

Journal of  
**Health, Medicine and Nursing**  
*(JHMN)*

**PERCEPTIONS AND ATTITUDES OF NURSES TOWARDS THE  
WHO GUIDELINE FOR CANCER-RELATED PAIN  
MANAGEMENT AT A COUNTY REFERRAL HOSPITAL IN  
KENYA**

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**PERCEPTIONS AND ATTITUDES OF NURSES TOWARDS THE WHO GUIDELINE  
FOR CANCER-RELATED PAIN MANAGEMENT AT A COUNTY REFERRAL  
HOSPITAL IN KENYA**

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**Abstract**

**Purpose:** To establish nurses' attitudes on WHO guideline for cancer-related pain management at the Nakuru County Referral Hospital.

**Methodology:** A descriptive cross-sectional study design was used. The study targeted all nurses working at Nakuru County Referral Hospital; systematic random sampling was used to select the respondents where every 2<sup>nd</sup> nurse was selected. Data was collected using a structured self-administered questionnaire for nurses. Quantitative data was analyzed using Statistical Package for Social Sciences (SPSS) version 20, Ethical clearance was obtained from Mount Kenya University and Nakuru County Referral Hospital Research and ethics Committees and relevant departments.

**Results:** About 79.8% had poor attitude while 20.2% had good attitude on WHO guideline for cancer-related pain management. There was poor attitude among the respondents due to inadequate attitude training.

**Unique contribution to theory, practice and policy** Development of firm attitudes by nurses to confront and control cancer-related pain should be maintained and encouraged by the hospital management through motivation and teaching of attitudes through role-plays.

**Key words:** *Nurses, Perceptions, Attitude, Cancer-related Pain, WHO, Analgesic ladder*

## 1.0 INTRODUCTION

Pain is an unpleasant sensory and emotional experience associated with tissue damage (International Association for Study of Pain, 2012). It is a subjective experience, modified by genetics, past history, mood, expectation, and culture (British pain society, 2010). Approximately 75% of cancer patients live with chronic pain resulting from nociceptive or neuropathic syndromes which represent direct effects of the cancer (Portenoy, 2011).

Most cancer-related pain is due to the underlying cancers (85%), treatment (17%) and comorbidities unrelated to cancer (9%). Cancer-related pain can be acute or chronic, acute pain syndromes are disease-related while chronic pain syndromes are due to direct effects of malignancy or treatments (Fornasari, 2012).

Unmanaged cancer pain has been identified as a global Health Concern (WHO, 2011) that greatly affects patients' daily living activities, emotions and quality of life (Funk et al 2012). Nurses have a key role in cancer pain management by accurate assessment, prompt intervention, adequate evaluation of pain relief measures for better cancer-related pain control, and to work effectively in interdisciplinary health care teams (Pasero & McCaffery, 2011).

In 1986, World Health Organization (WHO) developed guidelines for cancer-related pain management worldwide. This was as a result of widespread misconceptions about treatment of chronic pain using opioids and the risk of addiction. WHO recommends a three-step pain relief ladder based on the intensity of pain and emphasizes the principles of “by the clock, by the mouth, by the ladder, and by the individual” as sufficient for cancer-related pain control. (WHO, 1996).

Despite the publication of the WHO evidence-based guidelines, cancer-related pain is still under treated throughout the world (Caraceni, 2012) driving the need for health professionals' education about best practices (Breuer, 2011).

A study on nurses' knowledge and attitudes in regard to pain management in Turkey yielded a score of 40% on the knowledge and attitude scale indicating poor knowledge and attitude on cancer-related pain management (Yava et al. 2013).

A study to assess cancer pain levels and treatment at a National Referral Hospital in Western Kenya found that a majority of patients (66%) had undertreated cancer pain partly due to poor perception and attitudes (Kristin et al.2013).

The WHO three-step pain relief ladder has evolved as an international standard of care for cancer-related pain (Koyyalagunta, 2012). It is estimated to achieve adequate pain relief in up to 90% of cancer patients (WHO, 2011).

The Kenyan Government emphasizes utilization of the principles of treatment outlined in the WHO cancer pain relief programme when treating pain in patients with cancer (National Guidelines for Cancer Management Kenya, 2013).

