Contents

The Influence of Work-Life Balance and Job Satisfaction on Nursing Performance in Teaching Hospitals: A Cross-Sectional Study

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Abstract

Nursing is a noble profession that involves caring for disabled patients. The demanding nature of nursing work has an impact on their work-life balance (WLB). Workplace stress also negatively affects work-life balance, job satisfaction, and performance. This research aims to determine the impacts of work-life balance and job satisfaction on nurses' performance in a teaching hospital. This cross-sectional survey, employing purposive sampling, involved 205 registered nurses across diverse departments at Hospital Sultan Abdul Aziz Shah (HSAAS), UPM. This study utilized the Work-life Balance Scale, Job Satisfaction Scale, and Job Performance Scale as research instruments to measure work-life balance, job satisfaction, and job performance among nurses. The finding revealed a moderate to high level of WLB among nurses in teaching hospitals (M = 54.39, SD = 9.439). The relationship between work-life balance and the performance of nurses was reported to be significant (p < 0.000). There is a positive correlation between job satisfaction and job performance in nursing (p < 0.001, r = 0.574). Additionally, the research revealed a significant association between nurses' work hours and their degree of work-life balance (p = 0.01). In addition, nurses' service duration was also associated with their work-life balance (p < 0.001). The findings indicate that WLB and job satisfaction significantly influence nurses' performance. The findings also emphasize the necessity of work-life balance and job satisfaction strategies to achieve high performance in nursing.

Keywords: Work-Life Balance, Job Performance, Job Satisfaction, Nurses, Teaching Hospital

Introduction

Work-life balance (WLB) is essential to pleasure, personal health, and contentment. It requires the simultaneous management of work, personal relationships, and family obligations to fulfil a variety of time and life demands (1). A balanced WLB fosters satisfaction in one's personal and professional life, contributing to positive outcomes. Despite this, balancing a career with personal and family obligations can be tricky and challenging (2). Introduced in the 1970s, WLB signifies finding a manageable balance between work and personal commitments. In this context, "work-life balance" refers to the ideal situation in which one's professional and private pursuits are equally satisfied (3).

According to the Human Resource Division, Ministry of Health Malaysia, the total number of registered nurses in the private and government sectors is 106,3733, with a 1:297 ratio of the nurses to the population. However, the World Health Organization (WHO) recommended that the ideal ratio of nurses to the population is 1:200. Additionally, a shortage of staff nurses in the country happens due to staff migration for overseas posting for better salaries, such as in Arab Saudi, Dubai, and Singapore (4). This scenario contributes to the country's extreme shortage of nurses and affects the remaining nurses in Malaysia because they have to cope with the current situation and extra workload. Thus, it will impact their WLB as they need to spend more working hours and deploy to other departments to overcome the staff shortage.

Furthermore, WLB has a significant influence on productivity and performance. A person must maintain precise balance and better control to avoid a lack of energy

and an excessive workload (5). The imbalance will cause fatigue and poor performance, thus diminishing quality of life (6). Excessive work demands may lead to increased employee dissatisfaction and an impairment between their job and personal spheres, adversely influencing their job performance and productivity (3).

In response to Malaysia's growing population, the government has established new public hospitals with enhanced facilities, bed capacity, and advanced medical technology. However, the improvement in hospitals has yet to be accompanied by proportional staff recruitment, leading to an imbalance in the workload, especially for nurses. The insufficient number of healthcare providers in public hospitals may contribute to work-life conflicts, creating a disparity in their professional and personal lives (5). Nursing staff usually sacrifice their personal needs for careers and face many difficulties, including night shifts, extended shifts, fewer breaks, excessive work pressure, and understaffing. In addition to a lack of support and understanding from family members, these concerns create dilemmas for married nurses who must handle many responsibilities at home and work. Consequently, many nurses must juggle different roles and struggle to balance their work and life (7).

Besides that, nurses are pulled in many directions. Besides interacting with numerous patients, co-workers, and other healthcare professionals, they are frequently required to multitask and manage competing demands simultaneously. Hence, nurses may experience discontentment and a sense of being overburdened by the demands of their profession. These factors contribute to tension among nurses. In addition, inadequate staffing, lack of collaboration, miscommunication, ineffective leadership, and excessive work schedules worsen this situation. Inadequate nurses cause more frequent rotations, which causes an imbalance in the equilibrium between professional and personal domains. These variables can contribute to nurses' job dissatisfaction (8).

