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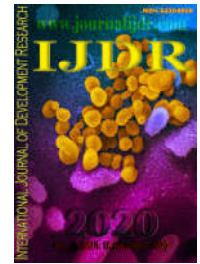
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RESEARCH ARTICLE

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KNOWLEDGE OF NURSING ACADEMICS OF A PRIVATE HIGHER EDUCATION INSTITUTION ON PREVENTION AND TREATMENT OF PRESSURE INJURIES

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ABSTRACT

The nurse needs technical / scientific support that allows him to know the most diverse aspects of the pressure injury, Elaborated through a study made on the adequacy of the knowledge of nursing students and their clinical experience during graduation, in the area of prevention and treatment of patients with wounds. The research aims to evaluate the knowledge of nursing students from a private higher education institution, on the prevention and treatment of pressure injuries. Using as a study method, the descriptive and exploratory study, with a quantitative approach carried out in the city of Recife. , using a questionnaire with sociodemographic questions and a test consisting of 33 questions regarding the classification / staging of LP, wound characteristics and preventive measures. Data collection was carried out between October and November 2016 at the higher education institution and included a sample of 84 students from the morning and night shifts. Resulting in an analysis of the pressure injury and its classification / staging, only stage IV of the LP obtained a satisfactory percentage of 98% of correct answers by the students. We concluded that nursing students do not have a satisfactory knowledge about the prevention and treatment of pressure injuries.

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INTRODUCTION

Oliveira (2014) states that the skin, in addition to being the largest organ in the human body, is the organ that, due to its exposure to various factors, most evidences the aging process. There are two components that influence skin aging, intrinsic and extrinsic. The former is associated with age, genetics, biological and biochemical processes, while the latter is related to the action of external factors on the skin, such as sun exposure, chemical agents, stress, lifestyle. The aforementioned author reports that exposure to ultraviolet rays causes extrinsic aging of the skin, being characterized by increased thickness, deeper wrinkles, irregular pigmentation with yellowish tones, in addition to a wide variation of lesions, that is, when subjected to all this aggression and exposure, can cause changes in its constitution, which characterizes a wound. Costa et al. (2015) states that wounds are quite frequent problems in health services and are characterized by weakening and often incapacitating the individual, deteriorating their quality of life, bringing great impact to the health sector. health and burden of public spending.

Orghardt et al. (2015) mention that the process of developing pressure injuries is, most of the time, fast and adds complications to the hospitalized individual. It is estimated that 0.4% to 38% of patients develop LP due to the most diverse factors, thus becoming a persistent health problem. Several studies point to the importance of reducing the number of LP incidence, which would be possible through the prevention and identification of risk factors, the permanent education of the multiprofessional team, through evidence-based practices and the establishment of the relationship of knowledge with clinical experiences (SANTOS et al., 2013). Given the facts, there is a growing need for scientific knowledge in the area of care for patients with wounds, seeking a better quality of care.

MATERIALS AND METHODS

This is a descriptive and exploratory, cross-sectional study with a quantitative approach. Descriptive studies aim to observe, describe and document aspects of a situation, but they can also be developed with the purpose of raising opinions and determining the nature of certain relationships related to the

theme and end up serving as a new view of the problem (GIL, 2010). The research was carried out at Faculdade Estácio do Recife - FER. Participated in the research: nursing students, duly enrolled in the 10th period, of both sexes, both in the morning and night shifts, and who have signed the informed consent form (ICF), accepting to participate in the study. Students who are not present at the time of application of the data collection instrument, those who refuse to participate in the study and those who do not sign the agreement will be excluded from the research. IC. Data collection was carried out from October to November 2016, after approval and appraisal of the project by the research ethics committee of Estácio do Recife with the number of CAAE 60868116.6.0000.5640, where a validated and adapted questionnaire was applied. The Portuguese. The test aimed to assess the level of knowledge that nursing students at a higher education institution have on the prevention and treatment of pressure injuries. After data collection, quantitative tabulation was performed with simple and factorial descriptive statistical analysis. Data quantification was also performed using the Microsoft Excel® 2012 Program Electronic Spreadsheet, from where the necessary graphs and tables will be made. The reference period was the 2nd semester of 2016, after approval by the Ethics and Research Committee (CEP). A questionnaire with sociodemographic questions prepared by the authors of the study and another instrument developed by American researchers (PIEPER, MOTT, 1995) was applied. Validated in a previous study carried out in Brazil and suitable for the research context. The test consists of 33 true or false affirmative questions, with 6 questions referring to the classification / staging of the LP, 2 related to the characteristics of the wound and the others regarding prevention measures. The project was registered in the Brazil Platform and forwarded to the Ethics and Research Committee - CEP, of the Faculty of Estácio do Recife, respecting the ethical concepts recommended by Resolution No. 466/12 of the Ministry of Health - MS, which bases the aspects with research in human beings and COFEN Resolution No. 311/2007, which reformulates the Code of Ethics for Nursing Professionals, and started only after its approval. The discomforts and risks that may eventually occur will be minimal due to the time required by the filling in the data collection instrument and also of a subjective order, with regard to reflection on the assessment of their knowledge, since the possibility of a negative result may induce the subject to think about their unpreparedness for future professional performance, which can take you to moments of low esteem, depressive or euphoric. As benefits, the possibility that at the end of the research, academics from the last period of the nursing course will be able to assess their knowledge during the completion of the questionnaire, seeking to research the questions that they did not know how to answer, thus contributing to the improvement of knowledge about prevention and LP treatment.

