

Nurses Knowledge and Practices towards Prevention of Pressure Ulcer in Tertiary Care Hospital

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Abstract: "Prevention is better than cure" as per this proverb in prevention of pressure ulcer requirement of early identification of persons at risk and rapid implementation of prevention interventions was very important. Nursing team members are responsible for direct and continuous care related to pressure ulcer prevention. A study was conducted to assess knowledge and practices of staff nurses towards prevention of pressure ulcer in tertiary care hospital. **Method:** Descriptive approach with cross sectional study was conducted at tertiary care hospital. 193 staff nurses were selected through convenient sampling technique. Data was collected using a structured and pretested self administered questionnaire. The data was analyzed in descriptive statistics with spss software. **Result:** Majority 125(64.8%) of study subjects were in age group 20-25yrs, 148(76.7%) were females, 123(63.7%) were GNM and 162(83.9%) had 1-5 years of experience. majority 102(52.8%) of study subjects with good knowledge, Aspects on with all professional groups 182 (94.3%) gave correct answer related to immobility and 175 (90.7%) related to pressure as contributing factor of pressure ulcer. Aspects on with all professional groups 155(80.3%) had very good practices on assessment and management of pain and 151(78.2%) were very prompt in documentation. There was significant association between knowledge of nurses with age and qualification. **Conclusion:** Nurses knowledge and practices towards prevention of pressure ulcer will be improved through continue nursing education program.

Keywords: Pressure ulcer, knowledge, Practices, Assess, Tertiary care hospital.

1. Introduction

Pressure ulcers were common in a variety of patient settings and associated with adverse health outcomes and high treatment costs. Pressure ulcers were the common conditions among patients hospitalized in acute and chronic care facilities and impose a significant burden on patients, their relatives, and caregivers. Pressure ulcer was a significant problem among hospitalized patients. Pressure ulcers also known as pressure sores. Bedsores and decubitus ulcers were localized damage to the skin or underlying tissue that usually occur over a bony prominence as a result of pressure or pressure in combination with shear and/or friction. Pressure ulcers occur due to pressure applied to soft tissue resulting in completely or partially obstructed blood flow to the soft tissue.

The unique function of the nurse was to assist the individual, sick or well, in the performance of those activities contributing to health or its recovery. Nursing team members are responsible for direct and continuous care related to pressure ulcer prevention and treatment. For nursing to achieve quality care, its practice needs to be based on the best evidence regarding the pressure ulcer.

Pressure ulcers have been described as one of the most costly and physically debilitating complications since the 20th century. The pain and discomfort of pressure ulcer delays rehabilitation prolong illness and timing of discharge and also contribute to disability and death. These dramatically raise health care costs as a result of the need for supplies and nursing hours [1].

Knowledge and practices of the nurses regarding prevention of pressure ulcer were found to be inadequate. Having higher

educational status, attending formal training and being experienced were positively associated with knowledge; while a shortage of facilities and equipment, dissatisfaction with nursing leadership and inadequate staff number showed a negative association with the practice of nurse's pressure ulcer prevention. In-service training and upgrading courses are some of the important steps to improve nurses' knowledge and practice on prevention of ulcer pressure [2].

Poor knowledge and practice of nurses have its own significant contribution for the higher prevalence of pressure ulcers [3]. "Prevention is better than cure" as per this proverb in the prevention of pressure ulcer requirement of early identification of persons at risk and rapid implementation of prevention interventions was very important. Pressure injury prevention also requires multidisciplinary efforts. Pressure injury quality improvement teams that are fully empowered appear to have more success in reducing pressure injury occurrence. Nurses and nursing care interventions play an important role in pressure injury prevention across healthcare settings [4].

However, pressure ulcers are largely preventable. All patients who are identified as being at risk should have a management plan to prevent development of pressure ulcer, optimize healing, and prevent complications of existing pressure ulcer.

