

Occupational Strain and Care Quality: A Cross-Sectional Analysis of Workload, Overtime, and Work–Life Balance among Dialysis Nurses in Samar Island

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ABSTRACT

This study examined the relationship among workload, overtime hours, work–life balance, occupational strain, and perceived quality of care among dialysis nurses in Samar Island. Anchored on the Job Demand–Resources (JD-R) Model, the study aimed to determine the demographic profile of the respondents, assess the levels of the major study variables, examine significant relationships among selected variables, identify predictors of occupational strain, and determine whether occupational strain significantly predicted perceived quality of care. A quantitative, non-experimental, cross-sectional correlational research design was employed. Data were gathered from 75 dialysis nurses working in dialysis hospitals, centers, and clinics in Samar Island using a structured self-developed questionnaire. Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to describe the respondents' profile and the levels of the variables. Pearson product-moment correlation and regression analysis were utilized to determine significant relationships and predictive influence among variables. The findings revealed that the respondents were predominantly 31–40 years old, female, married, had 2 to 5 years of dialysis experience, held a Bachelor of Science in Nursing degree, were regular employees, and were assigned in hospital-based dialysis units. The respondents generally agreed that they experienced workload, overtime hours, occupational strain, and perceived quality of care, while work–life balance was rated moderate. Significant positive relationships were found between workload and occupational strain, and between overtime hours and occupational strain. In contrast, work–life balance showed a significant negative relationship with occupational strain, indicating that better balance was associated with lower levels of strain. Regression analysis further revealed that workload, overtime hours, and work–life balance significantly predicted occupational strain, with work–life balance emerging as the strongest predictor. Occupational strain also significantly predicted perceived quality of care, suggesting that higher levels of strain were associated with lower perceived care quality among dialysis nurses. Based on the findings, an Occupational Strain Reduction and Care Quality Enhancement Program was proposed to support nurse well-being and improve care delivery. The study concluded that dialysis nurses in Samar Island work under demanding conditions, and that strengthening work–life balance while reducing excessive workload and overtime may help lessen occupational strain and support quality nursing care.

Keywords: workload, overtime hours, work–life balance, occupational strain, perceived quality of care

INTRODUCTION

This study aimed to examine the relationship among workload, overtime hours, work–life balance, occupational strain, and perceived quality of care among dialysis nurses in Samar Island. Specifically, it sought to describe the demographic and professional profile of the respondents; determine the levels of workload, overtime hours, work–life balance, occupational strain, and perceived quality of care; examine the relationships between workload and occupational strain, overtime hours and occupational strain, and work–life balance and occupational strain; determine whether workload, overtime hours, and work–life balance significantly predict

occupational strain; determine whether occupational strain significantly predicts perceived quality of care; and propose an intervention program to address occupational strain and improve perceived quality of care among dialysis nurses.

The nursing profession remains essential in the delivery of safe, effective, and patient-centered healthcare. However, nurses assigned in specialized areas such as dialysis units often experience increasing work demands due to the complexity and continuity of care required by patients with chronic kidney disease. Dialysis nurses perform highly technical and time-sensitive responsibilities, including machine preparation, vascular access monitoring, infection control, patient education, documentation, and immediate response to treatment-related complications. These responsibilities require sustained attention, clinical accuracy, emotional stability, and professional competence throughout long dialysis sessions.

In provincial and resource-limited healthcare settings, the demands of dialysis nursing may become more challenging because of increasing patient volume, limited staffing, and extended duty hours. Heavy workload and overtime may reduce nurses' opportunities for rest, recovery, and personal time, thereby affecting their ability to maintain work–life balance. Staffing and resource inadequacy have been associated with missed nursing care, while poor work–life balance has been linked to lower work performance, reduced quality of care, and increased burnout among nurses ([1]; [8]; [10]).

Previous studies have shown that sustained exposure to excessive workload and inadequate recovery may result in burnout, emotional exhaustion, depersonalization, and reduced professional accomplishment. Burnout has also been linked to lower patient safety, decreased quality of care, and reduced patient satisfaction (7). In the Philippine setting, studies involving hemodialysis nurses have identified stress and fatigue as common concerns that may affect both nurse well-being and nursing service quality (4).

These concerns are particularly relevant in Samar Island, where geographic barriers, staffing limitations, and increasing demand for dialysis services may intensify workplace pressure. Dialysis nurses may be required to care for several patients simultaneously while maintaining precision and safety in every procedure. Since dialysis care allows little room for error, prolonged fatigue and occupational strain may affect nurses' concentration, emotional readiness, and perception of the quality of care they provide.

This study is anchored on the Job Demands–Resources Model, which explains how workplace conditions influence employee well-being, occupational strain, and work performance. The model classifies workplace factors into job demands and job resources. In this study, workload and overtime hours are considered job demands, while work–life balance is considered a job resource. Occupational strain is viewed as the central outcome of the interaction between job demands and job resources, while perceived quality of care is considered the care-related outcome. Despite the growing international literature on workload, burnout, and occupational stress among nurses, limited localized evidence focuses specifically on dialysis nurses in provincial Philippine settings. Therefore, this study was conducted to generate evidence that may guide workplace interventions, staffing strategies, and support mechanisms that promote nurse well-being and quality patient care.

Research Questions

This study sought to answer the following questions:

1. What is the demographic profile of the respondents in terms of age, sex, civil status, years of dialysis experience, educational attainment, employment status, and type of dialysis center?
2. What is the level of workload, overtime hours, work–life balance, occupational strain, and perceived quality of care among dialysis nurses in Samar Island?
3. Is there a significant relationship between workload and occupational strain among dialysis nurses in Samar Island?
4. Is there a significant relationship between overtime hours and occupational strain among dialysis nurses in Samar Island?

