ORIGINAL ARTICLE

Experience of nurses in assessing postoperative pain in hip fracture patients suffering from dementia in nursing homes

Ferid Krupić[1,2], Mirza Bišćević[3], Emina Spahić[4], Amila Jašarević[5], Mahir Jašarević[6], Kemal Grbić[7], Eric Hamrin-Senorski[8], Eleonor Svantesson[2], Svemir Čustović[5], Olof Westin[2]

[1]Department of Anesthesiology, Institute of Clinical Sciences, [2]Department of Orthopaedics; Institute of Clinical Sciences, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, [3]Orthopaedic and Traumatology Clinic, University Clinical Center Sarajevo, [4]Department of Forensic Medicine, School of Medicine, University of Sarajevo; Sarajevo, Bosnia and Herzegovina, [5]Clinic for internal disease, Department for nephrology and dialysis, [6]Clinic for Orthopaedic and Traumatology; University Clinical Center Tuzla, Tuzla, [7]Clinic of Thoracic Surgery, University Clinical Center Sarajevo, Sarajevo; Bosnia and Herzegowina; [8]Department of Health and Rehabilitation, Institute of Neuroscience and Physiology, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden.

ABSTRACT

Aim To explore the experiences of registered nurses in assessing postoperative pain in hip fracture patients suffering from dementia in nursing homes.

Methods The study was designed as a qualitative study using data from a self-reported questionnaire form. Data were collected through the self-administered questionnaire with 23 questions, mainly addressing demographic and social data, information about communication and pain assessment.

Results All nurses reported that large part of verbal communication with dementia patients was lost, and non-verbal communication was very important to optimize the care of these patients in postoperative situations. An assessment of pain in patients with dementia and hip fractures was a complex process because cognitive ability of these patients was reduced.

Conclusion Registered nurses need to know various and different forms of evaluation and tools to assess the experience of pain in patients with dementia who had undergone surgery for hip fractures. This is a complicated task, which requires a great deal of time, and means that nurses must work together with other medical staff, using a holistic approach.

Key words: pain management, pain measurement, registered nurses, retirement

Corresponding author:
Jašarević Mahir
Clinic for Orthopaedics and Traumatology, University Clinical Centre Tuzla
Trnovac bb, 75000 Tuzla, Bosnia and Herzegovina
Phone: +387 35 303 246; fax: 387 35 303 246;
E-mail: mahir.j@gmail.com
Ferid Krupić http://www.orcid.org/0000-0001- 7082-3414

Original submission:
17 May 2019;
Revised submission:
27 August 2019;
Accepted:
25 September 2019
doi: 10.17392/1042-20

Med Glas (Zenica) 2020; 17(1):216-223

INTRODUCTION

As the population grows generally older, dementia is becoming more common. In 2018, there were approximately 57.8 million people suffering from dementia throughout the world and there are nearly 8.1 million new cases of dementia every year worldwide (1). On the other hand, hip fractures are one of the most common and debilitating injuries that affect the elderly population worldwide, with a global incidence estimated to be around 1.6 million fractures annually (2) Treatment of the pain in the patients with hip fracture and dementia presents a particular challenge. Since elderly patients with dementia or communication difficulties are often unable to communicate their pain experiences verbally or in sufficient detail, their pain is often not recognized, or it is not effectively treated.

Registered nurses (RN) provide expert care on the basis of scientific research, according to the Swedish Board of Health and Welfare (3). They must be able to observe, assess, plan, implement and evaluate their patients' needs, so it is imperative for them to acquire the necessary skills, especially for dementia patients, since these patients are unable to express themselves clearly. Undetected and untreated pain in demented patients can cause cognitive (decreased attention and concentration) and behavioural (aggression and depression) problems, which cause an increase in care demand, caregiver dependency and the need for health system (4).