Hospital daily reports at the Nakuru County Referral Hospital indicated that 20 patients are admitted with different types of cancer at one given time ( Hospital daily reports) and 80 cancer

patients are attended per month on average at the Nakuru Hospice ( Annual data analysis report, 2014).

The report also shows a 6.3% increase in new cancer patients and a 96% increase in Hospital visits from the year 2013.

The WHO guideline on cancer-related pain management is available in some wards and no study has been done at the Nakuru County Referral Hospital to ascertain the perception and attitude of nurses to the WHO guideline; this study therefore sought to establish the nurses' attitudes on WHO guideline for cancer-related pain management at the Nakuru County Referral Hospital.

More than 70% of cancer patients will experience cancer-related pain in the course of the disease. Nurses have a key role in cancer pain management by accurate assessment, prompt intervention, and adequate evaluation of pain relief measures for better cancer-related pain control. To enhance this, World Health Organization (WHO) developed a 3-step analgesic ladder in 1986 to guide cancer-related pain management worldwide.

## **2.0 MATERIALS AND METHODS**

A cross-sectional descriptive study design was used to determine the nurses' attitudes on WHO guideline for cancer-related pain management at the Nakuru County Referral Hospital. The study was carried out at the Nakuru County Referral Hospital. Nakuru County Referral Hospital is situated in Milimani area of Nakuru County, with a catchment population of about 500,000, bed capacity of 588 and 60 cots, and average monthly bed occupancy of 110%. Nakuru County has a total Population of 1,603,325 ; 409,836 Households and covers an area of 7,496.5sq.km. The Population density is 213.9 persq.km and 43% of the population live below the poverty line. The County borders Baringo Central to the North, Kericho to the West, Laikipia to the North East, Nyandarua to the East, Narok to the South West, Kajiado to the South and Kiambu Counties. The county is the main economic and agricultural centre of the Kenyan Rift Valley region. The study targeted all nurses at all levels working at the Nakuru County Referral Hospital since their deployment to units is rotational with a total Nursing workforce of 466 Nurses, 3 Nurses have acquired Masters Degrees, BSc in Nursing-23, Diploma in Nursing-212 and 228 Enrolled Nurses. Nakuru County Referral Hospital was purposively selected as a case study. A sample of 232 respondents was determined using Fishers formula as cited by Mugenda and Mugenda(2003). From the anticipated population of 466, systematic random sampling was employed to identify the study respondents whereby every 2<sup>nd</sup> client qualified to be a respondent in this study was chosen subject to their informed consent. Eight nurse managers took part in the study as key informants. A self administered structured questionnaire was used to collect data. Four nurses were recruited and trained as research assistants; during the training, they reviewed the instruments item by item, and engaged in practice and mock interviews. The dependent variable was of attitudes on WHO guidelines, the independent variables were; Nurses' social-demographic characteristics, nurses' attitudes. Quantitative data was analyzed using Statistical Package for Social Sciences (SPSS) version 20, with sample weights applied prior to analysis. The demographic and general characteristics were identified using descriptive statistics. Chi-square test was used to determine the prevalence of statistically significant association between the dependent

variable and independent variables. The results are presented in narrative, tables, pie charts and bar graphs. Chi square was used to check the levels of relationships between variables and level of significance in the interactions. Measures of central tendencies were used to show the mean and mode.

### **3.0 RESULTS**

#### **3.1 Respondents' Demographic characteristics**

The response rate for quantitative respondents was 88% (204 out of 232).

About 17.5% (34) of the respondents were up to 30 years of age; 33.5% (65) were between 31-40 years; 29.4% (57) were between 41-50 years and 19.6% (38) were above 50 years (N=194).

85% (171) of the respondents were female while 15% (30) were male (N=201).

The study also sort to understand the respondents' marital status, 204 respondents gave out their marital status, 66.2% (135) were married; 27.5% (56) were single; 4.4% (9) were widowed and 2% (3) were divorced (N=204). On the religious affiliations of the respondents, about 98 % (199) of the respondents were Christian while 2% (4) were Muslim (N=203)

Pertaining to their level of nursing education; the respondents were asked their highest level of nursing education (N=204); 69.6% (142) of the respondents were Kenya Registered Nurses; 19.6% (40) were Kenya Enrolled Community Health Nurses; 10.3% (21) had obtained Bachelor of Science in nursing degree and 0.5% (1) had obtained a Master of Science in nursing degree.