5. Is there a significant relationship between work–life balance and occupational strain among dialysis nurses in Samar Island?
6. Do workload, overtime hours, and work–life balance significantly predict occupational strain among dialysis nurses in Samar Island?
7. Does occupational strain significantly predict perceived quality of care among dialysis nurses in Samar Island?
8. Based on the findings of the study, what intervention or program may be proposed to address occupational strain and improve perceived quality of care among dialysis nurses in Samar Island?

Research Hypotheses

H01: There is no statistically significant relationship between workload and occupational strain among dialysis nurses in Samar Island.

H02: There is no statistically significant relationship between overtime hours and occupational strain among dialysis nurses in Samar Island.

H03: There is no statistically significant relationship between work–life balance and occupational strain among dialysis nurses in Samar Island.

H04: Workload, overtime hours, and work–life balance do not significantly predict occupational strain among dialysis nurses in Samar Island.

H05: Occupational strain does not significantly predict perceived quality of care among dialysis nurses in Samar Island.

Definition of Key Terms

Workload refers to the amount, intensity, and complexity of dialysis nursing tasks performed by the respondents, including patient monitoring, machine preparation, vascular access care, documentation, infection control, patient education, and management of dialysis-related complications.

Overtime hours refer to the work hours rendered by dialysis nurses beyond their regular duty schedule. This includes extended shifts caused by patient volume, staffing limitations, documentation requirements, or service demands.

Work–life balance refers to the ability of dialysis nurses to manage their professional responsibilities while maintaining adequate time and energy for personal, family, and social life.

Occupational strain refers to the physical, emotional, and mental stress experienced by dialysis nurses as a result of sustained workload, overtime exposure, and insufficient recovery.

Perceived quality of care refers to the nurses' perception of their ability to provide safe, effective, timely, patient-centered, and technically competent dialysis care under existing work conditions.

Dialysis nurses refer to registered nurses assigned in dialysis hospitals, centers, or clinics who provide direct care to patients undergoing hemodialysis treatment.

Job demands refer to work-related conditions that require sustained physical, emotional, or psychological effort, such as workload and overtime hours.

Job resources refer to work-related or personal factors that help reduce strain, promote resilience, and support performance, such as work–life balance.

Conceptual Framework

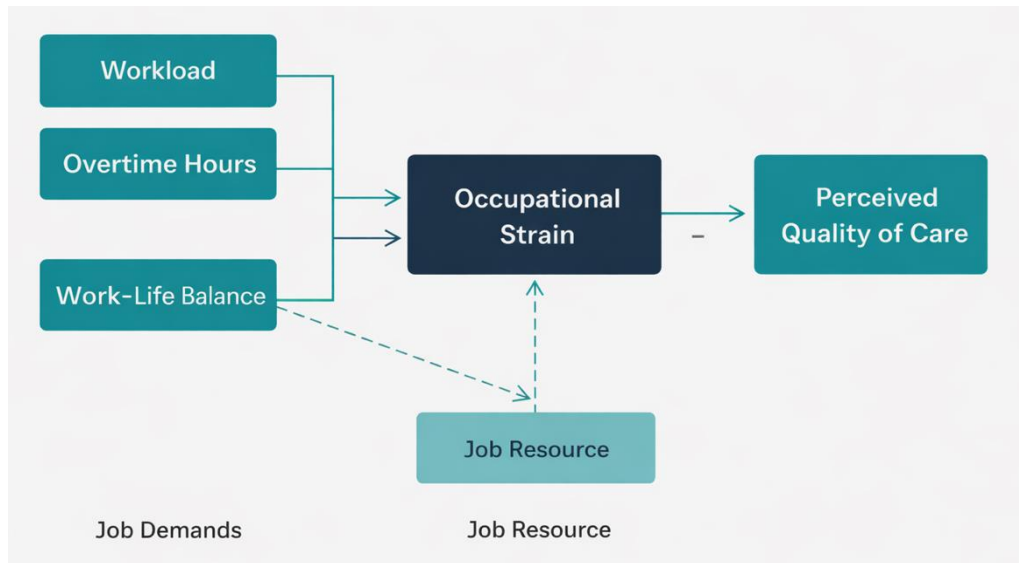


Figure 1: Self-developed Conceptual Framework of the Study

This study is anchored on the Job Demands–Resources (JD–R) Model, which explains how workplace conditions influence employee well-being, occupational strain, and work performance. The model classifies workplace factors into job demands and job resources. Job demands are aspects of work that require sustained physical, emotional, or psychological effort, while job resources are factors that help employees cope with work demands, reduce strain, and maintain motivation and performance (6).

In this study, workload and overtime hours are considered job demands. These reflect the physical, mental, and emotional effort required from dialysis nurses in performing specialized responsibilities such as patient monitoring, machine preparation, vascular access care, documentation, infection control, patient education, and management of dialysis-related complications. When workload is heavy and overtime is frequent, nurses may experience fatigue, reduced recovery time, emotional exhaustion, and increased occupational strain. On the other hand, work–life balance is considered a job resource. It refers to the ability of nurses to manage professional responsibilities while maintaining adequate time for personal, family, and social life. Within the JD–R Model, job resources may help lessen the negative effects of job demands by supporting resilience, motivation, and psychological well-being (6). Thus, better work–life balance may help dialysis nurses cope with workload pressure and extended working hours.

