

WORKLOAD, NURSING CARE MODALITY AND WORK-RELATED STRESS AMONG NURSES IN PRIVATE HOSPITALS IN DAVAO DEL SUR

Liezel Jan R. Ballesteros, RN

Davao Doctors College

ABSTRACT

Workload and work-related stress may have been the major factors in nursing practice nowadays. This study aimed to examine the level of workload, the nursing care modalities utilized among nurses in private hospitals, and their level of work-related stress. Descriptive, correlational, and comparative designs were utilized in this study. Data were collected using an adapted questionnaire based on the Workload Scale and a work-related stress questionnaire, which underwent validity and reliability testing with a McDonald's Omega result of 0.85 and 0.92, respectively. A total of 101 nurses participated in the study. The findings revealed that nurses have an elevated level of workload who were working under pressure but did not feel frustrated in their work. The work-related stress was also found to be highest when dealing with technology and the least when experiencing discrimination among colleagues. However, the study showed a significant difference in the level of workload among nurses when grouped according to nursing care modality; primary nursing care has a higher workload compared to functional nursing care. Furthermore, there were no significant differences in the level of stress among nurses when grouped according to nursing care modality. Moreover, there was no significant relationship between the level of workload and work-related stress among staff nurses, which suggests that there are other factors that caused the high level of work-related stress apart from their workload.

Keywords: *Social Science, Workload, Nursing Care Modality, Work-Related Stress, Comparative-Correlational, Davao del Sur*

Corresponding email: ljballesteros28@gmail.com
ORCID ID: <https://orcid.org/0009-0004-4388-6996>

Introduction

Nursing workload can be determined by adding up the average number of patients seen each day and the average time spent helping each patient, adjusting for the kind of care and level of reliance (Simões et al., 2021). Nurses who have heavy workloads may experience more stress and exhaustion, which may affect their capacity to deliver timely and efficient treatment (Griffiths et al., 2020). Workload influences emotional

exhaustion, implicit nursing care restrictions, and work satisfaction, all of which have an effect on the standard of nursing care given (Maghsoud et al., 2022). When it comes to nursing care delivery models, they can be divided into four categories: (a) functional, (b) team care, (c) individualized care, and (d) primary nursing (Parreira et al., 2021). According to the World Health Organization and International Labor Organization (2021), occupational stress is a major global problem that contributes to around 2 million fatalities each year from job-related illnesses and accidents, such as heart problems

and extended work hours. Risk factors for occupation-related stress among nurses in West Africa included increased workload, exposure to hazards, staff shortage, inadequate incentives, unfavorable patient attitude, longer and more frequent shifts, lack of resources and equipment, work environment, high energy involvement, and few opportunities for professional growth (Awosika et al., 2023)

Internationally trained nurses reported improved work-life balance, reduced stress, and lower burnout compared to host nurses who experienced more overwork and poor work-life balance (Roth et al., 2021). It's critical to understand the variables that could affect nursing workload and patient care in critical care units which shows that both nurse and patient characteristics may have an impact on the workload of nurses in intensive care units (Moghadam et al., 2021). Health professionals should split work shifts into an appropriate environment to avoid nurses from being exhausted from their workload and the awareness that each nurse is accountable for fulfilling their assigned obligations (Zainaro et al., 2021). The higher the nurses' workload perception, the more likely they will leave their current job (Phillips et al., 2020).

The Philippine health system must effectively maximize the number of medical professionals on hand by establishing the minimum and maximum numbers based on workloads, scope of practice, and time needed to complete various activities at the barangay health stations, rural health units, and city health offices (Aytona et al., 2022). Lower nurse-to-patient ratios and higher workloads are linked to higher rates of stress, needlestick and sharps injuries, tardiness, and intention to give up among nurses in low- and middle-income countries and related factors have also been linked to patient

medication errors, hospital-acquired infections, and in-hospital mortality (Assaye et al., 2021).

