

Conference Paper

Analyzing Patient Education Methods to Improve Patient Care in Hospital: A Systematic Review

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Abstract

One way of caring but often unnoticed is through patient education, defined as the process of influencing patient behavior and producing changes in knowledge, attitudes and skills necessary to maintain or improve health. The aim of this systematic review is to analyze various methods of patient education in a way to improve patient care in hospital. This is a systematic review based on PRISMA protocol retrieved from online databases such as ProQuest, JSTOR, Science Direct and Springer Link. Nine journal articles were chosen as eligible library to be reviewed for qualitative synthesis. Six out of nine articles used a qualitative study as the method of delivering patient education, an evaluation in qualitative study is essential for improving patient education. Another two articles used a mixed method study between qualitative and a use of other media and materials. Only one article used observational method, they observed an interpretation check on recording of a tele-patient education. An effective patient education method will have to consider patient and family's value and norms, which allows adequate interaction between patient and family, and the healthcare providers. As conclusion, an effective communication of patient education must provide knowledge, skills and increased self-awareness. Qualitative method is a great way of delivering patient education, though it would be better if combined with use of other media and materials, such as written materials (e.g., handouts and banner, etc.), telephone counseling, including the Internet. Broadening patient access to and delivering patient education could lead to improved levels of satisfaction.

Keywords: patient education to improve patient care, patient education method, patient

1. Introduction

Patient care is a challenging concept to study, in part because it is the core on medical/healthcare professionals-to-patient relationship, but often without thoughtful parsing. What kind of care is health care? Contemporary interaction between medical

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professionals (especially doctors and clinical nurses) with patients have tended to emphasize an understanding of diagnosis and treatment, whether it uses pharmacological intervention or invasive medical intervention technique [1]. One way of caring but often unnoticed, is through patient education.

Patient education has been recognized as a central component to ensure that patients are knowledgeable about treatment options, the management of their health-care needs, and the effective use of medication. The Joint Commission on Accreditation of Hospital Organization (JCAHO) mandated that patient education programs have to be implemented to achieve these objectives. According to the American Academy of Family Practitioners (2000), "Patient education can be defined as the process of influencing patient behavior and producing changes in knowledge, attitudes and skills necessary to maintain or improve health." [2]. Patient education is a term that includes patient teaching, advice and information-giving, behavior modification techniques, and involves two-way communication between the clinical nurse and the patient aimed at maintaining or improving health, or learning to cope with their condition [3].

Patient education is a key intervention for promoting family health and empowerment of families with a person with chronic illness. The purpose of patient education is to provide knowledge, skills and increased self-awareness so patients or their family members can use the power to act in their own self-interest [4], self-efficiency and participation in decision-making [3], to then gradually build their own self-management.

The concept of empowerment was further developed into a model for patient education, made up of seven dimensions: [3, 4]

1. *Bio-physiological*: sufficient knowledge of the psychological signs and symptoms, and feelings of control over these problems.
2. *Functional*: patients able to take functional control of the situation and daily activities.
3. *Cognitive*: patients have enough knowledge and ability to use that knowledge for improving their health.
4. *Social*: meaningful social interaction and contact with others.
5. *Experimental*: patients able to use their past experiences and self-esteem.
6. *Ethical*: patients feel unique, respected, and valued and believes that the care they are receiving ensures their well-being.

7. *Economic*: patients able to afford technical aids and supports available.

Healthcare professional organization in America such as the American Hospital Association, the American Nurses Association, JCAHO, and others, are striving to improve the quality and frequency of patient education. Doctors and nurses as healthcare professionals now recognize that patient education can lead to improved outcomes, and it aids in necessary lifestyle changes for chronic illness, such as heart disease and diabetes [2, 5, 6].

Patient education is a critical element of diabetes management. Studies of children with type-1 diabetes have demonstrated that patient and family education in preparation for self-management at home is associated with reduced hospitalizations, fewer emergency room visits, and reduction of overall costs for the payer and patient [5].

Patient education in radiation therapy has been shown to help patients cope with their diagnosis, facilitate increased patient satisfaction with their treatment and related outcomes, reduce anxiety, and aid in symptom management. Standard written materials are often utilized within cancer programs as a source of educating patients about treatments and associated side effects [7].