"World stop pressure ulcer day report in 2014 showed as nearly 700,000 patients was affected by pressure ulcers every year. Around 186,617 patients develop a new pressure ulcer in acute care each year. This has shown that in the year January 2012 to December 2013 between 4 and 6% of patients in acute care settings and more than 5–10% of

patients in non-acute care had pressure ulcers. Pressure ulcers were accountable for 2% of preventable deaths. According to 2014 Coloplast pressure ulcer summit report, 60,000 people died as a result of the complications of pressure ulcer globally^[5].

Chronic illnesses and traumas needs prolong hospitalization with meticulous care in tertiary care hospital include multidisciplinary approach among health team. Now a day's patients also increasingly aware of their rights to receive high-quality care with cost effectiveness. Skin injury in pressure ulcer present integrity, pressure ulcer in hospitalized patients represents an important problem, due to the high ratios found and the emotional and financial costs. Pressure ulcer entails high costs for the patient, family, hospital, health institution and society as a whole. This condition demands continuity and extension of care beyond the end of hospitalization. It entails socioeconomic consequences for the country and the health system, as it increases morbidity and mortality, impairs the patients and families' quality of life and generates more spending on resources that often are already scarce^[6].

Almost 1.7 million patients develop PUs per year. Considerable variability in the incidence of PUs between developed and developing countries exists, with an estimated incidence rate of PUs of 8.3 % to 25.1 % in developed countries, and 2.1 % to 31.3 % in developing countries^[7].

2. Literature Survey

Gunningberg L et.al. Conducted a study to examine the prevalence of pressure ulcers and hospital-acquired pressure ulcers (HAPU). The prevalence of pressure ulcers continues to be a significant issue in acute care and the prevalence of HAPU was high. There was significant room for quality improvement in pressure ulcer prevention in Swedish hospitals^[8].

A study conducted by Ulrika Källman on nurse's knowledge and practice, concluded that all respondents displayed good knowledge on prevention and treatment of pressure ulcers and demonstrated a positive attitude. They explained as answer recent research findings and guidelines had not succeeded^[9].

Pancorbo-Hidalgo et.al. conducted a research on Spanish nurses level of knowledge on existing guidelines for pressure ulcer prevention and treatment they concluded as the nurses who holding university degree belong to higher score. The nurses who received specific education on pressure ulcer received higher score for knowledge as well as practice^[10].

Lena Gunningberg et.al. Conducted a research on nurses to find out registered nurses and assistant nurses knowledge on risk, prevention and treatment of pressure ulcer. They find out Swedish guidelines on prevention and treatment of pressure ulcer was not fully implemented by nurses. They found there were need to improved knowledge and documentation of risk, prevention and treatment of pressure ulcer^[11].

Margareth Yuri et.al. Conducted a study on nurses to assess knowledge and suggest that professional categories display

knowledge deficits. The identification of deficient areas can guide strategic planning with a view to the dissemination and adoption of prevention measures by the team^[12].

El Enein conducted a study it had been concluded that the nurses' knowledge regarding pressure ulcer prevention was below the acceptable levels^[13].

Claudia G et.al. Conducted a study and concluded that the level of knowledge of the nurses was insufficient. They also showed a correlation between a higher level of knowledge and (i) the sector of activities in which the nurses were working, (ii) the training periods provided by the university hospital centre, and a (iii) good perception by the nurses of their level of knowledge. However, training on its own cannot guarantee the provision of quality health care, as there was a wide discrepancy between what nurses know and what they put into practice^[14].

Sedigheh Iranmanesh et.al. Concluded in their study as prevention of pressure ulcer Programs aimed at raising nurses' knowledge accompanied by interventions intended to decrease incidence of pressure ulcer are important parts in educational programs. Continuing education may need to be added to the pressure ulcer care to improve the quality of care at intensive care unit^[15].

Nurhusien, et.al. Conducted a research on nurse's knowledge and concluded that knowledge and practice of the nurses regarding prevention of pressure ulcer was found to be inadequate. Having higher educational status, attending formal training and being experienced were positively associated with knowledge; while shortage of facilities and equipments, dissatisfaction with nursing leadership and inadequate staff number showed negative association with practice of nurse's pressure ulcer prevention^[16].