Lastly, hospitals face intense competition to offer top-notch medical care and services. The effectiveness and quality of a patient's treatment are primarily determined by the performance of healthcare personnel, especially nurses. The hospital's services ensure that every patient receives top-quality care and is safeguarded against harm or mistreatment. Therefore, nurses must be productive and exhibit excellent work performance. Evidence suggests that the delicate balance between professional obligations and familial responsibilities negatively impacts both work and personal life, potentially leading to employee attrition and other personal issues, resulting in poor job performance among nurses (9). Thus, this study examines the WLB level among registered nurses and the relationship between WLB and job satisfaction with job performance in a teaching hospital.

Materials and Methods

Study design

This cross-sectional study was conducted among registered nurses in Hospital Sultan Abdul Aziz Shah (HSAAS), UPM. The design was chosen because it is convenient, can establish the norm and prevalence of study issues for a specific demographic at the current specific time, and can measure multiple variables simultaneously. In addition, a cross-sectional study can systematically study a phenomenon by collecting quantitative data.

Study setting

Various clinical departments, including inpatient wards and clinics, were involved in this study. The sampling approach from diverse departments reflects a comprehensive effort to understand registered nurses' experiences and perspectives across different specialities. It allows for a more thorough examination of WLB, job satisfaction, and performance factors, considering each department's unique challenges and dynamics. The data collection lasts for three months, from July to September 2023.

Sample

In this study, participants were selected using purposive sampling. The inclusion criteria focused on registered nurses providing direct patient care in clinical settings. Purposive sampling was selected as the methodological approach due to its feasibility and widespread accessibility, enabling the selection of participants by their availability and willingness to participate in the study. The researcher collaborated with the hospital administrator to obtain a list of eligible participants. Exclusion criteria included head nurses, nurse managers, nurses working in administrative offices, and nurses currently on leave or unable to complete the questionnaire due to medical reasons.

Sample size calculation

The study population consisted of 438 registered nurses employed at HSAAS. The sample size was determined using Raosoft software to ensure a statistically valid and representative sample. A 95% confidence level (CI), a 5% margin of error, and a 50% response distribution were specified for each question, resulting in a required sample size of 205 registered nurses for this study.

Instruments

The survey was designed with a close-ended question, and the participants were required to select the single answer that most accurately reflected their perspective. The respondents' demographic profiles include personal information like gender, age, marital status, number of children, education level, race, religion, position, working department, working schedule, length of service, and distance from home to the workplace.

The WLB level among registered nurses was measured using a Work-life Balance Inventory Hayman (10). It consists of 15 items designed to assess three dimensions of work-life balance: Work Interference with Personal Life (WIPL - 7 items), this dimension reveals how much work interferes with personal life, Personal Life Interference with Work (PLIW - 4 items), indicates the opposite direction of work-personal life interference and Work/Personal Life Enhancement (WPLE - 4 items) involve the positive effects of one's work on personal life or vice versa, the extent to which one personal life increases work. A five-point Likert scale was used with Strongly Disagree [1], Disagree [2], Neutral [3], Agree [4], and Strongly Agree [5]. The dimensions of WIPL and PLIW are assigned reverse scores of 5, 4, 3, 2, and 1 due to the negative wording of the items. Higher levels of work-life balance were represented by scores ranging from 44 to 55, indicating lower interference. Positively worded items within the WPLE dimension were scored as 1, 2, 3, 4, and 5. An elevated work-life balance is associated with a high score of 16 to 20, indicating significant improvement in both professional and personal life. The combined scores for the three dimensions will constitute the overall work-life balance score. The maximum score is 75, and the minimum score is 15. The level of WLB then was categorized as high level for a score > 75%, moderate level for a score of 60-74%, and low level for a score < 59% (11).

The job Satisfaction Scale adopted by Abdirahman et al. (12) was used to measure job satisfaction among registered nurses. It uses a five-point Likert Scale: Strongly Disagree [1], Disagree [2], Neutral [3], Agree [4], Strongly Agree [5], and consists of six items. The scores on job satisfaction will range from six to 30. The subject's lowest score is six, and the highest is 30. Higher scores indicate higher satisfaction and lower scores indicate low job satisfaction.

