

Article

Not peer-reviewed version

Factors Affecting Nurses' Caring Behaviors: A Study in Greece

[Victoria Alikari](#) ^{*}, [Evangelos Fradelos](#), [Afroditi Zartaloudi](#), [Petros Kolovos](#), [Sofia Zyga](#)

Posted Date: 5 January 2024

doi: 10.20944/preprints202401.0464.v1

Keywords: caring behaviors; factors; management; workplace circumstances; workload



Preprints.org is a free multidiscipline platform providing preprint service that is dedicated to making early versions of research outputs permanently available and citable. Preprints posted at Preprints.org appear in Web of Science, Crossref, Google Scholar, Scilit, Europe PMC.

Copyright: This is an open access article distributed under the Creative Commons Attribution License which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Article

Factors Affecting Nurses' Caring Behaviors: A Study in Greece

Victoria Alikari ^{1,2,*}, Evangelos Fradelos ³, Afroditi Zartaloudi ², Petros Kolovos ¹ and Sofia Zyga ¹

¹ Department of Nursing, University of Peloponnese, Greece, zygas@uop.gr

² Department of Nursing, University of West Attica, Greece, vicalikari@uniwa.gr

³ Department of Nursing, University of Thessaly, Greece, efradelos@uth.gr

* Correspondence: vicalikari@uniwa.gr

Abstract: Nurses' caring behaviors are affected by several determinants. The aim of this study was to explore the factors affecting nurses' caring behaviors. Nurses (N=309) from three public general hospitals in Greece completed the Factors of Nurses' Caring Behaviors Scale. The data analysis was carried out with the Statistical Package for the Social Sciences (SPSS), version 26.0. Demographic and occupational data were, also, recorded. The statistical significance level was set at <0.05. The total mean score on the FNCB Scale was 100.4 (SD±26). The dimensions of Workplace Circumstances (Mean: 24.6, SD±8.0) and Workload/Management (Mean: 24.5, SD±6.4) were the most important factors of caring behaviors. On the opposite, nurses perceived the dimensions of Patients' Demographic Characteristics (Mean: 9.3, SD± 4.4) and Patients' Clinical Characteristics (Mean: 12.5 SD±4.2) as the least important factors. Men scored higher than women in the dimension of Patients' Demographic Characteristics (t=3.022, p=0.003). Secondary Education Graduates scored lower in the dimensions of Workplace Circumstances (Tukey, p=0.035) and Workload/Management (Tukey, p=0.033) than MSc/Ph.D. Graduates. Nurses of surgical departments scored lower in total score than ICU nurses (Tukey, p = 0.026). Workplace conditions, workload, and management seem to be the most important factors in nurses' caring behaviors.

Keywords: caring behaviors; factors; management; workplace circumstances; workload

1. Introduction

Caring is the central feature and essence of the nursing profession. According to Kurt et al. [1], caring is a fundamental concept for understanding humans as individuals and social beings [1]. The concept of caring has been attempted to be defined by philosophers, theorists, and scientists. Jean Watson's theory is one of the most recent nursing theories which considers the human being as a whole in constant interaction with the environment. More specifically, caring is concerned with the harmony of mind, body, and spirit, as a process of interpersonal interaction [2]. It is a type of relationship and transaction that is necessary between the provider (nurse) and the recipient (patient) of care for the protection of the patient as a human being [3]. At the heart of this theory, caring is a system of values that results in the maintenance and strengthening of human dignity. Watson (2009), states that caring includes human and emotional aspects related to the commitment and attitude of nurses to provide care to patients [4].

Nursing evolved from a normal job to a respectable profession as a result of nurses' capacity to care for patients. By practicing the art of caring and relieving the pain of patients and their families, nurses enhance the health and dignity of patients and expand their self-actualization [5]. Caring behaviors include words, thoughts, feelings, actions, movements, gestures, body language, touch, and knowledge. Nurses' accessibility and skills, active listening, acceptance, eye contact, and providing comfort are well-known and salient caring behaviors [6].

It is important to consider that nurses' perceptions of caring depend on the influence of various social, personal, cultural, and emotional factors [7]. The international nursing community continues to place great importance on elucidating the factors that may affect nurses' perceptions of their ability

to demonstrate caring. According to Watson, in addition to scientific knowledge and clinical competence, caring behaviors are defined by faith, hope, sensitivity, the development of a relationship of trust, mutual help, the expression of positive and negative emotions, the supportive, protective, spiritual, physical, and social environment, and the satisfaction of human needs [8]. The study by Akansel et al. [9] on the perceptions of nurses and patients about caring in oncology showed that nurses perceive caring according to their cultural values and the nurse-patient relationship [9]. Oskouie et al. [10] emphasize that the personal characteristics of nurses such as patience, empathy, a sense of responsibility, altruism, and personal philosophy may influence the caring behaviors of the nurses. These innate qualities enable nurses to connect with patients on a deeper level, allowing them to provide care that goes beyond the physical aspect [10]. The process for developing these internal characteristics of nurses is likely to be carried out during the education of nursing students so that these caring behaviors are merged with nursing skills and applied in the future by professional nurses [11].

