

A Factor-Analytic Study on Work–Life Balance of Nurses in Virudhunagar District

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Abstract: *Work-life balance (WLB) is crucial for employee well-being and business productivity because it enables people to manage work and family responsibilities. In today's competitive economy, maintaining this balance has become increasingly challenging due to demanding work conditions, particularly in sectors like healthcare. Organizations must go beyond formal policies and actively cultivate a supportive culture that aids employees in achieving balance because poor work-life balance typically leads to employee dissatisfaction, decreased productivity, and higher turnover rates. The study highlights that WLB among nurses is a complex concept influenced by Involvement Balance (IB), Time Balance (TB), and Satisfaction Balance (SB). The most crucial of these is Satisfaction Balance, which has a strong connection to IB and TB. The primary data was collected from 314 committed female nurses in Virudhunagar using a stratified random sample technique and a well-structured questionnaire. This implies that a nurse's overall degree of satisfaction in balancing their personal and professional obligations is a crucial component in determining their work-life balance. By boosting involvement in both areas, efficient time management also improves balance. Overall, the findings show that a harmonious combination of time, involvement, and satisfaction leads to improved well-being, higher job satisfaction, and better patient care.*

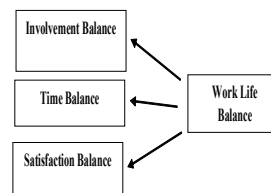
Healthcare businesses must implement comprehensive strategies, such as employee-focused initiatives, flexible scheduling, and supportive leadership, to enhance nurses' work-life balance and ensure long-term organizational effectiveness.

Keywords: Work Life Balance, Satisfaction Balance, Factor-Analytic Study, Virudhunagar District

INTRODUCTION

“Work-life balance” is essential to an organization's and its workers' success. It includes workplace policies that recognize and assist workers in juggling their obligations to their families and their jobs. Researchers are paying attention to this crucial problem for managers in all sectors and professions. Finding harmony between various responsibilities in life is the goal of work-life balance. Managing the line between work and home is becoming more difficult in today's competitive economy, particularly in sectors like IT and healthcare. Organizations must establish and encourage a work-life balance that benefits both the company and its people in order to compete in the global market. One of the main causes of high-level management turnover is a lack of work-life balance, which results in unhappy and ineffective workers and higher turnover rates. Organizations must actively cultivate a culture that supports work-life balance; merely having a framework for work-life policies is insufficient.

Model Framework of Work Life Balance



REVIEW OF LITERATURE

Gede AnggaAriestaWidayana, and et.al. (2025), in their study, “Factors Associated with Work Life Balance Among Nurses in Hospitals: A Socio-Ecological Scoping Review” Based on 12 carefully chosen research from various nations, this scoping review uses the socio-ecological model to examine factors influencing nurses' work-life balance. It concludes that individual, interpersonal, and organizational aspects affect work-life balance and emphasizes the necessity of supporting policies, flexible work schedules, and robust social support to enhance nurses' well-being and the standard of healthcare.

Usha Mallick, Ratna Chhayya Singh. (2025), in their study, “A Study to Assess the Work-Life Balance and Burnout of Nurses during Covid-19” According to the study, nurses' work-life balance was negatively impacted by the substantial psychological and social strains they endured throughout the pandemic. The majority of nurses were between the ages of 22 and 30, with just 20% reporting very good work-life balance, 35% moderate, and the

remainder (45%) having poor work-life balance. This study was carried out due to the paucity of available data on nurses' work-life balance and burnout.

METHODOLOGY

In our inquiry, we used both primary and secondary data to ensure a comprehensive understanding. The primary data was collected from 314 committed female nurses in Virudhunagar using a stratified random sample technique and a well-structured questionnaire. We also carefully collected secondary data from reliable sources, such as websites, journals, and publications. Using the created questionnaire in a pilot study, we tested its validity, reliability, and normalcy as part of our rigorous methodology. After determining the reliability of the questionnaire, we carefully tabulated and examined the results, using factor analyses for testing in addition to the straightforward percentage technique for interpretation.