Strand T et.al revealed as the Correct categorisation of pressure ulcers was made by 46.8% of nursing staff with less correct categorisation ($p = 0.019$). Pressure relief (97.3%) and nutritional support (36.1%) were the most frequently reported preventive measures. Reported barriers were the lack of time (57.8%) and severely ill patients (28.9%); opportunities were knowledge (38%) and access to pressure relieving equipment (35.5%), Concluded as raising knowledge and making pressure ulcer prevention a part of daily care^[17].

Mwebaza I found as the nurses had limited knowledge about critical parameters of pressure ulcers. Prevention practices were observed to be unreliable and uncoordinated related to a significant shortage of staff and logistics for pressure ulcer prevention. Nurses had poor access to current literature on pressure ulcer prevention. Translation of nurses' knowledge into practice was possible if barriers like staff shortage, pressure relieving devices provision, and risk assessment tools were addressed at Mulago^[18]

Sving, E. conducted a study to observe Registered nurses' attention to and perceptions of pressure ulcer prevention in hospital settings Pressure ulcer prevention performed by the registered nurses was dependent on the cultural care, which ranged from planned to unplanned prevention. Diversity was

found in compliance with evidence-based guidelines across the wards. Although all patients were at risk and the nurses described pressure ulcer prevention as basic care, the nurses' attention to prevention was lacking. Few prevention activities and no structured risk assessments using risk assessment tools were observed, and few care plans were identified. The lack of attention was explained by registered nurses' trust in assistant nurses' knowledge, and prevention was seen as an assistant nurse task^[19].

3. Methods and Material

Research approach: In present study Descriptive approach was carried out for the purpose of providing an accurate portrayal of a group of subjects with specific characteristics. Descriptive studies usually entail the precise measurement of the phenomenon as they currently exist within a single group^[20].

Research design: An institutional based cross sectional study was conducted among nurses working in tertiary care hospital, Karad.

Research setting: Research setting was the area where the actual data collection was carried out. In the present study, data was collected in Tertiary Care Hospital, Karad. This hospital total bed strength was 12.000. Total monthly in patient ratio was near to 3696.

Study subjects: Staff Nurses working in tertiary care hospital.

Sample size: The sample size was determined by using single population proportion formula with the assumption of: 50 % proportion, 95 % confidence level and 5 % margin of error. Given that the source population was less than 10,000 correction formula was used and 5 % non response was added, making the final sample size 193^[21].

Criteria for selection of sample

Inclusion criteria

- Staff nurses who were working at bedside.
- Staff nurses who have more than one year experience.

Exclusion criteria

- Staff nurses who were working in operation theatre, labor room, pediatrics, and OPD.

Sampling technique: In the present study, convenient sampling technique was used. A convenience sample was made up of people who were easy to reach and easy to gather data in stipulated time.^[22]

Data collection tool: section I: Demographical data: it includes age, sex, education and experience.

Section II: Structured Modified Questionnaire on knowledge and practices of nurses towards prevention of pressure ulcer.

The questionnaire was prepared in English with definition, etiological factors, pressure ulcer stages, assessment scales and preventive measures to be carried out by staff nurses.

Participants were asked 22 knowledge based and 18 practice-based questions to assess their level of knowledge and practices towards prevention of pressure ulcer.

Validation of tool: Validity was the extent to which a concept, conclusions or measurement was well-founded and correspond accurately to the tool. It was important to determine what type of tests to use and help to make sure researchers were using methods that truly measure the ideas construct in questions. Validation of questionnaire was done through subject experts of Medical, Nursing, and Statistics. Total nine tools were sent for validation and six were returned with the suggestions. As per the suggestions of experts addition and deletion was done and final questionnaires was set.

Reliability of tool: Reliability concern with consistency, stability, and equivalency. Reliability was the degree to which an assessment tool produces stable and consistent results. Cronbach's was used to test the reliability of tool. R=0.86^[23].