Apart from nurses' values and beliefs, the nurses' workload strongly influences nurses' caring behaviors. The need to manage multiple tasks, handle complex clinical conditions, and perform administrative tasks can cause nurses to feel stressed and exhausted. When nurses are overwhelmed with excessive patient assignments, time constraints, and administrative responsibilities, it becomes challenging to provide individualized care that encompasses emotional support and meaningful communication. As a result, they may struggle to allocate sufficient time and attention to each patient, compromising their ability to provide personalized and qualitative care [12,13].

The level of job satisfaction and compassionate behavior exhibited by nurses are greatly influenced by their attitudes towards their profession. Nurses with positive attitudes recognize the significance of their work and are more likely to experience satisfaction and motivation in performing their roles [14]. Conversely, nurses with negative views about their profession, such as feeling undervalued or overwhelmed with excessive workload, are prone to job dissatisfaction, low work-related quality of life, and a decline in their empathetic actions [10,15].

Also, nurses' caring behaviors may be related to patient characteristics. Each patient brings their own set of needs, circumstances, and challenges, which can influence the way nurses provide care. For instance, patients who are in severe pain, experiencing emotional distress, or facing a life-threatening condition may require more intensive and empathetic care [16]. Nurses often adapt their caring behaviors based on the individual needs of each patient, considering factors such as age, cultural background, socioeconomic status, and previous healthcare experiences. All these elements guide nursing practice and are expressed through it [10, 17].

Based on the above and given the fact that patients' satisfaction is dependent on the nurses' caring behaviors, this study aimed to investigate the factors of nurses' caring behaviors. Moreover, since the main body of studies [9,10,14-16] focuses on the effect of specific variables (e.g. job satisfaction, levels of empathy, and compassion) on nurses' caring behaviors using several self-administered tools, in this particular study, an attempt is made to study these factors using a single scale which measures a wide range of caring behaviors factors.

2. Materials and Methods

Between April and May 2021, nurses from three Greek Public General hospitals in Athens, Peloponnese, and Piraeus regions participated in this descriptive, cross-sectional study. The inclusion criteria were: (i) be a nurse or nursing assistant for at least 1 year (ii) read and write the Greek language fluently. Nursing students were excluded from the study. Of the total 381 eligible nurses, 309 questionnaires were completed (response rate 81%). The questionnaires were distributed by the researchers in a closed envelope. Participants completed the questionnaires during their shift in the hospital.

In order to investigate the factors that influence nurses' caring behaviors, the Factors of Nurses Caring Behaviors Scale (FNCB) was employed. This self-administered questionnaire was developed for Egyptian nurses in 2018 by Samah Anwar Shalaby et al. [16]. The scale comprises 32 items, which are rated on a 5-point Likert scale ranging from 1 (totally do not affect) to 5 (completely affect). These

items encompass six dimensions of factors related to nurses' caring behaviors: Workplace Circumstances (8 items, rating 8-40), Workload / Management (7 items, rating 7-35), Interest/Perceptions of Nursing Job (5 items, rating 5-25), Nurses' Educational Background (4 items, rating 4-20), Patients' Demographic Characteristics (4 items, rating 4-20) and Patients' Clinical Characteristics (4 items, rating 4-20). The total score of the scale ranges from 32 to 160, with the total score obtained by summing the responses. A higher score indicates a greater impact of each factor on nurses' caring behaviors. In the present study, the Greek version of the scale was utilized. The psychometric properties of the Greek version have been assessed, yielding a Cronbach's Alpha Coefficient of 0.95 [18]. To the best of our knowledge, this scale has not been translated into other languages yet.

Also, demographic and occupational data were recorded.

Qualitative variables were described using absolute (N) and relative (%) frequencies, while quantitative variables were described using mean values and standard deviations (SD). Normality tests were performed using the Kolmogorov–Smirnov criterion. To compare quantitative variables between two groups, the Student's t-test was employed, and for comparisons between more than two groups, the parametric analysis of variance (ANOVA) was utilized. The Statistical Package for the Social Sciences (SPSS), version 26.0 (IBM Corp., Armonk, NY, USA), was used for the analyses. The statistical significance level was set at <0.05.

This study is part of a larger project. Licenses were obtained by the Scientific Committees of the three Hospitals (Apr. numbers 41432/27.12.2018, 54493/25.11.2019, and 27/04.12.2019). The scientific committees of the hospitals constitute the ethics committees. The study was carried out according to the ethical principles of the Declaration of Helsinki for medical research. Participants were informed about the anonymity and the scope of the study, that the participation is voluntary, and that the data will be used only by the researchers. They were also informed about the law regarding the General Data Protection Regulation (EU) 2016/679, GDPR) and signed a consent document.

3. Results

The mean age of nurses was 44 (SD: 8.77) years old, 240 (77.6%) were women, 134 (43.3%) nurses worked in Internal Medicine Departments, and 114 (36.8%) worked in Surgical Departments. The majority (n=249, 75.6%) worked with rotated shifts (Table 1).

