains questions about patient safety practices(30, 31). Most qualitative studies used interviewing as a method of evaluation. The interviews mostly included recording and reporting patient safety knowledge among health care providers and their personal experiences of patient safety incidents. The qualitative studies that used interviews and open-ended questions as their instrument to measure the practice of safety among providers are (a) semi-structured interview guide and personal interviews on patient safety (5) and (b) digitally recorded interviews that measure the perceptions of patient safety among primary care nurses (20). In 2011, Feng et al. used the Manager's Safety Commitment Scale (MSCS) using a Visual Analog Scale, which contained a 100 mm line with numbers 0-10 where '0' indicated 'no safety commitment' and '10' indicated 'total safety commitment'(32). The scale measured safety commitment among managers. They have also used Hospital Survey of Patient Safety Culture (HSPSC), which employs the Likert scale to measure safety culture among nurses and nurse managers. The Likert scale contained 44 items with 12 dimensions and five points ranging from "strongly agree" to "strongly disagree"(32). The observable referents that would measure the patient safety found in the literature included: (a) washing hands before and after the wound care (25) and (b) documentation of the nursing procedure that has been done (33).

Conclusion

In the final analysis, the concept of patient safety in primary care has been selected for concept analysis because patient safety is increasingly compromised in health care settings especially in primary care settings across the world. Nursing and other health care literature also present the evidence of patient safety incidents in primary care settings. The analysis provided well-clarified defining attributes of the concept patient safety in primary care which include: (a) knowledge, (b) freedom from harm, and (c) commitment to the patient safety. These attributes are also explained by employing the model case and other additional cases to clarify the attributes well for the better understanding of the concept. The study has also identified the antecedents and consequences associated with the concept. Manager's Safety Commitment Scale (MSCS) and Hospital Survey of Patient Safety Culture (HSPSC) are used to assess and evaluate the concept(32).

It has been noted in the literature that the patient safety is a constantly changing and an ongoing process in the health care especially in the primary care. Hence, it is recommended to conduct research and clinical trials for every two to three years in order to ensure maximum patient safety in primary care and improve the quality of

health care in primary care settings. These initiatives would be beneficial to the nursing and other health care providers in gaining better understanding of the concept and implementing relevant nursing activities that improve patient safety in primary care. It was difficult to find the available literature in databases about long-term consequences of safety incidents on patient and family health in the primary care settings. Thus, it is fair to declare that there is much work are needed to be done in evaluating the long-term consequences of patient safety incidents and their impact on the health of the patient and their families. For nursing practice, it is recommended that patient safety among primary care practitioners should be evaluated from time to time to make sure that they are competent enough in order to deliver health care⁽³⁴⁾. An ongoing education and training on patient safety and quality of health care in primary care is recommended not just for practitioners but also for managers and executives in the health care settings.

Table 1. Patient safety found in the literature

| Citation | Findings | Main Idea |
|--|---|--|
| Feng, Bobay, & Weiss(2008) | Nurses' shared values, beliefs, and behavioral norms towards patient safety were identified as the overarching dimensions of the patient safety culture. The four sub-dimensions of patient safety culture were synthesized as system, personal, task-associated and interaction. Two main philosophical perspectives, functional and interpretative were added to the analysis and further clarification was provided. | Beliefs, concept analysis, culture, dimensional analysis, nursing, patient safety, and values. |
| Feng, Acord, Cheng, Zeng, & Song (2011) | Management safety commitment was significantly related to patient safety culture and is an important predictor of patient safety culture. | Nursing management, patient safety culture, and safety commitment |
| Evans (2012) | The study examines the theory of significant audit to prove its importance in progressive improvements to patient safety and professional development among primary care staff especially primary care nurses. | Patient safety, significant event audit, quality assurance, adverse event reporting |
| Lowthian, Joyce, Diug, & Dooley, (2011). | Primary care plays a pivotal role in health systems. The ageing population and mounting prevalenceof chronic disease will place increasing demandson primary care. | Primary care, general nurse practices, patient safety. |
| Gillam, (2008) | Patient safety is complicated and requires a systems approach to improving quality and safety. | Ergonomics, leadership, organizational culture, patient-centered care, patient safety, and learning from med errors. |
| Kaufman &McCaughan (2013). | Patients are experts in the knowledge about their condition and the care they are being received and they have an important role in the patient safety. Seven Steps to Patient | Adverse events, error, harm, human factor, patient safety, patient safety incidents. |

| | | |
|--|---|---|
| Verbakel, Langelaan, Verheij, Wagner, Zwart (2013) | Safety guidelines were discussed. Provides an understanding of the effect of administering a culture questionnaire or a questionnaire with a complementary workshop, which helps in implementation of patient safety tools. | Patient safety, safety culture, questionnaire, trial, intervention. |
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Table 1. continued

| Citation | Findings | Main Idea |
|--|--|---|
| Gehring, et al. (2012) | Many safety incidents occur regularly and they are very relevant for health care professionals' daily work. The study suggests the importance on setting priorities in patient safety in primary care. | Patient safety, harm, safety incident, primary care, safety threats, physicians, nurses. |
| Dulmen, Tacke, Staal, Gaal, Wensing, & Sanden (2011) | Incompleteness of the patient records and the fact that safety incidents are human errors suggests that record keeping is necessary for patient safety in primary care. | Adverse events, patient safety, patient records, administration, allied health care. |
| Martijn, Jacobs, Massen, Buitendijk, & Wensing (2013). | It has been found that there is a lower prevalence for safety-incidents in midwifery care for low-risk pregnant women. | Midwifery, patient safety, safety incident, low-risk pregnancy. |
| Debourgh & Prion (2012). | Recommend nurse educators to revise pre license nursing curricula to include teaching and learning activities focused on nursing care sensitive outcomes especially patient safety. | Patient safety, quality, medical error, nursing education. |
| Paese & Sasso (2013). | It has been found out that the patient safety attitude is considered the most important among community health agents, nurse technicians, and nurses. | Culture, safety, primary health care, nursing team. |
| Kanerva, Lammintakanen, & Kivinen (2013) | Organizational safety culture is present in all aspects of the patient safety and organizational management has a role in creating good working conditions for the staff to reduce the safety incidents. | Concept, inpatient care, patient safety, literature review, mental healthcare, psychiatric care. |
| Gaal, Laarhoven, Wolters, Wetzels, Verstappen, & Wensing (2010). | Patient safety programs focused at issues like safety incidents and medication safety. | General practitioners, interview study, patient safety, practice nurses, primary care. |
| Kirwan, Matthews, & Scott (2013). | The importance of nurse education level and work environment should be recognized and manipulated as important determining factors in patient safety. | Adverse incident reporting, multi-level modeling, nurse work environment, patient safety, unit level characteristics. |
| Runciman, Hibbert, Thomson, Schaff, Sherman, & Lewalle (2009). | The work is a beginning of progressive use of improving a common international understanding of terms and concepts relevant to patient safety. | Patient safety, definitions, terminology, concepts, classification. |
| Koppel & Gordon, (2012). | Patient safety is both the absence of harm to patients and the actions that the nurses take to prevent harming them. | Safety, preventing harm, organization system and high quality health care. |
| | Findings suggest the need for clarification of the concept of patient safety, as well | Patient safety, nursing students, teaching-learning |

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|------------------------------|--|---|
| | as revision of curricula and teaching, learning and assessment strategies in order to address patient safety explicitly. | strategies, and implementing safety aspects in the nursing curriculum |
| Vijayaraghavan et al. (2012) | Safety procedure to control chronic pain in primary care | Definition of patient safety and primary care. |

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