Occupational strain serves as the central outcome of the interaction between job demands and job resources. It refers to the physical, emotional, and mental stress experienced by nurses due to sustained work pressure and insufficient recovery. Previous studies have shown that burnout and occupational strain are associated with lower patient safety, decreased quality of care, and reduced patient satisfaction (7). In dialysis settings, burnout among hemodialysis nurses has also been linked to concerns regarding quality nursing care (4). The framework further proposes that occupational strain may influence perceived quality of care. Since dialysis nursing requires accuracy, attentiveness, emotional engagement, and timely clinical judgment, excessive strain may affect nurses’ concentration, emotional readiness, and work performance. Therefore, this study examines how workload, overtime hours, and work–life balance relate to occupational strain and how occupational strain predicts perceived quality of care among dialysis nurses in Samar Island.

The indicators contextualized in this study were also classified according to their related health determinants. Workload and overtime hours were considered occupational and organizational determinants because they reflect the demands of the work environment, including task intensity, patient assignments, documentation, staffing limitations, and extended duty schedules. Work–life balance was classified as a psychosocial and social determinant because it reflects the ability of nurses to maintain rest, recovery, family responsibilities, and personal well-being despite work demands. Occupational strain was considered an occupational health and psychosocial determinant because it represents the physical, emotional, and mental effects of sustained

workplace pressure. Perceived quality of care was classified as a health service delivery determinant because it reflects how nurses evaluate their ability to provide safe, effective, timely, and patient-centered dialysis care. Other contextual indicators such as nurse-to-patient ratio, staffing pattern, leadership support, supply availability, patient acuity, commute time, employment status, years of dialysis experience, and educational attainment were also linked to organizational, clinical, geographic, socioeconomic, and professional determinants of health. These determinants help explain how workplace and contextual conditions may influence both nurse well-being and the quality of dialysis care.

On the other hand, the determinants of preventive, promotive, palliative, and rehabilitative care were linked to the descriptive focus of the study because dialysis nursing involves more than the technical performance of hemodialysis procedures. Preventive care was associated with workload, staffing adequacy, infection control practices, supply availability, patient monitoring, and occupational strain. These determinants influence the nurse's ability to prevent dialysis-related complications such as infection, vascular access problems, hypotension, medication errors, and treatment-related incidents.

Promotive care was linked to patient education, communication, work–life balance, nurse well-being, leadership support, and available time for health teaching. These determinants affect the nurse's ability to promote patient adherence to diet, fluid restriction, medication regimen, vascular access care, and regular dialysis treatment. Palliative care was associated with occupational strain, emotional resilience, patient acuity, psychosocial support, staffing adequacy, and therapeutic communication. These determinants are important because patients undergoing long-term dialysis may experience distress, discomfort, uncertainty, and declining health status that require compassionate and supportive nursing care.

Rehabilitative care was linked to continuity of care, patient education, family involvement, workload, follow-up support, and work–life balance. These determinants influence how nurses support patients in adapting to long-term dialysis, maintaining functional ability, improving self-care, and sustaining quality of life. In this study, these care determinants help explain how the work conditions of dialysis nurses may influence not only their occupational strain but also their perceived ability to provide holistic and quality dialysis care.

METHODOLOGY

Research Design

This study used a quantitative, non-experimental, cross-sectional correlational research design to examine the relationships among workload, overtime hours, work–life balance, occupational strain, and perceived quality of care among dialysis nurses in Samar Island. A quantitative design was appropriate because the study gathered numerical data and used statistical procedures to describe variables, test hypotheses, and determine relationships among the study constructs.

The study was non-experimental because the researcher did not manipulate any variable or introduce an intervention. Instead, the variables were measured as they naturally occurred in the respondents' work setting. A correlational design was used because the study sought to determine whether significant relationships existed among workload, overtime hours, work–life balance, occupational strain, and perceived quality of care. Correlational research is useful in examining the strength and direction of relationships between variables without assuming direct causation ([3]; [5]). The study was also cross-sectional because data were collected at one point in time. This design provided a snapshot of the respondents' experiences and perceptions during the period of data collection, although it did not establish cause-and-effect relationships (11).

Locale of the Study

The study was conducted in dialysis hospitals, centers, and clinics located in Samar Island, Eastern Visayas, Philippines. Samar Island was considered an appropriate setting because dialysis services in the province continued to expand while healthcare facilities still faced challenges related to geography, staffing, and accessibility. Although dialysis facilities were available in selected areas, patients from remote municipalities may still experience difficulty accessing regular hemodialysis services.

The increasing demand for renal replacement therapy may contribute to higher patient volume in dialysis units. In this setting, dialysis nurses were expected to perform highly technical procedures, monitor patients closely, respond to complications, and maintain safety despite workload pressures and possible staffing limitations. These conditions made Samar Island a relevant locale for examining how job demands and work–life balance may influence occupational strain and perceived quality of care among dialysis nurses.

Method of Data Collection

Data were collected using a structured self-administered questionnaire distributed to eligible dialysis nurses in the participating dialysis hospitals, centers, and clinics. The questionnaire was used to gather information on the respondents' demographic and professional characteristics, as well as their perceptions of workload, overtime hours, work–life balance, occupational strain, and perceived quality of care.

This method was appropriate because it allowed the respondents to provide standardized responses that could be quantified and statistically analyzed. The use of a self-administered questionnaire also helped ensure privacy, as respondents were able to answer the items independently and without direct pressure from the researcher.