Employee performance instrument adapted from Abdirahman et al. was used to measure nurses' performance consists of six items (12). It uses a five-point Likert Scale: Strongly Disagree [1], Disagree [2], Neutral [3], Agree [4], Strongly Agree [5]. The survey is designed as a closed-ended question with a set of alternative answers. The subject's lowest score is six, and the highest is 30, meaning higher scores indicate a higher performance rate.

Data collection

Ethical approval was obtained from the UiTM (REC) Ethics Committee, the Ethics Committee for Research Involving Human Subjects, Universiti Putra Malaysia (JKEUPM), and approval from the hospital director. Data collection involved directly administering survey forms to registered nurses working in HSAAS. The survey items measured variables related to WLB, job satisfaction, and nursing performance. To recruit participants, the researcher obtained a list of eligible nurses from hospital administrators and set up a designated private room for survey completion. Participants were informed about the study's purpose and potential benefits and asked to sign a consent form before completing the survey. Participation in the survey took approximately about 15-20 minutes to complete, and the researcher was available to address any questions.

Data analysis

Data analysis using IBM SPSS Statistics Version 26 to utilize all the collected data. Descriptive statistics were used to analyze socio-demographic variables and summarize the characteristics of the dataset. Descriptive statistics and one-way ANOVA were employed to determine the impact of work-life balance on nurses' job performance. Pearson's correlation was used to examine the correlation between job satisfaction and nurses' performance. Lastly, the Chi-square test and Fisher's Exact test were applied to investigate the association between demographic variables and work-life balance among registered nurses. There was a significant relationship between variables if the p-value ≤ 0.05.

Results

Demographic characteristics of the respondents

The demographic characteristics of the respondents are summarized in Table 1. In a study of 205 registered nurses, the majority were female (93.7%, n = 192), aged between 26 and 30 years (59.0%, n = 121). Predominantly, they were Malay ethnicity (96.6%, n = 198) and followed Islam (97.1%, n = 199). Most were married (76.6%, n = 157) without children (37.6%, n = 77). The highest education level for most was a diploma (84.4%, n = 173). They were primarily employed in the U29 position (93.7%, n = 192), working in rotating shifts (78.5%, n = 161), with a service duration of 6 to 10 years as nurses (45.9%, n = 94). The largest group works in the Surgical Department (16.6%, n = 34), followed by the Intensive Care Unit (13.2%, n = 27), Medical (12.7%, n = 26), Orthopedic (12.2%, n = 25), Obstetrics and Gynecology (11.7%, n = 24), Pediatric (10.2%, n = 21) and others. Nearly half of the respondents (43.9%, n = 90) commuted more than 15km to reach the workplace.

Table 1: Demographic characteristics (N = 205)

Socio-demographic Characteristics	n	%
Gender		
Male	13	6.3%
Female	192	**93.7%**
Age		
20-25	7	3.4%
26-30	121	**59.0%**
31-35	20	9.8%
36-40	50	24.4%
41-45	7	3.4%

Table 1: Demographic characteristics (N = 205) (continued)

| Socio-demographic Characteristics	n	%
Race		
Malay	198	**96.6%**
Chinese	1	0.5%
Indian	3	1.5%
Others	3	1.5%
Religion		
Islam	199	**97.1%**
Buddha	3	1.5%
Hindu	3	1.5%
Marital Status		
Single	46	22.4%
Married	157	**76.6%**
Divorce	2	1.0%
Number of Children		
0	77	**37.6%**
1	42	20.5%
2	44	21.5%
3	26	12.7%
4	12	5.9%
More than 4	4	2.0%
Educational Qualification		
Diploma in Nursing	173	**84.4%**
Advanced Diploma (Post Basic)	28	13.7%
Degree	4	2.0%
Position		
U29	192	**93.7%**
U32	13	6.3%
Working Department		
Medical	26	12.7%
Surgical	34	**16.6%**
Orthopedic	25	12.2%
Obstetrics and Gynecology	24	11.7%
Pediatric	21	10.2%
Intensive Care Unit	27	13.2%
Clinic	11	5.4%
Operation Theatre	15	7.3%
Ophthalmology + ENT	9	4.4%
NICU	5	2.4%
RESQ	8	3.9%
Working Hours		
Rotating Shift	161	**78.5%**
Fix (Office Hour)	44	21.5%
Length of Service		
Less than 5 years	56	27.3%
6 – 10 years	94	**45.9%**
11 – 15 years	46	22.4%
More than 15 years	9	4.4%
Distance from Home to Workplace		
Less than 3km	10	4.9%
3 – 5km	22	10.7%
5 – 10km	47	22.9%
10 – 15km	36	17.6%
More than 15km	90	**43.9%**