It is clear that the assessment of and communication relating to pain in dementia patients is challenging for medical staff, since these patients do not find it easy to express their pain (5,6). It has been acknowledged that there is a lack of adequate evaluation and treatment of pain in hospitals (7) and patients' mental illnesses make the challenge even greater (8). To some degree, this is because these patients find it difficult to remember the pain they suffered in the past, understand the pain they are currently suffering and talk about it in a comprehensible way. It is possible that they no longer have any memory of pain (9), and on the other side health care professionals are often under severe time pressure and are frustrated in their work, whether they work in nursing homes (10,11) or hospitals (12,13). After surgical procedures, many different medical professionals participate in the communication and assessment of pain. The physicians prescribe analgesics, but RN evaluate and give the pain medication to the patients (14,15). Patients in pain post-surgery are a particular problem, since their wishes and ability to communicate with them are very individual (16,17). The communication between RN and patients was described by Travelbee as a person-to-person relationship (18). It takes place in four phases: the initial encounter, emerging identities, empathy and sympathy. The RN and the patient pass through these phases to obtain understanding of one another and be able to relate to one another as people rather than nurse and patient. Sympathy is defined as the situation in which people have the ability to be actively interested in another person's feelings. Travelbee says that sympathy is not possible at a distance. The present article, which deals with communication in the work done by RN, was inspired by two aspects of Travelbee's research: consideration of sympathy as an important aspect of the relationship between a RN and a patient and the concept of that relationship as between two human beings.

There is a limited amount of literature investigating the way RNs act in response to "problematic patients", especially in terms of the theoretical study of emotional labour and engagement or detachment, in the context of care-giving. There may be problems in communication due to the lack of practical, day-to-day guidelines to help ease stress and facilitate communication (19,20). Registered nurses act as advocates for patients and need to be proactive in ensuring that older people have adequate pain relief (21).

The aim of this study was to explore the experience of registered nurses in the assessment of pain and communication with hip fracture patients with dementia in nursing homes.

PARTICIPANS AND METHODS

Participants and study design

The study was designed as a qualitative study assessing postoperative pain in hip fracture patients suffering from dementia in nursing homes using data from a self-reported questionnaire form. Data were collected through a questionnaire with 23 questions.

The study was conducted at three nursing homes in the northern part of Gothenburg. The heads of

the centres were contacted by the first author and were asked to permit the RN to participate voluntarily in the study. Only nurses with more than five years of experience of working with fracture patients with dementia were eligible to take part in the study. Questionnaires were sent to 30 registered nurses and 24 of them (78%) returned the completed questionnaires. The participating nurses were between 42 and 61 years of age (median 51.5) and they had worked as registered nurses for between six and 33 years (median 18.5 years).

Methods

The data were collected between January 2017 and August 2018 (by the first author) through the self-administered questionnaire. The study questionnaire contained 23 items mainly addressing demographic and social data, information about communication and pain assessment, the attention and awareness of the health-care professionals on the ward and suggestions for improving nursing. For the purpose of the study, all 23 questions were analysed. They were related to age, gender (m/f), educational level and years of experience as a registered nurse and candidate examination (yes/no). The questions about communication and pain assessment in fracture patients with dementia were written as standard questions and the nurses were able to write and describe things, as much as they wanted (Table 1).

Table 1. Demographics of participants in terms of educational level, work and years of experience

Characteristic	Number of patients
Gender	
Male	7
Female	17
Total	24
Education level	
Registered nurses	24
Candidate exam	8
Total	**24**
Dementia courses taken	**20**
Age	
≤ 30 years	5
31-40 years	7
41-50 years	9
≥ 60 years	3
Total	**24**
Experience as registered nurses	
≤ 5 years	3
6-10 years	5
11-15 years	9
16-20 years	3
≥ 20 years	1
Total	**24**

Statistical analysis

A qualitative content analysis method in accordance with Graneheim and Lundman (22) was chosen for the analysis and interpretation of the data. This method is capable of condensing a large amount of data into a limited number of themes, categories, subcategories and codes. The data were analysed initially at the level of manifest, but latent analysis was also used. The transcriptions were studied in detail to draw out the subjects' thoughts and experiences. Units comprising a single word or a few words or more from their replies that were related in some way were then created. These units were joined together in terms of their content and grouped into condensed units. A description was ascribed to these units that related to the original words and they were then assigned codes and collected into subcategories (Table 2). These were then merged so that they dealt with a clear topic (22). We mainly interpreted statements at the manifest level, according to Graneheim and Lundman, and the results that are shown are actual quotations from the replies (22).