Data Collection Procedure

Before data collection, the researcher secured approval from the institutional research review body and obtained permission from the administrators of the participating dialysis hospitals, centers, and clinics. After permission was granted, the researcher coordinated with nurse managers or unit supervisors to identify qualified respondents and determine appropriate schedules for questionnaire distribution.

The respondents were oriented about the purpose of the study, inclusion criteria, voluntary participation, confidentiality, and estimated time required to complete the questionnaire. Written informed consent was obtained before the questionnaires were distributed. The respondents answered the printed questionnaires at a convenient time that did not interfere with patient care or clinical duties.

To protect anonymity, the respondents were not required to write their names on the questionnaire. Completed forms were placed in sealed envelopes and collected by the researcher. The questionnaires were then reviewed for completeness, coded, and entered into statistical software for analysis. Data were handled carefully to maintain confidentiality and accuracy.

Research Instrument

The study used a self-developed structured questionnaire designed to measure workload, overtime hours, work–life balance, occupational strain, and perceived quality of care. The instrument was developed based on related literature and was guided by the Job Demands–Resources Model, which explains how job demands and job resources influence employee well-being and work outcomes ([6]; [2]).

The questionnaire consisted of two parts. The first part gathered demographic information, including age, sex, civil status, years of dialysis experience, educational attainment, employment status, and type of dialysis facility. These data were used to describe the profile of the respondents.

The second part contained statements grouped into five subscales: workload, overtime hours, work–life balance, occupational strain, and perceived quality of care. The workload subscale assessed the intensity and complexity of dialysis nursing tasks. The overtime hours subscale measured the frequency and impact of working beyond regular duty hours. The work–life balance subscale assessed the respondents' ability to manage work responsibilities together with personal and family life. The occupational strain subscale measured physical, emotional, and mental stress related to work. The perceived quality of care subscale assessed the nurses' perception of their ability to provide safe and effective dialysis care.

All items were rated using a five-point Likert scale ranging from 1, strongly disagree, to 5, strongly agree. Negatively worded items, when present, were reverse-coded during data analysis.

Since the questionnaire was self-developed, validity and reliability procedures were conducted before the actual data collection. Content validity was established through expert review. At least three experts in nursing research, dialysis nursing, and nursing administration evaluated the items based on relevance, clarity, and appropriateness. Their comments were used to revise unclear, repetitive, or weak statements. Expert validation helped ensure that the instrument adequately represented the constructs being measured.

A pilot test was also conducted among 15 to 20 dialysis nurses who were not part of the actual study population. The pilot test helped determine whether the questionnaire items were clear, understandable, and appropriate for the intended respondents. It also allowed the researcher to identify wording problems, unclear instructions, or items that needed refinement.

Reliability was determined using Cronbach's alpha. Each subscale was analyzed separately to determine internal consistency. A Cronbach's alpha value of 0.70 or higher was considered acceptable, indicating that the items consistently measured the same construct (9). Items with low item-total correlations were reviewed and revised or removed when necessary.

Sampling Technique

The population of the study consisted of registered nurses assigned to dialysis hospitals, centers, and clinics within Samar Island. The respondents were included if they were currently working in a dialysis unit, had at least six months of dialysis nursing experience, and were employed either as regular or contractual staff. Nurses who were on extended leave during the data collection period were excluded because they did not have recent clinical exposure related to the study variables.

Approximately 75 dialysis nurses met the inclusion criteria. Since the population was relatively small and accessible, the study used total enumeration as the sampling technique. This means that all qualified nurses were invited to participate in the study. Total enumeration was appropriate because it allowed the researcher to include the entire accessible population and reduce sampling error, especially when the population was limited and clearly defined ([9]; [12]). Although some non-response was expected, inviting all eligible respondents helped maximize participation and maintain the adequacy of the sample for correlational and regression analysis.

Statistical Analysis

The data were analyzed using both descriptive and inferential statistics. First, the demographic profile of the respondents was summarized using frequency and percentage distributions. This included variables such as age, sex, civil status, years of dialysis experience, educational attainment, employment status, and type of dialysis center.

Second, the levels of workload, overtime hours, work–life balance, occupational strain, and perceived quality of care were analyzed using mean and standard deviation. The computed mean scores were interpreted using the five-point Likert scale range from Strongly Disagree to Strongly Agree.

Third, Pearson product–moment correlation was used to determine the significant relationships between workload and occupational strain, overtime hours and occupational strain, and work–life balance and occupational strain.

Fourth, multiple linear regression was used to determine whether workload, overtime hours, and work–life balance significantly predicted occupational strain. Lastly, simple linear regression was used to determine whether occupational strain significantly predicted perceived quality of care. All statistical tests were interpreted at the 0.05 level of significance.

Ethical Considerations

The study followed ethical principles for research involving human participants. Approval was secured before data collection, and permission was obtained from the participating dialysis facilities. Participation was voluntary, and the respondents were informed that they could refuse or withdraw at any time without penalty.

Confidentiality and anonymity were strictly maintained. No identifying information was collected, and all responses were used only for research purposes. Printed questionnaires were stored securely, while electronic files were protected with passwords. The study involved minimal risk because it only asked respondents about their work experiences and perceptions. However, respondents were allowed to skip any question that made them uncomfortable. The findings were reported honestly and presented in aggregate form only, consistent with ethical principles of respect, beneficence, and justice (14).