Table 1. Participants' demographic and occupational data (N=309).

Demographic data		Mean (SD ¹)	Min-Max
Age (years)		44 (8.77)	21-62
Total professional experience in the nursing field (years)		17.78 (8.6)	1-36
		Frequency	Percentage (%)
Gender	Women	240	77.6
	Men	69	22.4
Educational Level			
Secondary Education Graduates (Lyceum)		69	22.3
University Graduates		188	60.2
Master's Degree / Ph.D.		52	16.8
Family Status			
Married		177	57.3
Single		91	29.4
Divorced		28	9.06
Widowed		13	4.2

Clinical Setting	ICU ²	25	8.09
	ED ³	30	9.7
	Internal Medicine Department	134	43.3
	Surgical Department	114	36.8
	Other	6	1.9
Occupational Position	Nursing Assistant	70	22.6
	Nurse	219	70.8
	Nurse Leader	18	5.8
	Section Manager	2	0.6
Number of patients in the nursing unit	≤10	51	16.5
	11 – 20	102	33.0
	21 – 30	94	30.4
	≥ 30	28	9.1
Shift type	Rotated working hours	235	76
		61	19.7
	Only Morning		
	Only Night	6	1.9
	Only Afternoon	7	2.2

¹Standard Deviation, ²Intensive Care Unit, ³Emergency Department

In Table 2 the descriptive characteristics and the ranking of the FNCB subscales in order of importance are presented. According to the findings, nurses perceive Workplace Circumstances (Mean: 24.6, SD±8.0) and Workload/Management (Mean: 24.5, SD±6.4) as the most important factors of caring behaviors. In opposite, “Patients’ Demographic Characteristics (Mean: 9.3, SD±4.4) and Patients’ Clinical Characteristics (Mean: 12.5, SD±4.2) were the least important factors of nurses’ caring behaviors.

Table 2. Descriptive characteristics of the FNCB Scale.

	Mean	SD ¹	Minimum	Maximum
Workplace Circumstances	24.6	8.0	8	40
Workload/Management	24.5	6.4	7	35
Interest/ Perceptions of Nursing Job	16.6	5.1	5	25
Nurses’ Educational Background	12.9	4.2	4	28
Patients’ Demographic Characteristics	9.3	4.4	4	20
Patients’ Clinical Characteristics	12.5	4.2	4	20
Total (<i>theoretical range: 32-160</i>)	100.4	26.0	32	158

¹Standard Deviation

Also, men presented higher scores (Mean: 103.3, SD±25.3) than women (Mean: 100.6, SD±26.2). However, this result is not statistically significant. Women rated the Workload/Management (Mean: 24.6, SD±6.5) as the first factor of caring behaviors and the Workplace Circumstances (Mean:24.3, SD±8.1) as the second. The opposite happened with men (Workplace Circumstances Mean: 25.6, SD±7.5 and Workload/Management Mean: 24.2, SD±6.0). Both men and women rated Patients’ clinical characteristics in last place (Mean for men:13.2, SD±3.7, and Mean for women: 12.3 SD±4.3). There was a significant relationship between nurses’ gender with the dimension of Patients’ Demographic Characteristics. In particular, men scored higher than women (Mean for men: 10.7 SD±4.5, Mean for women: 8.8, SD±4.3, t=3.022, p = 0.003) in this dimension (Table 3).

Table 3. Relationships between gender and the dimensions of the FNCB Scale.

	Group	Mean	SD ¹	Rank	SE ²	t	df	p
Workplace Circumstances	Men	25.6	7.5	1	0.95	1.171	289	0.242
	Women	24.3	8.1	2	0.54			
Workload/Management	Men	24.2	6.0	2	0.75	-0.418	289	0.676
	Women	24.6	6.5	1	0.43			
Interest/Perceptions of Nursing Job	Men	16.6	4.7	3	0.59	0.141	289	0.888
	Women	16.5	5.2	3	0.34			
Nurses’ Educational Background	Men	13.3	4.2	4	0.53	0.763	291	0.446
	Women	12.8	4.2	4	0.28			
Patients’ Demographic Characteristics	Men	10.7	4.5	6	0.57	3.022	300	0.003
	Women	8.8	4.3	6	0.28			
Patients’ Clinical Characteristics	Men	13.2	3.7	5	0.47	1.455	295	0.147
	Women	12.3	4.3	5	0.28			
Total	Men	103.3	25.3		3.27	0.702	256	0.483
	Women	100.6	26.2		1.86			

¹Standard Deviation, ²Standard Error

Table 4 presents mean scores and the ranking of caring factors according to nurses' educational level. University graduates presented higher scores (Mean: 102.1 SD±22.9) than Secondary Education Graduates (Mean: 94.2 SD±21.4). Both Secondary Education Graduates and University Graduates rated the dimensions of Workplace Circumstances, Workload/Management, and Interest/Perceptions of Nursing Job in the first three positions, respectively while Patients’ Demographic Characteristics were rated in the last place. Examining the Workplace Circumstances between the educational level groups, the ANOVA test was significant (F (2.290) = 3.372, p = 0.036). A post hoc Tukey HSD test indicated that the mean of Workplace Circumstances of Secondary Education Graduates was significantly lower than that of the MSc/Ph.D. Graduates (p=0.035). Examining the Workload/Management between the educational groups the ANOVA test was significant (F (2.290) = 3.461, p=0.033). A post hoc Tukey HSD test indicated that the mean in the Workload/Management of Secondary Education Graduates was significantly lower than that of the MSc/Ph.D. Graduates (p=0.028).

