

# Cancer Pain and its Management: Knowledge of Nurses at Selected Health Institutions, Offering Cancer Treatment in Addis Ababa, Ethiopia, 2013

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## Abstract

**Background:** Around a third of patients with cancer report moderate to severe pain and with the development of metastases, the incidence of pain increases to 40% to 60% of patients, and in far advanced disease, 60% to 90% of patients report significant pain. Majority of health professionals found in Ethiopia do not know how to holistically assess and control pain and only insignificant numbers are familiar with the World Health Organization (WHO) pain management protocol. Hence, this study is conducted to assess knowledge of nurses regarding cancer pain management at selected health institutions, offering cancer treatment in Addis Ababa, Ethiopia, 2013.

**Methods:** Cross-sectional study with supplement of qualitative study design was carried out among 82 nurses in Addis Ababa, Ethiopia. Nurses' Knowledge and Attitudes Survey Regarding Pain (NKARSP) questionnaire for self-administered and three focus group discussions were used to collect data. Epi info version 3.5.4 and SPSS version 20 statistical software's were used for data entry and analysis respectively. Means and standard deviations were determined for quantitative data and frequency determined for categorical variables. Nonparametric statistics-Mann-Whitney U and Kruskal Wallis test were used for comparison between multiple means. A P-value less than 0.05 were considered statistically significant.

**Results:** A deficit in knowledge to cancer pain management was prominent. Only 35.4% of the respondents had good knowledge on cancer pain management. The mean score for correctly answered items was 12.6 (37.1%). A statistical significance was observed in nurse's work experience with pain knowledge at P<0.05. However, no statistical significance was observed for other socio demographic variables.

**Conclusion:** Inadequate knowledge regarding cancer pain management was observed. Inadequate education, lack of both pre service and in service trainings were major barriers for acceptable knowledge on cancer pain management. Both theoretical and practical education programs on the provision of cancer pain management should be included for nurses to the existing nursing curriculum.

**Keywords:** Nurse; Knowledge; Cancer; Pain; Management; Ethiopia

## Introduction

Pain is one of the most common symptoms associated with cancer [1]. Cancer pain increases with progression of the disease and around a third of patients with cancer report pain: rising to three quarters in the advanced stages of cancer [2]. Currently, 12.5% of all deaths are caused by cancer, which is more than HIV/AIDS, tuberculosis, and malaria combined [3,4]. Attempts to control pain and hence improve functional ability and quality of life have been over shadowed in the past by attempts to cure the underlying disease [2].

Pain management refers to the use of pharmacological and non-pharmacological interventions to control the patient's identified pain. WHO drug selection approach for cancer pain has a capable of providing adequate relief for 70 to 95% of patients [5,6].

Over half of the 10 million people diagnosed with cancer worldwide each year live in developing countries [7]. Today, cancer accounts for approximately one in every eight deaths globally and more than half of the global cancer burden is found in low- and middle income countries [8,9].

By 2050, it is projected that low-income countries alone will account for up to three-quarters of all cancer deaths. Addressing the cancer epidemic in low- and middle income countries will require a public health approach that identifies what can be done to diagnose and treat cancers more effectively at each level of the health system [10,11].

One of the major fears of patients with cancer is pain, which can

occur as a result of the cancer itself or its treatment, or from other causes [5]. The pain is often of moderate-to-severe intensity for many patients [9,12]. Around a third of patients with cancer report pain and with the development of metastases, the incidence of pain increases from 40% to 60% of patients, and in far advanced disease, 60% to 90% of patients report significant pain [1,2].

Principles of pain management include a proper and regular assessment of pain, encouragement of patients and their families to use opioids for cancer pain, and aggressive management of side effects [5]. Proper use of therapeutic approaches concurrent with appropriate assessment techniques should result in excellent pain control in nearly from 70 to 95 % of patients with cancer pain. But unfortunately, cancer pain still remains grossly undertreated throughout the world and epidemiological studies of cancer pain also confirmed that pain remains common, severe and undertreated for many patients [5,6,12,13].