Table 2. Illustration of the analysis process in various stages

Stage	Description
	Meaning unit
I	The first step is to identify the words, sentences, and paragraphs that have the same essential meaning and contain aspects related to each other through their content and context.
	Condensed meaning unit description close to the text
II	Meaning units were condensed with a description close to the original text.
	Condensed meaning unit interpretation of the underlying meaning
III	The condensed text in the meaning unit was further abstracted and interpreted as the underlying meaning and labelled with a code.
	Subcategories
IV	Codes were grouped together based on their relationship and codes that addressed similar issues were grouped together in subcategories.
	Categories
V	Subcategories that focused on the same problem were brought together in order to create more extensive conceptions.

RESULTS

The analysis of the text in the present study resulted in one theme, three main categories and nine subcategories (Table 3).

Table 3.

Categories	Subcategories	Theme
Non-verbal communication	Facial expressions Touching the patients Listening to the patients	Caring for hip fracture patients with dementia – a complex issue
The pain assessment	Having a holistic approach to patients Observation of patients Pain assessment instruments	
Advice and suggestions for improvement	Different strategies in communication More time and better information	

Non-verbal communication

All nurses started the assessment of pain in hip fracture patients with dementia by communicating with them. However, all nurses emphasized that a large part of the verbal communication with these patients was lost. Since verbal communication was not effective, all nurses abandoned it and used non-verbal communication as a tool for performing their duties in the best possible way. All nurses had read a great deal about communication and other ways to optimize the care of dementia patients. Almost all of them had taken a course on dementia and described taking care of dementia patients in postoperative situations. They stated that non-verbal communication could begin, for example, by turning to a person and showing that one wants interaction or through mimicry. This means that, in a regular conversation, the conversation begins by expressing an assertion or a question. They also said that body language was an important part of communication and that they interacted with smiles, touch, tone and eye contact with dementia patients.

Facial expressions. The importance of facial expressions was described by all nurses in the study. Expressions are important because they convey a great deal of feeling and meaning. How persons hold their head, the gestures they make with their hands and their posture also play a major role. All nurses mentioned that a smile and widespread arms is a friendly welcome, while a smile in combination with crossed arms is a threatening welcome. You must be aware of your own body language and learn to read the people you care for. They repeated their knowledge from the course and stated that many people with dementia can tell if a smile is forced or if it comes from the heart.

"Although they can't speak, they know… when I'm laughing in the room with the patient, she's in a good mood right away."

Touching the patients

All nurses found that touch was an effective method for communicating with dementia patients and can be used to stimulate, convey security and warmth and to calm the patient and make someone relax. Touch can also be used to communicate quietly, provide motion signals, provide physical support and loosen a grip. Some nurses said that they had experienced that some patients did not like being touched and that it was therefore important to be alert and careful. They also knew that, of all the senses we have, touch develops first. Most of the nurses also described their hands as important tools in non-verbal communication with dementia patients. They said that, when their hands are used to touch or make gestures, they could almost talk.

"You do not have to talk to them… it's enough to be close and put your hand on their hand or shoulder."

Listening to patients. The importance of listening to patients and being clear and sure that patients listen to their caregivers was described and emphasized by all nurses. They also said that it was important that people who need professional help or who are developing a problem have someone who pays attention to them. The fact that dementia patients must feel safe and perceive that health-care staff listen to them was described by all the nurses in the study. The fact that care providers ask questions indicates that you are trying to understand, by listening carefully or using different expressions, hoping to learn more about their story in depth. A change in volume may express how the person is feeling.

"Sometimes, I'm with the patient for 30 minutes, but nothing happens… I listen… wait…, that's enough."

The pain assessment

An assessment of pain in patients with dementia and hip fractures was initiated using various observation strategies, a general overview of the patients and, in some cases, using assessment criteria. However, the last of these produced no real results. The majority of nurses in the study were

aware of these patients' communication ability and they usually focused on other things rather than communicating with them.

Having holistic views about patients. Regarding pain assessments in hip fracture patients with dementia, the majority of the nurses in the study pointed out difficulty dealing with this issue. They said that pain assessment was a complex process because the cognitive ability of these patients was reduced. On the other hand, nurses perceived this as a challenge and trusted in their knowledge, their colleagues and the dementia courses the majority of them had attended. Unlike other staff and previous departments where the patients find themselves in the surgical process, the nurses now see the patient as a whole person composed of many different dimensions and not just as an individual who is ill. All the nurses in the pain assessment interpreted various signals from their patients and collected information from experienced colleagues.

