http://kadint.net/our-journal.html

ISSN 2410-4981

"I Experience Very Sharp Pain but It's On and Off": A Phenomenological Study of Postoperative Pain Experiences of Patients in Ghana

Evans Frimpong Kyei [a, *], Edward Appiah Boateng [b], Abigail Kusi-Amponsah Diji [b]

[a] Asonomaso Government Hospital, Ghana
[b] Kwame Nkrumah University of Science and Technology, Ghana

Paper Review Summary:
Received: 2019, March 29
Received in revised form: N/A
Acceptance: 2019, March 30

Highlights

- Participants' postoperative pain felt prolonged than they expected.
- Analgesic intake was driven by fear of death, the desire for a reduced level of pain, and enhanced comfort.
- Common non-pharmacological methods like conversations, watching television, and meditation was adopted by participants.
- Postoperative pain management should be client-centred to meet the unique comfort needs of patients

Abstract

Postoperative pain has been a challenge for the healthcare industry for many years in Africa especially Ghana. However, its management has not received adequate attention like other aspects in the industry as it is evident that clients who undergo surgery continually experience much pain after surgery. The study sought to explore patients' experiences with postoperative pain management. The study employed a qualitative research design with a phenomenological approach. In all twelve (12) participants were recruited for this study using purposive sampling approach. Participants were interviewed in a face to face manner with the help of a semi-structured interview guide. These were patients who had survived more than twenty-four (24) hours after surgery. Interpretative phenomenological analysis (IPA) guided the active generation of four themes which described participants' postoperative pain management experiences. Pain disability, dualistic engagement with nurses, drivers and discomforts of analgesic intake and casting the mind off pain characterized participants' postoperative pain management experiences in the current study. Pain disability represented the debilitating nature of the postoperative pain experience which affected their activities of daily living. Participants described both positive and negative nursing encounters which were covered under the dualistic engagement with nurses. The drivers

* Corresponding author
E-mail addresses: evanskyei80@gmail.com (E.F. Kyei), guardian2405@yahoo.com (E.A. Boateng), abacious@live.co.uk (A.K-A. Diji)

and discomforts of analgesic intake related to participants' motivation for taking prescribed pain medications and some of the untoward effects they experienced with such drugs. Casting the mind off pain illustrated participants' engagement in non-drug techniques due to their potential in distracting them from their prevailing postoperative pain. Unrelieved postoperative pain and its undesirable effects persist despite decades of advanced technologies and research on pain. Postoperative pain care should be individualized to meet the unique comfort needs of patients. Analgesics and non-drug techniques should be encouraged to maximize postoperative pain relief with minimal or no untoward effects.

Keywords: Ghana, Pain Management, Patients, Phenomenological Study, Postoperative Pain.

Introduction

Postoperative pain is an acute type of pain caused by surgical incision and manipulations of body parts during operation. Even though it is often expected, unrelieved postoperative pain can lead to negative psychological, physical, social and spiritual consequences which delay the recovery process, increases the cost of healthcare, and impairs an individual's quality of life (Aziato, Adejumo, 2015; Cohn et al., 2016). A study conducted by Lovich-Sapola, Smith, Brandt (2015) revealed that inadequate postoperative pain management may lead to pathophysiological complications such as atelectasis, pneumonia, nausea, and vomiting. A substantial number of postoperative patients also report of unsatisfactory pain management due to poorly controlled pain and its associated loss of paid working days and interruptions in one's daily living activities (Edusei et al., 2017).

Although African Union summits and workshops have adopted good and effective pain management as a basic human right, most surgical patients in Africa do not receive adequate pain management (Ofori, 2017). Though pain resulting from surgical intervention has a far bigger burden, Woldehaimanot, Eshetie, Kerie (2014) indicate that only about 10 % of patients who have surgery in Africa receive good and adequate pain management. Faponle, Soyannwo, Ajayi, (2001) revealed that two-thirds of surgical patients reported pain of moderate to severe intensity 24 hours after an operation in Nigeria.

The situation in Ghana is not different from these reported studies. Postoperative patients in Ghana continue to experience a substantial amount of pain after the surgical operation (Aziato, Adejumo, 2015). Previous research at the Agogo Presbyterian Hospital in Ghana showed that patient dissatisfaction with postoperative pain management still persists in spite of advances in pain management (Ofori, 2017). At the centre of postoperative pain management is the patient who must endure diverse levels of pain resulting from the surgical operation. It is therefore important to explore the experiences of these patients in order to gather empirical evidence to inform practice, education, healthcare leadership, and policy. The current study, thus, intended to explore experiences of postoperative patients regarding pain management at a teaching hospital in Ghana.