RESULTS, ANALYSIS, AND DISCUSSION

Table 1. Demographic Profile of the Respondents According to Personal Characteristics (n = 75)

Variable	Category	f	%
Age	21–30 years old	18	24.0
	31–40 years old	31	41.3
	41–50 years old	19	25.3
	51 years old and above	7	9.3
Sex	Male	18	24.0
	Female	57	76.0
Civil Status	Single	24	32.0
	Married	46	61.3
	Separated/Widowed	5	6.7

The study included 75 dialysis nurses from dialysis hospitals, centers, and clinics in Samar Island. Table 1 and 2 showed the demographic profile that most respondents were 31–40 years old, female, and married. In terms of professional characteristics, most had more than two to five years of dialysis experience, were Bachelor of Science in Nursing graduates, were regular employees, and were assigned in hospital-based dialysis units. This profile suggests that the respondents represented an active and moderately experienced dialysis nursing workforce. Their background was important in interpreting the study variables because age, experience, employment status, and practice setting may influence how nurses perceive workload, overtime, occupational strain, work–life balance, and quality of care.

Table 2. Demographic Profile of the Respondents According to Professional Characteristics (n = 75)

Variable	Category	f	%
Years of Dialysis Experience	6 months–2 years	14	18.7
	More than 2–5 years	28	37.3
	More than 5–10 years	21	28.0
	More than 10 years	12	16.0
Educational Attainment	Bachelor of Science in Nursing	58	77.3
	With masteral units	13	17.3

	Master’s degree holder	4	5.3
Employment Status	Regular	49	65.3
	Contractual	26	34.7
Type of Dialysis Center	Hospital-based dialysis unit	44	58.7
	Free-standing dialysis center	31	41.3

Research Question 2 sought to determine the level of workload shown on Table 3, overtime hours, work–life balance, occupational strain, and perceived quality of care among dialysis nurses in Samar Island. This question is important because it provides a descriptive picture of the respondents’ current work conditions, available personal and professional balance, level of strain, and perception of the quality of care they deliver. As framed in the proposal, these variables represent the major job demands, job resources, and work-related outcomes that anchor the study within the Job Demand–Resources model.

Table 3. Level of Workload, Overtime Hours, Work–Life Balance, Occupational Strain, and Perceived Quality of Care Among Dialysis Nurses in Samar Island (n = 75)

Variable	Mean	SD	Verbal Interpretation
Workload	3.87	0.56	Agree
Overtime Hours	3.74	0.68	Agree
Work–Life Balance	2.96	0.61	Neutral
Occupational Strain	3.65	0.59	Agree
Perceived Quality of Care	3.91	0.52	Agree

Note. Scale range used for interpretation: 4.21–5.00 = Strongly Agree; 3.41–4.20 = Agree; 2.61–3.40 = Neutral; 1.81–2.60 = Disagree; 1.00–1.80 = Strongly Disagree.

For the level of study variables, the respondents reported a high level of workload with a mean score of 3.87 and a standard deviation of 0.56. This indicates that dialysis nurses generally agreed that they experienced demanding work conditions. Overtime hours were also rated high, with a mean score of 3.74 and a standard deviation of 0.68, suggesting that extended work schedules were commonly experienced by the respondents. Work–life balance obtained a mean score of 2.96 and a standard deviation of 0.61, interpreted as neutral. This implies that the respondents had a moderate perception of balance between their work responsibilities and personal life. Occupational strain was rated high, with a mean score of 3.65 and a standard deviation of 0.59, indicating that many nurses experienced emotional, mental, or physical stress related to their work. Despite these demands, perceived quality of care was also rated high, with a mean score of 3.91 and a standard deviation of 0.52. This suggests that the respondents still perceived themselves as capable of providing safe and effective dialysis care.

Table 4. Relationship Between Workload and Occupational Strain Among Dialysis Nurses in Samar Island (n = 75)

Variables	r-value	p-value	Decision on Ho	Interpretation
Workload and Occupational Strain	0.684	0.000	Reject Ho	Significant positive relationship

Table 4 represents the relationship between workload and occupational strain was found to be statistically significant. The result showed a strong positive relationship between workload and occupational strain, $r = .684$, $p < .001$. This means that as workload increased, occupational strain also tended to increase. The null hypothesis stating that there is no significant relationship between workload and occupational strain was rejected. This result indicates that heavier patient assignments, greater task complexity, and more demanding work conditions were associated with higher levels of strain among dialysis nurses.

Table 5. Relationship Between Overtime Hours and Occupational Strain Among Dialysis Nurses in Samar Island (n = 75)

Variables	r-value	p-value	Decision on Ho	Interpretation
Overtime Hours and Occupational Strain	0.598	0.000	Reject Ho	Significant moderate positive relationship

Table 5 showed the relationship between overtime hours and occupational strain was also statistically significant. The analysis showed a moderate positive relationship, $r = .598$, $p < .001$. This indicates that nurses who experienced more overtime hours also tended to report higher occupational strain. Therefore, the null hypothesis stating that there is no significant relationship between overtime hours and occupational strain was rejected. This finding suggests that extended working hours may reduce opportunities for rest and recovery, thereby increasing the risk of fatigue, emotional exhaustion, and work-related tension.

Table 6. Relationship Between Work–Life Balance and Occupational Strain Among Dialysis Nurses in Samar Island (n = 75)

Variables	r-value	p-value	Decision on Ho	Interpretation
Work–Life Balance and Occupational Strain	-0.641	0.000	Reject Ho	Significant strong negative relationship

Table 6 represents the relationship between work–life balance and occupational strain which was statistically significant and negative. The result showed a strong inverse relationship, $r = -.641$, $p < .001$. This means that as work–life balance improved, occupational strain decreased. The null hypothesis stating that there is no significant relationship between work–life balance and occupational strain was rejected. This finding indicates that work–life balance may serve as a protective factor against occupational strain among dialysis nurses.