Healthcare administrators have to take into account our findings and incorporate them into staffing policies to help nurses better organize their work, lessen the impact on their workload, and increase their overall well-being (Ferramosca et al., 2023). Further attention should be paid to the growth in nurses' job performance and its weakly positive link with their mental burden, given the detrimental effects of mental strain on their behavior and performance (Pourteimour et al., 2021). According to Gonçalves et al. (2023), the negative outcomes are clearly associated with the primary nursing care model. However, there is limited research linking primary nursing to positive outcomes, such as improvements in patients' functional status, adequate workload and self-care abilities, highlighting the need for further studies. Although studies have explored various aspects of workload and work-related stress, there is limited evidence regarding its connection to nursing care delivery model. A study by Fikri et al. (2023) emphasizes the importance of healthcare institutions implementing strategies and interventions aimed at reducing the mental workload among nurses.

This study aims to assess the level of workload, identify nursing care modalities, and examine work-related stress among nurses in private hospitals in Davao del Sur province. Specifically, the study investigates the level of workload and work-related stress of primary and functional nursing care modalities within the selected hospitals. The primary objective is to explore the correlation between workload, chosen nursing care delivery approaches, and work-related stress levels among nurses, thereby providing insights into how different nursing care models may impact occupational stress.

Methods

The study utilized an independent variable-dependent variable model, the researcher utilized a descriptive, comparative-correlational research design. The study determined the workload level, work-related stress among nurses, and what nursing care modalities were practiced. Comparative research was used to determine the respondents' work-related stress and workload when grouped according to the nursing care modality utilized in their institution. Furthermore, this study also applied a correlational type of research, which identified the significant difference in the level of workload and work-related stress when grouped according to the nursing care modality of the respondents.

The study was conducted in five selected private hospitals in Davao del Sur. Two institutions are tertiary-level hospitals, providing advanced healthcare services, while the other three are Level 1 hospitals, offering essential to intermediate care. These healthcare settings utilize primary and functional nursing care, enabling an investigation into how different nursing care modalities affect the workload and work-related stress experienced among nurses. The study's findings contributed to understanding best practices in nursing management and the overall well-being of healthcare staff in the region.

Using convenience sampling, 101 participants for this study were chosen with the following criteria: a registered nurse and have been utilizing either primary nursing care and/or functional nursing care in their respective institutions. The researcher chose responders from the selected five private hospitals in Davao del Sur. Despite the researcher's attempt to include all nurses in private hospitals, only 101 respondents could answer the survey

questionnaire due to the time available during the study.

The study utilized an adapted questionnaire from a study of workload and work-related stress questionnaire to measure the level of workload and work-related stress of the respondents who utilized either primary nursing care or functional nursing care. The initial phase inquired about the designated nursing care model, namely primary and functional nursing care, which the respondents utilized within their institution, either primary nursing care or functional nursing care model.

The researcher utilized two adapted questionnaires to collect data relevant to the study. Each questionnaire was specifically tailored to measure different variables under investigation. One part of the questionnaire was designed to assess nurses' workloads, drawing from an existing validated instrument, such as the Workload Scale by McMullan et al. (2019). This tool captured key workload dimensions, including the number of tasks, time demands, and complexity of responsibilities. The second part of an adapted questionnaire from the study of De Sio (2020) measured the extent of work-related stress on two nursing care modalities. With three items per category, the 33 items under the work-related stress survey examine the domains, including work-life balance, relationships, change, peer and management support, job satisfaction, workplace, role, job demand, and job control. In addition, the questionnaire examines three more topics with one item each: racial or ethnic discrimination, coping with technology and religion, and emotional demand. The questionnaire utilized a 5-point Likert scale. This approach allows participants to express varying degrees of agreement or disagreement with a given statement, providing a nuanced view of their attitudes. It has five response options, which

typically range from "Strongly Disagree" to "Strongly Agree," with intermediate options such as "Disagree," "Neutral (or Neither Agree nor Disagree)," and "Agree." This section was tested for reliability to ensure that the questions were valid and the items were consistent. The tool had an overall reliability result of 0.75. The scores under this parameter were measured and interpreted in a 5-point Likert scale.