A study by the Australian National Primary Healthcare Strategy, and Council of Australian Governments (COAG) Australian Better Health Initiative (ABHI), on chronic disease prevention and screening of those with at least one risk factor for chronic disease, determine the risk factors are smoking, nutrition, alcohol, physical activity, and weight (SNAPW) are major contributing factors of chronic disease worldwide [8]. This study also use patient education by increasing health literacy, particularly in relation to modifying those behavioral risk factors, SNAPW.

By the Indonesian Standard of Hospital Accreditation (2011), patient and family education is also used to assist the process of care, in the informed consent procedure prior to invasive treatment (e.g., pre-operating and pre-anesthetic procedure), and it then be documented in the patient's medical record. In addition, if the patient or their family will get involved in the home care treatment (e.g., wound dressing, change of verban, giving medication, etc.), they need to be educated in a proper way [9].

Effective patient education program in hospital should enable the patient to make decisions about self-care behaviors and be more focus on patient's self-management in order to enable individual's ability to manage symptoms, treatment, physical and psychological consequences, and the lifestyle changes inherent in living with chronic condition, also manage their behavioral-associated health-risk problems successfully [6, 9].

An individualized approach to patient education can be very time consuming. Nevertheless, benefits such as improved communication, patient outcomes, patient satisfaction, and documentation for accreditation purposes, as well as decreased litigation, may outweigh the cost of this implementation [2]. Moreover, patient educator as the caregiver listens and tries to understand, acknowledging the patient's needs, recognizing elements where the patient may feel dependent and powerless due to their health status [10].

The aim of this systematic review is to analyze various methods of patient education in a way to improve patient care in hospital.

2. Methods

This systematic review is based on Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) statement guidelines in reporting the results. PRISMA is an evidence-based minimum set of items, aims to help author to improve the reporting of systematic reviews and meta-analyses [11].

Literatures search started on October 20 to 21, 2016 using several online journal database: ProQuest, JStor, and Science Direct, and SpringerLink (as shown in Figure 1). Keywords used on searching process were 'patient education to improve patient care', 'patient education method', 'patient education', 'educating patient', and 'patient educator'. The next question begins with restricted filtered year between 2011–2016, then filtered by language in English, then filtered again by Full Text Journal Literature. Eight journal articles were chosen as eligible library to be reviewed for qualitative synthesis.

Each of the article is appraised from its study method and period, results obtained, kind of intervention mode, advantages and disadvantages of the intervention method.

2.1. Inclusion and exclusion criteria

Also shown in Figure 1, studies were included and assessed for the eligibility in this systematic review if they (1) study took place in a hospital, (2) assess methods of patient education, and (3) mention a positive result obtained from the study. Studies were excluded if the libraries that insufficient information to be compared with the other literatures, also if they (1) did not take place in a hospital, (2) did not assess methods of patient education, and (3) did not mention a positive result out of the study.

