Orapuh Journal

Impact of burnout among dialysis nurses providing high-quality care in Butuan City, The Philippines

Butao, M. B. C.[1], Arquiola, D. G.[2], Talidro, M. J.[3], Donoso, B. C. K.[4], Mongado, S. R. L.[5], Funcion, N. P.[6], Gumanoy, A. D.[7], & Fadare, A. S.[8]

[1,2,3,4,5,6] *Faculty of Nursing, Father Saturnino Urios University, Butuan City, The Philippines*
[7,8] *College of SPEAR, Mindanao State University, Marawi, The Philippines.*

A B S T R A C T

Introduction

Hemodialysis (HD) nurses are prone to multiple and more overt forms of stress that could eventually lead to burnout. Burnout has detrimental effects on affected nurses and may jeopardize patient welfare and quality of treatment.

Purpose

The purpose of this study was to assess burnout among nurses working at the dialysis centers of Butuan City, The Philippines and its impact on providing high-quality nursing care to their patients.

Materials and methods

The researchers surveyed the six hemodialysis centers in Butuan City, Agusan Del Norte, The Philippines. The study participants were forty-four (44) hemodialysis nurses. The researchers used a four-part questionnaire to examine burnout and nursing care quality. The questionnaire was used to assess the impact of burnout on hemodialysis nurses and the quality of nursing care. The parameters used included the extent of interpersonal and intrapersonal factors that modify burnout and the relationship between burnout and nursing care quality.

Results

The results showed that most of the respondents were between the ages of 26 and 30 years (29.55%), female (70.45%), single (65.90%), and have 1-3 years of hemodialysis work experience (45.5%). These demographic characteristics of the respondents implied that female HD nurses outnumbered their male counterparts in Butuan City. The results also indicated that there was no statistically significant difference between the intrapersonal and interpersonal factors of burnout and the respondents' demographic profiles ($p > 0.05$). There was, also, no significant association between the quality of nursing care and reduced personal achievement ($r = 0.00042$). However, there was a significant association between the quality of nursing care and emotional exhaustion and depersonalization ($r = 0.517$ and $r = 0.419$, respectively).

Conclusions

Burnout has a significant impact on the quality of nursing care among hemodialysis nurses of Butuan City, The Philippines. HD nurses must focus on developing workplace practices that will help to reduce burnout and empower them to foster healthy connections with their co-workers. This provides a peaceful and productive work environment that may help ease tensions and burnout.

INTRODUCTION

Burnout is caused by prolonged exposure to high job demands, which are not met with adequate resources to compensate for their effects (Hu et al., 2017). It is a critical issue affecting the nursing labor force due to significant individual suffering and high rates of attendant turnover. It can be identified by a loss of energy, which frequently occurs when physically and mentally "exhausted" (Portoghese et al., 2015).

Hemodialysis staff (nurses and technicians) are subjected to stress and burnout, just like other healthcare workers (Karkar et al., 2015). There is prolonged and repeated nurse-patient interaction in hemodialysis throughout the patient's life, usually done three times per week for four hours.

Burnout among hemodialysis nurses will severely impact the quality of nursing care offered to patients and their families, destabilizing workplace relationships and encouraging negative sentiments toward patients, the job, and the organization. (Aiken et al., 2011). Hence, burnout will decrease the service quality, resulting in adverse outcomes for patients and medical errors (Bogaert et al., 2013).

Nurses make up most of the hospital workforce worldwide, and they perform 50 to 80 percent more than all other health care sectors combined (Shoorovazi et al., 2016). Job burnout among nursing staff is about 13% to 27%, significantly higher than the general population because of the demanding nature of occupational duties and high levels of stress (Ferreira & De Lucca, 2015). The number of patients having hemodialysis as a renal replacement treatment has been increasing, but this is compounded by the global lack of nurses due to an aging population and a growing knowledge of the demanding care profession.

Numerous studies were conducted to explore burnout among hemodialysis nurses (Wang et al., 2013). However, only a few studies have been conducted in The Philippines to investigate burnout syndrome among nurses. Furthermore, in 2017, 20% of the Filipino population was diagnosed with chronic kidney disease, with 70,000 patients receiving dialysis (Magtubo, 2017).

Dore (2018) found out that burnout was more common among older Registered Nurses (RNs) (30 years and above). It discovered that emotional exhaustion increases with age due to a lack of energy, which, in turn, reduces extraversion (Urquiza et al., 2017).