Results and discussion

Table 1. The profile of nursing care modality practiced by nurses

Nursing Care Modality	Frequency (n)	Percentage (%)
Primary Nursing Care	50	49.50
Functional Nursing Care	51	50.50
Total	101	100.00

Table 1 shows that 50.50% of the respondents (n=51) practice functional nursing care, while 49.50% of them (n=50) are doing primary nursing care. A total of 101 respondents. This implies that the participating Hospitals used both nursing care modalities mentioned in this study. The descriptions of the many care delivery models vary, and perspectives about the models' advantages and disadvantages are divided (Parreira et al., 2021). Effective collaboration ensures that tasks are delegated appropriately and

that care is delivered seamlessly, reducing the risk of errors (Cooper et al., 2020).

Table 2 reveals that the overall level of nurses' workload is high, with a Mean score of 3.36 and a standard deviation of 0.25. This implies that nurses have an elevated workload, mainly when working under pressure, but also feel less frustrated. An increased occupational physical workload is associated with reduced recovery among home care workers (Mänttari et al., 2023). A high workload has been demonstrated to impact patient care negatively, and nursing is a profession with a high workload (Lestari et al., 2023). Other research generally exposed employees to relatively high levels of physical and psychological demands in their jobs, which reveals the challenging nature of this occupation (Bazazan et al., 2023).

In nursing, heavy workloads are a recurring problem that substantially affects patient care, nurse well-being, and the effectiveness of the healthcare system as a whole. In settings where nurses feel supported, workload difficulties are lessened. Organizational strategies that support the resilience of nurses and lessen the adverse effects of high workloads include resource provision and cooperation (Cooper et al., 2020). Studies show that high workloads might jeopardize patient safety by raising the risk of mistakes, postponed treatment, and unfavorable outcomes. Under pressure, nurses could find it difficult to continue performing at their best (Ekmekci et al., 2021).

Table 2. The Level of Workload among nurses

Workload	Mean	SD	Interpretation
1. I take time to decide to perform my job	3.47	0.78	High
2. I can physically perform the role and responsibility of my job	4.24	0.49	Very High
3. I can work under pressure	4.35	0.50	Very High
4. It is an effort for me to accomplish my usual level of performance at work	2.55	0.78	Low
5. I am satisfied with my performance at work.	4.23	0.55	Very High
6. I feel stressed at work.	2.49	0.74	Low
feel frustrated with my work	2.21	0.74	Low
Overall	3.36	0.25	High

Table 3: The Level of Work-related stress among nurses

Work-related Stress	Mean	SD	Interpretation
Job Satisfaction	3.42	0.34	High
Workplace	3.75	0.37	High
Role	3.80	0.51	High
Job Demand	3.51	0.56	High
Job Control	3.61	0.39	High
Support	3.33	0.33	Moderate
Support Manager	3.23	0.34	Moderate
Relationship	3.23	0.32	Moderate
Change	3.81	0.30	High
Work-Life	3.17	0.50	Moderate
Balance			
Emotional	3.77	0.60	High
Demand			
Dealing with	4.03	0.48	High
Technology			
Discrimination	2.08	0.64	Low
Overall	3.45	0.12	High

Legend: 1.00-1.80 (Very Low); 1.81-2.60 (Low); 2.61-3.40 (Moderate); 3.41-4.20 (High); 4.21-5.00 (Very High)

Table 3 shows that the respondents' overall level of work-related stress is high, with a mean score of 3.45 and a standard deviation of 0.12. This implies that nurses have high work-related stress levels in dealing with technology, with a mean score of 4.03; however, nurses have experienced less discrimination at work, indicating that nurses have fair and just management regarding staff assignments and others. Technology use can have a positive or negative impact on the workload of nurses. Several variables may influence the nursing workload, including nurses' familiarity with the technology, institutions' adoption, and nurses themselves (Mohammadnejad et al., 2023). According to other industry surveys, work-life conflicts are the primary cause of employee resignations, and stress caused by technology contributes to work-life conflicts increasing among employees (Li et al., 2021). Another article explored how the work environment is one of the significant factors causing work-related stress (Noor et al., 2023).

