WORK–LIFE BALANCE DIMENSIONS AS PREDICTORS OF WORK STRESS IN HOSPITAL NURSES: A CROSS-SECTIONAL STUDY

Sagita Candra Puspitasari[1*]
[1]STIKES Arrahma Mandiri Indonesia
*Email: gitacandra2624@gamil.com

ABSTRACT

Background: The nursing profession has high physical and mental demands that can interfere with nurses' ability to maintain work–life balance (WLB), thus potentially increasing work stress. This study aims to analyze the relationship between WLB determinants and work stress levels in inpatient nurses at Prof. Dr. Soekandar Mojosari Regional General Hospital. Method: The study design used a cross-sectional approach with 84 respondents selected through purposive sampling. Instruments included the WIPL, PLIW, PLEW, and WEPL questionnaires, and work stress questionnaires. The analysis used the Spearman correlation test. Results: WIPL had a significant negative relationship with work stress (p = 0.000; r = –0.499), and PLIW also showed a significant negative relationship (p = 0.021; r = –0.235). WEPL had a strong and significant negative correlation (p = 0.000; r = –0.557), indicating that the more work supports personal life, the lower the nurses' stress levels. However, PLEW did not show a significant relationship (p = 0.246; r = –0.117). This condition indicates that personal life support, such as family comfort or social environment, is not enough to offset the high work pressure, so it does not have a direct impact on stress reduction. Conclusion: This study confirms that the imbalance between work demands and personal life is an important factor affecting work stress. Hospitals need to strengthen strategies to improve WLB through flexible scheduling, adequate rest time, and psychological support to reduce nurses' work stress.

1. INTRODUCTION

Nursing is a profession that carries a very demanding job and significant responsibilities, both physically and mentally. These responsibilities often make it difficult to maintain a balance between work and personal life, known as work-life balance (WLB). In some hospitals, nurses are found to be impatient, easily angered, speak rudely to patients and their families, and even make mistakes in their work, such as administering the wrong medication or being late in administering injections. This clearly contradicts the primary duty of nurses, which is to provide the best possible care to patients. The duties and responsibilities of a nurse are not easy. As professionals, nurses must be able to carry out their roles effectively, both when dealing with patients, their families, doctors, and other healthcare workers. This condition often causes nurses to experience stress at work.(1)

The nursing profession is known for its grueling workload. Nurses are required to

* **Author Correspondence: Sagita Candra Puspitasari**, STIKES Arrahma Mandiri Indonesia,
gitacandra2624@gmail.com , +6285649926224

work long hours, face high levels of pressure and stress, and have limited work flexibility. This significantly impacts their work-life balance, performance, and mental and physical well-being. Furthermore, the high demand for nurses in hospitals requires them to remain productive in carrying out their duties. (2)

Meanwhile, a survey by the Indonesian Nurses Association (PPNI) found that 50.9% of nurses experience work-related stress. Symptoms include frequent headaches, fatigue, excessive workloads, wasted time, and lack of rest due to low wages and minimal incentives. The main factors influencing work stress in nurses are their working conditions and personal lives.(3) In the East Java region, based on research at the Surabaya Islamic Hospital, 94.5% of nurses experienced an unbalanced work-life balance, and 69.5% experienced work stress.(4) Based on research at Muhammadiyah General Hospital Lamongan, the results showed that almost half of nurses experienced moderate work stress, namely (48.3%).(5)

The results of an initial survey at Prof. Dr. Soekandar Regional General Hospital found that several nurses expressed difficulty in maintaining a balance between work and personal life. This was reflected in complaints related to fatigue, disturbed rest time, and limited time with family due to high workloads. In brief interviews with 10 nurses working in the Inpatient Ward, 7 nurses said that work shifts affected personal activities, such as rest, socializing, and hobbies, resulting in feeling less time for themselves and their families. The other 3 nurses said that work shifts did not affect their personal activities. Meanwhile, a preliminary study of 10 nurses found that 9 of the nurses experienced physical and emotional symptoms of work stress, such as difficulty sleeping, irritability, and headaches, due to high work demands. And 1 nurse reported no physical or emotional symptoms related to work stress. These findings suggest a tendency for imbalance

between work and personal life that can trigger work stress. Therefore, further research is important to examine the relationship between work-life balance and work stress, especially among nursing staff, to provide a basis for developing health worker welfare policies.