RESULTS

Study of Nurses' Balance Between Work and Life

Table 1: Study of Nurses' Balance Between Work and Life

Variable	Response	Frequency	Per cent
Hours spend with Family	Less than 2 hours	151	48.1
Enough time to rest after working hours	Yes	168	53.5
Enjoy holidays without bothering work commitments	No	172	54.8
Skip Meals	Rarely	177	56.4
Salary enough to meet family requirements	No	179	57
Reason for working in the present hospital	A sense of Pride	79	25.2
Able to balance Work and Life	Little difficult	181	57.6
Health Centre support for Work-Life Balance	Rarely	138	43.9
Kind of provision for Work Life Balance given by Hospital	Flexible shift time	125	39.8

Opinion regarding Work

- 26.8% agreed that the workload is manageable.
- 32.5% disagreed that the lower nurse-patient ratio is properly adjusted.
- 32.5% disagreed that medical equipment can be handled effectively during emergencies.
- 30.6% agreed that verbal abuse from patients is overcome with colleagues' support.
- 28.3% were neutral about whether patient complaints are resolved quickly with management support.
- 23.6% agreed that doctors do not scold nurses in front of patients.
- 24.5% remained neutral about the absence of stress in the job.
- 32.5% believed that a job's type has no bearing on one's health.
- 32.2% disagreed that consecutive shifts are comfortable.
- 27.1% agreed that rotational work can be adjusted with colleagues.

- 34.4% agreed that working hours are comfortable.
- 38.9% disagreed that overtime is not compulsory, indicating overtime pressure exists.
- 35.4% agreed that shift work is comfortable.
- 30.3% agreed that there are no meetings or training sessions after working hours.
- 28.7% disagreed that there are no emergency calls after working hours while at home.
- 29.9% disagreed that there are no calls after shift time.
- 27.4% agreed that they do not feel tired after work.
- 36.3% agreed that they are able to perform household activities after work.
- 30.6% agreed that job stress does not affect personal relationships.
- 41.1% agreed that caring for children and family members is not affected.
- 36% agreed that health issues due to the work environment are manageable.
- 30.6% disagreed that family health risks are unaffected.
- 35.03% were neutral about not thinking about work while at home.
- 37.6% were neutral about not thinking about home while at work.

K MO and Bartlett's Test of Sphericity to evaluate the Involvement Balance on Work Life Balance

Higher values are typically preferred, however a number above 0.5 is deemed appropriate for factor analysis.

Cronbach's Alpha for the Involvement Balance on Work Life Balance

The value of reliability is greater than 0.70 will be considered reliable.

Table2: Reliability Statistics of Factors Influencing Job Satisfaction

Cronbach's Alpha	No. of Items
0.781	8

Source: SPSS output

The 8-item participation balance scale scored 0.781, showing great internal consistency and good reliability in assessing work-life balance.

K MO and Bartlett's Test of Sphericity of Involvement Balance on Work Life Balance

Table 3: K MO and Bartlett's Test of Involvement Balance on Work Life Balance

K MO and Bartlett's Test		
K M O Sampling Adequacy Measure.		0.805
Bartlett's Test of Sphericity	Approx. Chi-Square	630.584
	Df	28
	Sig.	0

Source: SPSS output

The KMO Sampling Measure the acceptable value of 0.5 is exceeded by the adequacy value of 0.805. At 28 degrees of freedom, the Bartlett's Test of Sphericity chi square value is 630.584. As a result, factor analysis can be applied to the provided collection of data. The significance level of 0.05 is exceeded by the Bartlett's Test of Sphericity result of 0.000. For the specified set of data, the correlation matrix is therefore deemed significant.

Total variance explained of Involvement Balance on Work Life Balance

Table 4: Total variance explained

Component	Initial Eigenvalues / Sums of Extraction for Squared Loadings			Rotation Sums Squared Loadings		
	Total	of Variance	Cumulative	Total	of Variance	Cumulative
1	3.252	40.645	40.645	2.252	28.151	28.151
2	1.116	13.95	54.594	1.915	23.94	52.091
3	1.028	12.846	67.44	1.228	15.349	67.44

Source: Results from SPSS

Method of Extraction: Principal Component Analysis.