In contrast, discrimination ($M=2.08$, $SD=0.64$) has the lowest mean score, suggesting that it is a relatively slight or low source of work-related stress for nurses, revealing a quite unbiased work environment. Workplace discrimination refers to any preference, disadvantage, unfairness, or injustice experienced, caused, or committed by colleagues or managers, whether on a personal or structural level (Hämmig, 2023).

Table 4. The Test of difference on the level of workload among nurses when grouped according to nursing care modality

Nursing Care Modality	Workload			
	U	p-value	Decision	Mean Rank
Primary Nursing Care	58.55	6.708	0.010	Reject H_0
Functional Nursing Care	46.63			

Legend: $p\text{-value} \leq 0.05$ (Significant)

Table 4 presented a significant difference in workload levels between nurses practicing primary nursing care and those engaged in functional nursing care, with a p-value of 0.010. This finding statistically implies that primary nursing is considered to have a heightened workload since nurses are solely responsible for patients carrying out, implementing care orders, giving medication, and imparting health teachings. However, functional nursing care has a lesser workload since caring for patients is divided among two or more nurses, leading to a dedicated task for each nurse. Primary nursing care limits the differentiation and performance of associate nurses, risks emotional involvement with the patient, and can increase stress (Parreira et al., 2021). In contrast, functional nursing care, characterized by task-based assignments shared among multiple nurses, typically results in a more distributed workload. This model focuses on efficiency by assigning specific tasks (e.g., administering medications or monitoring vital signs) to individual nurses, thereby reducing the

overall workload on any single nurse (Oppel & Mohr, 2021).

Nurses deal with different workloads depending on factors, including patient acuity, staffing numbers, and the healthcare environment. Workload significantly impacts patient outcomes, performance, and work satisfaction. In high-demand settings like critical care units (ICUs) or emergency rooms, nurses frequently have to do physically demanding duties, including patient mobility, extended standing, and several operations. These workloads are more common in environments with insufficient workforce or resources (Ekmekci et al., 2021). Patient outcomes may be jeopardized by high organizational stress that reduces the amount of time available for actual patient care (Contreras et al., 2020).

models enhanced the connections between the caregiving team members. Given the increased emphasis on age-friendly health systems in all healthcare settings, including long-term care (Siegel et al., 2023).

Long-term work-related stress can lead to several mental health issues, including stress, sadness, and anxiety (Dall'Ora et al., 2020). Nurses who experience stress are more likely to miss work, have more excellent turnover rates, and be less productive as a team. Systemic interventions and an emphasis on fostering a supportive work environment are necessary to address these issues (Cooper et al., 2020). The demanding nature of their profession, which includes lengthy shifts, unpredictable scheduling, and the physical and mental stresses of providing patient care, often causes stress among nurses (De Sio et al., 2020).

Table 5. The Test of difference on the level of work-related stress among nurses when grouped according to nursing care modality

Nursing Care Modality	Work-related Stress			
	Mean Rank	U	p-value	Decision
Primary Nursing Care	51.80	0.074	0.785	Accept H ₀
Functional Nursing Care	50.80			

Legend: p-value ≤ 0.05 (Significant)

Table 5 shows no significant difference in the level of work-related stress when grouped in terms of primary nursing care and functional nursing care, resulting in a p-value of 0.785. This implies that both nursing care modalities do not influence nurses' work-related stress. A study with positive results was obtained by individuals, families, and staff when nursing care delivery

Table 6. The test of the relationship between the workload and work-related stress of staff nurses