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**Received** February 19, 2014; **Accepted** March 17, 2014; **Published** March 19, 2014

**Citation:** Nega R, Tachbele E, Kassa GM (2014) Cancer Pain and its Management: Knowledge of Nurses at Selected Health Institutions, Offering Cancer Treatment in Addis Ababa, Ethiopia, 2013. J Pain Relief 3: 137. doi:10.4172/2167-0846.1000137

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A study done in Turkey on oncology nurses provided that oncology nurses' knowledge about cancer pain management was far from optimal [14]. Out of the 39 pain questions examined, only 35.41% were correctly answered [14]. Similar finding in Iran also showed that nurses had inadequate knowledge in relation to cancer pain management [15]. A study conducted in Hong Kong identified that 20 % of the participant had knowledge deficit regarding pain management [16].

In Ethiopia where health service delivery is often fragmented and many patients first consult traditional healers, cancer patients typically go through three or more care channels before they reach the hospital they need [5]. This increases the magnitude of the pain that resulted from the cancer itself. In addition, 80% of patients who came to the adult oncology department at Black Lion Hospital complained of pain related with cancer. Of whom, 60% complained of moderate to severe pain where as 20% of them experienced of mild pain (data obtained during preliminary survey). Hence, this study assessed the knowledge of nurses' who are working with cancer patients at different public and private health institutions offering cancer treatments towards cancer pain management in Addis Ababa, Ethiopia.

### Purpose of the Study and Research Questions

Cancer pain management plays a vital role in prolonging survival, optimizing comfort and function, relieving pain and for better quality of life of the patient. Since nurses spend a long time with their patients than other health care providers, assessing their knowledge towards cancer pain management will be important to hospitals to draft standardized evidence based practice guidelines for the nurses and to inform policy makers and education planners to develop appropriate evidence-based curriculum in cancer related institutions. Unfortunately, no tangible research has been conducted in this area among the nurses who are working with cancer patients. Therefore, this study is assumed to answer the following questions:

1. What is the current level of cancer pain management knowledge among the nurses who are working at oncology units?
2. What are the associated factors related to knowledge of nurses' towards cancer pain management?

### Materials and Methods

#### Study area, period and design

Cross sectional quantitative study, supplemented with a qualitative method was conducted from March to April 2013 in Addis Ababa. Addis Ababa is the capital city of Ethiopia. The City has ten sub cities and hundred districts. The population of the city is estimated to be over 3million (3, 038096) with annual growth rate of 2.1 [17]. Addis Ababa has disproportionately high concentration of health facilities and health care workers in the country. Health services are provided by various levels of facilities, including governmental and private clinics, hospitals, as well as different levels of health centers. It has 14 governmental and 35 private hospitals. It also encompasses 56 health centers and 83 different clinics. Among these, only five of the institutions are being offering cancer treatment.

The study subjects were 82 nurses who were available during the study period, willing to participate and working at oncology department of the selected health institutions. Nurses who were working in one public teaching hospital and other four private profit making health institutions were included in the study. These health facilities were selected since they are officially known cancer treatment provider health institutions at this time in Ethiopia. Nurses, who were not willing to participate, free service nurse workers and nurses who were not available during data collection period due to sick leave, annual leave, study leave, temporary reassignment were excluded from the study.

#### Sampling technique/procedure

All nurses who were working at one public teaching hospital and other four private profit making health institutions were included in the study (Figure 1).

#### Study variables

Dependent variables: Knowledge of nurse's on cancer pain management.

Independent variables: Socio demographic variables (Age, Sex, Religion, Marital status, Ethnicity, Work experience, Educational level,

