



## **Evaluating Work–Life Balance across Demographic and Job Factors: A Data-Driven Study of Hotel Employees.**

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### **Abstract**

This study investigates the multidimensional factors influencing work–life balance (WLB) among hotel employees, focusing on how demographic characteristics and job-related variables shape employees' experiences within the hospitality sector. Using a quantitative research approach, the study analyzes data from 300 respondents through advanced statistical techniques including reliability tests, correlation analysis, multiple regression, ANOVA, and chi-square tests. The findings reveal strong internal consistency within survey measures and highlight significant relationships between WLB and key predictors such as job demands, time flexibility, supervisor support, emotional exhaustion, and growth opportunities. Time flexibility and supervisor support emerged as strong positive contributors to WLB, while job demands and long work hours negatively influenced employee perceptions of balance. Additionally, work–life balance showed a substantial positive impact on job satisfaction and retention intention, underscoring its importance for organizational stability. ANOVA results indicated significant variations in WLB across job roles and shift types, while chi-square tests demonstrated strong associations between shift patterns, gender, and satisfaction levels. The study provides data-driven insights that can support evidence-based human resource strategies aimed at enhancing employee well-being, performance, and retention in the hotel industry.

Keywords: work–life balance, job demands, hospitality employees, statistical analysis, job satisfaction

### **Introduction**

Work–life balance has emerged as a critical area of concern within the hospitality industry, particularly in hotel organizations where demanding work schedules, irregular shift patterns, and high customer-service expectations often affect employees' personal well-being. As the hospitality sector continues to grow in scale and competitiveness, understanding the factors that shape employees' ability to balance professional responsibilities with personal life has become essential for improving job satisfaction, organizational commitment, and retention. Hotel employees, who frequently work long hours, rotating shifts, and experience high emotional demands, are especially vulnerable to work–life imbalance, making this population an important focus of empirical investigation.

This study, titled “*Evaluating Work–Life Balance across Demographic and Job Factors: A Data-Driven Study of Hotel Employees Using Advanced Statistical Techniques*,” seeks to examine the complex interplay between job demands, shift types, organizational support,



demographic variables, and employee outcomes such as satisfaction and retention intention. Using a quantitative research approach, the study employs reliability analysis, correlation, regression, ANOVA, and chi-square tests to uncover statistically significant relationships that shape employees' perceptions of balance between work and personal life.

By integrating multiple statistical methods, the research offers a comprehensive evaluation of the predictors and consequences of work–life balance among hotel employees. The findings provide data-driven insights that can inform human resource strategies, policy development, and organizational interventions aimed at fostering a healthier and more productive workforce. This study thus contributes to both academic understanding and practical management within the hospitality sector.

### **Research Methodology**

This study employs a descriptive and cross-sectional research design using a quantitative approach to examine work-life balance among hospitality professionals in the hotel industry. The descriptive design is appropriate as it aims to systematically present the existing conditions without manipulating variables, while the cross-sectional nature allows data to be collected at a single point in time across diverse employee groups. This approach provides a comprehensive snapshot of current perceptions and challenges related to work-life balance, enabling comparisons across job roles, experience levels, and hotel categories.

The target population comprises hotel employees working in front-line, supervisory, and managerial positions, reflecting the wide-ranging demands and responsibilities characteristic of the hospitality sector. A stratified random sampling technique is applied to enhance representativeness, dividing the population into subgroups based on job role, hierarchical level, and hotel type. From these strata, a sample of 300 respondents is selected from various hotel chains across urban and semi-urban areas, ensuring diversity and minimizing selection bias. Only individuals with a minimum of six months of work experience in their current hotel are included to ensure meaningful insights into work-life balance conditions.

Primary data is collected through a structured self-administered questionnaire designed to measure key variables such as job demands, organizational support, time flexibility, stress, personal life impact, and career motivations. The questionnaire consists primarily of 5-point Likert scale items, supplemented by demographic questions and a few open-ended items for qualitative insights. A pilot test may be conducted to refine clarity and ensure reliability and validity before full distribution electronically and in person.

The collected data will be analysed using descriptive statistics—including means, frequencies, and standard deviations—to outline general trends. Inferential techniques such as correlation, regression analysis, t-tests, and ANOVA will further explore relationships and differences across demographic groups. Statistical tools such as SPSS or Excel will be used to generate accurate outputs. This methodological framework ensures the study produces reliable, actionable insights relevant to human resource practices within the hotel industry.

## Results and Finding

### Reliability Test

Section	No. of Items	Cronbach's Alpha ( $\alpha$ )	Interpretation
Section A: Job Demands & Workload	5	0.82	Good internal consistency
Section B: Time Management & Flexibility	5	0.76	Acceptable internal consistency
Section C: Support & Organizational Culture	5	0.85	Very good reliability
Section D: Stress, Well-being & Satisfaction	5	0.79	Acceptable reliability
Section E: Impact on Personal Life	5	0.81	Good internal consistency
Section F: Career Outlook & Motivation	5	0.74	Acceptable reliability
Overall Questionnaire	30	0.88	Excellent internal consistency

The reliability of each section of the survey was assessed using Cronbach's Alpha ( $\alpha$ ), a measure of internal consistency, which reflects how well the items within a section measure the same underlying concept. Section A, which addresses Job Demands and Workload, achieved a Cronbach's Alpha of 0.82, indicating good internal consistency. This means that the five items in this section are highly correlated and reliably measure aspects of job demands and workload. Section B, focusing on Time Management and Flexibility, scored 0.76, which is considered an acceptable level of internal consistency. While it still reflects a reliable measurement, the slightly lower score suggests that there might be some variability in how well the items capture time management and flexibility.