The study also looked at the respondent's years of clinical experience (N=204); 36.3% (74) of the respondents had more than 15 years of experience; 28.9% (59) had between 11 and 15 years of experience; 19.1% (39) had between five and ten years of experience and 15.7% (32) had less than 5 years of experience.

#### **3.2 Respondents' attitude regarding WHO guideline on cancer-related pain management.**

To establish the respondents' attitude the researcher used three pre-coded questions on respondents' attitude to WHO guideline on cancer related pain management. These questions were: c20- The most accurate judge of the intensity of cancer-related pain is? c21- In your practice, what determines the choice of cancer-related pain treatment? And c22- If a patient declines to take opioids, what will be the best action a nurse should take?

In order to compute the attitude level, each correct response to each of these questions was assigned the value '1' and any other value was assigned '0'. The values from c20, c21 and c22 were then summed up; the highest value was 3 and the least 0. This was then recorded into three groups of; 3- good, 2-average, 1-Poor.

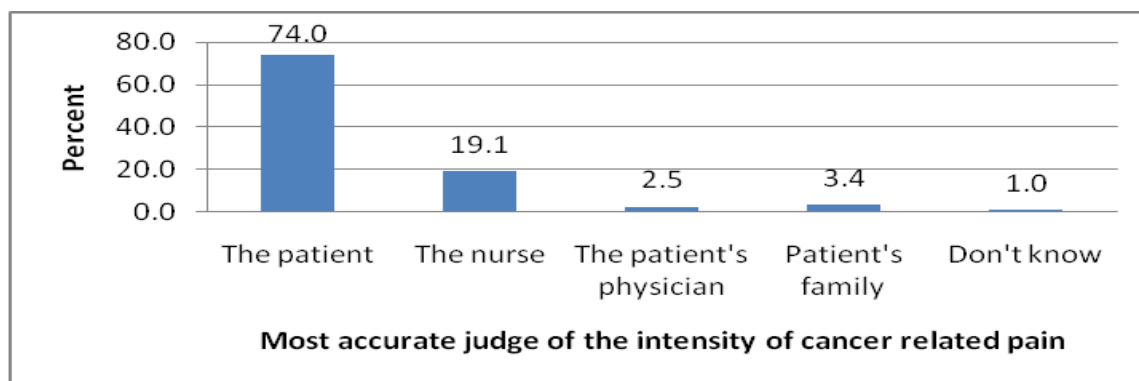
The brief summary shown in Table 1 indicates that 40.9% (79) had good attitude of WHO guideline on management of cancer related pain; 38.9% (75) had average attitude and 20.2% (39) had poor attitude about of the guideline.

**Table 1. Respondents’ attitude on WHO guideline for cancer-related pain management**

Attitude						Total	
Poor		Average		Good			
Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent
17	8.8	25	13.0	20	10.4	62	32.1
15	7.8	35	18.1	39	20.2	89	46.1
7	3.6	15	7.8	20	10.4	42	21.8
39	20.2	75	38.9	79	40.9	193	100.0

### 3.2 The most accurate judge of the intensity of cancer-related pain

In trying to establish their attitude; the researcher asked the question ' The most accurate judge of the intensity of cancer-related pain is?' The responses received were as shown in Figure 1



