

# KNOWLEDGE AND ATTITUDES ON PRESSURE ULCER PREVENTION AMONG NURSES WORKING IN NEUROLOGICAL DEPARTMENTS IN TERTIARY CARE HOSPITALS OF PESHAWAR: A MULTICENTER STUDY

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## Abstract

**AIM:** The aim of the current study was to assess (a) how much nurses employed in tertiary care hospital know about the preventive measures. (b) Whether there is a liaison of knowledge and attitude existing among nurses working in neurology unit of tertiary care hospitals of Peshawar. (c) To assess factors influencing performance of nurses in terms of prevention of pressure ulcer in patients at risk in tertiary care hospitals of Peshawar.

**METHODS:** A cross-sectional study was conducted among nurses employed in tertiary care hospitals in Peshawar. "Pressure ulcer baseline assessment tool" developed by Iowa Health Des Moines was used to assess their knowledge and attitude. For the attitude assessment previously tested tool, used by Moor and Price, was used. Data was analyzed by using SPSS and MS excel.

**RESULTS:** Out of 52 nurses, 06% male and 94% female with a mean age of  $26.7 \pm 5.15$  years (ranged 19 - 40 years) were recruited in the study. The average score of knowledge was  $28.35 \pm 6.01$  (total score = 47). Results revealed that 30.77% of the nurses had good knowledge i.e. (70-84%), while no single score was falling in outstanding and excellent category. About 25% had average knowledge i.e. (60-69 %) and 17.31% falls in minimal acceptable range (50-59 score) while 25 had poor knowledge (<50 score). A positive attitude was shown by majority of the nurses and they were of the view that most pressure ulcers can be avoided.

**CONCLUSION:** It is apparent that, availability of proper guidelines and policies about pressure ulcer prevention can lead to high level of awareness among nurses and thus to an increased attentiveness in daily nursing practice, however update knowledge and positive attitude are the key indicators for quality health care and pressure ulcer prevention. Inadequate knowledge and attitude of nurses working in neurology units of tertiary care hospitals in Peshawar was because of lack of formal training, motivation and proper supervision.

**KEYWORDS:** Pressure ulcer, bed sores, attitude, knowledge, awareness, tertiary care, hospitals, nurses, Peshawar, KPK, Pakistan

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## INTRODUCTION

Despite of advances in modern technology and the array of preventive equipments available, pres-

sure ulcers are not on the decline.<sup>1,2</sup> Pressure ulcer remains to be one of the common and serious health care problem in all health care settings all over the world. Although preven-

tion and prophecy of pressure ulcers engage health care workers in many parameters, nurses are the first and primary caregivers of the patients and therefore they carry most of the responsibility for managing and preventing the complications regarding pressure ulcers.<sup>3</sup>

It has been observed that although nurses have enough knowledge about pressure ulcers but they do not put their knowledge and competencies into practice which results in ineffective performance and

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poor health outcome among nursing homes and other hospitalized patient.<sup>4,5</sup>

Attitude is response (positive, negative) of any individual towards an idea/information. Attitude changes as function of experience/information, the key to lifelong educational success. This indicates that attitude is the capacity of application of knowledge in an existing situation, while behavior is the 'do' part of work. It is the use of knowledge to perform concrete action like taking measures to prevent pressure ulcer.<sup>6</sup>

Pressure ulcers remains one of the alarming conditions for patients who have been discharged with damaged tissues.<sup>7</sup> Lack of assessment and evaluation of pressure areas during discharge and admission is also indicative of negative attitude and practice, hence leading to contributing factors in developing pressure ulcers.<sup>7</sup>

Localized damage of skin tissues due to prolong and extensive pressure on the body parts is called pressure ulcer.<sup>8</sup> A huge population is at risk to get pressure ulcers in different health care set ups due to immobility and chronic illness. The increasing incidence and prevalence of pressure ulcers indicates that nursing care needs its maximum focus on prevention and treatment of pressure ulcers. The prevalence of pressure ulcers across five countries was 18.1% in different health care settings.<sup>9</sup> A study identified that prevalence of pressure ulcer in UK and Sweden is ranging from 21.1 % to 23% as compare to Italy (8.3%) and Portugal (12.5%).<sup>10</sup> By 2006, the overall incidence of pressure sores for hospitalized patients ranged from 2.7% to 29.5%, greater than 50% which was reported for patients in critical care settings.<sup>11</sup>