RESULTS AND DISCUSSIONS

The distribution of students according to sociodemographic characteristics is presented in Table 1. Of the students interviewed 76 (90%) were female. Regarding age, 43 (51%) of the 84 participants were in their 20s to 30s. Eighty-one (96%) of the students stated that they only had completed high school and the other three (4%) reported having a complete higher education level, but none of them have any kind of specialization.

Table 1. Distribution of the participants of the research, according to sociodemographic characteristics at the Estácio do Recife College - FER. Recife-PE, 2016

Variables	No	%
Age group		
20 30	43	51
31 40	30	36
41 50	08	09
51 60	03	04
Sex		
Female	76	90
Male	08	10
Degree of Instruction		
High school	81	96
Higher education	03	04
Total	84	100

Classification/staging of the pressure injury resulted in correct answers in relation to stages I, III, IV and II of LP, were 61%, 33%, 98% and 56%, respectively, evidencing that there are still doubts related to the stage/staging.

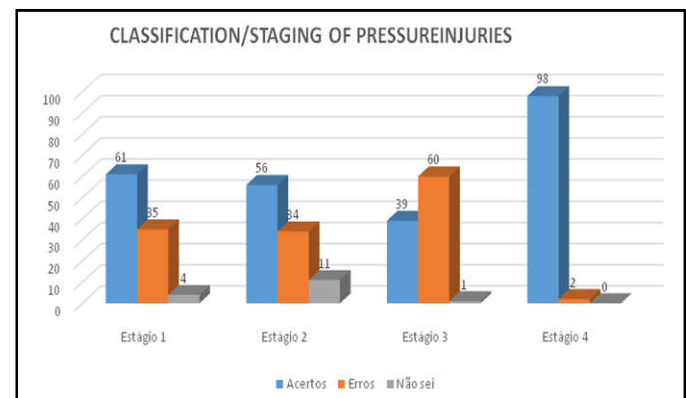


Figure 1. Classification/staging of pressure injuries

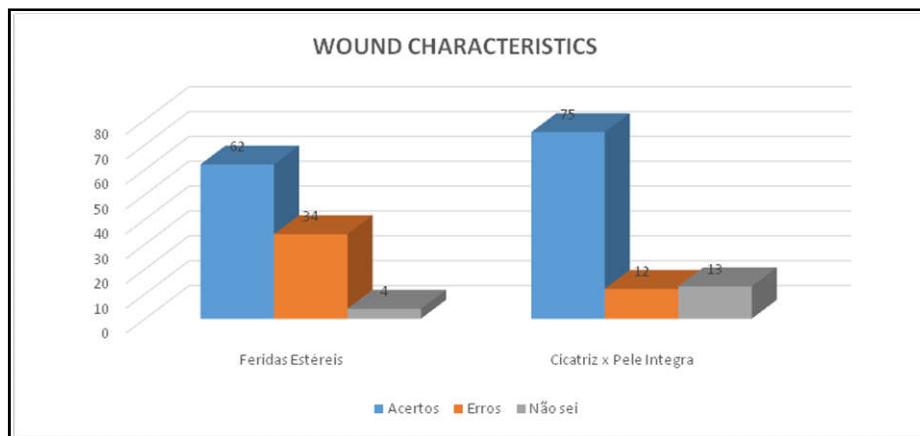
Table 2. Index of correct answers and errors of the items on the classification/staging of pressure injuries at the Estácio do Recife College - FER. Recife-PE, 2016