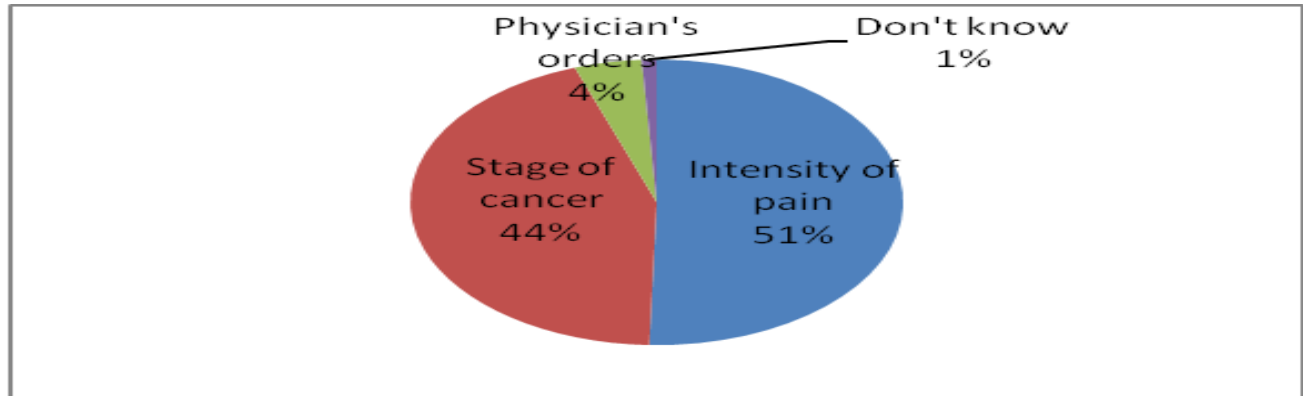
**Figure 1: Most accurate judge of the intensity of cancer related pain (N=204).**

Figure 1 shows that 74% (151) of the respondents identified the patient as the most accurate judge of the intensity of cancer-related pain; 19.1% (39) suggested the nurse; 2.5% (5) the patient's family while 1% (2) did not know.

### 3.3 Determinant of choice of cancer-related pain treatment

On what determines the choice of cancer-related pain treatment; the respondents provided various responses as shown in Figure 2.



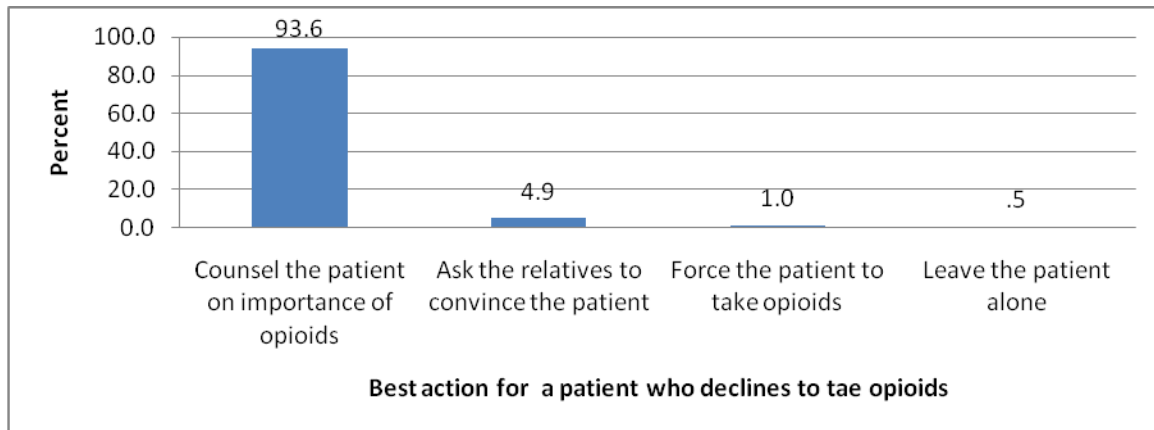


### 3.4 Determinant of choice of cancer-related pain treatment (N=204)

About 51% (103) of the respondents correctly identified the intensity of pain as the determinant of choice of cancer-related pain treatment; 44% (90) of the respondents were for the stage of cancer ; physician’s orders was suggested by 4% (9) of the respondents while 1% (2) did not know as shown in figure 2.

### 3.5 Best action a nurse should take if a patient declines to take opioids

The respondents were asked the best action to take if a patient declines to take opioid analgesics; the results were as shown in figure 3.



**Figure 3: Best action a nurse should take if a patient declines to take opioids (N=204).**

About 93.6% (191) identified the best action as being counselling the patient on importance of opioids; 4.9 % (10) stated that they will ask the relatives to convince the patient; 1% (2) stated that they will force the patient to take opioids and leaving the patient alone by 0.5% (1) as shown in Figure 3.

## **4.0 DISCUSSIONs, CONCLUSSIONS AND RECOMMENDATIONS**

### **4.1 Discussions**

#### **Respondents' Socio-demographic characteristics**

About 85% of the respondents were female while 15% were male. Kenya Population and Housing Census (2009) indicate that 52% of Kenyan population are Female. This also depicts the way society views nursing as being a female profession based on the caring role of women in society.