Variable:

- Independent: pressure ulcer.
- Dependent: knowledge and practice

Pilot study: A pilot study or pilot experiment was a small scale preliminary study conducted in order to evaluate the feasibility, time, cost, adverse events, and affect size (statistical variability) in an attempt to predict an appropriate sample size and improve upon the study design prior to performance of a full-scale research project^[24]. In present study, the Pilot study was conducted on 10% of total study subjects on 20 nurses.

Data collection procedure: In the present study, data was collected through convenient sampling technique with a structured modified pretested self-administered questionnaire. Nurses who were present on duty during data collection as per their convenient time and who had experience above one year participated in a study with prior written consent. Data was collected from 24.10.2016 to 15.11.2016.

Data processing and analysis

All collected data were entered in Microsoft excel sheet with demographical data and answers given by each participant to each item. The data obtained was analyzed in terms of the objective of the study using descriptive statistics. Descriptive inferential statistics was used to describe the study population in relation to relevant variables. 95 % Confidence Intervals was computed and variables with $p < 0.05$ were considered as significantly associated with the outcome variable.

Assumptions

Good knowledge and practices can prevent the pressure ulcer.

4. Result and Discussion

Table 1: Frequency and percentage of demographical data

		Freq.	Percentage
Age	20-25 Yrs	125	64.8
	26-30 Yrs	37	19.2
	31-35 Yrs	9	4.7
	36-40 Yrs	3	1.6
	Above40 Yrs	19	9.8
Gender	Female	148	76.7
	Male	45	23.3
Qualification	Anm	16	8.3
	Bsc	43	22.3
	Gnm	123	63.7
	Pbbsc	11	5.7
Experience	1-5yrs	162	83.9
	11-15yrs	3	1.6
	16-20yrs	3	1.6
	6-10yrs	8	4.1
	Above 20yrs	17	8.8

Majority 125(64.8%) subjects were in age group 20-25yrs,37(19.2%) subjects were in age group 26-30 yrs,9(4.7%) subjects were in age group 31-35 yrs, 3(1.6%) subjects were in age group 36-40 yrs and 19(9.8%) subjects were above age 40 years. majority 148(76.7%) of study subjects were female and 45(23.3%) were male. Majority 123(63.7%) of study subjects were educated up to GNM while 43(22.3%) subjects were educated up to BSC, 16(8.3%) subjects with were educated up to ANM and11(5.7%) subjects were educated up to PBBSC. Most of 162(83.9%) study subjects had 1-5 years of experience, 8(4.1%) study subjects had 06-10 years of experience, 3(1.6%) study subjects had 11-15 years of experience, 3(1.6%) study subjects had 16-20 years of experience and 17(8.8%) study subjects had above 20 years of experience.

Table 2: Association of knowledge with demographic variable.
N: 193

		Knowledge Score			Asymp. Sig.(2-sided)
		Poor	Average	Good	
Age	20-25 yrs	0	64	61	.000*
	26-30 yrs	0	17	20	
	31-35 yrs	1	1	7	
	36-40 yrs	1	0	2	
	Aobve40 yrs	0	7	12	
Gender	FEMALE	1	74	73	.113
	MALE	1	15	29	
Qualification	ANM	0	7	9	.040 *
	BSC	0	20	23	
	GNM	1	61	61	
	PBBSC	1	1	9	
Experience	1-5YRS	1	79	82	.060
	11-15YRS	0	0	3	
	16-20YRS	0	1	2	
	6-10YRS	1	3	4	
	Above 20yrs	0	6	11	

*p<0.05

Among 193 study subjects in association of knowledge with demographical variables. Age and qualification was significant as (p>0.05). Gender and experience was not significant as (p<0.05).