Table 4. Ranking of caring factors according to nurses' educational level.

Dimensions of the FNCB Scale	Educational level					
	Secondary Education Graduates			University Graduates		
	Mean	SD ¹	Rank	Mean	SD ¹	Rank

Workplace Circumstances	23.4	8.5	1	25.0	7.8	1
Workload/Management	23	6	2	24.8	6	2
Interest/Perceptions of Nursing Job	15	5	3	17	5	3
Nurses' Educational Background	11.8	4.2	5	13.3	4.2	4
Patients' Demographic Characteristics	8.8	4.2	6	9.4	4.5	6
Patients' Clinical Characteristics	12.2	3.9	4	12.6	4.3	5
Total	94.2	21.4		102.1	22.9	

¹ Standard Deviation

Table 5 presents the means and ranking of caring factors according to the clinical setting. ICU nurses scored higher (Mean: 104.9, SD±22.4) total score on the FNCB Scale than nurses working in Internal Medicine (Mean: 103.2, SD±22.3) and Surgical Departments (Mean: 95.7, SD±21.1). All nurses from these three clinical settings rated the dimensions of Workplace Circumstances, Workload/Management, and Interest/Perceptions of Nursing Job in the first three positions, respectively while Patients' Demographic Characteristics were rated in the last place. Upon examination, the following were observed in factors of caring behaviors regarding clinical settings. No differences were observed in Workplace Circumstance (F (2,293)1.117, p=0.310), Workplace/Management (F (2,293) 2.716, p=0.068), Interest/Perception of Nursing Job (F (2,293) 1,626, p= 0.199), and Patients' Clinical Characteristics (F (2,299) 0.293 p= 0.787). Significant differences were observed in Nurses' Educational Background (F (2,295) 5.630 p=0.004). More specifically, nurses of Surgical Departments scored lower in this domain than ICU nurses (Tukey, p=0.003). Differences were, also, observed in the dimension Patients' Demographic Characteristics among the Clinical Settings (F (2,304) 8.370 p=0.001). More specifically, nurses of Surgical Departments scored lower in this domain compared to nurses of Internal Medicine Departments (Tukey, p = 0.001) and ICU (Tukey, p=0.004). Finally, a difference was observed in the total score between the clinical settings (F (2,260), p=0.023), since nurses of Surgical Departments scored lower in total score than ICU nurses (Tukey, p = 0.026).

Table 5. Ranking of caring factors according to occupational sector.

	Internal Medicine			Surgical			ICU ²		
	Department		Rank	Department		Ran	Mea	SD	Ran
	Mean	SD ¹		n	SD ¹				
Dimensions of the FNCB Scale									
Workplace Circumstances	25.2	7.9	1	23.8	7.2	1	25.4	9.5	1
Workload/Management	25.1	5.6	2	23.5	6.4	2	25.3	7.4	2
Interest/Perceptions of Nursing Job	17.2	4.4	3	16.0	5.1	3	16.7	6.1	3
Nurses' Educational Background	13.1	3.9	4	12.1	4.4	5	14.4	4.3	4
Patients' Demographic Characteristics	10.0	4.5	6	8.0	3.7	6	10.3	5.1	6
Patients' Clinical Characteristics	12.6	4.2	5	12.3	4.1	4	12.8	4.5	5
Total	103.2	22.3		95.7	21.1		104.9	22.4	

¹Standard Deviation, ²Intensive Care Unit

There was no other significant relationship between the demographic or occupational characteristics of the sample and the total score or the dimensions of the FNCB Scale.

4. Discussion

This study was carried out in three geographical regions of Greece (Athens, Peloponnese, and Piraeus) targeting to explore the factors affecting nurses' caring behaviors. Most studies [19-21] examine the effect of one or two factors on nurses' caring behaviors such as professional satisfaction, nurse-doctor relationship [19], nurse-patient interaction [20], and work environment [21]. The FNCB Scale covers a wide range of factors affecting caring behaviors as it studies six domains (work circumstances, workload/management, perceptions of nursing job, nurses' educational background, patients' characteristics) of nurses' caring factors covering this literature gap. After conducting an extensive search of the global literature, two scales [18,22] have emerged that focus solely on examining the various aspects of nurses' caring behaviors. In this particular study, the FNCB scale was used as it has been translated and adapted to the Greek population [18].