No.	Classification/Staging Issues (No.84)	Hits n (%)	Errors n (%)	NS n (%)
1)	Stage I of the pressure injury is defined as an erythema that does not whiten.	51 (61%)	29 (35%)	04 (4%)
2)	A stage III pressure injury is characterized by partial loss of skin involving the epidermis.	33 (39%)	50 (60%)	01 (1%)
3)	Stage IV pressure injuries have a total skin loss with intense destruction and necrosis muscles, bones or structures support system.	82 (98%)	02 (2%)	00 (0%)
4)	Stage II pressure injuries show a loss of skin in its full thickness.	47 (56%)	28 (34%)	09 (11%)
5)	A blister in the calcaneus should not be a reason of concern.	71 (85%)	12 (14%)	01 (1%)
6)	Stage II pressure injuries may result in be extremely painful by the exposure of nerve endings.	41 (49%)	39 (46%)	04 (5%)

Legend: NS = I don't know

Wound Characteristics

The questions about wound characteristics indicated a good rate of correct answers. It was evidenced that 62% answered question seven, but the percentage of wrong answers (34%) added to the "i don't know" answers (4%) it is worrying, because it points to the ignorance of the meaning of the word sterile.



Graph 2. Wound Characteristics

Table 3. Index of correct answers and errors of the items on the characteristics of the wound at the Estácio Do Recife College - FER. Recife-PE, 2016

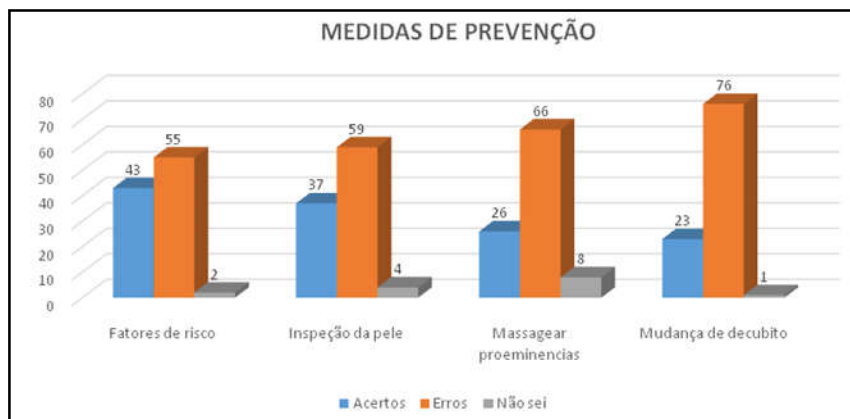
No.	Characteristic Issues of the Wound (No.84)	Hits n (%)	Errors n (%)	NS n (%)
7)	Pressure injuries are sterile wounds	52 (62%)	28 (34%)	04 (4%)
8)	A pressure injury scar may harm faster than the skin integrates.	63 (75%)	10 (12%)	11(13%)

Legend: NS = I don't know

Table 4. Index of correct answers and errors of the items on prevention measures at the Estácio do Recife College - FER. Recife-PE, 2016

No.	Issues Prevention Measures (No.84)	Hits n (%)	Errors n (%)	NS n (%)
9)	Risk factors for the development of pressure injury are: mobility; incontinence; nutrition and altered level of consciousness.	36 (43%)	46 (55%)	02 (2%)
10)	All individuals at risk for pressure injury should have a systematic inspection of the skin at least once a week.	31 (37%)	49 (59%)	04 (4%)
11)	Hot water and soap can dry the skin and increase the risk for pressure injury.	53 (63%)	21 (25%)	10 (12%)
12)	It is important to massage bone prominences if they are hyperemic.	22 (26%)	55 (66%)	07 (8%)
13)	Every individual, on hospital admission, should be evaluated as to the to develop pressure injury.	78 (93%)	05 (6%)	01 (1%)
14)	A dietary intake appropriate to the needs of protein and calories should be maintained during the disease.	77 (92%)	06 (7%)	01 (1%)
15)	People who are restricted in the bed must be repositioned at each 3 hours.	19 (23%)	64 (76%)	01 (1%)

Legend: NS = I don't know



Graph 3.