among the study variables. Respondents reported a moderate to high level of perceived work-life balance (M = 54.39, SD = 9.436). Work Interference with Personal Life (WIPL) scores ranged from 9 to 35, with a mean of 25.48 (SD = 6.017), indicating diverse experiences of work impacting personal life. Personal Life Interference with Work (PLIW) exhibited moderate interference, with scores ranging from 9 to 25 and a mean of 18.80 (SD = 3.338). The Work/Personal Life Enhancement variable ranges from 6 to 20 with a mean of 13.51 (SD = 2.922).

Table 2: Mean score of work-life balance according to domain

Variable	Min	Max	Mean	SD
Overall Work-Life Balance	27	75	54.39	9.436
Work Interference with Personal Life (WIPL)	9	35	**25.48**	**6.017**
Personal Life Interference with Work (PLIW)	9	25	18.80	3.338
Work/Personal Life Enhancement (WPLE)	6	20	13.51	2.922

Figure 1 shows the level of WLB among registered nurses. From the analysis findings, 85 (41.5%) out of 205 respondents had a high level of WLB, and 86 (42.0%) of them had a moderate level of WLB. However, 34 (16.5%) respondents had a low level of WLB.

Figure 1: The level of work-life balance among nurses
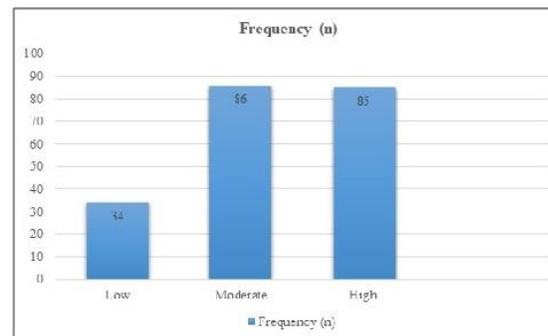
Job satisfaction

Table 3 shows the mean score of job satisfaction. Analysis of job satisfaction among participants revealed a range from 6 to 30, with a mean score of 21.71 (SD = 3.799), which indicates a moderate level of job satisfaction among respondents.

Work-Life Balance Level

Table 2 presents the mean score of WLB according to domain. The descriptive statistics reveal insightful patterns

Table 3: Mean score of job satisfaction

Variable	Min	Max	Mean	SD
Job satisfaction	6	30	21.71	3.799

Job performance

Table 4 shows the mean score of job performance. The respondent's job performance in the study ranged from 6 to 30, with a mean score of 22.99 (SD = 3.136). This indicates a moderate to high level of job performance among respondents on average.

Table 4: Mean score of job performance

Variable	Min	Max	Mean	SD
Job performance	6	30	22.99	3.136

Relationship between work-life balance and Nurses' performance

The distribution of the relation between work-life balance levels and job performance is presented in Table 5. One-way ANOVA showed a significant relationship between nurses' work-life balance level and their job performance ($p < 0.000$).

Table 5: Comparison of job performance between work-life balance categories among nurses (N = 205)

Variable	Job Performance Mean (SD)	F statistic (df)	p-value*
Work-life balance			
Low	21.68 (2.962)	11.009 (2)	<0.000
Moderate	22.40 (2.805)		
High	24.12 (3.183)		

*One-way ANOVA test
Post Hoc analysis: Low vs High p-value = 0.00, High vs Moderate p-value = 0.01.
Other pair comparison p-value > 0.05

Correlation between job satisfaction and job performance among nurses

Table 6 provides an analysis of the correlation between job satisfaction and job performance. Pearson correlation analysis showed that the nurses' job satisfaction and job performance were positively correlated as p-value < 0.001. There is a good positive correlation ($r = 0.574$) between job satisfaction and job performance.