The three components that account for 67.440 percent of the variance have eigen values greater than 1. The Rotation Sums of Squared Loadings value's whole cumulative variance was explained by the three retrieved components (factors). also, same 67.440 per cent. The first factor has the initial eigen value total of 3.252 (40.645 %), the second factor has the initial Eigen value total of 1.116 (13.950 %) and the initial Eigen value of the third factor is 1.028 (12.846 %).

Variance Extractions for Communities of Involvement Balance on Work Life Balance

Table5: Communalities of Involvement Balance on Work Life Balance

S.No	Statements	Extraction
1	Over workload is manageable	0.828
2	Lower nurse-patient ratio is adjusted	0.709
3	Medical equipment is able to handle during emergency	0.679
4	Facing verbal abuse from patients is over come with colleague's support	0.655
5	Often receive complaints from in-patients/ outpatients can be resolved quickly with the support of management	0.589
6	The doctor did 'not scold in front of the patients	0.754
7	There is no stress in this job	0.670
8	The nature of Job does not affect health	0.511

Source: Results from SPSS

Method of Extraction: Principal Component Analysis (PC) All the statements of involvement balance on work-life balance are greater than 0.4 which indications a good correlation value.

Rotated Component Matrix of Involvement Balance on Work Life Balance

Generally, above 0.5 is taken as the cut-off point.

Table 6: Rotated Component Matrix of Involvement Balance on Work Life Balance

Statements	Component		
	1	2	3
Lower nurse-patient ratio is adjusted	0.817	0.163	-0.125
There is no stress in this job	0.731	0.361	-0.076
Medical equipment is capable of managing during emergency	0.679	0.02	0.466
The characteristics of Job does not affect health	0.589	0.202	0.351
The doctor did 'not scold in front of the patients	0.011	0.857	0.138
Facing verbal abuse from patients is over come with colleague's support	0.284	0.733	0.194
Often receive complaints from in-patients/ outpatients can be resolved quickly with the support of management	0.403	0.651	-0.058
Over workload is manageable	-0.013	0.147	0.898

Source: Results from SPSS

Method of Extraction: Principal Component Analysis (PC) Varimax with Kaiser Normalization is the rotation method.

All of the factor loadings of participation balance on work-life balance are greater than the threshold value of 0.50, which is split into three factors, according to the pattern matrix results using maximum likelihood. Additionally, a confirmatory factor analysis was conducted using all of these assertions.

Involvement Balance Measurement Model

Exploratory Factor Analysis (EFA) is used to examine each assertion in the component. First order confirmatory factor analysis (CFA) is used to further validate the identified factors.

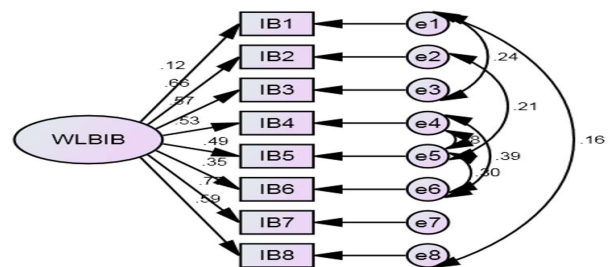


Figure 1: Measurement Model of Involvement Balance

Table 7: Model Fit indices CFA results of Involvement Balance for Work Life Balance

Name of Index	Obtained Value	Level of Acceptance	Observations
RMSEA	0.074	<0.08	The necessary level has been reached.
GFI	0.971	>0.90 / >0.80	The necessary level is somewhat attained.
AGFI	0.924	>0.90 / >0.80	The necessary level is somewhat attained.
CFI	0.96		
TLI	0.92		
CMIN/DF	2.736	<3.0 / <5.0	The required level is Achieved

KMO and Bartlett's Test of Sphericity to evaluate the Time Balance on Work Life Balance

A value above 0. Although 5 is thought to be appropriate for factor analysis, greater values are typically more desirable.

Cronbach's Alpha for Time Balance on Work Life Balance

Table 8: Statistics about the Reliability of Time Balance on Work Life Balance

Cronbach's Alpha	No. of Items
0.817	8

Source: Results from SPSS

The work-life balance statements have great internal consistency and high dependability, as indicated by the Cronbach's Alpha rating of 0.817.

K MO and Bartlett's Test of Sphericity of Time Balance on Work Life Balance

When doing factor analysis, the KMO loading value needs to be loaded between 0.5 and 1.0.