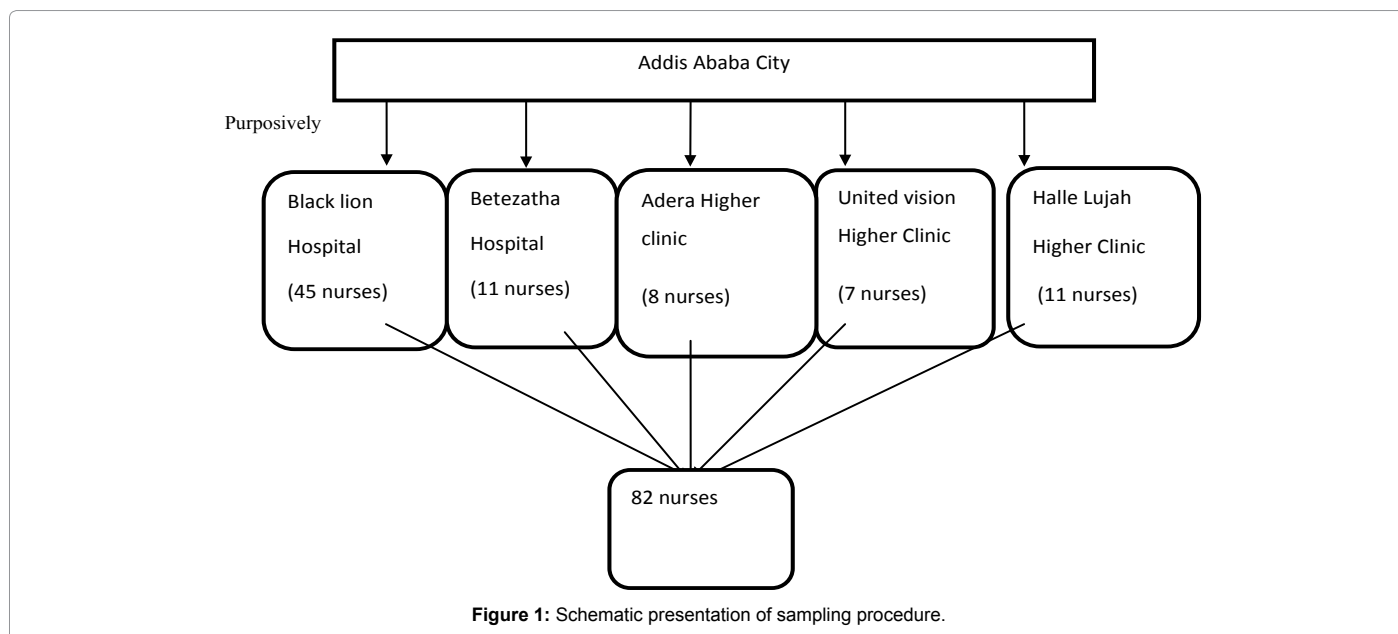


Figure 1: Schematic presentation of sampling procedure.

Salary), Cancer and/or pain related training, Type of Health institution (Governmental, Private).

### Operational definitions

Good Knowledge of nurses on cancer pain management-if the nurses respond above mean of the Nurses' Knowledge and Attitudes Survey Regarding Pain (NKARSP) questions on the questionnaire.

Poor knowledge of nurses on cancer pain management- if the nurses respond below mean of the Nurses' Knowledge and Attitudes Survey Regarding Pain (NKARSP) questions on the questionnaire

### Data collection techniques

A self-administered structured questionnaire was used to conduct quantitative part of the study whereas focus group discussion was used to conduct the qualitative part of the study. The instrument was adapted from NKARSP [18,19]. The Focus Group interview guide was adapted from literatures to reinforce the quantitative findings [20-23].

Five data collectors were chosen from each health institution and each institution holds one data collector. Three supervisors were selected from Black Lion hospital. The data collectors and the supervisors were nurses who worked in both governmental and private health institutions. They were trained by the principal investigators on the objectives of the study, how to conduct the focus group discussions, and handle questions asked by the nurses during data collection period. For the qualitative part, three focus group discussions were performed and each group consisted of six to eight participants, a total of 22 nurses. The discussants were randomly selected from all of the selected health institutions.

### Data quality control

The questionnaire was tested before the actual survey within a pilot survey to ensure its clarity, ordering, consistency and acceptance. It was done on nurses who were working in an oncology unit before joining other wards by rotation. The principal investigators made the necessary supervision throughout the data collection period to guide and correct any problems. During the data collection process each questionnaire was checked daily by the supervisor and principal investigators for completeness and accuracy.

### Data processing and analysis

The collected data was coded, entered, cleaned with appropriate statistical tests. Epi-info version 3.5.4 and SPSS version-20 was used for data entry and for analysis respectively. Descriptive statistics such as frequencies and percentages was used to describe the sample characteristics and nurses' responses to the questionnaire items. Means and standard deviations were determined for quantitative data and frequency determined for categorical variables. Nonparametric statistics-Mann-Whitney U and Kruskal Wallis test were used for comparison between multiple means. A P-value less than 0.05 were considered statistically significant.

