

Nurses' Knowledge toward Infection Control for Patients with Fracture at Orthopedic Wards in Baghdad Teaching Hospitals

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Abstract

Aims: The study aims at assess nurses' knowledge towards infection control for patients with fracture. **Methodology:** A descriptive study used assessment approach with questionnaire items is conducted to explore nurses knowledge. By a purposive random sample of (100) nurses is selected throughout the use of non-probability sampling approach. Data was collection through the use of a questionnaire and self-report nurses. Through the application the descriptive statistic, data were analyzed. **Results:** According to the analysis mean of score, the findings indicate that the majority (53%) of nurses knowledgeable at mean +S.d.= 2.46+0.626. As well as, the findings indicate that the majority (55%) of nurses poor knowledge regarding fracture ward and waste management at low level of mean +S.d.= 1.46+ 0.521. **Conclusion:** Knowledge in terms of personal protective equipment, nurses were knowledgeable. Knowledge in terms of fracture ward & waste management, nurses were poor knowledge. More years of experience and training the staff on orthopedic wards by local officials help raising professionals' nurses' knowledge. Provide the health resources and exploiting young energies of nurses which indeed helps to develop their knowledge and practice.

Keywords: Knowledge, Nurses, Infection Control.

INTRODUCTION

Fracture-related infection not only has a high morbidity and mortality rate, but it also has a significant socioeconomic effect as compared to patients who do not develop this complication after musculoskeletal trauma ^[1,2]. Infection rates after internal fixation of closed fractures have been estimated to be 1–2%, but can exceed 30% in cases of open fractures ^[3]. Since the effects of an infection like this may be life-changing for the patient, such as permanent functional loss or amputation of the infected leg, the patient's quality of life and functional status suffers as a result ^[4].

To address these concerns, it appears that focusing on infection prevention and improving

outcomes is critical. Care packages are small collections of evidence-based practices developed by the Institute for Healthcare Reform to eliminate such problems such as infections (e.g. ventilator-associated pneumonia, urinary tract infection, postoperative wound infection, etc.). Treatment packages, on the other hand, only address four or five main aspects of improving patient outcomes. The study proposes a multidisciplinary infection prevention package that includes pre-, peri-, and post-operative phases ^[5].

METHODOLOGY

To investigate nurse information relevant to infection control in orthopedic wards, a quantitative descriptive analysis used to assess approach with questionnaire items is performed. Throughout the non-probability sampling method, a purposive random sample of (100) nurses is chosen. The study was spread through three hospitals. These hospitals are hospitals distributed throughout three places, are AL-Yarmouk Teaching Hospital, Martyr Ghazi AL-Hariri Hospital for Specialized Surgery and Kadhimiya Teaching Hospital, Baghdad city, Iraq. A constructed questionnaire includes (socio-demographic data and knowledge questionnaire items), data was collection through the use of a questionnaire and self-report nurses. Through the application the descriptive statistic, data were analyzed. "Frequencies and percentages, mean+ S.d. Mean of score, Cut off point (0.66), poor (mean of score 1-1.66), moderate (mean of score 1.67-2.33), good (mean of score ≥ 2.34)

RESULTS AND DISCUSSION

Descriptive Statistic of Demographic Factors (Table1):

Out of (100) subjects participated in our study aged range from (21-30) years of age and constituted (59 percent) of the study sample, due to the work nature of the orthopedic wards need to be young to cover all duties in this units.

Gender-related results indicate that male nurses were more than half of study findings and represented that (54 percent) out total number. This result come because that the majority of the nurses they dealing directly with the patients are from those male because the action with the patients require a high physical activity.

In terms of marital status, the married nurses were predominated, it constituted (69 percent). This result come because most of these age groups are the age of marriage, especially after the completion of the study and appointment in the field of nursing.

Most of nurses were nursing institute graduated with less years of experience and without

trained only one sessions, it composed (45, 52 and 38 percent) respectively. This result come because that the majority of the nurses they dealing directly with the patients are from those with this age group because the action with the patients require a high physical activity and the nurses who are advanced age fail to dealing with the patients. In addition, the participation in a training sessions in-outside of Iraq is diminished due to the political and economic limitation and this is controlled by the policy of the minister of health of Iraq. This result is in agreement with study of Radhi and Tawfiq (2015), in their study found that the majority of the study subjects are technical institute ^[6].

"It is also obvious among our findings, showed that most of nurses were did not attend any training session and or with one trained session. This result reflects the need of education regarding orthopedic area. Also in El Enein study results 97.5% had no training sessions towards fracture care ^[7]. Our above findings come in the same line with findings conducted in at orthopedic ward in AL-Najaf AL-Ashraf Hospitals. Their findings showed that the majority of the age group were (23-27) years old (31%). Most of the study samples (61%) were male. Most of them (59%) were married and (52%) were nursing secondary graduate with limited training" ^[8].

Knowledge regarding Infection Control for Patients with Fracture(Figure 1):

Infection control need to hand hygiene, use of personal protective equipment (e.g., gloves, masks, eyewear), respiratory hygiene / cough etiquette, sharps safety (engineering and work practice controls), safe injection practices and sterile instruments and devices.

"Prevention of surgical site infection in orthopedic surgery and bone trauma has some hallmarks not shared with other surgical disciplines. According to the analysis mean of score, our findings indicate that the majority (53%) of nurses knowledgeable at mean +S.d.= 2.46+0.626. This results come because the majority of health care workers have knowledge about infection control and personal protective equipment, added to that recent pandemic, leading to fear of any infection. The highlights the need for nurses knowledge in this regard deals with infection prevention for patients with fracture ^[9]. The Epidemiology and outcomes of surgical site infections following orthopedic surgery, confirmed that infection were controlled due to good knowledge and practice among working staff in those area" ^[10].