#### **Respondents' attitude in regard to WHO guideline on cancer-related pain management.**

About 40.9% of the respondents in this study had good attitude in regard to W.H.O guideline on cancer-related pain management. These findings are similar to the findings realized in a study on nurses' knowledge and attitudes in regard to pain management in Turkey that yielded a score of 40% on the knowledge and attitude scale indicating poor knowledge and attitude on cancer-related pain management (Yava et al. 2013).

### **4.2 Conclusions**

Based on the study findings on attitude, the respondents had low scores on attitude on WHO guideline cancer-related pain management due to inadequate attitude training.

### **4.3 Recommendations**

Development of firm attitudes by nurses to confront and control cancer-related pain should be maintained and encouraged by the hospital management through motivation and teaching of attitudes through role-plays.

#### **Recommendation for further study**

This study has helped to establish nurses' attitudes in regard to cancer-related pain management, there is still a gap in understanding the underlying reasons for involvement of only a few training institutions and supporting organizations in the area of cancer-related pain management. There is also need to establish the attitude of this guideline among other health professionals since they all work as an inter-disciplinary team.

#### **Acknowledgement**

The researchers acknowledges the support of Mount Kenya University School of nursing and school of postgraduate studies, the medical superintendent, Dr. Etemesi( chairperson research and ethical committee), nursing officer in-charge, research assistants and all the nurses at Nakuru County Referral Hospital who participated in this study.

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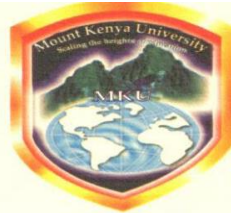


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APPENDICES

Appendix 1: MKU ethical clearance certificate

# Mount Kenya University



February 26, 2015

**Ref. No. MKU/IERC/0009**

**CERTIFICATE OF ETHICAL CLEARANCE**

This is to certify that the proposal titled “IMPLEMENTATION OF THE WORLD HEALTH ORGANIZATION GUIDELINES ON CANCER-RELATED PAIN MANAGEMENT BY NURSES AT THE NAKURU COUNTY REFERRAL HOSPITAL”, whose Principal Investigator is Ms Alice K. Maranga (MSCN/2013/40850) has been reviewed by Mount Kenya University Ethics Review Committee (ERC), and found to adequately address all ethical concerns.

**Prof. Mbaruk Suleiman**

**for Chairman, Mount Kenya University ERC**

**Date:** 26.2.15

**Dr. Francis W. Muregi**

**Secretary, Mount Kenya University ERC**

**Date:** 26/02/15

Mount Kenya University  
Director, Research & Development  
& Development  
P. O. Box 342 - 01000, Thika

**Appendix 2: Ethical clearance-Nakuru County Referral Hospital**

**MINISTRY OF HEALTH**

Telegrams: "PROVMED", NAKURU  
Telephone: Nakuru 051-2215580-90  
When replying please quote  
FAX 051 2216497



PROVINCIAL GENERAL HOSPITAL  
RIFT VALLEY PROVINCE  
P.O. Box 71  
NAKURU.

RII/VOL.I/08

Date 5/3/2015  
To: Alice K. Maranga

Dear Alice K. Maranga

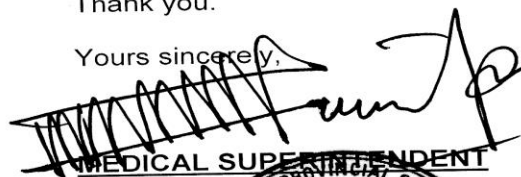
**RE: APPROVAL TO UNDERTAKE RESEARCH AT THE  
RIFT VALLEY PROVINCIAL GENERAL HOSPITAL**

Reference is made to your letter dated 26/2/2015 seeking  
approval to conduct a research on "Implementation of the  
WHO guidelines on cancer-related pain  
management by nurse"

Permission has been granted/~~Not granted~~ for the research. It is hoped that you will  
adhere to the ethics and standards that relate to research at our institution.

Thank you.

Yours sincerely,



**MEDICAL SUPERINTENDENT**



**CHAIRPERSON  
RESEARCH AND ETHICS COMMITTEE**