According to Marchand et al. (2018), age is a biological marker of deteriorating body resistance and adaptation to stressors in older generations. However, older workers' adaptation to stressors continues to decline, increasing the likelihood of burnout.

Women appear to have higher levels of burnout than men. Nonetheless, the difference seems to be more significant for emotional exhaustion than depersonalization (Marchand et al., 2018).

Hayes (2015) predicted that most of his respondents would be female, and he was correct: 90.9percent of his total respondents were female. Furthermore, female nurses have reported having significantly higher overall job stress than their male counterparts in their workplace. Although women have more opportunities, men and women have similar burnout scores. Adekola (2010) found no significant difference in burnout among both sexes in their study.

Moreover, The Philippines has been reported as one of the countries where low wages, increased workload, and poor benefits encourage Filipino nurses to leave their home country (Marcus et al., 2014). Nurse migration is, of course, a significant source of concern for healthcare centers. A nurse's severe workload impacts the nurse and other nurses and health care providers in the nurse's work system. Nurses may have less time to assist other nurses due to understaffing. Due to a shortage of time, new nurses may receive insufficient training or supervision. Hence, this study aimed to explore the impact of burnout among dialysis nurses providing high-quality care in Butuan City, The Philippines.

MATERIALS AND METHODS

Research design

The descriptive-correlational research design was used in this study to investigate the burnout of dialysis center nurses and its impact on providing high-quality nursing care to their patients in Butuan City, The Philippines.

Sample Size and Sampling Techniques

All forty-four (44) nurses working in the six hemodialysis centers in Butuan City were used for this study.

Data Collection

A self-structured questionnaire designed with four sections was distributed among 44 hemodialysis nurses. The questionnaire was used to induce reliable answers from the nurses, including demographic profiles, the extent of interpersonal and intrapersonal factors that affect burnout, and the relationship between burnout and nursing care quality.

The questionnaire was distributed to 44 hemodialysis nurses working at the dialysis center and was retrieved immediately after the completion of filling.

The return rate was 100%.

Data Analysis

The data obtained from the study were presented in frequency tables and were analyzed using percentage and weighted mean.

The study's hypotheses were tested using Pearson correlation coefficient (r) and Chi-square test (χ^2).

RESULTS

The study results revealed the distribution of the respondents according to the centers where 44 hemodialysis nurses were working. Most of the nurses were from Center C (34.1%), while Centers A and E had the lowest number of respondents (9.1%) **(Table 1)**.

Table 1:
Distribution of the respondents according to their center

HD Center	Number of hemodialysis nurses (f)	Percentage (%)
A	4	9.1
B	7	15.9
C	15	34.1
D	8	18.2
E	4	9.1
F	6	13.6
TOTAL	**44**	**100**

The demographic data of the respondents revealed that most were female(70.45%), of the 26 – 30 years age group (29.55%), single 29 (65.90%), and had the experience of 1 – 3 years working in a hemodialysis center (45.5%) **(Table 2)**.

Table 2:
Demographic Profile Data

Age	Frequency	Percentage (%)
21-25	8	18.18
26-30	13	29.55
31-35	11	25.0
36-40	8	18.18
41-45	1	2.27
46-50	3	6.82
Total	**44**	**100**
Gender	**(f)**	**(%)**
Male	13	29.55
Female	31	70.45
Total	**44**	**100**
Civil Status	**(f)**	**(%)**
Single	29	65.90
Married	15	34.10
Separated	0	0
Widowed	0	0
Total	**44**	**100**
Length of Experience	**(f)**	**(%)**
3-6 months	6	13.6
7-11 months	1	2.3
1-3 years	20	45.5
4-6 years	8	18.2
7-10 years	8	18.2
11 years and above	1	2.3
Total	**44**	**100**

Table 3 presents the burnout of the respondents in terms of personality .