According to our findings, the factors of caring behaviors are common among nurses in hospital healthcare settings. In this study, Work Circumstances, and Workload/Management were the most influential factors of caring behaviors. Several studies [23,24] emphasize the role of these variables. A cross-sectional study [23] highlighted that nurses who work in a supportive environment were more likely to demonstrate compassionate behaviors towards their patients. Authors, also, reported that adequate staffing levels, teamwork, and the positive organizational culture of the hospital may benefit caring in nursing practice. Similar findings were presented by studies [25,26] which indicated that high patient-to-nurse ratios and excessive administrative obligations, may be an inhibitory factor of nurses' ability to demonstrate caring behaviors such as emotional support and allocation of time to patients. The reduction of time spent with patients leads to reduced attention and an increase in medication errors thus compromising patient safety. In contrast to our findings, Fitriani et al. [27] found that workload may not affect nurses' caring behaviors. Results similar to the above study, are also highlighted by Rizkianti and Haryani [28] who did not observe any notable impact of workload on nurses' caring behaviors. The researchers suggested that factors such as the level of salary and managerial support might influence the relationship between workload and caring behaviors. This finding emphasizes the intricate nature of this topic and underscores the necessity for additional research to gain a comprehensive understanding of how workload affects nurses' caring behaviors. In a qualitative study [29], authors highlight another aspect of the work environment, the physical environment, such as inadequate equipment and inappropriate physical structure, may affect nurses' behaviors.

Numerous research [30-32] studies have explored the influence of management practices on the caring behaviors exhibited by nurses. A study [30] found that leadership styles characterized by emotional support, communication, collaboration, and recognition of the crucial role of nurses had a positive impact on nurses' caring behaviors. In contrast, researchers [31] highlighted the detrimental effects of authoritarian management styles on nurses' caring behaviors. Nurses working under authoritarian managers experienced decreased job satisfaction, increased burnout, and decreased ability to provide compassionate care. These findings suggest that oppressive management practices can hinder nurses' caring behaviors. On the opposite, other researchers revealed that authoritarian leadership styles may improve nursing performance and patient outcomes [32]. At this point, it should be highlighted that regardless of the positive or negative effect of nursing managers on nurses' caring behaviors, the literature data underline the important role of the relationship between nurses and nursing management in the manifestation of positive caring behaviors [33].

Participants rated Interest/Perceptions of nursing Job in third place of caring factors. The correlation between nurses' perceptions of nursing and their caring behaviors has been the subject of thorough research [34,35] in this domain. The findings of these studies have highlighted several factors that influence this connection. Nurses who consider nursing as a philanthropic profession and possess a strong sense of duty are more prone to exhibiting empathetic behaviors towards their patients [36]. In qualitative contrast, a qualitative study conducted [37] revealed that nurses who viewed nursing as a task-oriented job rather than a respected profession were less likely to display compassionate behaviors. The authors stated that this is a barrier to patient-nurse communication and patient-centered care. These nurses were primarily focused on fulfilling their duties without

prioritizing the establishment of genuine connections with their patients. This limited perception of nursing as merely a vocation has the potential to hinder the development of a therapeutic bond between nurses and patients, which is a vital aspect of providing quality care [38]. It is important to underscore that nurses' perceptions of their profession are not solely influenced by personal factors, but are also shaped by the broader healthcare system and societal attitudes towards nursing.

Nurses from three work sectors ranked the factors in the same order, with Work Circumstances being the top priority, followed by Workload/Management. It is important to highlight that nurses of surgical departments scored lower both in the total score and in each dimension of the scale than nurses working in ICU and Internal Medicine Departments meaning that these nurses consider the influence of caring factors less important than the nurses of the other departments. Particularly, these differences were statistically significant in the dimensions of Patients' Demographic Characteristics and Nurses' Educational Level. It seems that the nature of the nursing department in which a nurse works has a substantial influence on their caring behaviors. Prior research [39] suggests that ICU nurses experience high levels of emotional exhaustion and depersonalization which negatively affects their ability to provide caring behaviors [39]. Also, caring behaviors differ not only between nurses working in different departments but also between public and private hospitals, as researchers from China point out [40]. However, Arsat et al [41] found no significant correlation between nurses working in various hospital sectors [41]. Several factors contribute to the variations in caring behaviors among nurses employed in different hospital departments or units, particularly those with a high-intensity level. These factors encompass workload, time constraints, lack of dedication, job satisfaction, professional interest, and the overall work environment [21,27,28,30]. These findings emphasize the importance of considering the specific department when examining caring behaviors in nursing.

The gender of nurses and the mean of the FNCB Scale were found to be correlated in this study. More specifically, compared to their female colleagues, male nurses were more likely to believe that patients' demographics influence their caring behaviors. Researchers [42] discovered that women exhibited higher compassion than men, while Arkan et al. [43] and Arlı & Bakan [44] did not find any statistical difference. Although it is important to avoid drawing conclusions, research suggests that there might be differences between the perspectives of male and female nurses regarding caring behaviors. For example, a study [45] revealed that male nurses were more likely to consider demographic factors such as age, gender, and socioeconomic status when making clinical decisions. However, female nurses tended to put patients' emotional and interpersonal needs first [45]. It is imperative to acknowledge that the theoretical foundation for nursing care remains consistent among nurses, irrespective of their gender. As a result, the question arises regarding the possible reasons for these disparities. A possible explanation could be that female nurses are more vulnerable to internal factors while male nurses are more vulnerable to external ones [43].