According to the table above, the index of prevention measures resulted in 43% of correct answers. In the research by Lopes, Andrade and Luz (2015), (87.0%) of hit. This means that most academics know how to identify risk factors for LP development. Item 12 in table 4 presents a hit index considered unsatisfactory, 26% only. Very similar numbers were presented in the research by Lopes, Andrade and Luz (2015) (21.7%) of hits. Areas of bony prominence should not be massaged when hyperemic due to the risk of vessel disruption in the underlying tissues. Hydration should be done in gentle and circular movements. It was found in item 13 that 93% of the students agree that the patient at the time of admission should be carefully evaluated.

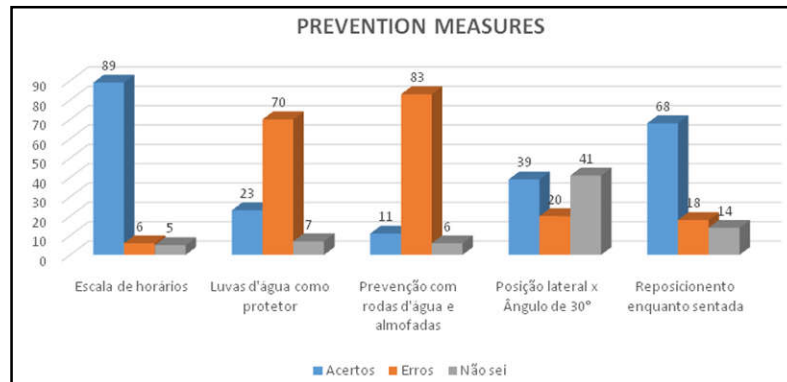
The study by Lopes, Andrade and Luz presents the index of (95.7%) which reinforces the importance of evaluation for the development of LP at the time of admission. Also on table 4, item 14 on hypercaloric and hyperprotein dietary intake brings a great percentage of correct answers, 92% of the students got it right. In the study by Lopes, Andrade and Luz (2015) 100% of the students got it right.

As for item 15 in table 4, which talks about the change in decubitus, the result was extremely unsatisfactory, 76% of those who participated in the research missed the question. Only 23% knew how long this change should happen, making it evident the lack of knowledge about this procedure.

Table 4.1. Index of correct answers and errors of the items on prevention measures at the Estácio do Recife College - FER. Recife-PE, 2016

No.	Issues Prevention Measures (No.84)	Hits n (%)	Errors n (%)	NS n (%)
16)	A stopover with times to change should be written for each patient.	75 (89%)	05 (6%)	04 (5%)
17)	Protectors such as water gloves relieve pressure on calcaneus.	19 (23%)	59 (70%)	06 (7%)
18)	Water wheels or ring pads help prevent pressure injury.	09 (11%)	70 (83%)	05 (6%)
19)	In the lateral position, the person should be at an angle of 30 degrees with the bed.	33 (39%)	17 (20%)	34 (41%)
20)	A person who can't move should be repositioned while sitting in the chair every 2 hours.	57 (68%)	15 (18%)	12 (14%)
21)	People who remain in the chair should use a cushion for protection on the seat.	67 (80%)	08 (9%)	09 (11%)

Legend: NS = I don't know

**Figure 3.1. Prevention Measures****Table 4.2. Index of correct answers and errors of the items on prevention measures at the Estácio do Recife College - FER. Recife-PE, 2016**

No.	Issues Prevention Measures (No.84)	Hits n (%)	Errors n (%)	NS n (%)
22)	The skin should remain clean and dry.	68 (81%)	08 (9%)	09 (10%)
23)	Prevention measures do not need to be used to prevent further injury when the patient already has pressure injury.	69 (82%)	08 (9%)	08 (9%)
24)	The mobilization and transfer of totally dependent patients must be done by two or more people.	74 (88%)	03 (4%)	07 (8%)
25)	All patients admitted to the intensive care unit should undergo risk assessment for the development of pressure injury.	74 (88%)	02 (3%)	08 (9%)
26)	Patients and family members should be guided on the causes and factors risk for the development of pressure injury.	74 (88%)	00 (0%)	10 (12%)
27)	Every person assessed as at risk for developing pressure injury should be placed on a mattress pressure reducer. (Ex: water mattress).	67 (80%)	05 (6%)	12 (14%)

Legend: NS = I don't know

Table 4.3. Index of correct answers and errors of items on prevention measures at The Estácio College of Recife - FER. Recife-PE, 2016