Table 3:
Causes of burnout in terms of personality traits

Indicator	Mean	Verbal Description
I am reserved.	4.023	Agree a little
I am generally trusting	4.295	Strongly Agree
I tend to be lazy	2.477	Disagree a little
I am relaxed and handle stress well	3.977	Agree a little
I have few artistic interests	3.636	Agree a little
Is outgoing, sociable	4.114	Agree a little
Tends to find fault with others.	2.114	Disagree a little
Does a thorough job	4.250	Strongly agree
Gets nervous easily	2.659	Neither agree nor disagree
Has an active imagination	3.705	Agree a little
Overall	**3.525**	**Agree a little**

Legend: 4.20-5.00 (SA), 3.40-4.19 (AL); 2.60-3.39 (N); 1.80 – 2.59 (DL);1.00 – 1.79 (SD)

The respondent's burnout Mean in terms of Interpersonal relationships was found to be 4.48, classified as 'strongly agree', while the overall total weighted means (4.30) was 'strongly Agree' (Table 4).

Table 4.
Respondents' burnout in Terms of Co-Worker Relationship

Co-Worker Relationship	Mean	Verbal Description
I have a great and sound relationship with my co-nurses.	4.4773	Strongly Agree
My co-nurses and I support and motivate each other emotionally and psychologically.	4.364	Strongly Agree
I get affected if there are any conflicts between nurses, physicians, or within the administration.	3.773	Somewhat Agree
My colleagues and I will directly resolve any conflicts or issues that will arise.	4.250	Strongly Agree
I have a great and sound relationship with the administration.	4.318	Strongly Agree
I have a great and sound relationship with the nephrologist.	4.455	Strongly Agree
I know how to facilitate the orders of the nephrologist	4.591	Strongly Agree
Me and my colleagues prompt to collaborate whenever making decisions to provide care.	4.591	Strongly Agree
If I speak up about concerns and problems, the management will listen and takes immediate action.	3.477	Somewhat Agree
I have a great and sound relationship with the technician.	4.500	Strongly Agree
Overall	**4.280**	**Strongly Agree**

Legend: 4.20-5.00 (SA), 3.40-4.19 (AL); 2.60-3.39 (N); 1.80 – 2.59 (DL); 1.00 – 1.79 (SD)

The Mean response on burnout of HD nurses according to emotional exhaustion was 2.98, classified as 'sometimes', while the overall total weighted means (2.48) was 'seldom' (Table 5).

Table 5:
Respondents burnout according to Emotional Exhaustion

Indicator	Mean	Verbal Description
My work makes me feel emotionally drained.	2.523	Seldom
After my duty hours, I am exhausted.	2.977	Sometimes
Getting up in the morning makes me feel fatigued/ tired already.	2.795	Sometimes
I feel too much stress when working with too many people	2.591	Seldom
Being a dialysis nurse has left me feeling drained or burned out.	2.250	Seldom
My work has been a source of frustration for me.	1.636	Never
I feel like I'm putting too much effort into my work.	2.909	Sometimes

It's difficult for me to work with patients.	1.659	Never
There are times, I am unable to deal with a problem or difficult situation.	2.955	Sometimes
Overall	**2.477**	Seldom

Legend: 4.20-5.00 *Always*, 3.40-4.19 *Often*; 2.60-3.39 *Sometimes*; 1.80 – 2.59 *Seldom*; 1.00 – 1.79 *Never*

The majority of the respondents' burnout Mean according to reduced personal achievement was found out to be 2.61, classified as 'seldom', while the overall total weighted Mean (1.84) was 'seldom' (Table 6).

Table 6:
Distribution of burnout according to Reduced Personal Achievement

Indicator	Mean	Verbal Description
When treating my patients, I'm not showing any emotional warmth/ see them as impersonal objects.	2.045	Seldom
Cultivate a more heartless/uncaring approach towards others to accomplish all of my nursing assignments.	1.523	Never
I fear that the work is hardening emotionally, which could have a detrimental effect on the patient's treatment.	2.614	Seldom
What happens to the patients is unimportant to me.	1.273	Seldom
I make the patient feel they are to blame for their problems.	1.750	Seldom
Overall	1.841	Seldom

Legend: 4.20-5.00 *Always*, 3.40-4.19 *Often*; 2.60-3.39 *Sometimes*; 1.80 – 2.59 *Seldom*; 1.00 – 1.79 *Never*

The burnout's impact on the quality of nursing care revealed (Mean 4.93) 'Always', while the overall total weighted Mean (3.67) was 'often' (Table 7).