Methods

Design

A qualitative study using the phenomenological approach was deemed appropriate as the researchers were interested in describing the lived experiences of postoperative patients regarding pain management.

Setting

The study was conducted in a tertiary level healthcare facility which also serves as a clinical training site for healthcare providers in Ghana. It is one of the leading referral hospitals in Ghana. The hospital has a bed capacity of one thousand and two hundred (1200) and comprises twelve (12) clinical directorates and four (4) non – clinical directorates. The hospital has been conducting high profile surgeries and has been assisting in other relevant charity events since its establishment.

The study was conducted precisely at the surgical wards of the hospital under the surgical directorate. There are six (6) surgical wards at this directorate which admit cases from the main theatres of the hospital. Each ward has a minimum bed capacity of sixteen (16) and at least three nurses per shift. The surgical directorate in total has a bed capacity of one hundred and seventy-six

(176). The directorate provides main services like specialist OPD services, in–health surgical operations, day-case surgeries, ultrasound services and wound dressing services.

Sampled participants and sampling

A purposive sampling method was employed to select two patients from each of the six surgical wards of the teaching hospital. A total of twelve participants were recruited for the current study, comprising five males and seven females. All patients selected had survived their respective surgeries for more than twenty-four (24) hours. More so, no participant declined or dropped out of the study. However, persons who could not speak audibly and persons who could neither speak and understand Asante Twi (Local dialect) or English were excluded from the study.

Data collection and analysis

Prior to the main data collection for the study, a pre-test was carried out using a semi-structured interview guide that was designed to meet the research objectives. Pre-testing of the interview guide was carried out using three postoperative patients, a male and two female patients who had survived more than twenty-four hours of their respective surgeries (herniorrhaphy, appendectomy, and excisional biopsy) in another healthcare facility. The pre-testing took place two weeks before the major study was rolled out in order to gain inputs from participants regarding the clarity and relevance of included items, and those that ought to be omitted or added on. The pre-testing proved that the interview guide was clear, precise, concise and easily understood by the participants. Thus, no modifications were made to the interview guide for the main study.

Eligible participants were approached at the surgical wards and verbally informed about the intent and purposes of the study, assuring them of anonymity and seeking their participation or otherwise. Eligible participants who signed the consent form to participate in the study were interviewed at an agreed upon date and time. Interviews were facilitated by EFK at side wards of the various wards and at the bedside of clients who could not move out of bed. The interviews were considered as a professional conversation that consisted of an agreed dialect by both parties (interviewer and interviewee), with no other person other than both parties present. Eight of the interviews were carried out using the English language whereas four of them were conducted using an indigenous popular language in Ghana called “Asante Twi”. The interviewer followed the conversational threads that emerged and guided the conversation towards the production of a full account of participants’ postoperative pain experiences. Cognizant of the possibility of participants’ digressing from the main themes in an interview session (Francis, Fitzpatrick, 2013), responses were regulated with well-tailored follow-up questions to keep them on track. As each interview went on, notes were taken, and full audio recording of the conversation was made after obtaining participants’ consent. A minimum of twenty (20) minutes was spent on interviewing each respondent.

Data collection and analysis occurred concurrently until saturation was achieved after the twelfth participant interview. Data familiarization in the current study was ensured through repeated listening and self-transcription of the recorded interviews by the researcher who facilitated the interview sessions. The four (4) interviews conducted in Twi were forward-translated into English and later back-translated into Twi by a professional transcriptionist in order to maintain content integrity – data translation is necessary to enable researchers to understand the meaning of linguistic features (Agu, 2017). Data transcription was performed using Microsoft Word and transported to NVivo 12 plus software for thematic data analysis. The current study adopted the bottom-up inductive way of identifying study patterns with the primary purpose of allowing research findings to emerge from the data, without the restraints imposed by structured methodologies. Guided by the interpretative phenomenological analysis (IPA), participants’ data were analysed using the three-stage approach (transcribing, coding and representing the data) (Creswell, Poth, 2017). Thus, the core purpose of exploring the lived experiences of postoperative patients regarding pain management was achieved.

Rigour

The study adhered to Guba and Lincoln’s criteria for enhancing quality in qualitative studies (Guba, Lincoln, 1989). Credibility and confirmability of the current study were achieved through member checking of the content and main ideas explored during the interviews, as well as peer checking of the themes by 3 experienced qualitative researchers. Transferability and

dependability of the study findings were also accomplished by describing the context of the research and the procedures involved in the entire research endeavour.