Workload	Work-Related Stress			
	r _s	p-	Re	De
1. I take time to decide to perform my job	-0.057	0.570	Not Significant	Accept H ₀
2. I can physically perform the role and responsibility of my job	-0.109	0.279	Not Significant	Accept H ₀
3. I can work under pressure	0.127	0.206	Not Significant	Accept H ₀
4. It is an effort for me to accomplish my usual level of performance at work	-0.077	0.446	Not Significant	Accept H ₀
5. I am satisfied with my performance at work.	0.117	0.244	Not Significant	Accept H ₀

5. I feel stressed at work.	.244	.666	Not Significant	Accept H0
7. I feel frustrated with my work	.139	.166	Not Significant	Accept H0

Legend: $p\text{-value} \leq 0.05$ (Significant)

Table 6 indicates no significant relationship between workload level and work-related stress among nurses. This finding suggests that nurses with elevated workloads do not necessarily have high work-related stress as well. On the other hand, nurses may feel stressed despite having a manageable workload due to other factors that may influence stress. Nevertheless, other nurses may thrive under heavy workloads, leveraging strong organizational skills and supportive team experience to have manageable work-related stress.

The results imply that addressing work-related stress in these settings may need to go beyond workload management and consider other aspects of the work environment and personal resilience strategies. In contrast, research from Nasrul (2023) indicates that employee performance is significantly impacted by workload and work-related stress, while the effects vary in direction (Nasrul et al., 2023).

In the nursing and healthcare industries, the connection between workload and work-related stress is a well-established issue. The level of workload, the complicated nature of patient care, and the time constraints that nurses encounter are common characteristics of workload. Increased stress levels brought on by heavy workloads may harm nurses' general well-being, job satisfaction, and the standard of patient care. Research on this link has shown conflicting results, nevertheless. High workload and high-

stress levels are strongly positively correlated, according to some research (Dall'Ora et al., 2020), while other studies contend that organizational support, work environment characteristics, and individual coping strategies may moderate this association. Similarly, De Sio et al. (2020) point out that psychosocial workplace risks, including workload, are significant predictors of work-related stress.

Conclusion and Recommendation

Conclusion

From a thorough analysis of the data collected and results obtained, the study found that both primary and functional nursing care modalities are equally practiced in private hospitals in Davao del Sur. Nurses experience high workloads, often working under pressure, yet many find fulfillment in their roles, which helps mitigate frustration. Despite facing significant work-related stress, particularly in adapting to new technologies, nurses report their experiences with minimal workplace discrimination, suggesting fair management in work assignments. The study also revealed that workload levels vary significantly based on the nursing care modality, with primary nursing care associated with a higher workload than functional nursing care. However, work-related stress levels remain consistently high across different nursing care modalities, indicating that stress is not solely dependent on workload. Additionally, no direct correlation was found between workload and stress, as individual coping mechanisms play a crucial role in how nurses perceive and manage their work demands.

Recommendation

Based on the findings that were gathered, the following recommendations were made:

Nursing Administrators. The survey found that nurses in private hospitals deal with much work and stress. It also implies that primary nursing care providers are under noticeably more pressure. Therefore, the researcher stresses the necessity of creating programs or techniques targeted at easing nurses' workloads and lowering stress levels and suggests giving functional nursing care precedence over primary nursing care. Specifically, the study recommends enhancing training in the use of machines to alleviate their burden.

Healthcare Institutions. The findings indicated a high level of work-related stress in the workplace. The researcher recommends that healthcare facilities use several strategies to enhance nurses' well-being and reduce work-related stress. Developing mental health and wellness programs, such as stress management classes and counseling, can provide nurses with coping mechanisms. Flexible scheduling and sufficient vacation time are two examples of policies that support work-life balance.

Future Researchers. The researcher recommends that future researchers use the same instrument in this study but look for other factors that may influence and/or contribute to work-related stress. Moreover, the researcher proposes that future studies' instruments may undertake factor analysis such as exploratory factor analysis (EFA) and Confirmatory Factor analysis (CFA) to identify indicators that may influence the level of workload and work-related stress. Furthermore, future research may use a mixed method design to triangulate the quantitative and qualitative results on workload and work-related stress.

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