The qualitative part was analyzed following the focus group discussion. It involved full transcripts and notes from a moderator. The analysis process was on a daily basis. The recorded data was read, commented and looked for ideas which led to themes. Answers from all discussions were grouped to each question. Responses which were congruent with the study objectives were categorized in to several thematic areas.

### Ethical considerations

Ethical clearance and permission was obtained from the Ethical Review Committee of department of nursing and midwifery, college of health sciences, Addis Ababa University. Informed consent was obtained from the study participants after explaining the objective and procedure of the study. Confidentiality of the study participants was maintained.

### Results

#### Socio demographic characteristics

A total of eighty two nurses returned questionnaires giving a 100% response rate. Of the five health institutions included in the study, 45(54.9%) of the study participants were from the governmental hospital; Black Lion Hospital, and the rest, 37(45.1%), were from private health institutions. Of these, both Betezatha General Hospital and Hallelujah higher clinic each account 11(13.4%), Adera Higher clinic and United Vision Medical Center account for 8(9.8%) and 7(8.5%) study participants respectively. Majority of the respondents, 64(78%), were female nurse's. More than half of the respondents, 42(51.2%) were within age group of 25 to 29 years and ranged from a minimum of 22 years to a maximum of 60 years with the mean, median age of 29.12 and 27.50 respectively and S.D of 7.04.

Majority of the study subjects 39(47.6%) were from Amhara ethnic group and most of the respondents 44(53.7%) were within a group of 2 to 9 years of work experience and ranged from a minimum of half year to a maximum of 41 years with the mean, median and S.D of 5.7, 3 and 7 years respectively. Regarding level of education, 51.2% of the respondents were diploma holders whereas bachelor degree accounts for 40(48.8%). Most, 66(80.5%) of the respondents' monthly salary was above 1,500.00 Ethiopian birr (ETB) (Table 1).

| Variables                           |                     | Frequency | Percentage |
|-------------------------------------|---------------------|-----------|------------|
| Age                                 | 20-24               | 18        | 22         |
|                                     | 25-30               | 42        | 51.2       |
|                                     | ≥ 30                | 22        | 26.8       |
| Sex                                 | Male                | 18        | 22         |
|                                     | Female              | 64        | 78         |
| Religion                            | Orthodox Christian  | 56        | 68.3       |
|                                     | Islam               | 6         | 7.3        |
|                                     | Protestants         | 17        | 20.7       |
|                                     | Wakefeta, Adventist | 3         | 3.7        |
| Marital status                      | Single              | 47        | 57.3       |
|                                     | Married             | 33        | 40.7       |
|                                     | Divorced            | 2         | 2.4        |
| Ethnicity                           | Oromo               | 26        | 31.7       |
|                                     | Amhara              | 39        | 47.6       |
|                                     | SNNPR               | 13        | 15.9       |
|                                     | Tigray              | 4         | 4.9        |
| Work experience                     | ≤ 1                 | 23        | 28         |
|                                     | 2-9                 | 44        | 53.7       |
|                                     | ≥ 10                | 15        | 18.3       |
| Level of education                  | Diploma             | 42        | 51.2       |
|                                     | Bachelor degree     | 40        | 48.8       |
| Cancer and/or pain related training | Yes                 | 6         | 7.3        |
|                                     | No                  | 76        | 92.7       |
| Monthly salary                      | <1500 ETB           | 16        | 19.5       |
|                                     | ≥1500 ETB           | 66        | 80.5       |

**Table 1:** Socio-demographic characteristics of nurses working on cancer pain management at selected public and private health institutions in Addis Ababa city, Ethiopia, 2013.

## Knowledge of nurses regarding cancer pain management

Among the 22 pain knowledge questions assessed, the mean of correctly answered questions was 8 (S.D =3.2), with a range from 3 to 17. Mean of the correct answer was considered as a reference to categorize as poor and good knowledge towards cancer pain management. Accordingly 64.6% of the study participants have poor knowledge; where as 35.4% had good knowledge (Table 2).