"We have to see the patient as a whole… not just that they are sick, but that they are active and some have different talents that should not be forgotten."

Observation of patients. For the nurses, one of the most common strategies when assessing pain in hip fracture patients with dementia was to observe patient behaviour. According to the majority of the nurses, behaviour that could indicate pain in these patients comprised concern, nervousness, agitation, anxiety, restlessness, sometimes screaming and aggression. The nurses even observed vital parameters such as pulse, blood pressure and breathing. Some of the nurses also noted various verbal expressions and unusual movements in these patients. Other nurses described sleep disorders and loss of appetite as indicators of pain in these patients. More experienced nurses and those who had taken a dementia course found it easier to assess patient's pain and respond to these patients in comparison to their younger, less experienced colleagues.

"As soon as I enter the room, I 'scan' my patient and see what the problem is."

Pain assessment instruments. Some nurses explained that they used various tools to assess pain in dementia patients with hip fractures. However, the majority of the experienced nurses in the study did not use assessment tools because they thought they did not help and said that these patients were unable to estimate their pain using these aids. Even the nurses who used assessment tools said that they had no results because these patients were not able to answer the questions and were not able to remember their pain. The most common assessment instruments were the numeric rating scale (NRS) and the visual analogue (VA) scale, but they did not produce results.

"Using the VA scale in these patients is a waste of time… it's not possible."

Advice and suggestions for improvement

Since almost all nurses had completed the dementia course, they shared their experiences and described different strategies and advice on how to communicate and assess pain in a hip fracture patient with dementia.

Different strategies in communication. Some strategies relating to communicating with patients with dementia were to use simple sentences, to be concise and clear, maintain eye contact, listen actively and not interrupt the patient, allow the individual time to respond, avoid talking slowly, not emphasize incorrectness and avoid different background noises. The majority of nurses in the study pointed out that, if you do not understand, you should not agree but let someone else try if you do not succeed in establishing contact with the individual and have patience and respect for these patients.

"When I come to these patients, I trust them to take command and I just listen, without stress."

More time and better information. In order to further improve the care of hip fracture patients with dementia, the nurses mentioned, in particular, that they needed more time and better information about these patients. All the nurses said that often, when they are with these patients, they need twice as much time compared with patients who do not have dementia. Sometimes they have other tasks, but sometimes a dementia patient takes up all their time. Another difficulty was insufficient information about these patients. All the nurses felt that there should be better collaboration between the emergency room and various surgical departments with the post-operative wards and nursing homes.

"Getting that much from a dementia patient takes time, but other tasks and patients have to wait."

"Sometimes, it's enough to read a piece of paper and you know everything about the patient, but sometimes you have to call, send mails and contact others to get information about the patient."

DISCUSSION

This is the first study in western Sweden to examine the opinions of nurses relating to the evaluation of pain and communicating with dementia patients who have suffered a hip fracture and other aspects that affect their work. It reveals many of the characteristics of these nurses and aspects that affect the way they evaluate pain after surgery and in retirement/nursing homes.

The nurses initially evaluate pain by talking to the patient, however, if it is not possible to have a conversation with the patient, they use non-verbal signs, facial expressions, touch and listen to them. The nurses mention that the patients' expressions help them to evaluate pain. However, Manfredi et al. (23) found that facial expressions did not help assess the amount of pain in dementia patients. Knowing the patient before he/she underwent surgery made it easier to evaluate his/her pain, especially if the nurses had known the patient for a while. This shows how important it is to maintain continuity in care, especially in patients with dementia. The challenges in the assessment of pain in people with dementia mean that health care workers are not sufficiently prepared to handle the difficulties in establishing good pain management practice for these patients. The literature suggests that a large proportion of these issues could be overcome through better education on specific aspects of pain management (24). Nurses who had taken classes on dealing with dementia found it much easier to carry out their tasks. It is very important to cooperate and communicate with all patients and this has been shown in several prior studies (13, 25-27).