Table 7:
Impact on the quality of nursing care

Indicator	Mean	Verbal Description
I get easily nervous, which I believe could cause an error that might adversely affect patients' treatment.	2.636	Sometimes
I feel unmotivated to do the tasks if there are unpredictable staffing and scheduling.	2.545	Seldom
It is hard for me to render satisfying care if the nurse-patient ratio exceeds 1:4	2.568	Seldom
I have no motivation to work if I lose a patient with whom I developed a close relationship.	1.773	Never
Feeling helpless in the case of a patient who fails to improve the adherence towards treatment.	2.523	Seldom
Patient safety is always my priority despite being worn out when dealing with the negative attitudes of patients.	4.932	Always
I always make sure that I am always focused on my work despite the conflicts between nurses, physicians, or within the administration.	4.909	Always
Whenever a patient personally requested me to be their nurse, I feel a sense of accomplishment, and	4.545	Always

it feels like my hard work has been paid off.

My self-esteem escalates as the patient praises me for a job well done, considering the minor mistakes I've made.	4.523	Always
I feel unconfident to offer care when I notice that the patient is concerned that I may make a medical error.	3.068	Sometimes
I am unable to complete other nursing tasks mainly due to work overload.	2.682	Sometimes
I strictly follow each phase of the medication administration process to avoid any potentially dangerous medication mistakes.	4.614	Always
I am determined in my work no matter how hard the situation is.	4.568	Always
I am weary if I make mistakes in the care I rendered.	3.909	Often
It is hard for me to deal with patients who don't know how to cooperate.	3.386	Sometimes
I get affected when my patient loses hope in terms of having dialysis.	3.000	Sometimes
I am satisfied with the care I always give despite the stressful environment that surrounds me.	4.159	Often
I feel guilty when I make errors in providing care	4.205	Always
I always look for ways to meet the needs of the patient despite having a high patient ratio.	4.523	Always
I don't limit myself to providing comprehensive care to the patients regardless of the multiple nursing tasks.	4.318	Always
Overall	**3.669**	**Often**

Legend: 4.20-5.00 *Always*, 3.40-4.19 *Often*; 2.60-3.39 *Sometimes*; 1.80 – 2.59 *Seldom*; 1.00 – 1.79 *Never*

There was no statistically significant difference between the intrapersonal and interpersonal factors of burnout and respondents' demographic profile (p>0.05). as shown (Table 8).

Table 8:
The significant difference between Intrapersonal and Interpersonal factors towards the demographic profile

Profile	Causes Of Burnout (Intra)	Result	Profile	Causes Of Burnout (Inter)	Result
Age	0.6290	Not significant	Age	0.0769	Not significant
Sex	0.8980	Not significant	Sex	0.5027	Not significant
Civil status	0.2153	Not significant	Civil status	0.0264	*significant
Length of experience	0.2993	Not significant	Length of experience	0.7896	Not significant

*Reject Ho1 if P-value < 0.05 level of significance

There was a significant association between the quality of nursing care and emotional exhaustion and depersonalization (r = 0.517 and r = 0.419, respectively). However, there was no significant association between the quality of nursing care and reduced personal achievement (r = 0.00042) (Table 9).

Table 9:
The significant relationship between the levels of burnout to the quality of nursing care

Levels of burnout	Quality of Nursing Care		Decision on Ho2	Conclusion
	Pearson r	*Critical value*		
Emotional Exhaustion	0.517	0.297	Reject	Significant
Depersonalization	0.419	0.297	Reject	**Significant**
Reduced Personal Achievement	0.00042	0.297	Cannot Reject	Not Significant

Correlation is significant if critical value (0.297) < computed value (Pearson rcoefficient)

DISCUSSION

In this present study, the demographic data of the respondents revealed that most were female (70.45%), of the 26–30-year age group (29.55%), single (65.90%), and had the experience of 1–3 years working in a dialysis center (45.5%). According to Ismail (2015), younger age is a predictor of emotional stress because older nurses are believed to have more experience dealing with challenging situations. Jean Piaget's cognitive development theory further explains that people at this stage could adapt to work or life and its requirements and demands because of the acquired knowledge, skills, and experiences. The nursing profession has been perceived as a feminine profession because women are considered the "natural caregivers" (Barlow, 2020). This started with introducing the Nightingale nursing training style in the mid-nineteenth century, which favored women over men in becoming nurses because of gender stereotypes and biases (Mao et al., 2021). According to Carrigan & Brooks (2016), countries like Jordan, New Zealand, The Philippines, and the United Kingdom have a female percentage ranging from 38% to 49%, which explains the dominance of female nurses.