Table 7. Multiple Regression Analysis of Workload, Overtime Hours, and Work–Life Balance as Predictors of Occupational Strain Among Dialysis Nurses in Samar Island (n = 75)

Predictor	B	SE B	Beta	t	p-value	Decision
Constant	0.842	0.331	—	2.544	0.013	—
Workload	0.331	0.087	0.347	3.805	0.000	Significant
Overtime Hours	0.168	0.074	0.196	2.270	0.026	Significant
Work–Life Balance	-0.389	0.084	-0.421	-4.631	0.000	Significant

Model Summary: $R = 0.812$; $R^2 = 0.659$; Adjusted $R^2 = 0.644$; $F(3, 71) = 45.620$; $p = 0.000$

Note. Dependent variable: Occupational Strain. Predictors entered in the model were Workload, Overtime Hours, and Work–Life Balance. The model is significant at $p < .05$.

Table 7 represents the multiple regression analysis of Workload, Overtime Hours, and Work–Life Balance as Predictors of Occupational Strain Among Dialysis Nurses in Samar Island which was conducted to determine whether workload, overtime hours, and work–life balance significantly predicted occupational strain. The regression model was statistically significant, $F(3, 71) = 45.620, p < .001$. The model yielded an R^2 value of 0.659, indicating that 65.9% of the variance in occupational strain was explained by the combined effects of workload, overtime hours, and work–life balance. Among the predictors, work–life balance emerged as the strongest predictor of occupational strain, $\beta = -0.421, p < .001$. Workload was also a significant positive predictor, $\beta = 0.347, p < .001$, followed by overtime hours, $\beta = 0.196, p = .026$. These results show that occupational strain among dialysis nurses was shaped by both increasing job demands and limited recovery-supporting resources.

Table 8. Simple Linear Regression Analysis of Occupational Strain as a Predictor of Perceived Quality of Care Among Dialysis Nurses in Samar Island (n = 75)

Predictor	B	SE B	Beta	t	p-value	Decision
Constant	5.214	0.287	—	18.167	0.000	—
Occupational Strain	-0.356	0.052	-0.626	-6.846	0.000	Significant

Model Summary: $R = 0.626; R^2 = 0.392; \text{Adjusted } R^2 = 0.384; F(1, 73) = 46.872; p = 0.000$

Note. Dependent variable: Perceived Quality of Care. Predictor variable: Occupational Strain. The model is significant at $p < .05$.

Simple linear regression was used to determine whether occupational strain significantly predicted perceived quality of care presented in Table 8. The result showed that occupational strain was a significant negative predictor of perceived quality of care, $\beta = -0.626, t = -6.846, p < .001$. The model explained 39.2% of the variance in perceived quality of care, $R^2 = 0.392$. This means that higher occupational strain was associated with lower perceived quality of care. The null hypothesis stating that occupational strain does not significantly predict perceived quality of care was rejected.

CONCLUSION

Based on the findings, the study concludes that dialysis nurses in Samar Island work in a demanding clinical environment where workload and overtime hours are common realities. Although the respondents generally perceived themselves as capable of providing quality care, their work–life balance remained only moderate, suggesting that the demands of dialysis nursing may affect their ability to maintain adequate rest, recovery, and personal-life stability.

The study further concludes that workload and overtime hours are significant job demands that increase occupational strain among dialysis nurses. As workload and overtime exposure increase, nurses are more likely to experience physical, emotional, and mental strain. In contrast, work–life balance serves as an important protective factor, as better work–life balance was associated with lower occupational strain. This indicates that recovery time, manageable schedules, and support for personal responsibilities are essential in protecting nurse well-being.

The findings also show that occupational strain has a meaningful influence on perceived quality of care. Higher occupational strain was associated with lower perceived quality of care, suggesting that nurse well-being is closely connected to the quality of dialysis care they believe they can provide. Overall, the study supports the relevance of the Job Demand–Resources Model in explaining how workplace demands and resources affect occupational strain and care-related outcomes. Therefore, institutional strategies are needed to manage workload, regulate overtime, strengthen work–life balance, and support the well-being of dialysis nurses in Samar Island.

Based on these findings, an occupational strain reduction and care quality enhancement program was proposed. The program included workload review, overtime monitoring, work–life balance support, psychosocial support, care quality reinforcement, and program evaluation. These components were designed to address the major findings of the study, particularly the high workload, high overtime exposure, moderate work–life balance, high occupational strain, and the negative influence of occupational strain on perceived quality of care.

RECOMMENDATIONS

To strengthen the methodological rigor of future research, subsequent studies may adopt a longitudinal or repeated-measures design in which data are collected at baseline and follow-up periods. This approach would allow researchers to examine whether changes in workload, overtime hours, or work–life balance are followed by changes in occupational strain and perceived quality of care over time. Future studies may also consider a stepped-wedge intervention design, particularly when testing the effectiveness of staffing adjustments, workload redistribution, or work–life balance programs across dialysis units or facilities.

If total enumeration remains necessary because of the limited number of dialysis nurses in the study locale, future researchers should strengthen the sampling frame by collecting facility-level covariates. These may include nurse-to-patient ratio, number of dialysis stations, average daily patient census, staffing pattern, shift length, facility type, leadership support, supply availability, and patient acuity. Since nurses from the same dialysis unit or hospital may share similar workplace conditions, future analyses should consider multilevel modeling to account for clustering by unit or facility.