Travelbee (18) wrote about inter-personal relationships, saying that, if a distance exists between a nurse and a patient, it is impossible to develop sympathy, which is vital for all relationships (18). This sympathy must lead to understanding; otherwise communication cannot exist (18-21). Of course, this is not always possible and the nurses find it easier to feel sympathy for some patients than for others. According to Travelbee (18), communication is "a process which can enable the nurse to establish a human-to-human relationship and thereby fulfil the purpose of nursing; namely, to assist individuals and families to prevent and to cope with the experience of illness and suffering and, if necessary, to assist them to find meaning in these experiences" (18). This is perhaps a little biased, since the nurse is the one who starts the relationship, but the patient may do this, too. Since patients with dementia are unable to answer the nurses' questions in a meaningful way, there is no real conversation, so the nurses must evaluate pain using other methods and a holistic approach. These results agree with a study by Burns and McIlfatrick (28), where higher levels of vital signs indicated that dementia patients were suffering from pain. This means that nurses have various ways of evaluating pain in these patients. It is complex and takes time and requires the cooperation of other medical staff, enabling a holistic approach.

Many of the current instruments used for evaluation were assessed as being more successful than in other studies and further research is necessary to find which are best suited. A review of the recent literature shows how research is aimed at helping nurses evaluate pain in dementia patients more successfully. It gives practical ideas and stresses that it is important to dedicate sufficient time to this vulnerable group. Nurses with longer experience do not use assessment tools, since they do not produce any useful results in these patients. Hadjistavropoulos et al. (29) found, like us, that dementia patients are frequently unable to express their pain due to the limitations to their language and mental ability. However, that study did recommend using assessment tools if it is possible to communicate meaningfully with the patient and it states that carers must take note of the patients' mental status. Perhaps this is the reason why nurses with less experience tend to use tools to evaluate pain in these patients. Another study by Hadjistavropoulos et al. and one by Husebo et al. (29, 30) found that there is in fact no commonly used standard tool to evaluate pain in patients with dementia. McAuliffe et al. (31) stated that it is very important for medical workers to know about pain and how to evaluate it in these patients. Evaluation tools need training and time to be used correctly, but they are not difficult to master. However, the nurses here stressed that

they do not have sufficient time, so we believe it is necessary to create guidelines for pain evaluation in hospitals and retirement/nursing homes to enable carers to provide adequate care.

In conclusion, our study showed that nurses used various different forms of evaluation and tools to assess the experience of pain in patients with dementia who had undergone surgery for hip fractures. This is a complicated task, which requires a great deal of time, and means that nurses must work together with other medical staff, using a holistic approach. They assessed a relatively large number of the current evaluation tools and found that they were better than in other studies, so it is necessary to undertake more studies to find the best approach. This study shed light on a field where more research is needed to help caregivers learn more about pain evaluation in dementia patients who have suffered a hip fracture. It may assist in finding better forms of care and help to resolve these issues.

FUNDING

No specific funding was received for this study.

TRANSPARENCY DECLARATION

Conflicts of interest: None to declare.