Table 6: The correlation between job satisfaction and job performance among nurses (N = 205)

Variable	Job Performance	p-value*
Job satisfaction	$r = 0.574$*	<0.001

*Pearson correlation

Association between Socio-Demographic Characteristics and Level of Work-Life Balance

Table 7 presents analyses exploring the association between socio-demographic characteristics and WLB. The Chi-square test result revealed a significant association between the working hours of the nurses and their level of WLB ($p = 0.01$). Fisher's Exact test also revealed a significant relationship between nurses' length of service and their WLB level ($p < 0.001$). Meanwhile, other characteristics show no significant relationship.

Table 7: Relationship between socio-demographic characteristics and level of work-life balance (N = 205)

Socio-demographic Characteristics	Work-Life Balance Level (n)			p-value
	Low	Moderate	High	
Gender				
Male	4	3	6	0.199[b]
Female	30	83	79	
Age				
20-25	1	2	4	
26-30	18	53	50	0.311[b]
31-35	1	11	8	
36-40	13	19	18	
41-45	1	1	5	
Race				
Malay	33	82	83	0.874[b]
Non-Malay	1	4	2	
Religion				
Islam	33	82	84	0.404[b]
Others	1	4	1	
Marital Status				
Single/Divorce	9	19	20	0.877[a]
Married	25	67	65	
Number of Children				
0	14	34	29	
1	7	17	18	
2	5	20	19	0.934[b]
3	6	10	10	
4	1	4	7	
More than 4	1	1	2	
Educational Qualification				
Diploma in Nursing	31	76	66	0.076[a]
Above Diploma	3	10	19	
Position				
U29	30	85	77	0.129[a]
U32	4	1	8	

Table 7: Relationship between socio-demographic characteristics and level of work-life balance (N = 205) (continued)

Socio-demographic Characteristics	Work-Life Balance Level (n)			p-value
	Low	Moderate	High	
Working Department				
Medical	4	11	11	
Surgical	7	12	15	
Orthopedic	2	10	13	
Obstetrics and Gynecology	2	11	11	
Pediatric	6	7	8	0.267[b]
Intensive Care Unit/NICU	2	20	10	
Clinic	1	4	6	
Operation Theatre	6	5	4	
Ophthalmology + ENT	3	2	4	
RESQ	1	4	3	
Working Hours				
Rotating Shift	26	76	59	**0.010[a]**
Fix (Office Hour)	8	10	26	
Length of Service				
Less than 5 years	8	15	33	
0 – 10 years	16	53	25	**<0.001[b]**
11 – 15 years	9	17	20	
More than 15 years	1	1	7	
Distance from Home to Workplace				
Less than 3km	3	2	5	
3 – 5km	2	10	10	
0 – 10km	13	14	20	0.209[b]
10 – 15km	5	18	13	
More than 15km	11	42	37	

*$p \leq 0.05$ considered as statistically significant
[a]Chi-square Test
Fischer's Exact Test
Abbreviation: 95% CI, confidence interval of 95%

Discussion

The study found that respondents reported a moderate to high level of WLB, aligning with the research expectations. This indicates a favourable balance between work and personal life demands, suggesting a harmonious integration of professional and personal spheres. This may be because the nurses are employed in a well-established tertiary care teaching hospital with advanced infrastructure and comprehensive staff welfare facilities. The findings are consistent with other studies that also demonstrated a similar degree of WLB among their respective respondents (13-15).

Contradicting earlier studies, they found that nurses often experienced poor WLB (3, 16). This is attributed to the considerable job demands faced by nurses and the challenging working conditions, making it difficult to balance work and family commitments. However, some studies in developed countries revealed that nurses perceived that they have dedicated more time to work than to personal lives (6, 17). Despite this imbalance, these nurses expressed satisfaction with their WLB and jobs. Variations in WLB across the studies may be influenced by different occupational and geographical contexts, including differences in hospitals and clinics' provision of various service levels in rural, suburban, or urban regions.

The current study revealed a moderate to high level of job performance among respondents, with a significant relationship between nurses' work-life balance (WLB) and job performance. This finding is consistent with previous studies, which have also reported that WLB positively impacts employee job performance (18-20). The study's setting in tertiary hospitals, which specialize in focused services unlike primary or secondary facilities, plays a role. The multifaceted nature of tasks in such environments can lead to increased stress among healthcare professionals. However, the workload in this teaching hospital may be lighter compared to government hospitals due to factors like lower patient load, streamlined administrative processes, and efficient resource allocation. This reduced burden allows nurses to focus more on individual patients, promoting quality care and a manageable work pace.