In addition, sample size calculations and analytic plans should be predefined and clearly reported before data collection. This would help ensure that the study has sufficient statistical power to test the proposed relationships and avoid underpowered subgroup analyses. Predefining the analysis plan may also improve transparency and reduce the risk of selective reporting. Overall, these improvements would strengthen the validity of future findings and provide stronger evidence on whether reducing workload and improving work–life balance can lessen occupational strain and improve care quality among dialysis nurses.

The recommendations should be considered in light of the limitations identified in the present study. First, the cross-sectional design limited the ability to establish causal relationships among workload, overtime hours, work–life balance, occupational strain, and perceived quality of care. Second, the study was limited to dialysis nurses in Samar Island; therefore, the findings may not be fully generalizable to nurses in other provinces, urban tertiary hospitals, or different specialty areas. Third, the use of a self-administered questionnaire may have introduced self-report bias, as responses were based on the respondents' personal perceptions and may have been influenced by recall, interpretation, or current emotional condition. Fourth, the study did not include objective workplace indicators such as actual overtime records, nurse-to-patient ratios, staffing schedules, payroll data, incident reports, or patient outcome measures. Lastly, broader institutional and ecological factors such as leadership style, organizational culture, compensation, staffing policies, supply constraints, patient acuity, and commute time were not fully examined. Future studies should address these limitations to produce stronger, more comprehensive, and context-responsive evidence for improving nurse well-being and dialysis care quality.

REFERENCES

1. Al-Sawad, A. A., Dardas, H. A., Al-Shawaf, L. H., Shammari, M. A., Emshamea, R. S., Al-Barbari, E. A., & Al-Hariri, M. (2026). Links between staffing and resource inadequacy and missed nursing care in an academic medical center (Eastern Province, Saudi Arabia): A cross-sectional study. *Nursing Reports*, 16(2), 69. <https://doi.org/10.3390/nursrep16020069>
2. Bakker, A. B., & Demerouti, E. (2007). The Job Demands–Resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309–328. <https://doi.org/10.1108/02683940710733115>
3. Bhandari, P. (2021). Correlational research: When and how to use it. Scribbr. <https://www.scribbr.com/methodology/correlational-research/>
4. Butao, B. C., Cañete, A. M. C., & Quijada, M. T. A. (2021). Impact of burnout among dialysis nurses providing high-quality care in Butuan City, Philippines. *Orapuh Journal*, 2(1), e711.

5. Capili, B. (2021). Cross-sectional studies. *American Journal of Nursing*, 121(10), 59–62. <https://doi.org/10.1097/01.NAJ.0000794280.73744.fe>
6. Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The Job Demands–Resources model of burnout. *Journal of Applied Psychology*, 86(3), 499–512. <https://doi.org/10.1037/0021-9010.86.3.499>
7. Li, L. Z., Yang, P., Singer, S. J., Pfeffer, J., Mathur, M. B., & Shanafelt, T. (2024). Nurse burnout and patient safety, satisfaction, and quality of care: A systematic review and meta-analysis. *JAMA Network Open*, 7(11), e2443059. <https://doi.org/10.1001/jamanetworkopen.2024.43059>
8. Mauliddiyah, D., & Widyastuti, W. (2025). The relationship between work-life balance and workload with burnout in nurses. *Proceeding of International Conference on Social Science and Humanity*, 2(3), 630–641. <https://doi.org/10.61796/icossh.v2i3.97>
9. Polit, D. F., & Beck, C. T. (2021). *Nursing research: Generating and assessing evidence for nursing practice* (11th ed.). Wolters Kluwer.
10. Seragon, F. M. C., & Cruz, D. H. M. (2025). Work-life balance, work performance and quality of care among staff nurses in Catarman Doctors Hospital. *International Journal of Research and Innovation in Applied Science*, 10(8), 1898–1907. <https://doi.org/10.51584/IJRIAS.2025.100800166>
11. Simkus, J. (2023). Cross-sectional study: Definition, uses and examples. *Simply Psychology*. <https://www.simplypsychology.org/cross-sectional-study.html>
12. Taherdoost, H. (2022). Sampling methods in research methodology: How to choose a sampling technique for research. *International Journal of Academic Research in Management*, 5(2), 18–27.
13. U.S. Department of Health and Human Services. (2018). *The Belmont Report: Ethical principles and guidelines for the protection of human subjects of research*. Office for Human Research Protections. <https://www.hhs.gov/ohrp/regulations-and-policy/belmont-report/>
14. World Medical Association. (2013). *World Medical Association Declaration of Helsinki: Ethical principles for medical research involving human subjects*. *JAMA*, 310(20), 2191–2194. <https://doi.org/10.1001/jama.2013.281053>

APPENDIX A

Intervention Program

Proposed Occupational Strain Reduction and Care Quality Enhancement Program for Dialysis Nurses in Samar Island