Table 9: K MO & Bartlett's Test of Time Balance K MO and Bartlett's Test

K MO and Bartlett's Test			
K MO Sampling Adequacy Measure			0.839
Bartlett's Test of Sphericity	Approx. Chi-Square	810.007	
	Df	28	
	Sig.	0	

Source: Results from SPSS

The KMO measure, which is loaded between 0.5 and 1.0, is 0.839. Bartlett's test of sphericity at 28 degrees of freedom has a chi square value of 810.007. The acceptable threshold of 0.05 is exceeded by the P value of 0.000.

Explained total variance of Time Balance on Work Life Balance

Table 9: Explained total variance

Component	Initial Eigenvalues / Sums of Extraction for Squared Loadings			Rotation Sums Squared Loadings		
	Total	of Variance	Cumulative	Total	of Variance	Cumulative
1	3.651	45.637	45.637	3.651	45.637	45.637
2	1.121	14.014	59.651	1.121	14.014	59.651

Source: Results from SPSS

Method of Extraction: Principal Component Analysis (PC) Two extracted factors accounted for 45.637 and 59.651 per cent of the total variance in the data, which are exceeding the allowable amount further it is carrying out for factor analysis.

Variance Extractions for Communities of Time Balance on Work Life Balance

Table 10: Communalities of Time Balance

S. No	Statements	Extraction
1	Consecutive shifts are made with comfortable	0.538
2	Rotational work can be adjusted with colleagues	0.718
3	Working hours is comfortable	0.441
4	Compulsory overtime is not compulsory	0.651
5	Shift work is comfortable	0.550
6	There is no Meetings/training after working hours	0.622
7	There is no call for emergency cases after working hours, when at home	0.596
8	There is no call after shift time	0.655

Source: Results from SPSS

Method of Extraction: Principal Component Analysis (PC) Every statement has a value more than 0.40, indicating a strong association between time balance and work-life balance.

Matrix of Rotated Components - Time Balance on Work Life Balance

Table 11: Matrix of Rotated Components of Time Balance

S.No.	Statements	Component	
		1	2
1.	Compulsory overtime is not compulsory	0.797	0.125
2.	There is no Meetings/training after working hours	0.732	0.293
3.	Working hours is comfortable	0.662	-0.051
4.	There isn't call after shift time	0.644	0.49
5.	There is no call for emergency cases after working hours, when at home	0.574	0.517
6.	Rotational work can be adjusted with colleagues	-0.199	0.824
7.	Shift work is comfortable	0.358	0.649
8.	Consecutive shifts are made with comfortable	0.444	0.584

Source: Results from SPSS

Method of Extraction: Principal Component Analysis (PC) Varimax with Kaiser Normalization is the rotation method. The loadings of time balance on work-life balance for all the factors above the threshold value of 0.50, which was used for the Confirmatory Factor analysis.

Measurement Model of Time Balance

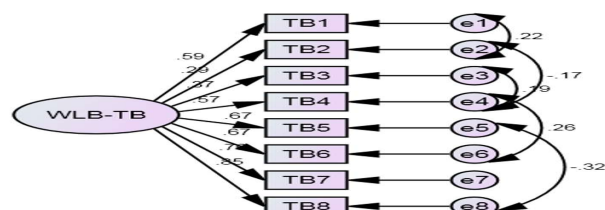


Figure 2: Model of Measurement of Time Balance

Table 12: Model Fit indices CFA results

Index Name	Acquired Value	Acceptance Level	Observations
RMSEA	0.071	<0.08	The required level is Achieved
GFI	0.969	>0.90 / >0.80	The necessary level is somewhat attained.
AGFI	0.926	>0.90 / >0.80	The necessary level is somewhat attained.
CFI	0.97		
TLI	0.944		
CMIN/DF	2.576	<3.0 / <5.0	The required level is Achieved

K MO and Bartlett's Test of Sphericity to evaluate the Involvement Balance on Work Life Balance

A value above 0. Although 5 is thought to be appropriate for factor analysis, greater values are typically more desirable.

Cronbach's Alpha for Satisfaction Balance on Work Life Balance**Table 13: Reliability Statistics of Satisfaction Balance**

Cronbach's Alpha	No. of Items
0.746	8

Source: Results from SPSS

The value is 0.746. It is representing that the factors have high internal consistency or reliability.