Research has shown that WLB has a positive impact on the performance of female employees (9, 21). This discovery has significance for the healthcare industry in Malaysia, specifically nurses, who are required to work in shifts and adhere to rigid schedules, which may result in work-life conflicts. These conflicts emerge when nurses contend with the challenge of managing their personal and familial obligations alongside their job responsibilities. Work shifts and the requirement to adhere to set schedules add complexity to the WLB of nurses in this environment. In addition, the nature of the job requires nurses to devote more time in the workplace and have fewer breaks. Notwithstanding these obstacles, the findings derived from these studies underscore the significance of attaining a favourable WLB in enhancing job performance.

A moderate level of job satisfaction was found among the respondent in this study, which suggests that they have a balanced perspective on their experiences at work. Consistent with earlier studies, the result shows a strong correlation between nurses' overall job satisfaction and their performance (22, 23). Furthermore, higher levels of job satisfaction are consistently associated with enhanced performance among nurses, as demonstrated in the previous studies (4, 19). This finding implies that nurses are more inclined to exhibit excellent job performance when they experience greater job satisfaction.

According to the current findings, a positive association has been shown between the WLB and the number of hours nurses spend on the job, whether on rotating or fixed schedules. At the same time, a significant association has also been observed between nurses' service duration and their WLB levels. These findings imply that nurses with longer service durations may display distinct patterns in their work-life equilibrium, while nurses' working hours may influence their WLB. Conversely, the respondents

indicate no statistically significant associations between WLB and other remaining variables. Consistent with this finding, previous studies have identified strong connections between nurses' length of service and work-life balance (WLB), as well as between age and WLB (3, 24, 25). This could be because experienced senior nurses are adept at managing personal issues while fulfilling work duties effectively. Similarly, highlighted a correlation between younger age and WLB, suggesting that younger nurses may experience a higher quality of life due to greater satisfaction (26).

Contrary to this, a survey highlighted significant differences in overall WLB and general health based on demographic characteristics such as marital status, religion, educational level, and job position (6). Additionally, another study found that married nurses perceived greater WLB compared to unmarried ones, indicating that married female employees' job performance is influenced by their ability to balance work and family responsibilities (7). On the other hand, revealed that gender, educational level, and working department significantly affect WLB (27).

Unlike a previous study, which found a weak positive and significant relationship between nurses' ages (16), another study concluded that there was no significant relationship between any socio-demographic characteristics and WLB (8). These diverse findings across different countries and cultures suggest the potential influence of various contextual factors. Differences in organizational practices, policies, and societal expectations may also contribute to these variations, highlighting the complex relationship between demographic variables and WLB.

This study has several limitations, including using a cross-sectional approach, which limits the understanding of causal relationships between WLB, job satisfaction, and performance. The limitation of this study is that being restricted to a single study setting impacts the generalizability of the findings to other healthcare settings. Furthermore, concentrating solely on nurses in a single teaching hospital limits the knowledge of performance dynamics among all healthcare professions. Additionally, the utilization of purposive sampling introduces selection bias, which can compromise the representativeness of the sample and diminish statistical power, thereby increasing the likelihood of overlooking significant relationships. Top of Form

Conclusion

Nursing professionals exhibited a generally positive integration of their personal and professional lives, as indicated by the moderate to high WLB level discovered in the study. The discovery of a significant relationship between WLB and the performance of nurses underscores the critical importance of a harmonious work-life equilibrium in augmenting overall professional efficacy. Furthermore, the study revealed a significant correlation between job satisfaction and performance, underscoring the interdependence of these variables within the nursing domain. Length of service and work schedule have a substantial effect on WLB, highlighting the importance of taking these demographic variables into account when formulating strategies to promote a more harmonious work-life equilibrium for nurses.

In conclusion, the research results emphasize the significance of acknowledging nurses' varied experiences in their pursuit of WLB. Through an extensive understanding of the various factors that impact WLB, healthcare organizations can effectively execute focused interventions to enhance the well-being of their nursing personnel and, consequently, job satisfaction and performance.

Competing interests

The authors declare that they have no competing interests.

Ethical Clearance

Ethical approval was obtained from the Research Ethics Committee (REC) UiTM (FERC/FSK/MR/2023/00143) and the Ethics Committee for Research Involving Human Subjects, Universiti Putra Malaysia (JKEUPM) (JKEUPM-2023-592).

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