Results

Demographics

In all, 12 participants were interviewed in the current study: seven females and five males. Their ages ranged between 19 and 55 years. Participants had their highest formal education at primary (5), secondary (4) and tertiary levels (3). These participants went through eight different surgical operations namely: amputation, appendectomy, cholecystectomy, excisional biopsy, exploratory laparotomy, herniorrhaphy, mastectomy, and prostatectomy. Four participants had previously been operated upon before the current surgery.

The study identified four major themes which described participants' experiences regarding postoperative pain management. These were "pain disability", "dualistic engagements with nurses", "drivers and discomforts of analgesic intake", and "casting the mind off the pain".

Theme 1: Pain disability

This theme describes the disabling nature of participants' postoperative pain experience and the effects this had on their life and daily activities. Existence of pain was an obvious manifestation of surgery as almost all participants expected to endure some level of pain after surgery. Some participants expected to experience short-lived pain after the surgery but to their surprise, they ended up having to endure prolonged pain postoperatively. A participant reiterated this with the following quotes:

"*Of course, I expected to go through some pain after surgery but never thought it was going to take more days [as] it has taken me. I expected to go through the surgery and be discharged quickly, maybe after two to three days*" (Helen, Mastectomy).

"*Today is my third day after surgery yet, I am still having pain. I didn't know it will take this long*" (Olive, Appendectomy)

Participants' also described their experiences of sharp debilitating pain on the first few postoperative days (2-3 days after surgery) which affected their engagement in daily living activities such as mobility and sleep. Eight out of the 12 studied participants reported mobility restrictions and sleeplessness amidst the undesirable experience of sharp pain that could not be relieved. One of them described:

"*I experience very sharp pain but it's on and off, surfacing about twenty times during the day. In bed, I do not find it easy to move and must be lying sideways. I find it very difficult to sleep. I am able to move alright when I am out of bed but I still feel some pain*" (Stephen, Prostatectomy).

Theme 2: Dualistic engagement with nurses

Participants recounted both positive and negative encounters with nurses regarding the management of their postoperative pain. The positive experiences centred around nurse-patient communications and responsive nature of nurses towards pain assessment and management during the postoperative period. Some of the participants had this to say regarding communication:

"*Most nurses communicate well with us. They respond to calls nicely and sound approachable. Nurses often show respect as they use "please", "hello" and some other courteous responses*" (Stephen, Prostatectomy).

"*All the nurses here are good. I have been to other hospitals and I think they have good communication skills with us*" (Helen, Mastectomy)

Majority of the participants also indicated that the nurses believed their self-reported pain and responded quickly to their postoperative pain needs through appropriate assessment and management. Some participants expressed these through the following excerpts:

"*Whenever I tell the nurses I am going through pain, they believe and come to my aid to help. They don't underestimate my pain*" (Seth, Exploratory Laparotomy).

"*They [nurses] are always here to assess my pain as soon as I complain and as a result, I do not suffer abnormal pain*" (Ahmidya, Cholecystectomy).

"*They don't underestimate my pain, they always believe me and help me with what they can*" (Olive, Appendectomy).

Participants' negative experiences with nurses also centred on their poor communication skills, lack of prescriptive authority and unyielding posture. They described these encounters as follows:

"*There are some nurses whose human relations are not good. They are woeful somehow, show some level of empathy but not enough*" (Stephen, Prostatectomy).

"*The nurses are not able to give me any extra or different drug to control my pain. They always tell me to wait for my doctor, so I keep my pain to myself till the doctor arrives*" (Prince, Hernnioraphy).

"*Of late I have decided to stop reporting pain to nurses because they cannot prescribe any other drug unless the doctor. Some nurses also prove adamant, so I do not feel like complaining about my pain to them. I only do so under unbearable situations*" (Francisca, Mastectomy).

Theme 3: Drivers and discomforts of analgesic intake

This theme was generated from participants' motivation for taking prescribed postoperative analgesics and some of the untoward effects they experienced from taking these medications. Some of the drivers for analgesic intake included the fear of death, the desire for a reduced level of pain, and enhanced comfort. The following remarks support this assertion.

"*I have been given medications which I always take as prescribed. I need to do as I am told because I am sick, and the medicine is to relieve my pain so if I do not take it then I am digging my own grave*" (Elvis, Herniorrhaphy).

