

A CROSS-SECTIONAL STUDY ON THE PREVALENCE AND ASSOCIATED FACTORS OF PRESSURE SORES AMONG HOSPITALIZED PATIENTS IN JAIPUR.

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ABSTRACT

Introduction :- Pressure sores develop due to prolonged pressure on the skin, particularly in immobile patients, leading to severe complications such as infections, increased mortality, and prolonged hospital stays. Their prevalence in hospitals highlights the need for improved healthcare interventions. This study assesses the risk factors and prevalence of pressure sores in Jaipur hospitals and evaluates current prevention strategies and healthcare policies. Methodology:- A cross-sectional study in Jaipur hospitals with 970 patients used questionnaires, exams, and medical records. Statistical analysis and interviews assessed preventive protocol adherence and wound care equipment availability. Results:- The study found that 60% of patients were over 45, with 63% male, and pressure sores were more common in urban patients. The overall prevalence was 4.94%, with higher rates in neurology and orthopedic wards. Risk factors included anemia, diabetes, malnutrition, limited mobility, and prolonged hospital stays. While 72% of patients received regular dressing, adherence to best practices varied. Emotional impacts included irritation (44%) and anxiety (12%). Hospitals with dedicated wound care teams had lower prevalence rates of pressure sores. Discussion & Conclusion:- The study emphasizes the importance of preventive strategies like repositioning, nutrition, and proper wound care to prevent pressure sores. Psychological support and continuous nursing education are crucial. Advanced wound care technologies and electronic monitoring can enhance early intervention. Early risk assessments and



enhanced nursing care are key to reducing pressure sore incidence. Overall, standardized prevention programs are essential for improving patient outcomes and addressing this preventable challenge.

Keywords: Pressure ulcers, prevalence, hospitalized patients, risk factors, Jaipur, patient safety, wound management, preventive care, nursing interventions, healthcare policies.

INTRODUCTION

Pressure sores (pressure ulcers) result from prolonged pressure, causing skin and tissue damage due to impaired blood supply. They indicate poor healthcare management and can be prevented with proper repositioning, hygiene, and nutrition.¹ They develop due to pressure, stress, friction, and moisture, particularly in immobile patients.² Pressure sores can become critical if untreated, with severity classified into stages, sometimes requiring surgery.³ Pressure sores can become critical if untreated early. They are classified into stages based on severity and can be managed with appropriate treatment or surgery.⁴

Pressure ulcers are a major global health issue, with 65,000 deaths per million cases. Hospitalizations increased by 80% from 1993 to 2006, contributing to PU prevalence.⁵ Pressure sores result from poor care, caused by prolonged pressure that damages skin and tissues, worsened by stress, friction, and moisture.⁶ Pressure sores affect immobile individuals, cause 65,000 deaths annually, and have risen by 80% from 1993 to 2006.⁷

Pressure sores are classified into four stages, from surface skin damage (Stage 1) to involvement of muscles and bones (Stage 4).⁸ Severe ulcers, like deep pressure injuries and unstageable sores, result from prolonged pressure, with higher risk in the elderly, immobile, and malnourished individuals.⁹ Treatment varies by sore stage and location, including pressure relief, wound care, dressings, creams, and sometimes surgery. Prevention involves reducing pressure, friction, managing health conditions, and ensuring good nutrition for healing.¹⁰

NEED FOR THE STUDY

1. Understanding causes and risk factors helps prevent bed sores, especially in vulnerable groups.¹¹
2. Research aids healthcare professionals in developing better prevention and treatment strategies.¹²
3. Effective prevention reduces hospital stays, surgeries, and healthcare expenses.¹³
4. Addressing bed sores helps reduce physical and emotional suffering, promoting dignity.¹⁴
5. Research leads to new treatments and best practices for various wound types.¹⁵
6. Studies shape healthcare policies and guidelines for better prevention and management.¹⁶
7. Understanding bed sores helps identify improvements in patient safety and care.¹⁷

OBJECTIVES

- 1) To assess the prevalence of pressure sore.
- 2) To assess the risk factors of pressure sore.

ASSUMPTIONS

- 1) Will have the prevalence rate of bed sore among hospitalized patients.
- 2) Will have the idea of most vulnerable body parts to bed sore.
- 3) Will have the idea of affected mobility of the body.

RESEARCH METHODOLOGY:

This quantitative study on pressure sores among hospitalized patients in Jaipur ensures accurate data collection and analysis.