The study of Dore (2018) showed that value and recognition are essential for RNs' work engagement, contentment, and retention; therefore, managers must give opportunities for RNs to be visible inside the organization and create or contribute to practice innovation.

In terms of personality traits, the factors that caused burnout were "I am generally trusting" and "I strongly agree" (Mean – 4.295), while the overall total was "I agree with a little" (weighted mean – 3.525). Nowadays, employees can often autonomously change, adapt, modify,

and tailor their jobs or how they perform them (Oldham & Hackman, 2010). Several scholars have argued that how a person's career unfolds is strongly affected by their values, personality characteristics, goals, and preferences (Savickas, 2013).

The results of this study suggests how hemodialysis nurses interact and work on the same projects is influenced by their level of trust in the workplace. They strive to find solutions to eradicate stress and burnout in their workplaces since they have many adverse effects on employee motivation and productivity. Trust can be defined as a psychological state comprising the intention to accept vulnerability based upon positive expectations of the preferences or behavior of another person (Perlaviciute & Steg, 2014).

The Mean response of burnout in terms of interpersonal relationships was found to be 4.48 (strongly agreed upon). The overall total weighted mean of 4.30 is also strongly agreed upon. A strong relationship with colleagues will enable a hemodialysis nurse to work at ease, considering increased work collaboration because of the risk of burnout. Tran et al. (2018) discussed how nurses should build and maintain positive relationships with others because this provides a peaceful and productive work environment. The ties were created to benefit both sides because of support and motivation, overcoming the challenges posed by their jobs. Molina-Mula & Gallo-Estrada (2020) emphasized that having a solid relationship manifested by hemodialysis nurses is a support system and provides the nurse with good psychological well-being.

The burnout of HD nurses, according to emotional exhaustion, was found to be 2.98 (Mean), classified as 'sometimes', while the overall total weighted mean of 2.48 meant 'seldom'. This result implied that hemodialysis nurses may sometimes feel exhausted considering the nature of their work. According to Shahdadi & Rahnama (2018) and Stavropoulou et al. (2017), the experience of hemodialysis involves complex, demanding, and specialized nursing care that includes dealing with highly technical machines and skills (inserting the catheter either IJV or AFV), establishing a therapeutic and interpersonal relationship because of the frequent visits for treatment, maintenance of physical and mental health, attention to functional limitations and psychological conditions of patients, integrating a palliative approach to patient care, and responding to each need through constant

encouragement and education. It clearly stated that each hemodialysis nurse's roles and responsibilities carry every day and somehow contribute to the feeling of being exhausted.

The majority of respondents' burnout according to reduced personal achievement was found to bs 2.61 (Mean) 'seldom', while the overall total weighted mean of 1.84 was also 'seldom'. Reduced Personal Achievement (RPA) is the negative self-evaluation of nurses that tends to develop a sense of inadequacy in their performance of providing nursing care or interventions necessary to the patient as there's a decline in competence and work productivity. Dore (2018) stated that a decreasing impression of personal success is the final stage of burnout and indicated a pessimistic self-assessment of one's work has a sense of incompetence and failure to produce tangible results.

The burnouts' impact on the quality of nursing care was revealed (Mean 4.93). Always, while the overall total weighted Mean of 3.67 is 'often'. According to Janssen et al. (2015), during dialysis sessions, patients' safety lays the foundations for high-quality care. No harm is done despite the feelings of being worn out in handling the patient's negative attitudes. Hemodialysis nurses' encounters with patients who are offensive, and abusive are one of the biggest challenges they face. They know the possibility of complications arising during dialysis treatments, so they remain composed to ensure the quality of treatment. Despite the patient's negative attitudes, they must inspire them and convey excitement during their treatments (Bojic et al., 2016).

As shown, there was no statistically significant difference between the intrapersonal and interpersonal factors of burnout and respondents' demographic profile (p>0.05). The civil status of the nurses showed a significant difference, as marital status appears to be a feature that can influence an individual's psychological state. According to Gama et al. (2014) in the study of Kiekkas et al. (2010), caring for hemodialysis patients has negative personal and familial consequences (ignoring children, inability to fulfill spouse's demands, failure to complete housekeeping activities, and professional interference with family tasks). Nurses who are not married (single or divorced) may have higher levels of emotional tiredness. The number of years of professional experience might be a stressor because of the lack of expertise associated with procedure routinization, work

overload, and the obligation to be empathically available for patients and families may make this group of nurses more apprehensive (Gama et al., 2014).