"*I always take my medications. I want to feel less pain, so I make sure I don't miss a dose*" (Helen, Mastectomy).

Two out the 12 participants also admitted some discomforts they experienced which led to the cessation of their initially prescribed postoperative analgesic medications. They narrated these discomforts in the following manner:

"*At a point in time, I decided not to take the medicine called Diclofenac which gave me very serious pain when I took it. I then complained to my doctor who agreed with me and asked that I should not take it again*" (Firdaus, Mastectomy).

I also had an instance where I experienced a sudden sharp pain in my stomach which I complained to my doctor and I was asked to stop taking my drugs (Olive, Appendectomy).

Theme 4: Casting the mind off the pain

Participants described non-pharmacological pain management approaches which they engaged in to distract them from their pain. Common methods adopted by participants in the current study included conversations, watching television, and meditations. One participant described it as follows:

"*I try on my own to engage in conversation with my in-mates or any visitors and health practitioners who come around first to cast my mind off the pain. Sometimes too I go through intensive meditation and praying quite often to distract my attention from my pain, which sometimes I end up falling asleep*" (Agyemang, Amputation).

Discussion

The present study sought to explore the lived experiences of postoperative patients regarding pain. Our findings revealed that participants endured prolonged unrelieving pain which affected their participation in daily living activities such as mobility and sleep. A study by Gan and colleagues (Gan et al., 2014) revealed that patients report moderate to severe postoperative pain which is inadequately managed. Among the negative consequences of unrelieved postoperative pain, restricted mobility and sleeplessness have been documented in the literature (Goldstein et al., 2004; Kinney et al., 2012; Montes et al., 2015). The disabling effects of unrelieved postoperative pain underscore the need for effective management strategies to return the patient to optimal functioning and enhance their quality of life.

Interestingly, the negative patient experiences with nurses also revolved around their poor communication skills, lack of prescriptive authority and unyielding posture. Even though most of the participants were satisfied with nurse-patient communication during the postoperative phase, a few of them were dissatisfied with this aspect of nursing care. Nurses need to improve upon their communication skills to meet the unique and culturally sensitive communication needs of different clients they encounter in the healthcare enterprise (Mohamed et al., 2013; Zoëga et al., 2015). It was also revealed that nurses' inability to prescribe analgesics other than those ordered by surgeons contributed to poor patient communications with nurses regarding their pain concerns. Nurse prescribing is increasingly gaining international popularity due to the advancements in nursing practice specialities with its associated role expansion amidst other contextual factors (Shannon, Spence, 2011). The benefits of nurse prescribing have been documented to include relatively faster and efficient patient care, enhanced nurse-client relationship and increased satisfaction with care delivery among others (Courtenay et al., 2011; Ross et al., 2014; Tinelli et al., 2015). Despite these benefits, nurse prescribing is still in its infancy in Ghana. Healthcare policymakers could take advantage of nurses' knowledge and expertise to reduce the prescription burden on physicians and enable more patients to gain efficient access to safe and regulated analgesia during hospitalization.

"Drivers and discomforts of analgesic intake" was the third theme that emerged from participants' postoperative pain management experiences. Participants in the current study described the fear of death and the desire for pain relief as reasons why they adhered to the prescribed analgesic regimen. These findings are similar to the research investigation conducted by Weiss et al. (2014) in which the goal of pain relief remained supreme among the reasons given by the sampled participants for their analgesic intake. Despite the motives underpinning their analgesic intake, some participants in the present study reported untoward drug effects which resulted in the cessation of their initially prescribed analgesics. The effectiveness of any treatment intervention is judged by the balance between its efficacy and side effect profile (Reed, 2013). Even though analgesics remain the mainstay in postoperative pain management, their use may be restricted due to adverse side effects. Effective postoperative pain control using both drug and non-drug techniques must be prioritized in order to provide optimal pain relief with minimal or no harmful effects.

Participants in the current study engaged in a range of non-pharmacological pain management methods due to their distractive ability which aided them in casting their minds off their pain. Apart from reducing the amount of analgesic consumption and its associated harmful effects, non-pharmacological pain relief methods hold promise as effective complements to the analgesic regimen (Chou et al., 2016). The use of non-pharmacological approaches has been shown to be effective in the affective, cognitive, behavioural and social aspects of pain management (Coutaux, 2017). Efforts should be made to widen the scope and accessibility of these methods so that patients can be encouraged to utilize them to improve postoperative pain management.