Knowledge and skills are ranked as one of the top ten core values for medical professionals.<sup>12</sup> Nursing staff should be fully adept and well versed, with all-round ability of ser-

vice provision. They act according to diverse scenarios and must have full capability in preventive and curative aspects of pressure ulcers. Their practices should also be in consonance with laid-out guidelines and standards followed by international level organizations.<sup>12</sup>

Many Studies revealed that nurses play crucial role in the forestalling of pressure ulcers and that they have good knowledge in this particular area.<sup>13, 15</sup> However some other studies stated that nurses have lack of updated knowledge about pressure ulcers, as well as lack of time and institutional system or they do not bother to use their knowledge and skills.<sup>19-21</sup> Although many nurses have positive attitude to pressure ulcers but they consider pressure ulcer to be a low priority in their daily work.<sup>22</sup>

Knowledge among nurses regarding pressure ulcers deduction, prevention and management plays a crucial role in the incidence and prevalence of pressure ulcer in health care system.<sup>23-25</sup> Education is considered as a first step in quality care provision.<sup>21</sup> Attitude towards pressure ulcer included risk assessment on regular basis. Proper value should be given to pressure ulcer prevention.<sup>4</sup> This defines that attitude depends upon the acquired knowledge, confidence/self-efficacy, motivation and outcome expectancy.<sup>26</sup> Regardless of the desire to keep up to date, attitude change is complicated. Refresher training have shown significant impact on knowledge, however, effect of knowledge on attitude is less impressive.<sup>27</sup>

## METHODS

Cross-sectional study was conducted to determine the knowledge and attitudes of nurses working in neurology department of tertiary care hospitals in Peshawar. Descriptive cross sectional design was used to gain information about the current knowledge and attitude of nurses towards the prevention of pressure ulcer in bed bound patients.

The location of the study included public and private tertiary health care centers (hospitals) in Peshawar which included; Rehman Medical Institute (RMI), North West General Hospital and Research Center (NWGH), Hayatabad Medical Complex (HMC), Khyber Teaching Hospital (KTH) and Lady Reading Hospital (LRH). Study population was composed of all nurses of HMC, LRH, KTH, RMI and North West Hospitals, Peshawar Khyber Pakhtunkhwa, Pakistan.

Pressure Ulcer Baseline Assessment: tool developed by Iowa Health Des Moines, was used for knowledge assessment in collecting data for descriptive measurements. For attitude assessment, another tool, used by Moor and Price, a 5-point scoring system ranging from strongly agrees to strongly disagree, was used. This tool basically had two components i.e. knowledge and attitude. For data analysis, statistical package for the social sciences (SPSS version 15) was used. Microsoft Excel was used to construct graphs.

## RESULTS

The respondents both male and female were not equal in number (06% male and 94% females) as shown in Graph-1. The respondents had five different qualifications. Majority of them i.e. 36 participants (69.2%) were diploma holders, followed by 9(17.3%) were generic BSN degree holders while 5(9.6%) had three nursing diploma plus one year midwifery. Only 1(1.9%) of the participant had done specialization in addition to Diploma in general nursing and a same proportion reported that they have done Post RN BScN (Graph 2).

Study result reveals that mean score of knowledge was  $28.35 \pm 6.01$  (total score = 47) with median 29.00 and mode 29 score. This indicates that 50% of the participants scored more than 29 out of 47 marks (61.7%). Results also indicates that minimum score was 17 and maximum was 37 (ranged 36.5% to 78.7%)

**Table 1: Knowledge of Nurses about Pressure ulcer N=52**

	Obtained score (total score = 47)	Percentage score
Mean	28.35	60.3%
Median	29.00	61.7%
Mode	29	61.7%
Std. Deviation	6.019	
Minimum	17	36.5%
Maximum	37	78.7%