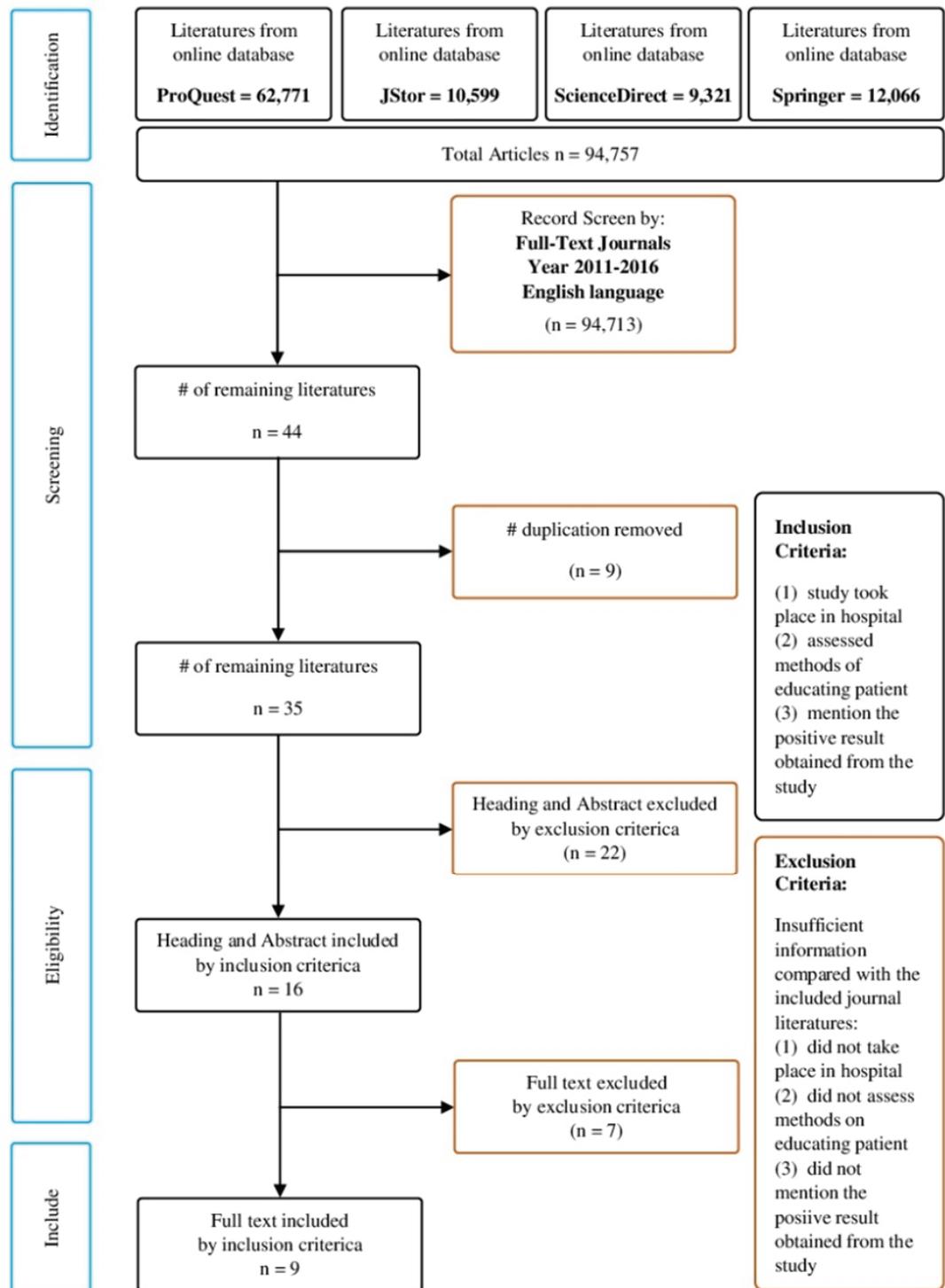


Figure 1: Study selection flow diagram, adapted from the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) statement guidelines.

3. Results and Discussion

3.1. Study selection

The search on identification level, yielded a total of 94,757 journal articles (ProQuest 62,771; JStor 10,599; ScienceDirect 9,321; and SpringerLink 12,066). Out of these 94,757 journal articles, 94,713 were screened using engine filter, provided by each source of online journal database. 44 journals were deemed relevant, then assessed manually for duplication and look-a-like journals, which comes down to 35 journals. Next step is manually assessed for eligibility by inclusion and exclusion criteria, first by heading and abstract leaving 16 journals, then read the full text journal which remaining 9 journal articles for qualitative synthesis.

3.2. Characteristics of included studies

In this systematic review was on 9 journal articles. The study methods from the articles reviewed varies, methods mentioned qualitative analysis (including evaluation on pre- and post-education), mixed method study (a combination of evaluation on qualitative study, and usage of media and written materials), and also observational.

Out of 9 studies from the journals articles, 5 studies were done in a hospital, one study was done in a Nurse University, whereas 3 others did not mention the location of the study took place. All 9 studies mention the methods used to gain a positive impact of patient education to improve the quality of patient care.

3.3. Assessment

Effective education provides individuals with chronic illness and behavioral-associated health-risk problems with the knowledge and skills required to self-manage their condition and maintain health [8, 12], increased self-awareness so patients and their family members can use the power to act in their own self-interests [4].

Patient education can be delivered using various methods and teaching strategies including traditional lecture formats, discussions, computer technology, printed materials, and audio/video with each strategy having various levels of effectiveness in practice [7, 12]. Both physician and clinical nurse play a vital role as the healthcare professional in the delivery of patient education, and among healthcare providers as the patient educator, must have a collaborating process in delivering patient education [5, 9, 13].

As shown in Table 1, methods on patient education obtained from this systematic review are:

1. *Qualitative Study*

According to study performed by Banning, M. & Gumley, V. (2013), a qualitative design used thematic analysis as an approach to capture the unique experiences, opinions, views and perceptions of nurses in relation to their caring role and its influence on their emotions and emotion management strategies they employ. Thematic analysis is a foundational method of qualitative analysis that focuses on the identification, analysis and reporting of themes within the data. Three themes emerged from the data, these included: (1) acknowledgement of patient's feelings; (2) professional behavior and patient's involvement; and (3) emotional control. The findings of this study indicate that nurses need educational support to raise awareness that having emotions related to caring is normal consequence of nursing patients. However, nurses need education and training to learn how to effectively manage their emotions [10].