Conclusion

Unrelieved postoperative pain persists despite decades of advanced technologies and research investigations on pain. Unrelieved postoperative pain affects patients' engagement in activities of daily life which ultimately affects their quality of life. Nurses are central to the management of postoperative pain and should individualize their care to meet the unique comfort needs of patients. Policies should be implemented to expand the roles of nurses who work with postoperative patients to include some level of prescriptive authority to enhance patients' confidence in their ability to adequately cater to their pain-needs. Analgesics and non-drug techniques should be encouraged to maximize postoperative pain relief with minimal or no untoward effects.

Abbreviations

CHRPE: Committee on Human Research Publication and Ethics; IPA: Interpretative Phenomenological Analysis; KNUST: Kwame Nkrumah University of Science and Technology; OPD: Out-patient department; RDU: Research and Development Unit; SMS: School of Medical Sciences.

Ethics approval and consent to participate

The study was approved and registered at the Research and Development Unit (RDU) of the teaching hospital, permitting the researchers' access to participants at the selected study sites. Ethical approval of the study was also granted by the CHRPE, KNUST – SMS, Ghana (Ref: CHRPE/AP/387/18). Participants' privacy, confidentiality, anonymity, and voluntary participation were ensured throughout the research process. Informed consent was obtained from all participants included in the study.

Consent for Publication

Ethical approval was obtained for the study and each participant signed informed consent before participating.

Data availability

Data for the current study would be available upon reasonable request.

Author's contribution

EFK and EAB designed the study. EFK, EAB and AKA analysed and interpreted the results. EFK drafted the manuscript. All authors read and approved the manuscript.

Competing Interest

The authors (EFK, EAB and AKA) declare they have no competing interests.

Acknowledgement

We are grateful to the participants for their voluntary involvement in the current study.

Funding

The study was financially sustained by the researchers without any external support.

References

Agu, 2017 – *Agu, B.* (2017). Patients and Nurses Attitudes to Hysterectomy and Postoperative Pain Management. (Walden University Doctoral Dissertation). [Electronic resource]. URL: https://scholarworks.waldenu.edu/cgi/viewcontent.cgi?referer=https://scholar.google.com/&httpsredir=1&article=5368&context=dissertations

Aziato, Adejumo, 2015 – *Aziato, L., Adejumo, O.* (2015). Developing a context appropriate clinical guideline for post-operative pain management in Ghana: A participatory approach. *International Journal of Africa Nursing Sciences,* 2, 26-33.

Chou et al., 2016 – *Chou, R., Gordon, D.B., de Leon-Casasola, O. A., Rosenberg, J.M., Bickler, S., Brennan, T., … , Griffith, S.* (2016). Management of Postoperative Pain: A clinical practice guideline from the American pain society, the American Society of Regional Anesthesia and Pain Medicine, and the American Society of Anesthesiologists' committee on regional anesthesia, executive committee, and administrative council. *The Journal of Pain*, 17(2), 131-157.

Cohn et al., 2016 – *Cohn, D.E., Castellon-Larios, K., Huffman, L., Salani, R., Fowler, J.M., Copeland, L.J.,…Abdel-Rasoul, M.* (2016). A prospective, comparative study for the evaluation of postoperative pain and quality of recovery in patients undergoing robotic versus open hysterectomy for staging of endometrial cancer. *Journal of Minimally Invasive Gynecology*, 23(3), 429-434.

Courtenay et al., 2011 – *Courtenay, M., Carey, N., Stenner, K., Lawton, S., Peters, J.* (2011). Patients' views of nurse prescribing: effects on care, concordance and medicine taking. *British Journal of Dermatology,* 164(2), 396-401.

Coutaux, 2017 – *Coutaux, A.* (2017). Non-pharmacological treatments for pain relief: TENS and acupuncture. *Joint Bone Spine,* 84(6), 657-661.

Creswell, Poth, 2017 – *Creswell, J.W., Poth, C.N.* (2017). Qualitative inquiry and research design: Choosing among five approaches (4th ed.). Thousand Oaks: Sage.

Edusei et al., 2017 – *Edusei, E., Grossman, K., Payne, A., Perez, B., Inneh, I., Nelson, C.L., Slover, J.* (2017). Impact of social support and pain coping ability on length of stay and discharge

disposition following hip and knee arthroplasty: A prospective study. *Bulletin of the NYU Hospital for Joint Diseases, 75*(2), 134-139.

Faponle et al., 2001 – *Faponle, A.F., Soyannwo, O.A., Ajayi, I.O.* (2001). Post operative pain therapy: A survey of prescribing patterns and adequacy of analgesia in Ibadan, Nigeria. *The Central African Journal of Medicine,* 47(3), 70-74.