Only 19.5% of nurses knew that the WHO pain ladder suggests a combination of drugs whereas 13.4 % of nurses recognized the non-likelihood of the patient developing opioids addiction due to treating pain with opioids. Majority (56.1%) of nurses did not know that the most accurate judge of the intensity of the patients' pain is the patients themselves. In addition, 29.3% of nurses said that they advise their patient to use non-drug techniques concurrently with pain medications. In addition, only 11%, and 20.7% of respondents gave correct answers for two case studies from the questionnaire (Table 2).

Nurses' knowledge was also further analyzed for association with socio demographic characteristics. Nonparametric statistics-Mann-Whitney U and Kruskal Wallis test were used for comparison between multiple means. Accordingly, Statistical significance was observed in nurse's work experience with pain knowledge ( $P < 0.05$ ). However; no statistical significance was observed for other socio demographic variables (Table 3).

## Findings of focus group discussion

**Educational preparation:** All of the discussants described that they didn't get courses on cancer pain management in their under graduate nursing courses. In addition they also said that most of nurses working in oncology ward didn't get any in service training on cancer pain management. One of the discussant said the following "I have been working for five years in this oncology department. But, I have never taken any on job trainings (neither short term nor long term trainings)..". (Focus group 3)

**Views of malpractices and misconceptions:** Some of the discussants said that opioids could result in addiction if patients are on opioids for a longer time. They also said that they use placebo injection to varify their patients' level of pain. In addition, patients' fascial expression, and body temperature were some of the methods used by the nurses to assess the pain level of their patient.

**Use of pain assessment tools:** The discussants said that they did not use any specified tool for pain assessment. Assessment tools like numeric rating scale, Verbal rating scale, Pediatrics face pain scale were not used in their daily practice. But, some techniques were used in some cases. For example, use of colors to identify degree of pain of patient. Especially for those patients who are illiterate instead of using numbering technique. Green indicates mild pain whereas yellow and

| Item no. | Item content   | Correct Response |      |
|----------|--|------------------|------|
|          |  | n                | %    |
| 1        | Aspirin and other non-steroidal anti-inflammatory agents are not effective analgesics for bone pain caused by metastases. (False)  | 13               | 15.9 |
| 2        | Because of an underdeveloped neurological system, children under 2 years of age have decreased pain sensitivity and limited memory of painful experiences. (False)   | 23               | 28   |
| 3        | The World Health Organization (WHO) pain ladder suggests using single analgesic agents rather than combining classes of drugs (e.g. combining an opioid with a non-steroidal agent). (False)   | 16               | 19.5 |
| 4        | After the initial recommended dose of opioid analgesic, subsequent doses are adjusted in accordance with the individual patient's response. (True)   | 22               | 26.8 |
| 5        | Beyond a certain dosage of morphine increase in dosage will not increase pain relief. (False)  | 25               | 30.5 |
| 6        | The patient should be advised to use non-drug techniques alone rather than concurrently with pain medications. (False)   | 24               | 29.3 |
| 7        | To be effective, heat or cold should only be applied to the painful area. (False)  | 30               | 36.6 |
| 8        | Observable changes in vital signs must be relied upon to verify a patient's statement that he has severe pain. (False)   | 22               | 26.8 |
| 9        | Non-drug interventions are very effective for mild-moderate pain control but rarely helpful for more severe pain. (False)  | 23               | 28   |
| 10       | Comparable stimuli in different people produce the same intensity of pain. (False)   | 42               | 51.2 |
| 11       | The recommended route of administration of opioid analgesics to patients with prolonged cancer-related pain is: (oral)   | 41               | 50   |
| 12       | The recommended route of administration of opioid analgesics to patients with brief, severe pain of sudden onset, e.g. trauma or postoperative pain, is: ( intravenous)  | 46               | 56.1 |
| 13       | Which of the following analgesic medications is considered the drug of choice for the treatment of prolonged moderate to severe pain for cancer patients? (morphine)   | 39               | 47.6 |
| 14       | Analgesics for Cancer pain should initially be given: (around the clock on a fixed schedule)   | 31               | 37.8 |
| 15       | Analgesics for chronic Cancer pain should initially be given: (around the clock on a fixed schedule)   | 28               | 34.1 |
| 16       | Which of the following drugs are useful for treatment of cancer pain? (Hydromorphone, Asprine, Ibuprophen)   | 28               | 34.1 |
| 17       | Responsibility of nurses before premedication. (take vital sign, history taking on allergic reaction, obtain consent for new patient)  | 66               | 80.5 |
| 18       | The nurse should see order sheet for; (availability of prescribed drugs, expiry date if the medication presents, change of color or crystallization of the medication)   | 60               | 73.2 |
| 19       | The most accurate judge of the intensity of the patient's pain is: (the patient)   | 36               | 43.9 |
| 20       | Which of the following describes the best approach for cultural considerations in caring for patients in pain: (Patients should be individually assessed to determine cultural influences on pain)   | 29               | 35.4 |
| 21       | Patient A: Bekele is 25 years old and this is his first day following abdominal surgery. As you enter his room, he smiles at you and continues talking and joking with his visitor. Your assessment reveals the following information: BP =120/80; HR= 80; R =18; on a scale of 0 to 10 (0 = no pain/discomfort, 10 = worst Pain/discomfort) he rates his pain as 8. On the patient's record you must mark his pain on the scale below. the number that represents your assessment of Bekeles' pain. (8) | 9                | 11   |
| 22       | Patient B: Alemu is 25 years old and this is his first day following abdominal surgery. As you enter his room, he is lying quietly in bed and grimaces as he turns in bed. Your assessment reveals the following information: BP =120/80; HR=80; R= 18; on a scale of 0 to 10 (0 = no pain/discomfort, 10=worst pain/discomfort) he rates his pain as 8. On the patient's record you must mark his pain on the scale below. the number that represents your assessment of Alemu's pain: (8)              | 17               | 20.7 |