Another study performed by Reinhart et al. (2014), which evaluates the informational distress levels on pre- and post-education. The aim of this study was to determine the usefulness and the acceptability of the interprofessional group education sessions. Ensuring completeness of information within the education session was an important goal of this study. Providing tailored and specific information for the patient population that the education strategy was utilized by was important to decrease anxiety and improve preparedness for treatment. The pre-treatment education session enabled patients to ask questions that required clarification from a member their healthcare team and aided in enhancing their understanding of the treatment. In result, all patient felt prepared for the treatment, but half still experienced a significant amount of distress [7].

Mikkonen, I. and Hynynen M. A. (2011)'s study on describing nurses' and other healthcare professionals' views about their patient education skills and how to develop them, collect and analyze their data using qualitative content analysis. The participants in this study experienced that, as patient educators, it is necessary for them to acknowledge their own abilities, beliefs and values in order to develop their patient education skills. Consequently, it is important to investigate the best ways of facilitating the development of healthcare professionals' skills

TABLE 1: Various methods of patient education, obtained from this systematic review.

| Author and Year of Publication | The Title of the Journal | Location and Period of Study | Study Method | Variable | Analysis | Result | Advantages | Disadvantages |
|--------------------------------|--|-----------------------------------|--|--|--|--|---|---|
| Banning M & Gumley V 2013 | Case Studies of Patient Interactions, Care Provision and the Impact of Emotions: A Qualitative Study | Cancer Hospital in Pakistan, 2013 | Case Studies of Patient Interactions, Care Provision and the Impact of Emotions: A Qualitative Study Data was collected using semi-structured interview approach. | Dependent variable: Interactions Independent variable: Care Provision and the Impact of Emotion | In such cases nurses require supportive networks to assist their emotions management and intra-personal skills. Educational support is needed to help nurses express their views in relation to emotional contagion, significance of repressed emotions and to identify supportive ways to assist nurses to communicate their experiences. | This study explored nurses' perceptions, experiences and emotions related to caring for cancer patients. This qualitative study used semi-structured interviews to explore the emotions management of 32 nurses working in a cancer hospital in Pakistan. Data saturation occurred after 20 interviews. Three themes emerged from the data related to caring, acknowledgement of patients' feelings, professional behavior, patient involvement and emotional control. | support system nurses is to raise awareness that such emotions do not just disappear; they can be challenged, discussed and coping strategies can be developed and reviewed that will allow nurses to vent their ideas, opinions and experiences Emotional attachment with patients is an idiosyncratic feature of oncology nursing. <i>Nurse-patient interactions are an important element of caring and care provision. In oncology nursing, nurses interact with patients at all stages of the illness trajectory. Interactions are important as they relieve anxiety, stress, depressive moods and help to form relationships between nurse and the patient.</i> | listening to patients stories of their illness, acknowledging patient frustrations, sadness, disillusion with life and providing counselling to patients both in the short- and long-term can be stressful for nurses Many nurses in this study acknowledged and illustrated through their conversations how difficult it was to maintain composure at times, hide their strong feelings of empathy, sadness and frustration at the often hopelessness of individual patient history, such situations posed difficulties and challenges for them |

| Author and Year of Publication | The Title of the Journal | Location and Period of Study | Study Method | Variable | Analysis | Result | Advantages | Disadvantages |
|--------------------------------|---|--|--|---|---|---|---|--|
| Crawforda T, et al. 2016 | The interconsequences of empowering discourse' in intercultural patient education | Acute Care Hospital in Sydney, Australia; 2016 | Ethnographic techniques of participant observation and audio recordings of naturally occurring interactions between nurses from CALD backgrounds and their patients were conducted and analyzed using interactional sociolinguistic (IS) and theme oriented discourse analytic approaches A review of studies of empowering discourse | Dependent variable: Interactions Independent variable: - patient participation in decision-making. - the patient's education needs - quality of communication skills of clinical nurses from culturally and linguistically diverse (CALD) | Empowerment in patient education has been found to influence patients' self-efficacy and participation in decision-making. Discourse analysis of a whole interaction is used in this article to trace the consequence of patient education where empowering discourse is displayed by clinical nurse from a culturally and linguistically diverse (CALD) background. | Results: The interconsequences of the nurse's empowering approach are readily observable in the data. The RN addresses the patient's education needs through a respectful encounter that illustrates the patient's active involvement | Greater awareness of how to use empowering discourse will offer an alternative and consistent approach that enables nurses to facilitate patient-centered education Positive outcomes of patient education include an increase in knowledge, adherence to treatment plans, involvement in care, perceived control over health and illness, and behavior change that enhances health related quality of life, therefore it is critical that health professionals have proficient communication skills to influence and enable this change | To use empowering discourse, nurses must take patients' levels of knowledge, abilities and values into account, but this is demanding of time and energy, and can be difficult in busy working environments. |