Table 3: Knowledge Frequency and percentage as per questionnaires towards prevention of pressure ulcer.
N=193

Sr no.	Contents	Correct	Incorrec t
1	A lesion of skin or underlying tissues by direct unrelieved pressure for more than three hours on skin is known as pressure ulcer.	147 (76.2%)	46(23.8%)
2	Pressure is the contributing factor for pressure ulcer formation.	175 (90.7%)	18 (9.3%)
3	Immobility is the most important factor for pressure ulcer Formation	182 (94.3%)	11 (5.7%)
4	Feces are the favorable environment for Bacterial growth in the form of maceration in a young man having Head injury with unconsciousness.	152 (78.8%)	41 (21.2%)
5	Serum albumin is the critical determinant for pressure ulcer formation.	91 (47.2%)	102 (52.8%)
6	Head to toe skin assessment is an assessment procedure for a patient with spinal cord injury who is at high risk for Pressure ulcer development?	140 (72.5%)	53 (27.5%)
7	Braden scale is the risk assessment scale of pressure ulcer development.	122 (63.2%)	71 (36.8%)
8	Risk assessment scale is an appropriate method for assessing an individual who is at risk for pressure ulcer development?	152 (78.8%)	41 (21.2%)
9	Partial skin loss with blister and abrasion is correct answer for the sign of stage II pressure ulcer?	43 (22.3%)	150 (77.7%)
10	pale, red, or blue - gray discoloration on the Skin is the sign for pressure ulcer development?	163 (84.5%)	30 (15.5%)
11	Topical cream is appropriate method for skin care?	153 (79.3%)	39 (20.2%)
12	Turn position for every 2 hours is significant activity for protecting skin damage?	155 (80.3%)	38 (19.7%)
13	Cleansing oil and using skin barrier cream or lotion activity is appropriate for preventing maceration for a 78 – years?	149 (77.2%)	44 (22.8%)
14	Client having a stroke with hemiplegic? Lift up the patient without dragging is a correct practice for maintaining skin integrity?	160 (82.9%)	33 (17.1%)
15	Use pillow under the patient's leg to prevent heel ulcer?	158 (81.9%)	35 (18.1%)
16	Vitamin C and E is important to maintain healthy skin?	154 (79.8%)	39 (20.2%)
17	High protein and high calorie needs to be offered to an old bedridden patient.	156 (80.8%)	37 (19.2%)
18	Serum albumin is an appropriate lab test for Nutritional assessment of pressure ulcer patient	147 (76.2%)	46 (23.8%)
19	Turn position is an appropriate nursing care For managing mechanical load?	165 (85.5%)	28 (14.5%)
20	Lift patient without dragging is appropriate activity to reduce Friction for an 80-years old man having fracture hip with skeletal traction.	157 (81.3%)	36 (18.7%)
21	Elevate the head of bed < 30 ⁰ is the activity for reducing Shearing force?	147 (76.2%)	46 (23.8%)

22	Schedule of Turing position is necessary In educational information for reducing pressure ulcer formation	173 (89.6%)	20 (10.4%)
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Aspects on with all professional groups gave correct answer 182 (94.3%) related to immobility and 175 (90.7%) related to pressure as contributing factor of pressure ulcer. The lowest (22.3%) of correct answers were related to the stage II identification and serum albumin critical determinant (47.2%).

Table 4: Practice Frequency and percentage as per questionnaire

Sr no	Questions	Always	Never	Sometomes
1	I Observe how other nurses assess the risk factors for pressure ulcer.	81 (42%)	2 (1 %)	110 (57.0%)
2	I identify common contributing factors for pressure ulcer.	72 (37.3 %)	5 (2.6%)	116 (60.1%)
3	I do a skin assessment for pressure ulcer.	84 (43.5%)	1 (.5%)	108 (56.0%)
4	I use pressure sore risk assessment scale for prevention	84 (43.5%)	9 (4.7%)	100 (51.8%)
5	I document the data.	151 (78.2%)	2 (1.0%)	40 (20.7%)
6	I assess and provide management of pain.	155 (80.3%)	1 (.5%)	37 (19.2%)
7	I perform skin care as a routine work.	117 (60.6%)	3 (1.6%)	73 (37.8%)
8	I place the pillow under the patient's leg.	106 (54.9%)	4 (2.1%)	83 (43.0%)
9	I use water bed, air bed to prevent pressure ulcer	92 (47.7%)	5 (2.6%)	96 (49.7%)
10	I use or advice caregiver to use creams	87 (45.1%)	11 (5.7%)	95 (49.2%)
11	I pay more attention to pressure points.	112 (58.0%)	2 (1.0%)	79 (40.9%)
12	I perform lab tests.	83 (43.0%)	15 (7.8%)	95 (49.2%)
13	I provide advice to care givers to provide enrich vitamins.	85 (44.0%)	5 (2.6%)	103 (53.4%)
14	I monitor intake of protein and calorie diet.	92 (47.7%)	3 (1.6%)	98 (50.8%)
15	I avoid dragging.	72 (37.3%)	8 (4.1%)	113 (58.5%)
16	I avoid using donut – shape air cushion.	56 (29.0%)	15 (7.8%)	122 (63.2%)
17	I turn a patient position every two hours.	93 (48.2%)	1 (.5%)	99 (51.3%)
18	I usually give advice to patient and caregiver regarding prevention of pressure ulcer.	85 (44.0%)	2 (1.0%)	106 (54.9%)