Research conducted at Dustira Hospital in Cimahi in 2021 revealed that the high demands within the hospital environment, particularly for those working in COVID-19 isolation rooms, contribute to a disrupted work-life balance. Data showed that more than 50% of respondents assessed their work-life balance as low, and approximately 48% experienced work stress. The study revealed that the better the work-life balance nurses had, the lower the level of psychological stress they felt. This stressful condition directly impacts the quality of hospital services, such as an increased likelihood of medical errors, decreased patient satisfaction, and high levels of nursing staff turnover. This situation has the potential to disrupt the continuity of operations and the hospital's image.(6)

Much research has been conducted on work-life balance (WLB) and job stress in nurses. However, previous studies generally discussed WLB in general terms without detailing its four main determinants: Work Interference with Personal Life (WIPL), Personal Life Interference with Work (PLIW), Personal Life Enhancement of Work (PLEW), and Work Enhancement of Personal Life (WEPL). For example, a study by Muhadi et al. (2022) emphasized the influence of WLB on stress and turnover intention, but did not evaluate the contribution of each component separately. (4). Meanwhile, a study by Fadillah, Aras, and Wahyuni (2022) only discussed the general relationship between WLB and job stress, without identifying which factors most strongly influence nurses' psychological well-being. (7). This suggests that more detailed mapping of WLB determinants is still rare.

* **Author Correspondence: Sagita Candra Puspitasari, STIKES Arrahma Mandiri Indonesia,**
gitacandra2624@gmail.com , +6285649926224

Furthermore, most previous studies have focused on aspects of role conflict, such as work-family conflict, while enhancement components, such as PLEW and WEPL, have received less attention. However, the literature indicates that support from both personal and work life can impact workers' psychological well-being. (8). The insignificance of certain variables, particularly PLEW, has rarely been explored in depth in previous studies, despite the importance of such findings for understanding the context of nurses facing heavy workloads and high levels of stress in various healthcare facilities. (1); (3); (6). This situation highlights a research gap: there are no studies that comprehensively explain why support from personal life is not always successful in reducing work stress.

This study presents a novelty by simultaneously analyzing four determinants of WLB and identifying the strength of their correlation with work stress. This approach was not found in the studies of Yuswandi et al. (2023) or Fatmia Jaya et al. (2023), which only examined the general relationship between WLB and work stress without specifically assessing its constituent aspects. (3); (6). Furthermore, this study explains the insignificance of PLEW, suggesting that the high work demands of nurses may overshadow the positive influence of personal life, in line with the findings of Antolí-Jover et al. (2025) found that nurse stress is more influenced by work-related factors than non-work-related factors. (9).

The context of this research also provides unique originality because it was conducted on inpatient nurses at Prof. Dr. Soekandar Mojosari Regional Hospital, a region never before studied using a comprehensive WLB determinant framework. The findings provide an important contribution to formulating strategies to improve nurse well-being through more flexible work schedules, providing psychological support, and strengthening work-life balance, as recommended in previous literature on improving the quality of nursing services. (1); (2)

Addressing the work-life imbalance that can lead to work-related stress among nurses requires a dual effort from both individuals and institutions. The expected solution from this research is the formulation of recommendations to improve the quality of work-life balance among nurses. By creating a good work-life balance, it is hoped that the level of work stress experienced by nurses will be reduced. This can be achieved through more flexible work schedules (easier to arrange leave or personal leave), providing adequate rest time, and psychosocial support from hospital management. Furthermore, internal policies that address nurses' holistic well-being are also expected to be part of the long-term solution to creating a healthy and productive work environment.

2. METHODE

This study applies a cross-sectional design. This approach was chosen because it allows it to describe the relationships between the variables studied over a single time period without continuous monitoring of respondents. (10);(11);(12). The primary focus of the study was to analyze the determinants of work stress levels in nurses.

Population and Sample

The population included all 106 nurses working in the inpatient wards of Prof. Dr. Soekandar Mojosari Regional General Hospital. The sample was selected using purposive sampling, which involves selecting respondents based on specific criteria relevant to the research objectives.

Inclusion criteria include: (1) Nurses who have worked for at least one year in the inpatient unit, (2) Willing to participate by signing an informed consent form, and (3) Present and actively on duty during the data collection period. While exclusion criteria include: (1) Nurses who are on leave or sick leave, (2) Respondents who do not complete the questionnaire completely. Based on these

* **Author Correspondence: Sagita Candra Puspitasari, STIKES Arrahma Mandiri Indonesia,**

gitacandra2624@gmail.com , +6285649926224

criteria, 84 respondents were obtained who met the requirements to be used as research samples.

