



Caregiver's Knowledge about Pressure Ulcer Prevention in Patient with Spinal Cord Injury

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Abstract

Objective(s): The present study aimed to assess caregivers' knowledge about pressure ulcer prevention in patient with spinal cord injury.

Methodology: This purpose, a pre-experimental study was designed to include a pre- and post-test without control group. A purposive (non-probabilistic) sampling of 25 caregivers was included used to conduct the research from May 21st, 2023 to January 31st, 2024. Ethical approval and informed consent of participants was obtained before data collection using a questionnaire. The first part of the questionnaire measured the participants' demographic variables and the second part measured their knowledge about pressure ulcer prevention. The data were analyzed in SPSS 26.0.

Result: The findings revealed that the majority of the study respondents were at age (28 – 37 year) and 64% of caregivers were male, most of them married and living together with the patient. The present findings showed that caregivers had a low level of knowledge according pressure ulcer prevention in patient with spinal cord injury.

Conclusions: This study concluded that caregivers had a low level of knowledge. Therefore, the study recommends that caregivers develop and increase their knowledge of pressure ulcer prevention by media and brochure to improve upon their practice.

Keywords: Caregivers, knowledge, Pressure Ulcer, Spinal Cord Injury.

I. Introduction

Spinal cord injury (SCI) is a life-threatening and disabling injury that has far-reaching immediate and long-term consequences for patients, their caregivers, and society ^(1,2). Patients with spinal cord injuries are at significant risk of developing pressure ulcers due to motor and sensory deficits, immobility, changes in skin composition, and lengthy hospital stays ⁽³⁾. PUs are a severe, costly, and lifelong complication of SCI. Approximately 30-40% of individuals with spinal cord injuries develop pressure ulcers throughout the acute and rehabilitative stages ^(4,5).

Pressure ulcers (PUs), a common secondary consequence in people with SCI, cause damage to the skin and/or underlying tissue as a result of unrelieved pressure or pressure combined with shear forces. PUs form after a lengthy period of compression and typically appear on bony prominences^(6,7).

Each year, the global incidence of SCI ranges from 8.0 to 246.0, with a prevalence of 236.0 to 1298.0 per million persons. However, when reviewing facts and numbers from the previous decade, a large increase can be seen^(8,9).

The prevalence of pressure ulcers in Iraq varies by location, with hospital populations ranging from 4.7% to 32.1% (24). PUs can also harm communities, healthcare facilities, and service providers^(22,23).

Regular repositioning is one of the most affordable preventative methods for pressure relief. During the rehabilitation phase, persons with SCI are taught and encouraged to perform repositioning exercises to assist diffuse pressure around the sacrum and ischial tuberosity. These repositioning workouts include forward, lateral, and vertical push-ups. It is recommended to perform this every 15 to 30 minutes^(10,24,25).

Caregivers' knowledge is crucial for managing and reducing the risk of PU. Pressure ulcer therapy (PU) management has been shown in research to speed up patients' recovery, and caregivers offer SCI patients with the necessary assistance to do daily duties^(11,12,26).

Caregivers' knowledge and practice are seen as extrinsic factors in pressure injury development. While preventing pressure ulcers is a multidisciplinary responsibility, caregivers play a crucial role in providing complete support.^(13,14) Therefore, the present study aimed to assess caregivers' knowledge about pressure ulcer prevention in patient with spinal cord injury.

II. Methodology

Design of Study

A pre-experimental design guided the present study. It conducted from May 21st, 2023 to January 31st, 2024. The study was conducted in AL-Sadr Teaching Hospital, which has a specialized ward for spinal cord injuries (Spinal Cord Injury Center) and is located in AL-Basra government.

Participants and Sampling

A purposive (non-probabilistic) sample was used to include (25) caregivers of recumbent patients with spinal cord injury who had been selected randomly. The sample size was estimated using the G power analysis.

Data Collection and Instruments

The data were collected from participants through self-report questionnaire about their knowledge. The questionnaire was an international scale that was used after obtaining official approval from the original researcher (Tharu, 2021). The questionnaire was translated from English to Arabic version in back-to-back translation. There were two parts in the instruments, as introduced below.

First part: Self-Administered Questionnaire on Caregivers' Demographic Information

It was concerned with the caregiver's demographic information including age group, sex, and level of education, marital status, whom s/he lives with, occupational status, residency, and kinship with patient.

Second part: Self-reported Questionnaire on caregivers' Knowledge about Pressure Ulcer Prevention:

It consisted of 18 items rated as correct (3 points), partially correct (2 points), and incorrect (1 point) about the caregivers' knowledge.