Knowledge related to fracture ward and waste management (Figure 2):

"According to the analysis mean of score, the findings indicate that the majority (55%) of nurses poor knowledge regarding fracture ward and waste management. This results come with study deals with the fragility fractures that showed that nurses knowledge were deficit and these gaps in

knowledge are due to the unqualified nurses in fracture area [11]. Also, results come with study waste management in operational and orthopedic room. Findings revealed gaps in knowledge were unsatisfactory knowledge" [12].

CONCLUSION AND RECOMNDATIONS

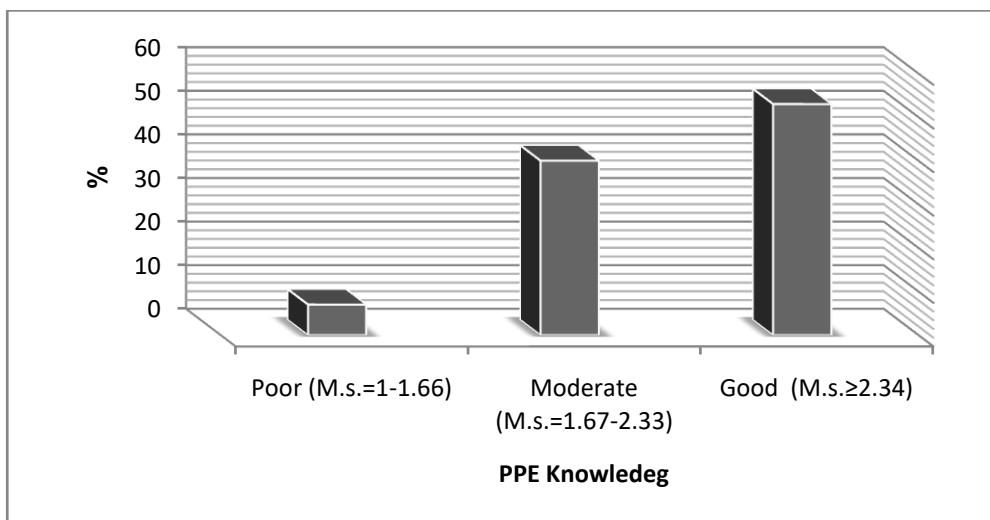
This study found knowledge in terms of personal protective equipment, nurses were knowledgeable. Knowledge in terms of fracture ward & waste management, nurses were poor knowledge. More years of experience and training the staff on orthopedic wards by local officials help raising professionals' nurses knowledge. Provide the health resources and exploiting young energies of nurses which indeed helps to develop their knowledge and practice. The researches recommended Providing health resources and exploiting young energies of nurses which indeed helps to develop their knowledge and practice.

Table1:Descriptive Statistic Nurses Demographic Variables (n=100).

Variables	Rating	F	%
Age/years (Mean+ 29.47+7.269) S.d=	21-30years old	59	59.0
	31-40years old	22	22.0
	41-50years old	12	12.0
	51and older	7	7.0
Gender	Male	54	54.0
	Female	46	46.0
Marital status	Single	22	22.0
	Married	69	69.0
	Widower	9	9.0
Education	Secondary school Nursing	29	29.0
	Nursing institute	45	45.0
	College of nursing	26	26.0
Years of experience	1-3years	52	52.0
	4-6years	28	28.0
	>6years	20	20.0

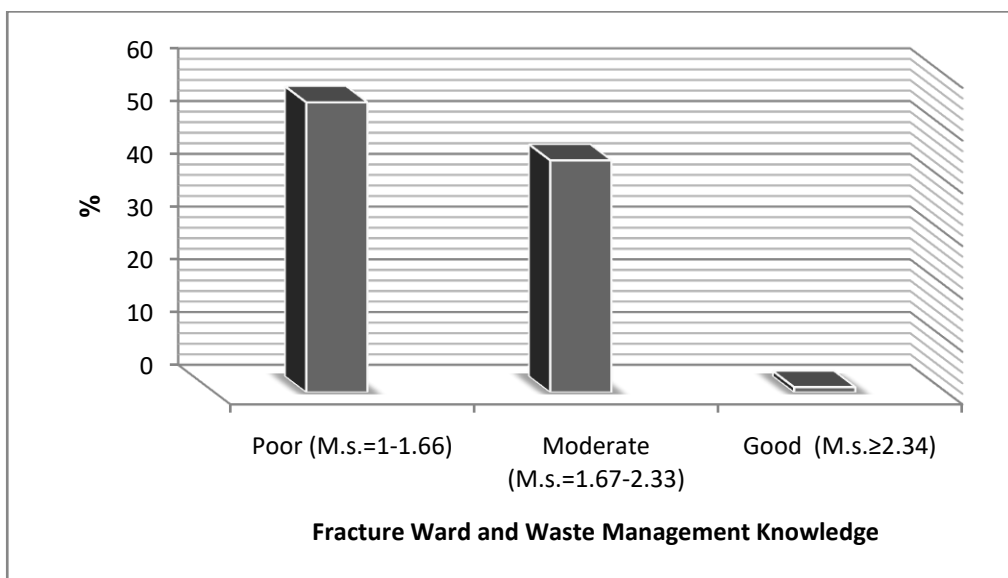
Training sessions	No trained	38	38.0
	1 session	38	38.0
	2 sessions	9	9.0
	>2 sessions	15	15.0

F=frequency, %= Percentage



poor (1-1.66), moderate (1.67-2.33), good (≥ 2.34)

Figure 1: Overall knowledge related to personal protective equipment



poor (1-1.66), moderate (1.67-2.33), good (≥ 2.34)

Figure 2: Overall knowledge related to fracture ward and waste management

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