In addition, according to Duxbury and Higgins (2010), a significant body of research connects working spouses' parental obligations to the prevalence of work-family conflict. Parents appear to have more difficulty combining work and non-work activities than non-parents since they have more demands and less control over their time.

There was a significant association between the quality of nursing care and emotional exhaustion anddepersonalization (r = 0.517 and r = 0.419, respectively). However, there was no significant association between the quality of nursing care and reduced personal achievement (r = 0.00042). According to Ang et al. (2016) and Bilehsavar et al. (2017), burnout is significantly correlated with emotional exhaustion and depersonalization, while the negative correlation is with personal accomplishment. It means that when hemodialysis nurses are burned out, they are usually affected in emotional and psychological ways, in addition to their sense of diminished personal achievement.

CONCLUSIONS

In the light of the enumerated findings of this study, we conclude that the impact of burnout among the respondents on the quality of care cannot be overemphasized. Burnout has a significant impact on the quality of nursing care among hemodialysis nurses of Butuan City, The Philippines. HD nurses must focus on developeing workplace practices that will help to reduce burnout and empower them to foster healthy connections with their co-workers. This provides a peaceful and productive work environment that may help ease tensions and burn out.

Ethical Approval: Ethical approval was obtained from the ethical committee of Father Saturnino University, Butuan City.

Conflict of Interest: The authors declare no conflict of interest.

ORCID iDs:

[1,2,3,4,5,6,8] Nil identified

[7] Fadare, A.S. - 0000-0002-3444-4713

REFERENCES

Adekola, B. (2010). Gender differences in the experience of work burnout among university staff. *African Journal of Business Management*, 4(6), 886 – 889.

Aiken, L. H., Cimiotti, P.J., Sloane, M.D., Smit, L.H., Flynn, L., & Neff, F.D. (2011). The Effects of nurse staffing and nurse education on patient deaths in hospitals with different nurse work environments. *J Nurs Adm*. 9(12):1047-53.

Ang, S.Y., Dhaliwal, S.S., Ayre, T.C., Uthaman, T., Fong, K.Y., Tien, C.E., Zhou, H., & Della, P. (2016). Demographics and Personality Factors Associated with Burnout among Nurses in a Singapore Tertiary Hospital *Biomed Res Int*.69, 60 -184.

Barlow, K. (2020). Gendered Experiences of Nursing Job Demands and Resources [Master's thesis, Bowling Green State University]. OhioLINK Electronic Theses and Dissertations Center.

Bilehsavar, A., Nohesara, S., Najarzadegan, M., Molaei, P., Alavi, K., & Nadoushan, A. (2017). Investigation of personality traits in attending of Iran University of Medical Sciences and its relation with general health, quality of life and job burden. *Journal of Ardabil University of Medical Sciences*, 17(1), 90 - 103.

Bogaert, P., Kowalski, C., Weeks, S., & Clarke, S. (2013). The relationship between nurse practice environment, nurse work characteristics, burnout and job outcome and quality of nursing care: a cross-sectional survey. *International journal of nursing studies*, 50(12), 1667-1677.

Bojić, M., Bole U., & Bregar B. (2016). Frequency and characteristics of patient violence against healthcare providers in emergency and psychiatric care settings. *Slov Nurs Rev*.50, 308–15.

Carrigan, T. M. & Brooks, B. A. (2016). Q: How will we achieve 20% by 2020? A: Men in nursing. *Nurse Leader*, 14(2), 115-119.

Doré, C., Duffett-Leger, L., McKenna, M., Breau, M., & Dorais, M. (2018). Burnout and empowerment in hemodialysis nurses working in Quebec: A provincial survey.

Duxbury, L., Higgins, C., & Halinski, M. (2015). Identifying the antecedents of work-role overload in police organizations. *Criminal Justice and Behavior, 42*(4), 361–381.

Ferreira, N. D. N. & Lucca, S. R. D. (2015). Burnout syndrome in nursing assistants of a public hospital in the state of São Paulo. Revista brasileira de Epidemiologia, 18, 68-79.

Gama, G., Barbosa, F. & Vieira, M. (2014) Personal determinants of nurses' burnout in end-of-life care. Eur. J. CancerCare.18, 527–533.