| Author and Year of Publication | The Title of the Journal | Location and Period of Study | Study Method | Variable | Analysis | Result | Advantages | Disadvantages |
|--------------------------------|---|---|--|---|---|---|--|---|
| Delparte JJ, et al. 2014 | Spinal Cord Essentials: the development of individualized, handout-based patient and family education initiative for people with spinal cord injury | SCI rehabilitation center (Canada); 2012-2014 | Mixed (environmental scan, qualitative and semi-quantitative). | Dependent variable: patient and family education Independent variable: teaching materials | Patient and family education is integral to spinal cord injury (SCI) rehabilitation. Information needs are particularly important for personal care, maximizing independence and preventing and managing secondary health complications however, the psychological and physical effects of the injury can present challenges to learning readiness. | One hundred and fifty-six potential handouts were identified; 83 deemed high priority. Seventy-two handouts addressing patient organization, self-management and community integration were finalized for phase 1 Handouts were also helpful for staff training and orientation, as well as increasing the confidence of staff providing education outside their immediate area of expertise. | To develop a customizable patient and family education resource for people with spinal cord injury (SCI). Effective education provides individuals with SCI and their families with the knowledge and skills required to self-manage their condition and maintain health unique patient education resource comprised of a series of concise, practical handouts, which highlight specific ways in which individuals with SCI can self-manage their condition, troubleshoot financial and service needs and access community resources Did evaluation and feed Back | A few patients indicated that the binder was not helpful because of a preference to retrieve information online. Also, some patients indicated that staff should be more proactive in providing them with handouts during their stay. |

| Author and Year of Publication | The Title of the Journal | Location and Period of Study | Study Method | Variable | Analysis | Result | Advantages | Disadvantages |
|--------------------------------|---|------------------------------|-------------------|---|--|--|--|--|
| Sy Virginia 2016 | Empowering Staff Nurses As Primary Educators to Children With Type 1 Diabetes | (not mentioned); 2016 | Literature Review | Dependent variable: patient and family education Independent variable: Simulation based training The class was conducted by a certified diabetes nurse educator and a certified nutritionist who is also a certified diabetes educator, and was facilitated by the CNS. | Patient and family education is a critical element of diabetes management. Many children with new onset type 1 diabetes present with symptoms of diabetic ketoacidosis (DKA) and are hospitalized at diagnosis. These children and their families receive their initial education in the hospital setting. As soon as blood glucose levels are stabilized and the acidosis is corrected, the patient is discharged home, usually within three days (Nettles, 2005). There is little time to provide the skills and education, as well as emotional support, for a smooth transition to home. It is a challenge to achieve these goals if the only resource person for diabetes education is the clinical nurse specialist (CNS). | Education of patients and families during hospitalization has been associated with positive outcomes. Studies of children with type 1 diabetes have demonstrated that patient and family education in preparation for self-management at home is associated with reduced hospitalizations, fewer emergency room visits, and reduction of overall costs for the payer and patient | Using the CNS-developed guidelines and resources, bedside nurses are better able to provide education to patients and families | A nurse felt they have an important role in diabetes education, but their knowledge with regards to diabetes mellitus was less than satisfactory Nurse-reported barriers to education included insufficient time, lack of knowledge, and low confidence in teaching ability. |