REFERENCES

1. World Health Organization. Dementia: a public health priority: Switzerland – 2012, Geneva: World Health Organization, 2012. https://www.who.int/mental_health/publications/dementia_report_2012/en/ (07 July 2019)
2. Johnell O. The socioeconomic burden of fractures: today and in the 21st century. Am J Med 1997; 103:20S–25S.
3. National Board. National Board competence description for registered nurses. https://www.nursingmidwiferyboard.gov.au/documents/default.aspx?record=WD10%2F1349&dbid=AP&chksum=aljeSkQ0D2Yzm4jBCcBhtg%3D%3D (07 July 2019)
4. Zwakhalen SM, Hamers JP, Abu-Saad HH, Berger MP. Pain in elderly people with severe dementia: a systematic review of behavioral pain assessment tools. BMC Geriatrics 2006; 6:1.
5. Cohen-Mansfield J. Nursing staff members' assessments of pain in cognitively impaired nursing home residents. Pain Manag Nurs 2005; 6:68-75.
6. Cunningham C, William M, Kelly F. The assessment and management of pain in people with dementia in care homes. Nurs Older People 2010; 22:29-35.
7. Carr ECJ, Meredith P, Chumbley G, Killen R, Prytherch DR, Smith GB. Pain: a quality of care issue during patients' admission to hospital. J Adv Nurs 2014; 70:1391-403.
8. Sampson EL, White N, Lord K, Leurent B, Vickerstaff V, Scott S, Jones L. Pain, agitation and behavioural problems in people with dementia admitted to general hospital: longitudinal cohort study. Pain 2015; 156:675-83.
9. Oosterman JM, Hendriks H, Scott S, Lord K, White N, Sampson EL. When pain memories are lost: a pilot study of semantic knowledge of pain in dementia. Pain Med 2014; 15:751-7.
10. Hedman AM, Strömberg L, Grafström M, Heikkilä K. Hip fracture patients' cognitive state affects family members' experiences – a diary study of the hip fracture recovery. Scand J Caring Sci 2011; 25:451-8.
11. Clark L, Fink R, Pennington K, Jones K. Nurses' reflections on pain management in a nursing home setting. Pain Manag Nurs 2006; 7:71-7.
12. Krupic F, Eisler T, Sköldenberg O, Fatahi N. Experience of anaesthesia nurses of perioperative communication in hip fracture patients with dementia. Scand J Caring Sci 2016; 30:99-107.
13. Brorson H, Plymoth H, Örmon K, Bolmsjö I. Pain relief at the end of life: nurses' experiences regarding end-of-life pain relief in patients with dementia. Pain Manag Nurs 2014; 15:315-23.
14. Dihle A, Helseth S, Kongsgaard UE, Paul SM, Miaskowski C. Using the American Pain Society's outcome questionnaire to evaluate the quality of postoperative pain management in a sample of Norwegian patients. J Pain 2006; 7:272-80.
15. Hartog CS, Rothaug J, Goettermann A, Zimmer A, Meissner W. Room for improvement: nurses' and physicians' views of a post-operative pain management program. Acta Anaestheiol Scand 2010; 54:277-83.
16. Rudolfsson G. The nurse has time for me: the perioperative dialogue: from the perspective of patients. J Adv Perioperative Care 2003; 3:77-84
17. Krupić F, Šadić S, Seffo S, Bišćevic M, Fazlić M, Čustović S, Samuelsson S. Experience of registered nurses in assessing postoperative pain in hip fracture patients with dementia Med Glas (Zenica) 2018; 15:75-80.
18. Travelbee J. Mellemmenneskelige Aspekter i Sygepleje (Interpersonal Aspects of Nursing). Copnehagen: Munksgaard, 2010.
19. Siemens I, Hazelton L. Communicating with families of dementia patients: practical guide to relieving caregiver stress. CanFam Physician 2011; 57:801-2.
20. Beer LE, Hutchinson SR, Skala-Cordes KK. Communicating with patients who have advanced dementia: training nurse aide students. Gerontol Geriatr Educ 2012; 33:402-20.
21. Prowse, M. Postoperative pain in older people: A review of the literature. J Clin Nurs 2007; 16:84-97.
22. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. Nurse Educ Today 2004; 24:105-12.

23. Manfredi PL, Breuer B, Meier DE, Libow L. Pain assessment in elderly patients with severe dementia. J Pain Symptom Manage 2003; 25:48-52.
24. Achterberg WP, Pieper MJ, van Dalen-Kok AH, de Waal MW, Husebo BS, Lautenbacher S, Kunz M, Scherder EJ, Corbett A. Pain management in patients with dementia. Clin Interv Aging 2013; 8:1471-82.
25. Hansebo G, Kihlgren M. Carers' interactions with patients suffering from severe dementia: a difficult balance to facilitate mutual togetherness. J Clinical Nurs 2002; 11:225-36.
26. Miller C. Communication difficulties in hospitalized older adults with dementia. Am J Nurs 2008; 108:58-66.
27. Long A, Slevin E. Living with dementia: communicating with an older person and her family. Nurs Ethics 1999; 6:23-36.
28. Burns, M., & McIlfatrick, S. Palliative care in dementia: literature review of nurses' knowledge and attitudes towards pain assessment. Int J Palliat Nurs 2015; 21:400-7.
29. Hadjistavropoulos T, Herr K, Prkachin K M, Craig K D, Gibson S J, Lukas A, Smith JH. Pain assessment in elderly adults with dementia. Lancet Neurol 2014; 13:1216-27.
30. Husebo B S, Achterberg W P, Lobbezoo F, Kunz M, Lautenbacher S, Kappesser J, Strand L I. Pain in patients with dementia: A review of pain assessment and treatment challenges. Norsk Epidemiologi 2012; 22:243-51.
31. McAuliffe L, Brown D, Fetherstonhaugh D. Pain and dementia: an overview of the literature. Int J Older People Nurs 2012; 7:219-26.