Research Instruments

Data collection was conducted using a structured questionnaire. It consisted of the WIPL, PLIW, PLEW, and WEPL instruments. Each item was assessed using a four-level Likert scale ranging from "strongly disagree" to "strongly agree."

The work stress variable assessed the level of work stress from physical, emotional, and behavioral aspects, also using a four-level Likert scale. The questionnaire has been tested for validity and reliability in previous research, with a reliability coefficient value (Cronbach's Alpha) above 0.70, indicating that the instrument has good internal consistency.(13)

Data Collection Procedures

Data collection for this research was conducted after obtaining official permission from the hospital and ethical approval. The researcher explained the purpose and benefits of the study to potential respondents and guaranteed their confidentiality. Respondents then completed the questionnaire independently at their work location within the designated time, with the researcher's assistance to ensure complete and accurate data entry.

Data Analysis Techniques

The collected data were re-examined to ensure completeness, then analyzed using SPSS 24 software. Univariate analysis explained the variables studied descriptively, and bivariate analysis used the Spearman correlation test to test the relationship between determinants and work stress.(13)

3. RESULTS AND DISCUSSION
Univariate analysis

Univariate results are used to explain the variables studied descriptively as follows:

Table 1. Frequency Distribution of Research Variables

Variables	Frequency	Percentage
Work Interference with Personal Life		
Low	10	11.9%
Medium	68	81.0 %
High	6	7.1%
Personal Life Interference With Work		
Low	10	11,9 %
Medium	74	88,0 %
High	0	0 %
Personal Life Enhancement of Work		
Low	8	9,5 %
Medium	71	84,5 %
High	5	6 ,0 %
Work Enhancement of Personal Life		
Low	10	11,9 %
Medium	60	71,4 %
High	14	16,7 %
Work Stress		
Low	14	16,7 %
Medium	61	72,6 %
High	9	10,7 %
Total	84	100 %

Based on the research results in Table 1, the variable of work interference with personal life (WIPL) is mostly in the moderate category, as many as 68 people or 81.0%. The variable of personal life interference with work (PLIW) is mostly in the moderate category, namely, as many as 74 people or 88.0%. The variable of Personal Life Enhancement of Work (PLEW) is mostly in the moderate category, namely, as many as 71 people (84.5%). The variable of Work Enhancement of Personal Life (WEPL) is mostly in the moderate category, namely, as many as 60 people (71.4%). The variable of work stress is mostly in the moderate category, namely, as many as 61 people (72.6%).

Bivariate analysis

The results of the bivariate data analysis explain the determinants and work stress as follows:

* **Author Correspondence: Sagita Candra Puspitasari, STIKES Arrahma Mandiri Indonesia,**
gitacandra2624@gmail.com , +6285649926224

Table 2. Results of the Spearman Correlation Test and Determinants of Job Stress

Variables	Work Stress						p value	Correlation coefficient
	Low		Medium		High			
	f	%	f	%	f	%		
WIPL								
Low	0	0.0	3	30.0	7	70.0	0.000	-4.994
Medium	12	17.6	54	79.4	2	2.9		
High	2	33.3	4	66.7	0	0.0		
PLIW								
Low	0	0.0	7	70.0	3	30.0	0.021	-2.359
Medium	14	18.9	54	73.0	6	8.1		
High	0	0.0	0	0.0	0	0.0		
PLEW								
Low	1	12.5	7	87.5	0	0.0	0.246	-1.170
Medium	10	14.0	52	73.2	9	12.7		
High	3	60.0	2	40.0	0	0.0		
WEPL								
Low	0	0.0	9	90.0	1	10.0	0.000	-5.579
Medium	3	5.0	49	81.7	8	13.3		
High	14	16.7	61	72.6	9	10.7		

Table 2 explains the determinants of work stress. The analysis shows that WIPL has a negative and significant relationship with work stress levels (p = 0.000; r = −4.994). This means that the greater the disruption caused by work to personal life, the greater the likelihood of nurses experiencing work stress. Judging from the data distribution, in the low WIPL category, most respondents experienced high work stress (70%), while in the medium WIPL category, most respondents experienced moderate work stress (79.4%). The results of this study indicate that nursing work, which requires high physical and mental demands, often reduces a person's opportunity to fulfill personal needs such as gathering with family, resting, or engaging in social activities.