Study Variables

Dependent Variable: Prevalence of pressure ulcers.

Independent Variable: Prevention and associated factors.

Research Setting & Sample

- Conducted at JNU Hospital and SMS Hospital, Jaipur.
- 970 patients were included using non-probability sampling.

Sample Selection Criteria

Included: Willing and available bed sore patients.

Excluded: Patients with speech/hearing issues or those uncooperative.

Data Collection & Instrument Testing

Method: Structured questionnaire (20-25 min per participant).

Validity: Reviewed by nursing experts and physicians.

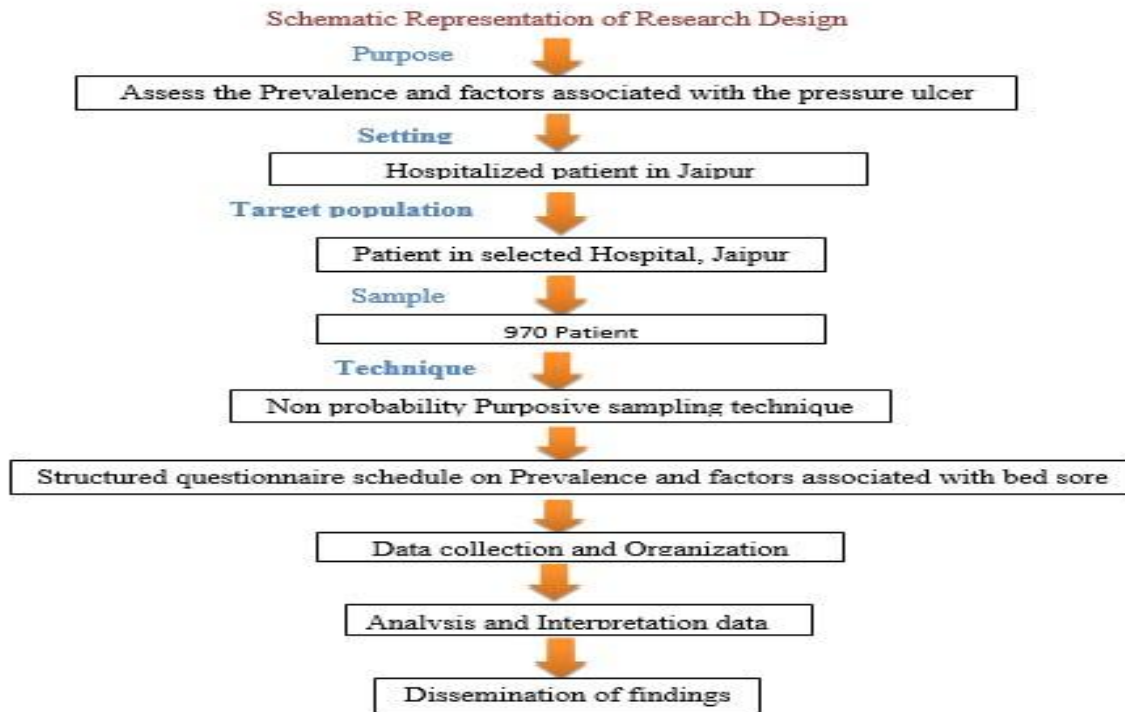
Duration: 20/05/2024 to 31/06/2024.

Testing of the Instrument

Content Validity

To ensure content validity, the tool, lesson plan, and criteria checklist were reviewed by five medical-surgical nursing experts and two physicians. They provided feedback on the accuracy, relevance, and appropriateness of the content.

Procedure of data collection:- Formal written permission was obtained before data collection, which took place from 20/05/2024 to 31/06/2024. The study on pressure sores among hospitalized patients in Jaipur used non-probability purposive sampling. Participants were assured of the study's purpose to gain their cooperation. Data was collected using a structured questionnaire, taking 20-25 minutes to complete. The investigator thanked the participants for their cooperation. Assessing pressure ulcers is challenging in early stages, but in advanced stages, they are easier to identify due to symptoms like reddish skin, warmth, spongy or hard texture, and pain.