Cronbach's Alpha coefficient was used to assess the reliability of instruments. The estimated alpha value showed very good internal consistency of performance scales it's 0.820, which means the questionnaires

had acceptable levels of internal consistency and equivalence measurability. The tool was scrutinized by experts in the field of nursing, to ascertain the content validity, before the actual data collection.

Ethical Considerations

Prior to undertaking the current study, an official request was made to the field authorities. The College of Nursing, University of Baghdad received a formal administrative request from the Central Statistical Organization, Ministry of Planning on May 21, 2023, and again on June 4, 2023. The request was sent from the College of Nursing, University of Baghdad to the Health Department of Basra, Training and Human Development Center (07\06\2023) and then to AL-Sadr Teaching Hospital ((31\07\2023) to ensure their agreement and cooperation for data collection and the instructional program. Before data collection began, all participants signed a written informed consent form.

Data Analysis

The data were analyzed and interpreted in SPSS 26.0. Descriptive statistics including mean, standard deviation, and frequency distribution were used.

III. Results

Table 1: Distribution of participants' socio-demographic variables

No.	Variables	F	%	
1	Age group	18 – 27 years	4	16
		28 – 37 years	10	40
		38 – 47 years	6	24
		48 – 57 years	5	20
2	Sex	Male	16	64
		Female	9	36
3	Level of education	Primary school	6	24
		Intermediate school	9	36
		Secondary school	4	16
		Bachelor and more	6	24

No: Number, f: Frequency, %: Percentage.

According to Table (1), 40% of caregivers are between the ages of 28 and 37. 64% of caregivers were male, while 36% were female. In terms of educational attainment, 36% of caregivers had completed intermediate school. An assessment of marital status revealed that 64% of caregivers were married, with the remainder remaining unmarried. Concerning the life partner, 72% of caregivers stated that they lived with the patients. The occupational status revealed that 44% of caregivers worked freelance and 40% were housewives. In terms of residency, 60% of caregivers lived in cities and 40% in rural areas. 32% of the caregivers were fathers, while 28% were mothers.

The presents items of caregivers' knowledge about pressure ulcer prevention among their patients; the mean scores indicates poor level of knowledge among all items except item 2 (Turn or reposition patients in bed at least every 2 hours) that show fair level.

IV. Discussion

The number of respondents for this study was 25 caregivers, and the results showed that less than half of the caregivers (40%) were between the ages of 28 and 37. This study is consistent with a study conducted by ⁽¹¹⁾ that said that participants were under the age of 30. The young age of the participants aided in their comprehension and application of the instructional program, which enhanced pressure ulcer care and prevention. According to

the findings of ⁽¹⁸⁾, young caregivers had more physical stamina and strength, which could help them do duties like turning bedridden patients to prevent bedsores or assistance with movement. Young caregivers may find it easier to shift, turn, and care for bedridden patients.

In terms of caregiver gender, more than half (64%) were male and 36% were female, which is consistent with research conducted in Iran ⁽¹⁷⁾, which found that the majority of family caregivers of patients 176 (54.5%) were male. The researcher believes that SCIs and incapacity to move necessitate support and specific measures; consequently, men are stronger than women in this regard.

According to the educational attainment, around one-third of the participants in this survey had completed intermediate school. In terms of marital status, over two-thirds of the sample (64%) was married, and nearly three-quarters of caregivers (72%) lived with their patients. The researcher believes that SCI patients can soon acquire problems, particularly bed sores. A study by ⁽¹⁶⁾ discovered that spouses are more likely to take on primary caregiving tasks than non-spouses. As a result, the closer the caregiver is to the patient, the lower the risk of complications. According to this study, 44% of caregivers worked freelance, while 40% were housewives.

More over half (60%) of the participants resided in metropolitan settings. According to the findings of this study, the father had the highest proportion of kinship with the patient (32%). A lesser number (28%) was mother, which contradicts a study conducted by ⁽¹²⁾, which found an equal ratio (22.2%) between daughter and sister in terms of the type of relationship between caregiver and patient. The father's presence near the sick can demonstrate that he can bear and assist the patient in performing difficult activities.

These findings showed that caregivers had a low level of knowledge, this result compatible with study conducted by ⁽⁴⁾, in Bangladesh, asserted that caregivers lacked appropriate knowledge on the pressure ulcer prevention and care. This aligns with the need for educational interventions to improve upon caregivers' knowledge and potentially patients' outcomes ^(20,21).

V. Conclusions:

This study concluded that caregivers had a low level of knowledge. Therefore, the study recommends that caregivers develop and increase their knowledge of pressure ulcer prevention by media and brochure to improve upon their practice. Due to the importance of pressure injuries prevention for patients, their families and healthcare systems, it is crucial that healthcare systems plan interventions and educational programs to educate and empower family caregivers.

Acknowledgments: The authors are grateful to the University of Baghdad's College of Nursing for its help to the official completion of research.

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