Studies [46] have explored the influence of nurses' educational background on the factors that affect their caring behaviors. In this study, University graduates presented higher scores on the Workplace Circumstances and Workload/Management than assistant nurses while Shalaby et al. [16] using the FNCB Scale found no significant association between the educational level and determinants of nurses' caring behaviors. Similarly, Fikre et al [47] discovered that the educational level is associated with good perceptions of caring behaviors. Furthermore, a comparative study examining the caring behavior of nurses in Ireland and the United States highlighted notable statistical differences concerning their educational backgrounds [48].

As far as the limitations are concerned, the sample came from hospitals in mainland (and not insular) southern Greece, and therefore the results cannot be generalized. Also, the completion of the questionnaires took place during the nursing shift, and consequently factors such as the presence of other colleagues or even patients may have influenced the responses of the participants. The use of the FNCB Scale which studies a wide range of nurses' caring behaviors is a strength of this study.

By recognizing the relationship between caring factors and caring behaviors, healthcare institutions can create conditions that promote a culture of quality care, commitment to their profession, and ultimately improving patient outcomes. Effective leadership and management

practices that prioritize caring behaviors can enhance nurses' motivation and commitment to providing compassionate care.

5. Conclusions

Workplace circumstances and workload/management are the most important factors in nurses' caring behaviors. On the opposite, patients' demographic and clinical characteristics are the least important factors in nurses' caring behaviors. Patients' demographic characteristics are considered more important determinants of caring behaviors for male than for female nurses. The importance of workplace conditions, workload, and management seems to be lower among Secondary Education Graduates in comparison to MSc/Ph.D. Graduates. Nurses of surgical departments consider the influence of caring factors less important than ICU nurses.

Author Contributions: Conceptualization, V.A. and S.Z.; methodology, V.A. and S.Z.; software, E.F. and P.K.; validation, V.A.; formal analysis, E.F.; investigation, V.A. and A.Z.; resources, A.Z.; data curation, V.A.; writing—original draft preparation, V.A. and S.Z.; writing—review and editing, V.A., E.F., A.Z., P.K. and S.Z.; visualization, V.A. and S.Z.; supervision, S.Z.; project administration, S.Z.; funding acquisition, V.A. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki, and approved by the Institutional Review Board of GENERAL HOSPITAL OF ATHENS G. GENNIMATAS (protocol code 41432/27.12.2018), GENERAL HOSPITAL OF PIREAUS ST. PANTELEIMON (protocol code 54493/25.11.2019), and GENERAL HOSPITAL OF MESSINIA (protocol code 27/04.12.2019), for studies involving humans.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study. Written informed consent has been obtained from the patients to publish this paper.

Data Availability Statement: The data presented in this study are available on request from the corresponding author. The data are not publicly available due to participants' confidentiality.

Conflicts of Interest: The authors declare no conflicts of interest.

References

1. Jax, K.; Calestani, M.; Chan, K.M.; Eser, U.; Keune, H.; Muraca, B.; O'Brien, L.; Potthast, T.; Voget-Kleschin, L.; Wittmer, H. Caring for nature matters: a relational approach for understanding nature's contributions to human well-being. *Curr. Opin. Environ. Sustain.* **2018**, *35*, 22–29.
2. Gönen Ş.S.; Küüükgüülü, Ö.; Watson, J. Caring for caregivers of individuals with dementia: from the perspective of Watson's Theory of human caring. *Journal of Hacettepe University Faculty of Nursing.* **2017**, *4*, 62–72.
3. Ambarika, R.; Novita Ana Anggraini. Patient safety analysis review of nurse's caring behavior in patients with fall risk. *Indonesian Journal of Nutritional Epidemiology and Reproductive* **2021**, *4*, 114–122.
4. Watson, J. Caring as the essence and science of nursing and health care. *O Mundo Da Saúde* **2009**, *33*, 143–149.
5. Morse, J.M.; Solberg, S.M.; Neander, W.L.; Bottorff, J.L.; Johnson, J.L. Concepts of caring and caring as a concept. In *Caring in nursing classics. An essential resource*, eBook.; Smith, M., Turkel, M.C., Wolf, Z.R., Eds.; Springer Publishing Company: New York, NY, 2013; pp. 19–31.
6. Gözütok Konuk, T.; Tanyer, D. Investigation of nursing students' perception of caring behaviors. *J. Caring Sci.* **2019**, *8*, 191–197.
7. Oluma, A.; Abadiga, M. Caring behavior and associated factors among nurses working in Jimma University specialized hospital, Oromia, Southwest Ethiopia. *BMC Nurs.* **2020**, *19*.
8. Gunawan, J.; Aungsuroch, Y.; Watson, J.; Marzilli, C. Nursing administration: Watson's Theory of Human Caring. *Nursing Sci. Q.* **2022**, *35*, 235–243.
9. Akansel, N.; Watson, R.; Vatansever, N.; Özdemir, A. Nurses' perceptions of caring activities in nursing. *Nurs. Open* **2020**, *8*, 506–516.
10. Oskouie, F.H.; Rafii, F.; Nikraves, M. Major determinants of caring behavior. *Harvard Health Policy Review* **2006**, *7*, 6–16.
11. Vujanić, J.; Prlić, N.; Lovrić, R. Nurses' self-assessment of caring behaviors in nurse-patient interactions: a cross-sectional study. *Int. J. Environ. Res. Public Health* **2020**, *17*, 5255.