No.	Issues Prevention Measures (No.84)	Hits n (%)	Errors n (%)	NS n (%)
28)	Skin exposed to moisture is damaged more easily.	58 (69%)	09 (10%)	17 (21%)
29)	One way to lower the pressure on the calcaneus is to raise them from the bed.	54 (64%)	17 (21%)	13 (15%)
30)	Shear is the force that occurs when the skin adheres to a surface and the body slides in the opposite direction	48 (57%)	09 (10%)	27 (33%)
31)	Friction can occur when moving the person in bed.	64 (76%)	10 (12%)	10 (12%)
32)	For people who have incontinence, skin cleansing should occur in the grindthat gets dirty and in routine intervals.	67 (80%)	07 (8%)	10 (12%)
33)	Hospitalized patients need to be evaluated for the risk of pressure injury only once.	70 (84%)	07 (8%)	07 (8%)

Legend: NS = I don't know

Regarding the importance of the schedule of decubitus change schedule as prevention of LP, 89% was the percentage of success of the students. The study by Lopes, Andrade and Luz (2015) obtained (100%) of hit. Lack of mobility is a risk factor and propitious to the development of LP. The change of decubitus must be precisely maintained for the reduction of pressure, friction and shear.

The guidelines for the treatment of LP recommend a repositioning schedule with written schedules, based on the patient's risk for the development of LP. Patients at high risk of developing LP should be repositioned more frequently (RANGEL; CALIRI, 2009). The study revealed that 81% of academics know the importance of keeping the client's skin always clean and dry.

It was observed that 88% of the interviewees agree that all patients admitted to the ICU should be submitted to risk assessment for the development of LP.

Considering item 28, 69% of participants stated that the skin when exposed to moisture is damaged more easily. The research by Lopes, Andrade and Luz (2015) shows a satisfactory rate of hit of (95.7%) participants. Humidity is a significant risk factor for the development of LP. This humidity may be associated with decreased level of consciousness, urinary and fecal incontinence, excess sweating, drain secretions, injury drains and rest of food (SOUZA, 2005). Item 30 on shear showed alarming rates where only 57% of the students answered correctly, but also showed that 33% of them did not know how to answer, which

connotes ignorance of the term and its meaning. Similar data were found by Lopes, Andrade and Luz (2015) and (60.9%) the percentage of correct answers and (39.1%) was the percentage of those who could not answer. The shear force is the force exerted on the skin, causing it to slide over the muscular plane, thus causing the obstruction or rupture of the capillaries responsible for skin perfusion (WADA; NETO; FERREIRA, 2010).

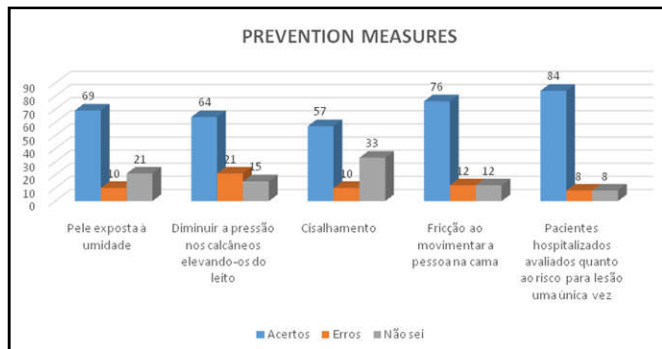


Figure 3. Prevention Measures

Question 31 on friction indicated a 76% hit. Lopes, Andrade and Luz (2015) obtained a 100% hit rate. It is very common to appear friction and shear forces in bedridden patients. According to Wada, Neto and Ferreira (2010) friction is caused by friction between two surfaces, the skin and a support surface, for example, the sheet with wrinkles, folds, food debris, thus leading to the formation of lesions directly on the skin. Regarding people who have incontinence, 80% was the percentage of hit. Lopes, Andrade and Luz (2015) obtained 87% of the right. In relation to item 33 in table 7, 84% of the undergraduates got it right. The rate of hit in the study by Lopes, Andrade and Luz (2015) was (60.9%). In the international field, there are several guidelines for clinical practice that guide the treatment and prevention of LP, these approaches and programs aim to develop evidence-based practices (MIYAZAKY; CALIRI, CALIRI, SANTOS, 2010).

CONCLUSION

In view of the results found in the present research, it was possible to recognize that the level of perception of the academics from Faculdade Estácio do Recife in relation to staging, characteristics of LP and preventive measures, was generally unsatisfactory. Despite the fact that in most of the questions the success rates were higher than the errors and "I don't know", the percentage of only 3 of the 33 questions was above 90%, a percentage that characterizes the index as satisfactory

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