Francis, Fitzpatrick, 2013 – *Francis, L., Fitzpatrick, J.J.* (2013). Postoperative pain: Nurses' knowledge and patients' experiences. *Pain Management Nursing,* 14(4), 351-357.

Gan et al., 2014 – *Gan, T.J., Habib, A.S., Miller, T.E., White, W., Apfelbaum, J.L.* (2014). Incidence, patient satisfaction, and perceptions of post-surgical pain: Results from a US national survey. *Current Medical Research and Opinion,* 30(1), 149-160.

Goldstein et al., 2004 – *Goldstein, D.H., VanDenKerkhof, E.G., Blaine, W.C.* (2004). Acute pain management services have progressed, albeit insufficiently in Canadian academic hospitals. *Canadian Journal of Anesthesia,* 51(3), 231-235.

Guba, Lincoln, 1989 – *Guba, E.G., Lincoln, Y.S.* (1989). Fourth generation evaluation. Newbury Park, CA: Sage.

Kinney et al., 2012 – *Kinney, M.A.O., Hooten, W.M., Cassivi, S.D., Allen, M.S., Passe, M.A., Hanson, A.C., … , Mantilla, C.B.* (2012). Chronic postthoracotomy pain and health-related quality of life. *The Annals of Thoracic Surgery*, 93(4), 1242-1247.

Lovich-Sapola et al., 2015 – *Lovich-Sapola, J., Smith, C.E., Brandt, C.P.* (2015). Postoperative Pain Control. *Surgical Clinics,* 95(2), 301-318.

Mohamed et al., 2013 – *Mohamed, M., Ahamed, A., Mahmoud, M.* (2013). Application of a proposed graphic chart for pain as fifth vital sign in nursing practice at Assiut University Hospital. *Journal of American Science,* 9(4), 197-201.

Montes et al., 2015 – *Montes, A., Roca, G., Sabate, S., Lao, J.I., Navarro, A., Cantillo, J., Canet, J.* (2015). Genetic and clinical factors associated with chronic postsurgical pain after hernia repair, hysterectomy, and thoracotomya two-year multicenter cohort study. *Anesthesiology: The Journal of the American Society of Anesthesiologists,* 122(5), 1123-1141.

Ofori, 2017 – *Ofori, F.* (2017). Assessment of post operative pain management at Agogo Presbytarian Hospital, Asante Akyem North District (KNUST, Master's dissertation). [Electronic resource]. URL: http://dspace.knust.edu.gh/handle/123456789/10202

Reed, 2013 – *Reed, M.D.* (2013). The balance between effective opioid-based pain management and patient safety: Can it be achieved? Pediatric Pharmacy Advocacy Group.

Ross et al., 2014 – *Ross, J.D., Clarke, A., Kettles, A.M.* (2014). Mental health nurse prescribing: using a constructivist approach to investigate the nurse-patient relationship. *Journal of Psychiatric and Mental Health Nursing,* 21(1), 1-10.

Shannon, Spence, 2011 – *Shannon, E., Spence, W.* (2011). The attitudes and views of GPs and physicians to prescribing by heart failure nurse specialists. *British Journal of Cardiac Nursing,* 6(9), 450-455.

Tinelli et al., 2015 – *Tinelli, M., Blenkinsopp, A., Latter, S., Smith, A., Chapman, S.R.* (2015). Survey of patients' experiences and perceptions of care provided by nurse and pharmacist independent prescribers in primary care. *Health Expectations,* 18(5), 1241-1255.

Weiss et al., 2014 – *Weiss, R.D., Potter, J.S., Griffin, M.L., McHugh, R.K., Haller, D., Jacobs, P., … Rosen, K.D.* (2014). Reasons for opioid use among patients with dependence on prescription opioids: the role of chronic pain. *Journal of Substance Abuse Treatment,* 47(2), 140-145.

Woldehaimanot et al., 2014 – *Woldehaimanot, T.E., Eshetie, T.C., Kerie, M.W.* (2014). Postoperative pain management among surgically treated patients in an Ethiopian hospital. *PLoS One*, 9(7), 1-9.

Zoëga et al., 2015 – *Zoëga, S., Ward, S.E., Sigurdsson, G.H., Aspelund, T., Sveinsdottir, H., Gunnarsdottir, S.* (2015). Quality pain management practices in a university hospital. *Pain Management Nursing,* 16(3), 198-210.