**Table 2:** Correctly answered items related to knowledge of nurses regarding cancer pain management at selected public and private health institutions in Addis Ababa city, Ethiopia, 2013.

| Characteristics                     | Frequency | Percentage | Mean Rank | p-value       |
|-------------------------------------|-----------|------------|-----------|---------------|
| Age (29.12 ± 7.04 ) years           |           |            |           |               |
| 22-31                               | 66        | 80.5       | 40.02     | 0.448         |
| 32-41                               | 11        | 13.4       | 45.68     |               |
| 42-60                               | 5         | 6.1        | 51.80     |               |
| Salary (2197.72 ± 976) ETB          |           |            |           |               |
| <1500                               | 23        | 28         | 34.98     | 0.113         |
| ≥1500                               | 59        | 72         | 44.04     |               |
| Work experience(5.74 ± 7) years     |           |            |           |               |
| <1                                  | 23        | 28         | 26.43     | <b>0.000*</b> |
| 2-5                                 | 29        | 35.4       | 38.40     |               |
| 6-10                                | 20        | 24.4       | 52.42     |               |
| ≥11                                 | 10        | 12.2       | 63.30     |               |
| Type of health institution          |           |            |           |               |
| Private                             | 37        | 45.1       | 37.42     | 0.149         |
| Governmental                        | 45        | 54.9       | 44.86     |               |
| Educational level                   |           |            |           |               |
| Diploma                             | 42        | 51.2       | 38.61     | 0.248         |
| Bachelor degree                     | 40        | 48.8       | 44.54     |               |
| Cancer and/or pain related Training |           |            |           |               |
| Yes                                 | 6         | 7.3        | 51.33     | 0.282         |
| No                                  | 76        | 92.7       | 40.72     |               |
| Total                               | 82        | 100        |           |               |

\*Statistically significant at 95% confidence interval (p<0.05)

**Table 3:** Relationship between cancer pain management knowledge and Socio-demographic and professional characteristics of nurses at selected public and private health institutions in Addis Ababa city, Ethiopia, 2013.

red indicate moderate and severe pain respectively. Majority of the discussants described that they understood their patient's pain level using facial expressions. "..... The first thing, looking at their tense face is indicative to measure their degree of pain. In addition to that they are so irritable and feel restless." (Focus group 1).