Data Analysis and Statistics

Data organized as follows:

The analyzed data was organized according to the objectives and presented under the following sections:

Section-A: -Demographic profile of the subjects

Section-B: -Frequency and percentage of medical history of the Subjects

Section-C: - Frequency and percentage of Bed sore information

Section-D: - Frequency and percentage of daily activities of the subject

Section-E: - Frequency and percentage of Wound care routine

Section-F: - Frequency and percentage of Emotional health of the subject

Figure-1

Table 1 Patients in selected hospital A & hospital B

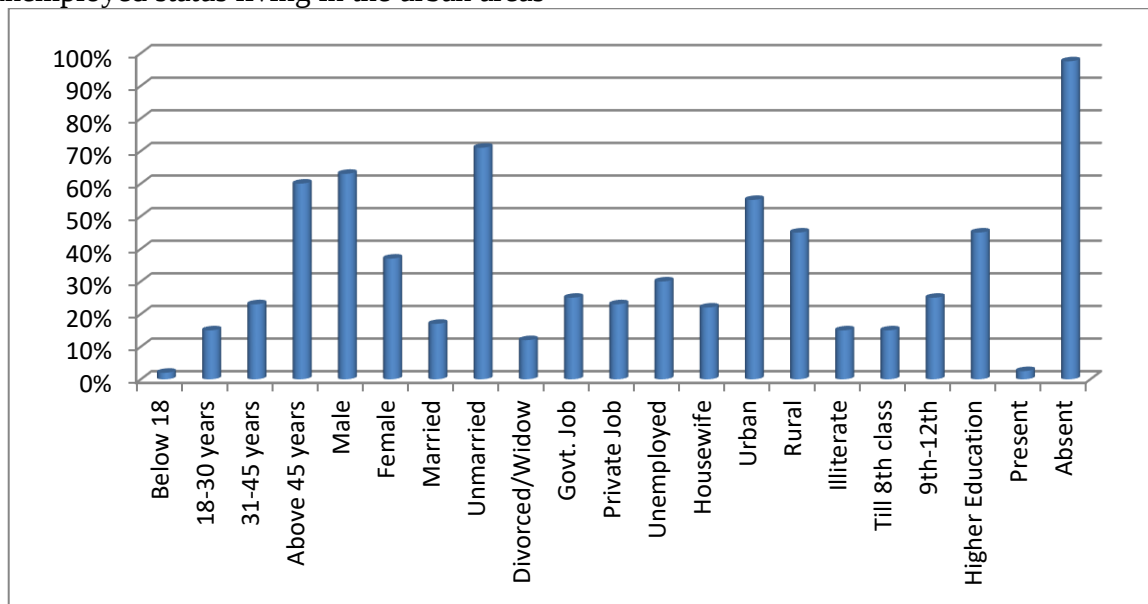
Wards Name	Total no. of patients	Patient's Affected with Bed sore	Wards Name	Total no. of patients	Patient's Affected with Bed sore
Male Medicine	52	0	Male Medicine	33	0
Female Medicine	48	0	Female Medicine	32	0
Male Surgery	80	5	Male Surgery	42	3
Female Surgery	56	1	Female Surgery	36	1
Male Respiratory	15	0	Male Respiratory	30	0
Female Respiratory	13	0	Female Respiratory	30	0
Male Orthopedic	53	2	Male Orthopedic	37	2
Female Orthopedic	49	1	Female Orthopedic	35	1
Psychiatric	15	0	Emergency	30	0
Obg. and Gyne.	28	0	Obg. and Gyne.	28	0
ENT	25	0	ENT	29	0
Pediatric	51	0	ICU	30	1
Dermatology	13	1	Dermatology	20	1
ICU	30	3	Neurology	30	3
Total=528		Total=13	Total=442		Total=12

Section-A

Table 3 DEMOGRAPHIC DATA

DEMOGRAPHIC VARIABLE		FREQUENCY	PERCENTAGE
AGE	Below 18	20	2%
	18-30 years	150	15%
	31-45 years	230	23%
	Above 45 years	570	60%
GENDER	Male	620	63%
	Female	350	37%
MARITAL STATUS	Married	150	17%
	Unmarried	710	71%
	Divorced/Widow	110	12%
OCCUPATION	Govt. Job	250	25%
	Private Job	200	23%
	Unemployed	300	30%
	Housewife	220	22%
LOCALITY	Urban	550	55%
	Rural	420	45%
EDUCATION	Illiterate	150	15%
	Till 8 th class	150	15%
	9 th -12 th	220	25%
	Higher Education	450	45%
BED SORE	Present	25	2.5%
	Absent	945	97.5%

As shown in the table most of the samples are of the 45 years and above 45 which mostly are males unmarried with unemployed status living in the urban areas