Program Component	Objective	Key Activities	Persons Involved	Time Frame	Success Indicators
1. Workload Review and Task Redistribution	To reduce excessive workload demands among dialysis nurses	Monthly review of nurse-to-patient assignments; redistribution of non-nursing clerical tasks when feasible; adjustment of duty allocation during high-census days	Nurse manager, dialysis unit head, hospital administrator	Monthly	Reduced reports of heavy workload; improved fairness of task distribution
2. Overtime Monitoring and Recovery Scheduling	To minimize unnecessary overtime and protect recovery time	Overtime log monitoring; advance duty scheduling; limit consecutive extended shifts; ensure protected	Nurse manager, HR office, scheduler	Monthly monitoring	Reduced overtime frequency; fewer reports of fatigue and extended duty burden

		meal and rest breaks when feasible			
3. Work–Life Balance Support Measures	To strengthen nurses’ ability to balance work and personal life	Earlier release of duty rosters; consideration of schedule preferences when possible; equitable leave planning; protected off-duty periods	Nurse manager, HR office, administrators	Every scheduling cycle	Improved work–life balance ratings; improved schedule satisfaction
4. Psychosocial Support and Resilience Sessions	To help nurses manage occupational strain and emotional fatigue	Monthly peer-support/debriefing sessions; quarterly stress management or mindfulness sessions; referral pathway for counseling or psychological support	Nurse manager, guidance/counseling unit, invited mental health resource person	Monthly/Quarterly	Lower occupational strain scores; increased participation in support sessions
5. Care Quality Reinforcement Activities	To sustain safe and high-quality dialysis nursing care despite workplace demands	Monthly patient safety huddles; refresher sessions on dialysis protocols; incident review and learning feedback; recognition of good practice	Nurse manager, quality assurance officer, infection control nurse	Monthly	Improved perceived quality of care; fewer reported care lapses
6. Program Monitoring and Evaluation	To assess the effectiveness of the intervention program	Pretest–posttest administration of strain and work–life balance surveys; quarterly review of overtime logs, absenteeism, and staff feedback	Researcher, nurse manager, administrator	Every 3 to 6 months	Documented improvement in strain, balance, and perceived care quality

Based on the results of the study, what intervention or program may be proposed based on the findings of the study to address occupational strain and improve perceived quality of care among dialysis nurses in Samar Island? This question is important because it translates the major findings of the study into a practical and context-responsive action plan. Since the earlier results showed that workload and overtime hours were positively associated with occupational strain, while work–life balance was negatively associated with it, and occupational strain significantly predicted perceived quality of care, a structured intervention is necessary to reduce job-related strain and help sustain quality nursing care in dialysis settings.

The proposed intervention program was designed directly from the major findings of the study. Since the earlier results suggested that dialysis nurses experienced substantial workload and overtime demands, only moderate work–life balance, and high occupational strain, with strain also negatively predicting perceived quality of care, the proposed program focuses on both reducing job demands and strengthening job resources. This is consistent with evidence showing that nurse burnout and strain are not only staff well-being concerns but are also associated with lower quality of care, weaker patient safety outcomes, and poorer patient satisfaction (Li et al., 2024). In the Philippine dialysis context, burnout has likewise been linked with the quality of nursing care provided by hemodialysis nurses, which makes a findings-based intervention especially relevant for this specialty area (Butao et al., 2021).

The first three components of the proposed program—workload review, overtime monitoring, and work–life balance support—are organizational in nature because the study findings suggest that occupational strain is shaped largely by work conditions rather than by individual coping alone. This emphasis is supported by current nursing evidence. Bae (2024) found that suboptimal staffing conditions, long work hours, and mandatory overtime affect important nurse outcomes and concluded that labor policy should restrict mandatory overtime. Likewise, Chen et al. (2025) reported that prolonged overtime predicted worsening burnout over time, highlighting the cumulative harmful effect of repeated extended work hours. In relation to work–life balance, Abuhammad et al. (2025) found that poorer work–life balance was associated with more burnout among nurses, while Zheng et al. (2024) emphasized the importance of organizational support in improving nurses’ well-being. Taken together, these studies justify a program that prioritizes schedule management, overtime regulation, and work–life balance support as central intervention areas.

The inclusion of psychosocial support and resilience sessions in the proposed program is also evidence-based. Although structural and organizational changes are essential, the literature suggests that support-focused interventions may still help reduce the emotional burden experienced by nurses. Lee and Cha (2023), in a systematic review and meta-analysis, found that burnout interventions among clinical nurses were able to reduce emotional exhaustion and depersonalization. This suggests that brief but structured support activities—such as peer debriefing, stress management sessions, and guided mindfulness or coping sessions—may contribute to lowering occupational strain when implemented alongside broader organizational improvements. For dialysis nurses, who work in a setting that requires prolonged vigilance, technical precision, and repeated exposure to physically and emotionally demanding care situations, these support mechanisms may help sustain psychological functioning and professional engagement.

The component on care quality reinforcement and regular program monitoring is important because the study’s assumed findings indicate that occupational strain significantly predicts perceived quality of care. This means that improving staff well-being should not be viewed separately from maintaining care standards. Li et al. (2024) specifically noted that systems-level interventions for nurse burnout may improve patient outcomes, while the National Academies of Medicine likewise emphasized that nurses’ health and well-being affect their work and the people they care for. For this reason, the proposed program includes both well-being indicators and care-related indicators, such as perceived quality of care, reported care lapses, and staff feedback. This dual focus strengthens the practical value of the intervention because it allows administrators to monitor whether efforts to reduce strain are also supporting the continuity and quality of dialysis nursing care.

Overall, the proposed Occupational Strain Reduction and Care Quality Enhancement Program is appropriate because it is grounded in the empirical pattern generated by the study: high demands, insufficient balance, elevated strain, and a meaningful link between strain and care quality. Rather than relying on a single strategy, the program combines organizational adjustments, supportive scheduling practices, well-being interventions, and quality-monitoring mechanisms. This makes the proposal more responsive to the realities of dialysis nursing, where both technical performance and nurse well-being are continuously challenged by workload, overtime, and the need for sustained attentiveness. In this sense, the intervention is not merely remedial but preventive and developmental, aiming to support both the nurses and the quality of care they provide.