## Discussion

Our study showed important information on the knowledge of nurses' on cancer pain management in Addis Ababa, Ethiopia. The findings showed that nurses who were working with cancer patients in oncology ward had insufficient knowledge about cancer pain management. Out of the 22 pain questions examined, the mean score for correctly answered items was 12.6 (37.1% correct answer rate). Similar study done in Iran also supported the finding [15]. In addition, other studies done in Italy, Turkey using the same instrument, showed a greater correct answer rate, 21.4 (55%), and 13.81 (35.41%) respectively [14,24]. Potential reasons for this difference could be due to the limited formal lectures on cancer pain management in undergraduate nursing courses in the current study area, inadequate continuing education on pain management, role confusion among healthcare professionals regarding the provision of pain management as supported by the qualitative finding in which the discussants described role confusion as a barrier to provide adequate cancer pain management [16,25].

Only 19.5% of nurses knew that the WHO pain ladder suggests a combination of drugs which is almost three fold lesser from Italian study (55.4%) [24]. The difference could be due to the absence of pre service and/ or in service trainings in the current study area regarding the WHO recommendations on cancer pain management as described by the respondents during the focus group discussion. In addition, the existing nursing curriculum in Ethiopia lacks information about World Health Organization (WHO) pain ladder. Majority, 72%, of the current study participants said that placebo is a useful test to determine if the pain is real. Similar study regarding pain management in Italy and Turkey revealed consistent result accounting 72.5%, 91.2% respectively [14,24]. Discussants in the qualitative part also said that they verify

their patients' level of pain using placebo injection. "We simply inject distilled water (placebo) to verify severity of their pain and to support them psychologically" (Focus group 3).

The correct definition of the pain intensity eight (8), as the patients' self-report, by the nurses was approximately two fold greater in a grimacing patient (11% for smiling patient vs. 20.7% for grimacing patient) which is almost comparable with study done in Turkey (19.1% for smiling patient vs. 35.3% for grimacing patient) [14]. It was reported that nurses were most likely to accept and record the patient's pain report if the patient was grimacing, had elevated vital signs, was elderly. Ninety five percent of respondents of this study did not know the correct percentage of patients who over report their pain. This result has consistency with the study done in Italy and Hong Kong which account for 90.2% and 98.6% of the respondent's respectively [16,24].

Respondents who had eleven and above years of work experience were more knowledgeable/ have a greater correct answer rate for questions related with knowledge of nurses regarding cancer pain management than those who had less than 10 years of service. The qualitative finding of this study also supports this idea. This finding was comparable with study done in Turkey and Hong Kong in which Nurses' pain knowledge was positively correlated to years of nursing experience [14,16,26].

In addition, the current study found no significant difference in pain knowledge scores between different educational levels. But nurses who had bachelor degree have a higher pain knowledge scores than those who have diploma. Other similar findings also showed that knowledge score is higher with educational preparations [27-29].

In our study, nurses who had cancer and/or pain related training have a better pain knowledge score than those nurses who have no such training. Study conducted in Italy, Florida and Greece also revealed that prior pain management training had an impact on nurse's knowledge [19,24,28].

## Strengths and Limitation of the Study

**Strengths:** The the study used a mixed methods of data collection (both quantitative and qualitative) with response rate of 100%.

**Limitation:** the small sample size

## Conclusion

Although the correct use of the WHO method can lead to adequate long-term pain control in most patients with advanced cancer disease, our study showed that nurses lack familiarity with the guideline and the pain knowledge score were below the optimal. This is because inadequate education, lack of specifically identified role, absence of both pre service and in service trainings. Nurses with work experience of longer than 10 years had a better pain knowledge score.

## Recommendations

- The existing syllabus in the nursing curriculum should include both theoretical and practical contents regarding cancer pain management.
- Field of specialization in oncology nursing should be arranged so as to improve quality of cancer pain management.
- Pain assessment should be integrated into nursing practice.
- More in service training should be organized for nurses regarding WHO pain ladder, and other pain assessment tools.

- Similar studies should be conducted to further investigate knowledge, attitude and practice of nurses towards cancer pain management.

#### Acknowledgments

We would like to thank Addis Ababa University, School of Nursing and Midwifery for the support of necessary materials while doing this study. We also like to thank the hospital administrators, data collectors, and study participants.

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