**Table 2: Attitude of nureses about pressure ulcer prevention and treatment**

	Strongly Agree f(%)	Agree f(%)	Neither Agree nor Disagree (%)	Disagree f(%)	Strongly Disagree f(%)
1. All Patients are at potential risk of developing pressure ulcers	13 (25%)	16 (30.8%)	2 (3.8%)	12 (23.1%)	9 (17.3%)
2. Pressure ulcer prevention is time consuming for me to carry out	10 (19.2%)	7 (13.5%)	11 (21.2%)	14 (26.9%)	10 (19.2%)
3. In my opinion, patients tent and to get as many pressure ulcers nowadays	10 (19.2%)	24 (46.1%)	4 (7.7%)	8 (15.3%)	6 (11.5%)
4. I do not need to concern myself with pressure ulcer prevention in my practice	5 (9.6%)	12 (23.1%)	3 (5.7%)	16 (30.7%)	16 (30.7%)
5. Pressure ulcer treatment is a greater priority than pressure ulcer prevention	4(7.6%)	11 (21.1%)	7 (13.5%)	19 (36.5%)	11 (21.1%)
6. Continuous assessment of patients will give an accurate account of their pressure ulcer risk	10(19.2%)	27 (51.9%)	6 (11.5%)	3 (5.7%)	6 (11.5%)

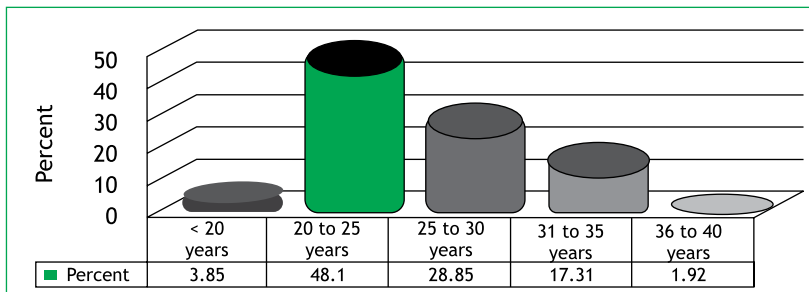


Figure 1: age of respondents

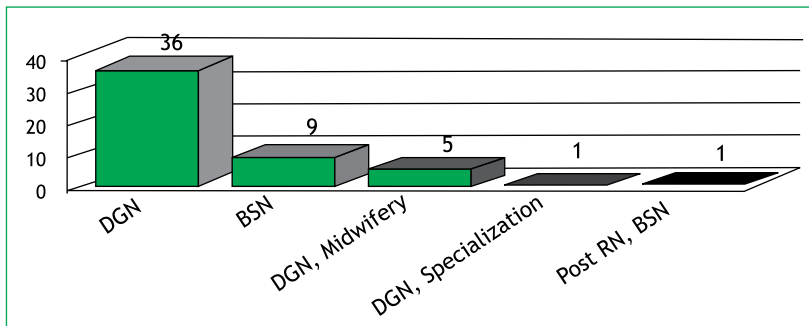


Figure 2: academic qualification of the respondents

as shown in table-1.

A positive attitude was shown by majority of the nurses and they were of the view that most pressure ulcers can be avoided, 13(25%) were neutral while rest were either disagree or strongly disagree. When they were asked that are you less interested in pressure ulcer prevention than other aspects of care, about 20 (23.1%) and 12 (23.1%) shown disagree and strongly disagreement respectively while 6(11.5%) were neutral. Only 4 (7.6%) and 6 (11.5%) of the participant were in favor of availability of any pressure ulcer risk assessment tool to them. They showed that it would be better rely on tested risk assessment tool rather than relying on personal clinical judgment (Table-1)

**DISCUSSION**

Study results reveal that mean score of knowledge was 28.35 ± 6.01 (total score = 47) with median 29.00 and mode 29 score. This indicates that 50% of the participants scored more