| Author and Year of Publication | The Title of the Journal | Location and Period of Study | Study Method | Variable | Analysis | Result | Advantages | Disadvantages |
|--------------------------------|--|--|--|---|---|---|--|---|
| Kello M, et al. 2013 | Patient Education of Children and Their Families: Nurses' Experiences Marjatta | Finnish University Hospital (within different pediatric wards and outpatient department); 2 months | The qualitative critical incident technique Multi-method: Assessment Planning Implementation Evaluation | Dependent variable: Patient Education Independent variable: The participation of the child and parents | The basis for education is the learning needs of the child and the family, which must be assessed with multiple methods using the instruments available. The participation of the child and parents is another prerequisite for empowering education. The patient practice refers to stating the objectives together with the child and the family, implementing child- and family-centered as well as interactive methods and using various evaluation methods. Counseling of children and their families is challenging and differs from adult education because nurses working with children are required to understand the world of children, recognize effects of hospitalization, and teach whole families | Nurse Traditional Behavior: patient education was based on nurses' assumptions of patient needs rather than the assessment of individual needs Nurse Empowering Behavior: the needs of parents with a child with a chronic illness are the need for normality and certainty, the need for information, and the need for partnership. In this study, these needs formed the basis of the individual cognitive, capability, experiential, and attitude objectives. | Patient education is a key intervention for promoting family health and empowerment of families with a child with a chronic illness. The purpose of patient education is to provide knowledge, skills, and increased self-awareness so patients or their family members can use the power to act in their own self-interests | Some factors limited trustworthiness during data collection. Several interviewers conducted the data collection, and the interrater reliability of the interviewers was not established. The interviewers used the same main open question and the same topics, but the interviews would have been more standardized if the same interviewer had conducted all of them. |

| Author and Year of Publication | The Title of the Journal | Location and Period of Study | Study Method | Variable | Analysis | Result | Advantages | Disadvantages |
|--------------------------------|---|--|--|--|---|--|--|--|
| Mikkonen J, et al. 2012 | Health care professionals' views about supporting patients' self-management | Savonia University of Applied Sciences in Finland; 2009-2010 | Analyzed using qualitative SWOT analyses (strengths, weaknesses, opportunities, threats) | Dependent variable: Patient Education Independent variable: patient-centered counseling quality patient education the patient's participation | Nurses' and other health care professionals' knowledge and skills in caring for and educating patients with chronic conditions is a determining factor in health care outcomes for patients Lack of knowledge and skills among health care professionals has contributed to inadequate care and education being delivered to patients Consequently, new more innovative and efficient ways to care for patients with chronic conditions are a paramount concern for societies | Three themes emerged to describe health care professionals' views about their patient education skills and how to develop them: patient-centered counselling; supporting self-management; and continuous development. Patient-centered | The health care professionals in this study experienced that they should develop their patient education toward patient-centeredness The nurses in this study, however, acknowledged the need for change and development toward patient-centeredness and patient self-management in care and patient education. | The sample used in the research is small |

| | |
|---------------------------------------|--|
| Author and Year of Publication | Sherman J R, et al. 2016 |
| The Title of the Journal | An Initiative to Improve Patient Education by Clinical Nurses |
| Location and Period of Study | (not mentioned); Sept-Oct 2016 |
| Study Method | Literature Review |
| Variable | Dependent variable: to Improve Patient Education Independent variable: the clinical nurse trained to perform education |
| Analysis | After hospitalization, patients need to understand how to care for themselves at home. One of the most important things nurses can do to improve outcomes is to educate patients about their self-care needs before discharge (London, 2016). Nurse educators must prepare clinical nurses through continuing education, in-service programs, and staff development to improve and maintain their teaching abilities. |
| Result | Comparison of participating units from pretest to posttest demonstrated an improvement in knowledge (average 83% pretest, posttest average 89%). All but three questioned demonstrated improvement between tests; they focused on assessing learners with appropriate use of teaching modalities, clarifying incorrect teach-back, and defining health literacy. The range of improvement was 2%-16%. To promote better patient health outcomes, clinical nurses need to be involved increasingly with patient education. However, they require support and resources in their role as patient educators to be successful |
| Advantages | Clinical nurses play a vital role in the delivery of patient education. The focus of the project described in this article was to promote a standard of practice that would improve nurses' ability as effective, efficient patient educators |
| Disadvantages | The organization had no practice standard for patient education. Central and unit-based nurse educators were responsible for educating nursing staff rather than patients. The hospital also did not employ specialty nurses dedicated to implementing patient education, which was the responsibility of clinical nurses. |