K MO & Bartlett's Test of Sphericity of Satisfaction Balance**Table 14: K MO & Bartlett's Test - Satisfaction Balance K MO and Bartlett's Test**

K MO and Bartlett's Test		
K MO Sampling Adequacy Measure		0.817
Bartlett's Test of Sphericity	Approx. Chi-Square	775.617
	Df	28
	Sig.	0

Source: Results from SPSS

The allowed value of 0.50 is exceeded by the KMO value of 0.817. At 28 degrees of freedom, Bartlett's test of sphericity yields a chi square value of 775.617. The acceptable threshold of 0.05 is exceeded by the P value of 0.000.

Explained total variance of Satisfaction Balance on Work Life Balance**Table 15: Explained total variance of Satisfaction Balance**

Component	Sums of Extraction for Squared Loadings			Rotation Sums Squared Loadings		
	Total	of Variance	Cumulative	Total	of Variance	Cumulative
C1	3.364	42.054	42.054	3.181	39.765	39.765
C2	1.184	14.794	56.848	1.353	16.909	56.675
C3	1.04	13.002	69.849	1.054	13.175	69.849

Source: Results from SPSS

Method of Extraction: Principal Component Analysis (PC) A total cumulative variance of the Rotation Sums of Squared Loadings value was explained by two elements or components that were extracted. 69.849 per cent.

Communalities of Satisfaction Balance on WL B**Table 16: Communalities of Satisfaction**

S. No	Statements	Extraction
1	Not Feeling Tired after working hours	0.688
2	Able to do household activities after Work	0.552
3	Job stress did not affect personal relationship	0.75
4	Caring of children/ family members not affected	0.637
5	Health issues due to work environment can be manageable	0.69
6	Family health risks is not affected	0.669
7	Never think about work when at home	0.677
8	Never think about home at work	0.925

Source: Results from SPSS

Method of Extraction: Principal Component Analysis (PC) The communalities value of satisfaction balance on work life balance. All the statements are more than value of 0.50 which indicates a good correlation value.

Rotated Component Matrix - Satisfaction Balance on Work Life Balance**Table 17: Rotated Component Matrix of Satisfaction Balance**

S.No.	Statements	Component		
		1	2	3
1.	Job stress did not affect personal relationship	0.810	0.305	-0.020
2.	Caring of children/ family members not affected	0.798	-0.012	0.026
3.	Health issues due to work environment can be manageable	0.740	0.374	-0.039
4.	Able to do household activities after Work	0.731	-0.045	-0.123
5.	Family health risks is not affected	0.639	0.509	-0.043
6.	Not Feeling Tired after working hours	0.618	-0.441	0.334
7.	Never think about work when at home	0.095	0.812	0.092
8.	Never think about home at work	-0.078	0.069	0.956

Source: Results from SPSS

Method of Extraction: Principal Component Analysis (PC) Varimax with Kaiser Normalization is the rotation method. All the factors loading are more than the threshold value of 0.50 which is divided into three components. Therefore, all the statements are having been used for CFA analysis.

Measurement Model of Satisfaction Balance

Exploratory Factor Analysis (EFA) is used to examine each assertion in the component. First order confirmatory factor analysis (CFA) is used to further validate the identified factors.

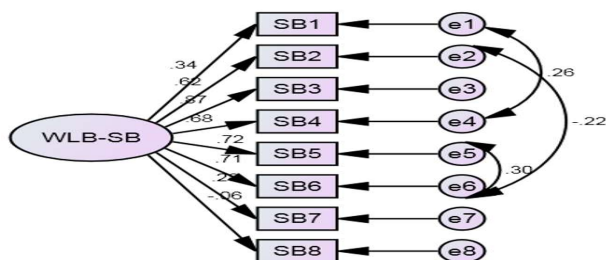
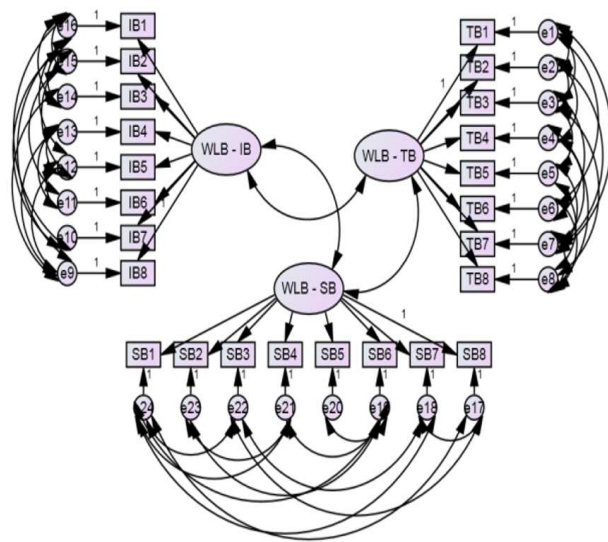
**Figure 3: Measurement Model of Satisfaction Balance**