12. Fitriani, R.; Yetti, K.; Kuntarti, K. Analysis of workload and occupational commitment: Their relationship to the caring behaviors of nurses in a hospital. *Enfermeria Clin.* **2019**, *29*, 634-639.
13. Hamim, Nur. Workload and work stress on caring behavior in nurse on nursing services. *Int. J. Hum. Resour. Stud.* **2015**, *5*, 148-160.
14. Kosydar-Bochenek, J.; Krupa, S.; Semań, T.; Mędrzycka-Dąbrowska, W. Work climate from the perspective of nurses: qualitative research. *Front. Med.* **2023**, *10*, 1199674.
15. Kibret, H.; Tadesse, B.; Debella, A.; Degefa, M.; Regassa, L.D. Level and predictors of nurse caring behaviors among nurses serving in inpatient departments in public hospitals in Harari region, Eastern Ethiopia. *BMC Nurs.* **2022**, *21*, 76.
16. Shalaby, S.A.; Janbi, N.F.; Mohammed, K.K.; Al-harthi, K.M. Assessing the caring behaviors of critical care nurses. *J. Nurs. Educ. Pract.* **2018**, *8*, 77.
17. Hosseinzadeh, H.; Mohammadi, M.; Shamshiri, M. The study of caring behaviors and its determinant factors from the perspective of nurses in educational hospitals of Ardabil. *Journal of Health and Care.* **2019**; *21*, 203-211.
18. Alikari, V.; Fradelos, E. C.; Giannakopoulou, N.; Gerogianni, G.; Efstathiou, F.; Lavdaniti, M.; Zyga, S. Translation, cultural adaptation, validation and internal consistency of the Factors of Nurses Caring Behavior. *Materia Sociomed.* **2021**, *33*, 34-40.
19. Assefa, A.; Getahun, D.; Desalegn, N.; Kefelew, E.; Molla, W.; Assefa, D. G.; Abebe, M. Perception of caring behavior and associated factors among nurses and midwives working in public hospitals in Southern Ethiopia. *Int. J. Nurs. Sci.* **2022**, *9*, 490-495.
20. Nilsen, M.L.; Sereika, S.M.; Hoffman, L.A.; Barnato, A.; Donovan, H.; Happ, M.B. Nurse and patient interaction behaviors' effects on nursing care quality for mechanically ventilated older adults in the ICU. *Res. Gerontol. Nurs.* **2014**, *7*, 113-125.
21. Arsat, N.; Chua, B. S.; Wider, W.; Dasan, N. The impact of working environment on nurses' caring behavior in Sabah, Malaysia. *Front. Public Health* **2022**, *10*, 858144.
22. Salimi, S.; Azimpour, A. Determinants of nurses' caring behaviors (DNCB): Preliminary validation of a scale. *J. Caring Sci.* **2013**, *2*(4), 269.
23. Naseri, S.; Ghafourifard, M.; Ghahramanian, A. The impact of work environment on nurses' compassion: a multicenter cross-sectional study. *SAGE Open Nurs.* **2022**, *8*, 23779608221119124.
24. Ockerby, C.; Wood, O.; Le, C. O.; Redley, B.; Yuen, E.; Thornton, R.; Hutchinson, A. M. Exploring the relationship between compassion, the practice environment, and quality of care as perceived by paediatric nurses. *J. Pediatr. Nurs.* **2023**, S0882-5963(23)00309-3.
25. Aiken, L.H.; Cimiotti, J.P.; Smith, H.L.; Flynn, L.; Neff, D.F. Effects of nurse staffing and nurse education on patient deaths in hospitals with different nurse work environments. *Med Care* **2011**, *49*, 1047-53.
26. Ashenafie, T.D.; Tebeje, N.B. Perception of caring behavior. *Asian Pac J.* **2015**, *2*, 17-24.
27. Fitriani, R.; Yetti, K.; Kuntarti, K. Analysis of workload and occupational commitment: Their relationship to the caring behaviors of nurses in a hospital. *Enfermeria Clin.* **2019**, *29*.
28. Rizkianti, I.; Haryani, A. The relationship between workload and work stress with caring behavior of nurses in inpatient rooms. *Jurnal Ilmu Kesehatan* **2020**, *5*, 159-166.
29. Rivaz, M.; Momennasab, M.; Yektatalab, S.; Ebadi, A. Adequate resources as essential component in the nursing practice environment: a qualitative study. *J. Clin. Diagn. Res.* **2017**, *11*, IC01-IC04.
30. Jankelová, N.; Joniaková, Z. Communication skills and transformational leadership style of first-line nurse managers in relation to job satisfaction of nurses and moderators of this relationship. *Healthcare* **2021**, *9*, 346.
31. Akbiyik, A.; Korhan, E.A.; Kiray, S.; Kirsan, M. The effect of nurses' leadership behavior on the quality of nursing care and patient outcomes. *Creat. Nurs.* **2020**, *26*, 8-18.
32. Qtait, M. Systematic review of head nurse leadership style and nurse performance. *Int. J. Africa Nurs. Sci.* **2023**, *18*, 100564.
33. Ernawati, D. K. Collaborative competencies in public health center in Indonesia: An explorative study. *J. Interprofessional Educ. Pract.* **2020**, *18*, 100299.
34. Sevda, Efil.; Selin Balaban Şahin.; Zeynep, Yarış. Nurses' images of the nursing profession and their caring behaviors. *J. Educ. Res. Nurs.* **2022**, *19*, 416-421.
35. Grinberg, K.; Sela, Y. Perception of the image of the nursing profession and its relationship with quality of care. *BMC Nurs.* **2022**, *21*, 57.
36. Babaii, A.; Mohammadi, E.; Sadooghiasl, A. The meaning of the empathetic nurse-patient communication: a qualitative study. *J. Patient Exp.* **2021**, *8*, 23743735211056432.
37. Kwame, A.; Petrucka, P.M. A literature-based study of patient-centered care and communication in nurse-patient interactions: barriers, facilitators, and the way forward. *BMC Nurs.* **2021**, *20*, 158.
38. Molina-Mula, J.; Gallo-Estrada, J. Impact of nurse-patient relationship on quality of care and patient autonomy in decision-making. *Int. J. Environ. Res. Public Health* **2020**, *17*, 835.