| Author and Year of Publication | The Title of the Journal | Location and Period of Study | Study Method | Variable | Analysis | Result | Advantages | Disadvantages |
|--------------------------------|---|---------------------------------------|--|---|---|---|--|--|
| Reinhart R, et al. 2014 | Educating Our Patients Collaboratively: A Novel Inter-professional Approach | A local hospital in Canada; 2010-2013 | Study Population pre- and post-education | Dependent variable: distress levels Independent variable: -The group education session - prostate cancer | Descriptive statistics were used to describe the responses from the acceptability and usefulness survey as a mean to provide insight into the usefulness and completeness of the information provided within the education session. Open-ended questions were analyzed for common themes reported by all participants. The field observations taken during the sessions were reviewed and used to help validate the themes found in the open-ended questions. The mean DT scores are reported for both the pre- and post-education sessions. To determine the potential impact that the educational sessions could have on pre-treatment anxiety levels, the pre-/post-DT data were analyzed using a matched pair <i>t</i> -test. | The group education session significantly improved informational distress levels ($p = 0.04$). Educating prostate cancer patients utilizing an inter-professional group format can decrease anxiety and stress related to their radiation therapy (RT) treatment. | Providing cancer patients with more information regarding their treatments allows them to feel more in control, increases self-efficacy, and can decrease anxiety. Education is critical to ensure that patients have informational satisfaction. Patients who participated in the group education sessions had increased self-esteem and quality of life (QOL), improved body image, and greater discussions with family members. | The sample size for this pilot study was small, The results obtained may not necessarily represent the findings of a larger study population of prostate cancer patients. The study population was also not homogeneous there was a large age difference between some of the patients in the education session. This could have influenced the openness of the discussion that followed the presentation, especially regarding the subject of sex and sexual function. |

| Author and Year of Publication | The Title of the Journal | Location and Period of Study | Study Method | Variable | Analysis | Result | Advantages | Disadvantages |
|--------------------------------|---|------------------------------|---|---|---|--|--|--|
| Denis S, et al. 2012 | Which providers can bridge the health literacy gap in lifestyle risk factor modification education: a systematic review and narrative synthesis | (not mentioned) 2012 | a systematic review and narrative synthesis | Dependent variable: developing health literacy of patients to make SNAPW (smoking, nutrition, alcohol, physical activity and weight) lifestyle changes Independent variable: interventions to address health literacy and lifestyle risk factor modification provided by different health professionals. | For some SNAPW lifestyle changes, such as smoking cessation interventions, low intensity interventions resulted in behavior change but not necessarily improvements in health literacy. | 52 papers were included that described interventions to address health literacy and lifestyle risk factor modification provided by different health professionals. Most of the studies (71%, 37/52) demonstrated an improvement in health literacy, in particular intervention of a moderate to high intensity. Non-medical health care providers were effective in improving health literacy. However this was confounded by intensity of intervention. Provider barriers impacted on their relationship with patients. | Capacity to provide interventions of sufficient intensity is an important condition for effective health literacy support for lifestyle change. This has implications for workforce development and the organization of primary health care. | People with low health literacy may not have the capacity to self-manage their health and prevent the development of chronic disease through lifestyle risk factor modification. |

with regard to patient-centered education. This study showed that, through education and training, healthcare professionals can recognize the need to develop their patient education toward patient-centeredness [6].

Sy, V. (2016), details the clinical nurse's approach to supporting the bedside nurses who serves as the primary educators for pediatric patients with type-1 diabetes. With qualitative study, Sy considered some variables, such as: (1) educational preparation of nurses as patient educators; (2) educational tools and resources; (3) development of a teaching plan; and (4) development of diabetic ketoacidosis protocol through multidisciplinary collaboration. The study resulted in an increase in nursing confidence and expertise related to diabetes care as demonstrated by competencies met by nurses and anecdotal evidence from nurses and patients' caregivers [5].

In line with a study by Reinhart et al. (2014); Sherman J. R. (2016), in this study, an initiative to improve patient education by clinical nurse, also use a qualitative study with pre- and post-education evaluation. As for evaluating, a number of variables were assessed, such as: (1) pre-test and post-test questions; (2) improvement needs; (3) quality indicators and data collection; and (4) action plan and data evaluation. This study come up with a result of patient education curriculum will contribute to provision of effective, efficient education by clinical nurses with the organization. The development of a standardized patient education approach for clinical nurses promoted improvement in patient education practices, which in turn may promote patient's ability in self-care in improve patient outcomes [13].