Section-B

Table 4: Medical History

N-970

Medical History		Frequency	Percentage
Existing Medical condition	Respiratory, CVS	150	15%
	Orthopedic condition	606	63%
	Other disorders	87	9%
	Other medical condition	127	13%
Medication currently taking	Yes	968	99.7%
	No	2	0.30%
History of bed sores	Yes	11	5%
	No	959	95%

Section-C

Table 5: Bed sore information

N-25

Bed Sore Information		Frequency	Percentage
Location of bed sore	a-Head, shoulders, Back and upper limbs	5	20%
	b-Lower limbs, buttocks	10	40%
	c-Heels and Ankles	5	20%
	Combination of a, b, c	5	20%
Duration of the bed sore	1-2 days	8	32%
	3-6 days	10	40%
	1-2 weeks	4	16%
	>2 weeks	3	12%
Pain level	0-2	0	0
	3-5	15	60%

	6-8	10	40%
	9-10	0	0
Factor that aggravates pain	Yes	1	4%
	No	24	96%
How often positions are changed	Every 2 hour	9	36%
	Every 4 hour	8	32%
	Within 8 hours	1	4%
	As per patient need	7	28%

Table 5. as shown in the table many people have the bed sores at the bony prominent areas like lower limbs and buttocks for 3-6 days mostly with moderate pain.

Section-D

Table 6: Daily Activities

N-25

Daily Activities		Frequency	percentage
Mobility level	No mobility	4	16%
	Less mobility	15	60%
	Needs help to improve	5	20%
	Normal mobility	1	4%
Daily routine	Disturbed sleep pattern and feel uncomfortable	7	28%
	Disturbed appetite	3	12%
	Bothe a and b	10	40%
	Normal appetite and sleep	5	20%
Any assistance required for daily activities	Yes	24	96%
	No	1	4%
Diet chart	Liquid and semi fluid	15	60%
	Iv fluid	1	4%
	Ng feeding	1	4%
	Both a and b	8	32%
Bathing habit	Once or twice a day	5	20%
	Twice a day	0	0
	Once in a week	0	0
	Sponge bath	20	80%
How often back care is given	Once in a day	17	68%
	Twice in a day	7	28%
	In every 2 days	1	4%
	Not given	0	0

Table 6. as shown in the table bed sore leads to less mobility to the person which ultimately leads to disturb sleep pattern and appetite and assistance is required to the patient in that condition.

Section--E

Table-7- Wound care routine

N-25

Wound care routine		Frequency	Percentage
Current Wound care routine	A-Clean with NS and do dressing	18	72%
	B-Use of betadine	1	4%
	C-Provide comfortable position to reduce friction	1	4%
	Either A and B or B and C	10	40%
Treatment is ongoing	Yes	22	88%
	No	3	12%
Dressing routine	Once or twice a day	14	56%
	Thrice in a day	9	36%
	In every 2 days	0	0
	No routine	2	8%
Any improvement or worsening	Improved	13	52%
	Worsening	0	0
	No effect	9	36%
	Not cure but relief	3	12%

Section-F

Table-8- Emotional Wellbeing

N-25

Emotional Well being		frequency	percentage
Impact of bed sores on mood and emotions	No impact	10	40%
	Irritation	11	44%
	Anxiety and fear	3	12%
	Depressed	1	4%

DISCUSSION AND CONCLUSION

The study examined the prevalence and contributing factors of pressure sores among hospitalized patients in Jaipur, focusing on demographic, medical, and emotional aspects. It identified vulnerable groups, such as older males and those with comorbidities like anemia, malnutrition, and diabetes. The majority of respondents reported positive interactions with nursing staff, with 18% describing them as "polite and humble," reflecting the quality of care provided.

Findings revealed a prevalence rate of 4.94%, with higher cases in neurology wards. Pressure sores were

mostly short-term and responded well to treatment. Emotional well-being was impacted, with irritation being the most common reaction, highlighting the need for improved emotional support. The study emphasizes the importance of focused care for vulnerable patients, particularly older males, and highlights the role of emotional support in managing pressure sores effectively.

RECOMMENDATIONS

1. Risk Factor Management: Enhance monitoring for anemia, malnutrition, and diabetes to minimize pressure sore risk.
2. Regular Repositioning: Ensure immobile patients are repositioned frequently, especially in high-risk wards.
3. Enhanced Wound Care: Use appropriate dressings and maintain hygiene to accelerate healing and prevent infections.
4. Emotional Support: Provide psychological support to manage the emotional impacts of pressure sores.

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