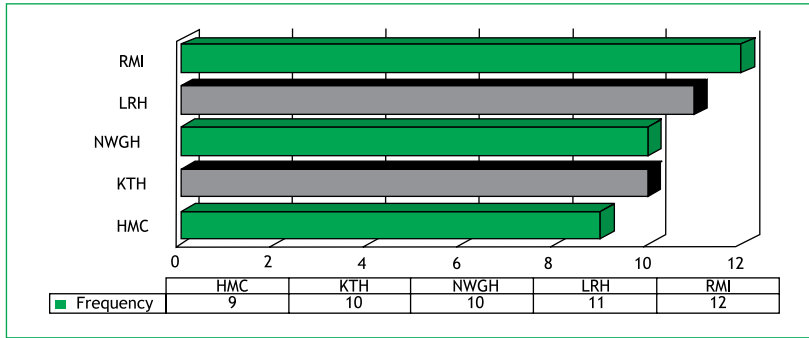


Figure 3: Distribution of participants according to tertiary health care centers

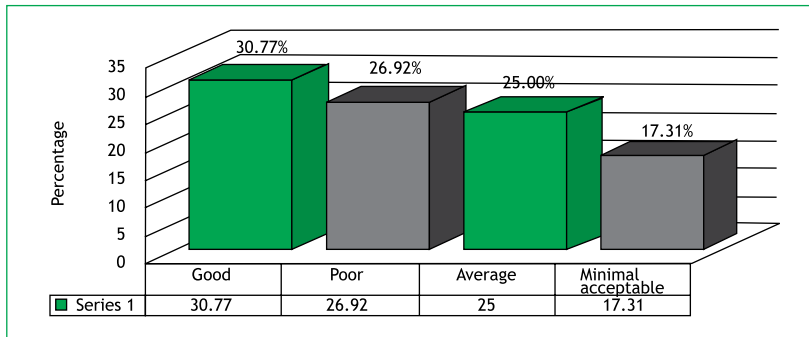


Figure 4: Cut-off of knowledge of Nurses regarding pressure ulcers

than 29 out of 47 marks (61.7%). Result also indicates that minimum score was 17 and maximum was 37 (ranged 36.5% to 78.7%). Further categorization reflects results such as, 30.77% had good knowledge (range 70-84 marks), 25% had average (ranged 60-69marks) and 17.31% had minimal acceptable knowledge (ranged 50-59 marks) while 26.92% of them had poor knowledge (ranged <50 marks) regarding pressure ulcers. The overall index or score of nurse's knowledge regarding pressure ulcers reported in different studies varies from study to study, with an average of 69.7% and ranged from 40% to 89%, which is similar to the current study with a bit fluctuations.<sup>4</sup> Development of pressure ulcers was found significantly associated with poor/inappropriate knowledge where increase in knowledge level of nurses was linked with refresher training and work experiences. However which the attitude and practice were significantly associated with the increased level of knowledge. Four other varying studies have emphasized on the importance of knowledge of pressure ulcers and linked it with that initial based of sore prevention (48-50),

Maylor and Torrance.<sup>28</sup> Some studies have reported poor knowledge related to pressure ulcers among registered staff nurses.<sup>21,24,28,29</sup> Mockridge, et al (1999) found that 73.2% of nurses correctly answered more than 50% of the questions that measured UPP treatment knowledge.<sup>30</sup>

The study by Bostrom & Kenneth (1992), reported about 89% of nurses who correctly identified 9 out of 11 risk factors, and 71% identified 10 or more factors relating to the development of pressure ulcers.<sup>13</sup> while Hallett (1996) established that nearly 60% of nursing staff identified at least 5 risk factors, compared to 20% who were unable to recognize more than four risk reason.<sup>31</sup> Similarly other studies have also reported poor knowledge (49%) related to pressure ulcers among registered staff nurses.<sup>20,24,28,29</sup> Almost all interventional studies which have compared the influence of training indicate the latter. Development of pressure ulcers was found significantly associated with poor/inappropriate knowledge and training among community and hospital nurses regarding respective aspect.<sup>23</sup> However refreshers training in specific domain have improved their

knowledge.<sup>32</sup>

## CONCLUSION

Although most of the recommendations on pressure ulcer care are well known and are available all over the world for nurses and managers, however the knowledge and attitude towards pressure ulcer is not up to the mark. Knowledge among nurses working in neurology of tertiary care hospitals (public and private) about the measures to prevent pressure ulcers seems to be moderate. Attitudes were a significant predictor of the application of knowledge however it also seemed to be on average. An adequate dissemination of pressure ulcer prevention guidelines and training is needed in addition to further research to investigate training needs assessment and sorting the barriers. This would be a prerequisite to improving the quality of pressure ulcer prevention in tertiary care hospitals located in Pakistan.

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## NOTES ON CONTRIBUTORS

All Authors are involved in every part of the analysis, idea's development, and write-up.

## CONFLICT OF INTEREST

Authors declare no conflict of interest.

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