In a literature review by Dennis et al. (2012), in determining the effectiveness of primary healthcare providers in developing health literacy of patients to make a smoking, nutrition, alcohol, physical activity, and weight (SNAPW) lifestyle changes. In the study, 52 papers were included that described interventions to address health literacy and lifestyle risk factor modification provided by different healthcare professionals. Most of the studies (71%) demonstrated an improvement in health literacy, in particular interventions of a moderate to high intensity. Capacity to provide interventions to sufficient intensity is an important condition for effective health literacy support for lifestyle change. This has implications for workforce development and the organization of primary healthcare [8].

A method of pure qualitative study was used in six of the aforementioned studies. Different variables was taken into account in each of these studies, depends on

what each author's aimed at. All studies have their own evaluation technique, in which they analyze and made a conclusion with their own findings, and finally they can come up with an objective planning for evaluating their delivery of patient education. An evaluation is essential for improvement on patient education.

2. *Mixed Method Study*

In a study by Kelo et al. (2013), by using qualitative study and multi-method, they (1) study qualitative critical incident technique was used by interviewing 45 nurses in pediatric units; (2) multi method: In implementation, the nurses used a combination of different methods cooperating with other professionals. The nurses used verbal counseling combined with written materials, demonstration, play, telephone counseling, and practical training. To assess educational needs, the nurses used a combination of different methods. They observed the child and parents, and verified their observation by reviewing hospital documents, interviewing patients, and receiving information from other sources [4].

Delparte et al. (2014), used a mixed method study, which consist of: (1) Environmental scan by using identification of content educational materials. The results of the environmental scan were then used to generate a preliminary list of handouts for stakeholder feedback. (2) By using semi-quantitative study, a search for potential handout and finally come up with One hundred and fifty-six potential handouts were identified; 83 deemed high priority. (3) qualitative study dengan open-ended questions solicited general feedback from staff and patients, including pro-s and con-s on launched handouts [12].

By using a mixed method study, the aforementioned two articles are able to customize more and 'play around' to suit their need in delivering a better patient education. They were using media such as telephone, handouts/written materials, and open-ended questions to get feedbacks from the healthcare professionals itself, and primarily from the patient, for evaluating their method of patient education.

3. *Observational*

According to a single study which was using observational method, by Crawford et al. (2016) on interactional consequences of 'empowering discourse' in intercultural patient education, found that discourse analysis is limited by reliance on

interpretive analytic procedures to deduce speakers' intent and listeners' interpretation; however this is mitigated through ethnographic techniques of participant observation, field notes and discussions with the participants to validate observations. Audio-recordings also enabled repeated listening of the interactions to check interpretation of the transcript. Empowering behavior builds trusting nurse-patient relationships which underpins good patient education [3].

Through this study, seems a single observational method a good method to deliver a patient education, in means of building a trusting nurse-patient relationship by empowering behavior. Though seems not as maximum as the other methods mentioned earlier. This observational method is suitable for tele-patient education which can be recorded and listened-to repeatedly for interpretation check.

In addition to various methods of patient education obtained out of the studies resumed as a systematic review earlier, by the Indonesian Standard of Hospital Accreditation (2011), an effective patient education method will have to consider patient and family's value and norms, which allows adequate interaction between patient and family, and the healthcare providers, in order to develop the learning process [9].

4. Conclusion

An effective communication of patient education must provide knowledge, skills and increased self-awareness so patients or their family members can use the power to act in their own self-interest [4], self-efficiency and participation in decision-making [3], to then gradually build their own self-management, not to forget the patient and family's value and norms, which allows adequate interaction between patient and family, and the healthcare providers, in order to develop the learning process [9].

Various methods on communicating an effective patient education, yet evaluation has to made, to objectively assess the effectiveness in patient education. In order to do so, variables have to be determined, both from the healthcare providers as the educator's point of view, along with patient as the care receiver's point of view. This method with determination of variables in continuous evaluation, is also known as qualitative method of patient education.

The qualitative method alone is already a great way of delivering patient education, though it would be better if combined with usage of other media and materials, such as

written materials (e.g., handouts and banner, etc.), telephone counseling, even internet will be quite useful.

Broadening patient access to and delivery of patient education could lead to improved levels of satisfaction with the information that patients in this facility received. In addition, educational efforts that are directed at increasing patient's understanding about their disease have benefits for patients, their families, providers, and society [2, 5].

Society in general is increasingly developing toward equality, participation and citizen rights. Consequently, it is important to take this development into account in health care and patient education as well, because long term success will be achieved only by supporting the patient's self-management as a consequence of the co-operation, support and facilitation of healthcare professionals [6].

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