Table 18: Model Fit indices CFA results

Name of Index	Obtained Value	Level of Acceptance	Observations
RMSEA	0.073	<0.08	The required level is Achieved
GFI	0.966	>0.90 / >0.80	The necessary level is somewhat attained.
AGFI	0.927	>0.90 / >0.80	The necessary level is somewhat attained.
CFI	0.962		
TLI	0.938		
CMIN/DF	2.67	<3.0 / <5.0	The required level is Achieved

Measurement Model of Work Life Balance**Figure 4: Measurement Model of WLB****Table 19: Model Fit indices CFA results of WLB**

Name of Index	Obtained Value	Level of Acceptance	Observations
RMSEA	0.073	<0.08	The required level is Achieved
GFI	0.966	>0.90 / >0.80	The necessary level is somewhat attained.
AGFI	0.927	>0.90 / >0.80	The necessary level is somewhat attained.
CFI	0.962		
TLI	0.938		
CMIN/DF	2.67	<3.0 / <5.0	The required level is Achieved

Due to its close relationship to both Time Balance (TB) and Involvement Balance (IB), the results indicate that Satisfaction Balance (SB) is a key and significant factor. This suggests that nurses' total work-life balance is greatly influenced by how well they manage their personal and professional lives. Furthermore, there is a strong correlation between Time Balance (TB) and Involvement Balance (IB), suggesting that efficient time management promotes greater involvement in both personal and professional spheres. The model demonstrates that attaining a healthy work-life balance among nurses requires a balanced time distribution, active participation in roles, and—above all—overall satisfaction, which turns out to be the most significant factor.

DISCUSSION

Hospital administration should place a high priority on flexible scheduling and efficient shift planning to enhance Time Balance (TB) and lessen workload pressure in order to improve Work-Life Balance (WLB) among

nurses. Creating a supportive workplace where nurses can actively participate in decision-making and retain meaningful involvement in both professional and personal roles is necessary to improve Involvement Balance (IB). To increase total job happiness, firms should concentrate on employee wellbeing programs, recognition systems, counseling services, and stress management activities since happiness Balance (SB) is the most important dimension. Furthermore, a healthy company culture can be promoted and burnout can be decreased by guaranteeing sufficient workforce, equitable workload distribution, and supportive leadership. Policies that support families, such leave benefits and childcare assistance, can also assist nurses in balancing life at home and at work.

CONCLUSION

The study comes to the conclusion that time management, role involvement, and general satisfaction have a significant influence on the complex idea of work-life balance among nurses. The most important of these is satisfaction balance, which is closely related to and reinforces the other qualities. Better patient care, increased work satisfaction, and enhanced well-being are all results of a well-balanced integration of time, involvement, and satisfaction. In order to improve nurses' work-life balance and ensure organizational performance and sustainable nursing practice, healthcare facilities must use comprehensive and encouraging measures.

REFERENCES

Journal Articles:

- Widayana, I. G. A. A., Agustina, H. R., & Mediawati, A. S. (2025). Factors associated with work-life balance among nurses in hospitals: A socio-ecological scoping review. *Journal of Multidisciplinary Healthcare*.
- Matsuo, M., Suzuki, E., Takayama, Y., Shibata, S., & Sato, K. (2021). Influence of striving for work-life balance and sense of coherence on intention to leave among nurses: A 6-month prospective survey. *SAGE Journals*.