Aspects on with all professional groups 155(80.3%) had very good practice on assessment and management of pain and 151(78.2%) were very prompt in documentation. Some factors which was never did by nurses as 15(7.8%) avoid using donut – shape air cushion, 11(5.7%) advice caregiver to use creams, 15(7.8%) perform lab tests. 9(4.7%) I use pressure sore risk assessment scale for prevention.

5. Discussion

Round o clock nurses are providing comprehensive care to clients. Among health professional nurses plays vital role in prevention of pressure ulcer. With all health team member's knowledge and practice of nurses towards pressure ulcer can achieve quality care. Practice needs to be based on the best evidence. Identification and documentation of pressure ulcer also equally important. Immobility and pressure are causative factors of pressure ulcer.

To assess the level of nurses' knowledge towards prevention of pressure ulcer in tertiary care hospital, karad.

Table 3 displayed results of the 22 test items on Pressure ulcer knowledge. 52.8% study subjects had good knowledge, a Similar study conducted by Nurhusien Nuru1 concluded that nearly half (54.4 %) of the nurses had good knowledge^[16]. Same study conducted by Källman U in Sweden. (2009) and found that respondents displayed (51.6%) good knowledge on prevention and treatment of pressure ulcers. Similarly, 48.4 % of them had a good practice on prevention of pressure ulcer^[9]. The study conducted by Strand T found that pressure relief factors were (97.3%) and nutrition supports (36.1%) were the most frequently reported preventive measures. Knowledge (38%) and access to pressure relieving equipment (35.5%)^[17].

89(46.1%) study subjects had an average knowledge and 2(1.0%) study subjects had poor knowledge. Table 1.3 showed among 22 test items of knowledge 182(94.3%) study subjects correctly answered as immobility was the most important factor for pressure ulcer formation. 175(90.7%) study subjects knew as pressure was contributing factor to pressure ulcer formation. A similar study conducted by Mwebaza I on risk factors of pressure ulcer found More than half (59%) of the nurses were able to identify at least three risk factors for pressure ulcers. The majority (96.4%) identified immobility as a risk factor, and 92.9% identified pressure and friction^[18].

In present study 173(89.6%) study subjects correctly answered for a schedule of turning position was necessary to reduce pressure ulcer. Above 50% study subjects were correctly answered for test item no. 1, 4,6,7,8, and 11- 21. In test item 5, 91(47.2%) and in test item no. 9, 43(22.3%) study participants were correctly answered for serum albumin level and stage II pressure ulcer identification. The majority of incorrectly answered were given by participants 150(77.7%) for identification of stages of Pressure ulcer, 102(52.8%) for serum albumin as a critical determinant and 71(36.8%) for Braden scale.

• To assess nurses' practices towards prevention of pressure ulcer in tertiary care hospital, karad.