This aligns with research by Boamah et al.(14) This showed that interference between work and personal life significantly impacts burnout, job satisfaction, and the desire to leave the nursing profession. Thus, excessive workload on personal life is a major risk factor for work stress in nurses.

The results showed that PLIW had a significant negative relationship with work stress levels (p = 0.021; r = −2.359). This

means that the greater the interference of personal life with work, the higher the level of work stress. The tabulated data shows that respondents with low PLIW mostly experienced moderate work stress (70%), while in the moderate category, most respondents still experienced moderate work stress (73%). This indicates that the problem between work demands and personal life, or vice versa, is an important factor that influences work stress levels.

Personal Life Interference with Work (PLIW) describes how personal life can interfere with work, such as through personal conflicts, emotional stress, or household duties that can reduce a person's focus and ability to work at work. This interference from personal life usually makes a person feel stressed, makes it difficult to concentrate, and ultimately reduces the overall quality of work. (8) This is in accordance with the Work-Family Conflict theory introduced by Greenhaus and Beutell(15). This theory explains that role conflict occurs when demands from two aspects of life, namely work and family, conflict, causing tension and negative emotions. In the case of nurses, a heavy workload, irregular work schedules, and

* Author Correspondence: Sagita Candra Puspitasari, STIKES Arrahma Mandiri Indonesia, gitacandra2624@gmail.com , +6285649926224

frequent interactions with patients can reduce the ability to carry out family roles well. Meanwhile, personal problems such as household duties can also interfere with performance at work. This situation creates role conflict that can increase the risk of work stress.

This aligns with previous research by Fadillah, Aras, and Wahyuni.(7), which also found a significant relationship between PLIW and the level of work stress experienced by healthcare workers.

Unlike the two previous variables, analysis of PLEW showed no significant relationship with work stress (p = 0.246; r = −1.170). These results suggest that factors such as family support, a positive social environment, and individual psychological well-being have not been proven to directly reduce nurses' work stress.

Personal life enhancement of work (PLEW) can influence a person's performance at work. For example, nurses who receive emotional support from their families should be better able to cope with work demands.(8) However, in this study, the effect of PLEW on work stress was not clearly visible. One possible reason is that nurses' workloads in hospitals are so demanding that the positive benefits of their personal lives are not strong enough to reduce the stress caused by high workload, rotating work schedules, and intense patient interactions. This finding aligns with research by Antoli.(9) In Spain, which supports this finding, showing that nurses' work stress is more influenced by work demands than by non-work factors such as personal problems.

The WEPL variable was shown to have a very strong and negative relationship with the level of work stress (p = 0.000; r = −5.579). This means that the more a job supports a person's personal life, the lower the level of work stress experienced by nurses. From the existing data, in the high WEPL group, most respondents experienced low to moderate work stress, while in the low WEPL group, most respondents experienced moderate to high work stress. Nurses at Prof. Dr. Soekanndar Regional Hospital can improve their personal quality of life by using skills acquired in the workplace. Autonomy in work also makes nurses happier at work, because they want to remain involved in work that provides meaning. Work that is beneficial to a person's life makes the person feel connected to the job, so that they work well and sincerely. By having skills, the level of work stress among nurses at Prof. Dr. Soekanndar Regional Hospital can be reduced.(16)

4. CONCLUSION

This study shows that Work Interference with Personal Life (WIPL) and Personal Life Interference with Work (PLIW) are proven to increase levels of work stress, while Work Enhancement of Personal Life (WEPL) plays a role in reducing work stress. Therefore, the more balanced nurses' work and personal lives are, the lower their work stress levels. Hospitals are advised to arrange more flexible work schedules and provide psychological support to create a better work-life balance.

Hospitals are advised to improve nurses' work-life balance by establishing more flexible schedules, providing adequate rest periods, and providing psychological support and a supportive work environment. Further research is recommended to include other variables such as organizational support, workload, and job satisfaction to provide more comprehensive results and strengthen the findings of this study.

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* Author Correspondence: Sagita Candra Puspitasari, STIKES Arrahma Mandiri Indonesia, gitacandra2624@gmail.com , +6285649926224

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* Author Correspondence: Sagita Candra Puspitasari, STIKES Arrahma Mandiri Indonesia,
gitacandra2624@gmail.com , +6285649926224