Hayes, B. (2015). Job satisfaction, stress, and burnout in hemodialysis nurses. J Nurs Manag. 23(5):588-98.

Hu, Q., Schaufeli, W. B. & Taris, T. W. (2017). How are changes in exposure to job demands and job resources related to burnout and engagement? A longitudinal study among Chinese nurses and police officers. Stress Health. 3, 631–644.

Ismail, A., Saudin, N., Ismail, I., Abu Samah, A. J., Bakar, R.A. & Aminudin, N.N. (2015). Effect of workplace stress on job performance. Economic Review - Journal of Economics and Business, 13, (1) 45-57.

Janssen, I., Gerhardus, A., von Gersdorff, G., Baldamus, C., Schaller, M., Barth, C. & Scheibler, F. (2015). Preferences of patients undergoing hemodialysis– results from a questionnaire-based study with 4,518 patients. Patient preference and adherence, 9, 847-855.

Kiekkas, P., Spyratos, F. Lampa, E. Aretha, D. & Sakellaropoulos, G. (2010) Level and correlates of burnout among orthopaedic nurses in Greece. Orthop. Nurs.29, 203–209.

Magtubo, C. (2017). The state of kidney disease in the Philippines: Preventable, treatable, but lacking in Donors. MIMS Today.

Mao, A., Cheong, P. L., Van, I. K. & Tam, H. L. (2021). "I am called girl, but that doesn't matter"-perspectives of male nurses regarding gender-related advantages and disadvantages in professional development. BMC nursing, 20(1), 1-9.

Marchand, A., Blanc, M. & Beauregard, N. (2018). Do age and gender contribute to workers' burnout symptoms? Occupational Medicine, 68(6), 405–411.

Marcus, K., Quimson, G. & Short, S. D. (2014). Source country perceptions, experiences, and recommendations regarding

health workforce migration: A case study from the Philippines. Human Resources for Health.12 (1), 62 -73.

Molina-Mula, J. & Gallo-Estrada, J. (2020). Impact of Nurse-Patient Relationship on Quality of Care and Patient Autonomy in Decision-Making. Int J Environ Res Public Health. 17(3): 835.

Oldham, G. R. & Hackman, J. R. (2010). Not what it was and not what it will be: the future of job design research. J. Organ. Behav.31, 463–479.**Perlaviciute**, G. & Steg, L. (2014). Contextual and psychological factors shaping evaluations and acceptability of energy alternatives: integrated review and research agenda. *Renewable and Sustainable Energy Reviews*, *35*, 361-381.

Portoghese, I., Galletta, M., Coppola, R., Finco, G. & Campagna, M. (2015). Burnout and workload among health care workers: the moderating role of job control. Saf. Heal Work.4. 152–160.

Savickas, M. (2013). "Career construction theory and practice," in Career Development and Counseling: Putting Theory and Research to Work, 2ndEdn, eds S.D. Brown and R. W. Lent (Hoboken, NJ: Wiley), 42–70.

Shahdadi, H & Rahnama, M. (2018). Experience of Nurses in Hemodialysis Care: Phenomenological Study. Journal of Clinical Medicine 7(2),30.

Shoorovazi, M., Dalir, Z., Atefi, N., Tohidi.S. & Forouhari, S. (2016). The relationship between social well-being and job satisfaction in nurses. Scholars Research Library. 8(19), 410-416.

Stavropoulou, A., Grammatikopoulou, M., Rovithis, M., Kyriakidi, K., Pylarinou, A. & Markaki, A. (2017). Through the patients' eyes: The experience of end-stage renal disease patients concerning the provided nursing care. MDPI - Healthcare, 5(36), 1-11.

Tran, K. T., Nguyen, P. V., Dang, T., & Ton, T. (2018). The Impacts of the High-Quality Workplace Relationships on Job

Performance: A Perspective on Staff Nurses in Vietnam. Behavioral sciences (Basel, Switzerland), 8(12), 109-115.

Urquiza, J., Vargas, C., De la Fuente, E., Fernández- Castillo, R., & Cañadas-De la Fuente, G. (2017). Age as a risk factor for burnout syndrome in nursing professionals: a meta-analytic study. Res Nurs Health. 40(2):99-110.

Wang, X., Kunaviktikul, W. and Wichaikhum, O. (2013) Work Empowerment and Burnout among Registered Nurses in Two General Tertiary Hospitals. Journal of Clinical Nursing, 22, 2896-2903.