Table no.4 indicates practice Frequency and percentage as per questionnaire. Total 193 participants attended 18 test items. 48.2% showed good practices towards prevention of pressure ulcer. A similar study conducted by Nurhusien Nuru find out as Nearly half (48.4 %) of the respondents had a good practice; whereas the remaining 51.6 % respondents had a poor practice of pressure ulcer prevention.^[16] in present study 155(80.3%) always practices for assessment and

management of pain. 151(78.2%) were prompt in the documentation of data. Above 50% participants always practices for test item no.7,8,11 on skin care, pillow elevation under the leg and more attention on a pressure point. 116(60.1%) participants sometimes identified common contributing factors of pressure ulcer. 110(57.0%) were lacking in observation of other nurses. As well as 108(56%) participants were performing skin assessment for pressure ulcer. 15(7.8%) participants never perform lab tests for pressure ulcer. 11(5.7%) never gave advice to the caregiver about a use of creams for prevention of pressure ulcer. 9 (4.7%) never use pressure sore risk assessment scale for prevention. The practice showed that in item no.1 gender had significant (.090) as ($p < 0.05$). 56 female participants correctly answered as always and 90 answered as sometimes. In male 25 in always and 20 answered as sometimes. In item no.3 age and experience were significant (.000) as ($p < 0.05$). In item no.4 related to use of risk assessment scale 84(43.5%) always practices this scale for prevention of pressure ulcer similar study conducted by Gunningberg, L concluded as the majority of the nursing staff reported that they performed risk assessment when caring for a patient with hip fracture^[4]. In this gender was significant (.019) as ($p < 0.05$). In item no 8 age was significant (.001) as ($p < 0.05$). In item no. 18 gender was significant (.026) as ($p < 0.05$).

• **To find out association of knowledge and practice with demographical variables.**

Table no.4 indicates (61) Participants were in age group 20-25 yrs, (73) participants were female, (61) participants were general nurse and midwife and (82) participants had 1-5 yrs experience have good knowledge score. In a similar conducted by Sving, E et.al found that The lack of attention was explained by registered nurses' trust in assistant nurses' knowledge, and prevention was seen as an assistant nurse task^[19].

Present Study found that there was a significant association between knowledge and demographic variable for Age. ($p = .000$) and Qualification ($p = .040$) as ($p < 0.05$). In gender female 73 had good, 74 had average and 1 had poor knowledge. In male 29 had good, 15 had average and 1 had poor knowledge. It indicates there was not a significant association between knowledge and demographic variable in gender. (113) as ($p > 0.05$). In qualification ANM. 9 had good knowledge and 7 had average knowledge. In BSC. 23 had good, 20 had average knowledge. In GNM. 61 had good, 61 had average and 1 had poor knowledge. In PBBSC. 9 had good, 1 had average and 1 had poor knowledge. Qualification ($p = .040$) as ($p < 0.05$). As per experience between 1-5 YRS, 82 participants had good knowledge, 79 had average and 1 had poor knowledge. 6-11 YRS 4 were in good, 3 were in average and 1 had poor knowledge. 11-15 YRS 3 had good and 0 were in average and poor. 16-20 YRS 2 had good, 1 had average knowledge towards prevention of pressure ulcer. (.060) as ($p > 0.05$). Association of practice with demographic variable showed that in item no.1 gender had significant (.090) as ($p < 0.05$). 56 female participants correctly answered as always and 90 answered as sometimes. In male 25 in always and 20 answered as sometimes. In item no.3 age and experience were significant (.000) as ($p < 0.05$). In item no.4 gender was significant (.019) as ($p < 0.05$). In

item no 8 age was significant (.001) as ($p < 0.05$). In item no. 18 gender was significant (.026) as ($p < 0.05$).

6. Conclusion

Among 193 study subjects 52.8% Nurses had good knowledge but 48.2% needs to improve practices towards prevention of pressure ulcer. So there was a need of continue nursing education program.

7. Future Scope

- The study can be replicated on a large sample, so that findings can be generalised.
- The study can be conducted to observe practices of staff nurses.
- A comparative study can be conducted to find out differences in knowledge and practices.
- A study can be conducted among different intensive care units in karad taluka.
- The same study can be conducted to assess effectiveness of STP, video cassette methods.

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