39. Efil, S.; Turen, S.; Yıldız Ayvaz, M.; Bulbul, E.; Yeni, T. Burnout levels and care behaviours in intensive care nurses: A cross-sectional, multicentre study. *Intensive Crit. Care Nurs.* **2022**, *71*, 103246.
40. Zhang N.; Li J.; Bu X.; Gong Z-X. The relationship between ethical climate and nursing service behavior in public and private hospitals: a cross-sectional study in China. *BMC Nurs.* **2021**, *20*, 1–10.
41. Arsat, N.; Lah, N.A.S.N.; Thomas, D.C.; Soong, S. F.; Chong, L. T.; Sawatan, W.; Dasan, N.; Wider, W. The effect of work setting and demographic factors on caring behaviour among nurses in the public hospitals and public health services, Sabah, Malaysia. *BMC Nurs.* **2023**, *22*, 194.
42. Çingöl, N.; Çelebi, E.; Zengin, S.; Karakaş, M.; Bir Sağlık Yüksekokulu Hemşirelik Bölümü Öğrencilerinin Merhamet Düzeylerinin İncelenmesi (The investigation of compassion level of nursing students in a health college). *Klinik Psikiyatri Dergisi* **2018**, *21*, 61–67.
43. Arkan, B.; Yılmaz, D.; Düzgün, F. Determination of compassion levels of nurses working at a University hospital. *J. Relig. Health* **2020**, *59*, 29–39.
44. Arlı, ŞK.; Bakan, A.B. Cerrahi hemşirelerde merhamet ve kültürlerarası duyarlılığı etkileyen faktörler (The factors affecting compassion and intercultural sensitivity among the surgical nurses). *J. Contin. Med. Educ.* **2018**, *27*, 277–283.
45. Wandner, L. D.; Heft, M. W.; Lok, B. C.; Hirsh, A. T.; George, S. Z.; Horgas, A. L.; Atchison, J. W.; Torres, C. A.; Robinson, M. E. The impact of patients' gender, race, and age on health care professionals' pain management decisions: an online survey using virtual human technology. *Int. J. Nurs. Stud.* **2014**, *51*, 726–733.
46. Mizuno, M.; Ozawa, M.; Evans, D.; Okada, A.; Takeo, K. Caring behaviors perceived by nurses in a Japanese hospital. *J. Nurs. Studies* **2005**, *4*, 13–19.
47. Fikre, A.; Egata, G.; Abdisa, L.; Yadeta, E.; Eyeberu, A.; Dheresa, M. Perception of caring behaviors and associated factors among nurses working in Harar hospitals, Eastern Ethiopia. *SAGE Open Nurs.* **2022**, *8*, 23779608221143909.
48. Weathers, E.; McCarthy, G.; Landers, M.; Porter, C.; Cortese, M. A.; Fitzpatrick, J. J. Nurses' caring behaviors in Ireland and the United States. *International Journal of Human Caring* **2015**, *19*, 30–35.

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.