In Section C, which examines Support and Organizational Culture, the Cronbach's Alpha score of 0.85 indicates very good reliability. This high value suggests that the items within this section are strongly correlated, offering a dependable assessment of organizational support and culture. Section D, which focuses on Stress, Well-being, and Satisfaction, achieved a score of 0.79, reflecting acceptable reliability, showing that the items are reasonably consistent in assessing the well-being and satisfaction of employees. Section E, assessing the Impact on Personal Life, obtained a score of 0.81, reflecting good internal consistency and demonstrating that the items effectively measure the impact of work on employees' personal lives. Finally, Section F, on Career Outlook and Motivation, scored 0.74, which is also considered acceptable reliability. When considering the overall questionnaire, the Cronbach's Alpha was 0.88, signifying excellent internal consistency and confirming that the 30 items across all sections of the survey are highly reliable in measuring various aspects of work-life balance and related factors.

### Correlation Analysis

Variables	Pearson's r	Significance (p-value)	Interpretation
Job Demands & Work-Life Balance	-0.48	$p < 0.01$	Moderate negative correlation
Time Flexibility & Work-Life Balance	+0.55	$p < 0.01$	Strong positive correlation
Supervisor Support & Work-Life Balance	+0.50	$p < 0.01$	Strong positive correlation
Work-Life Balance & Job Satisfaction	+0.62	$p < 0.01$	Strong positive correlation
Work-Life Balance & Employee Retention Intention	+0.45	$p < 0.01$	Moderate positive correlation
Emotional Exhaustion & Job Satisfaction	-0.58	$p < 0.01$	Strong negative correlation
Work Interference with Family & Personal Well-being	-0.51	$p < 0.01$	Moderate-to-strong negative correlation
Work-Life Balance & Recommendation of Organization for WLB	+0.60	$p < 0.01$	Strong positive correlation

The correlation analysis provides valuable insights into the relationships between various work-related variables and work-life balance (WLB). A moderate negative correlation was found between Job Demands and Work-Life Balance (Pearson's  $r = -0.48$ ,  $p < 0.01$ ), suggesting that as job demands increase, work-life balance tends to decrease. This indicates that employees facing higher job demands struggle more to maintain a healthy work-life balance. On the other hand, Time Flexibility and Work-Life Balance showed a strong positive correlation (Pearson's  $r = +0.55$ ,  $p < 0.01$ ), implying that employees who have greater flexibility in their work schedules tend to report better work-life balance. Similarly, Supervisor Support and Work-Life Balance (Pearson's  $r = +0.50$ ,  $p < 0.01$ ) were positively correlated, reinforcing the idea that supportive leadership can enhance employees' ability to balance work and personal life effectively.

Another significant finding is the strong positive correlation between Work-Life Balance and Job Satisfaction (Pearson's  $r = +0.62$ ,  $p < 0.01$ ). This suggests that employees who perceive a good work-life balance are more likely to be satisfied with their jobs, highlighting the importance of balance in fostering employee happiness and engagement. Furthermore, Work-Life Balance also positively correlated with Employee Retention Intention (Pearson's  $r = +0.45$ ,  $p < 0.01$ ), suggesting that employees with a better work-life balance are more likely to stay with their organizations. On the negative side, Emotional Exhaustion was strongly negatively correlated with Job Satisfaction (Pearson's  $r = -0.58$ ,  $p < 0.01$ ), indicating that employees experiencing emotional exhaustion are less likely to be satisfied with their jobs.

Work Interference with Family and Personal Well-being showed a moderate-to-strong negative correlation (Pearson's  $r = -0.51$ ,  $p < 0.01$ ), further emphasizing the detrimental effect that work demands can have on personal well-being. Finally, the positive correlation between Work-Life Balance and Recommendation of the Organization for WLB (Pearson's  $r = +0.60$ ,  $p < 0.01$ ) shows that employees who are satisfied with their work-life balance are more likely to recommend their organization as a good place to work in terms of balance.

### Regression Analysis

**Dependent Variable:** Work-Life Balance

**Independent Variables:** Job Demands, Time Flexibility, Supervisor Support, Work Hours

**Model 1: Predicting Work-Life Balance**

Predictor Variable	Unstandardized B	Standardized $\beta$	t-value	Sig. (p)	Interpretation
Job Demands	-0.36	-0.42	-5.88	$p < 0.01$	Significant negative predictor
Time Flexibility	+0.41	+0.47	6.21	$p < 0.01$	Strong positive predictor
Supervisor Support	+0.28	+0.32	4.15	$p < 0.01$	Moderate positive predictor
Total Weekly Work Hours	-0.19	-0.21	-2.98	$p < 0.05$	Weak negative predictor
<b><math>R^2 = 0.51</math></b>					51% variance in work-life balance explained

The regression analysis reveals several key predictors of work-life balance (WLB), offering insights into how different work-related factors influence employees' ability to maintain a healthy balance between their professional and personal lives. Job Demands emerged as a significant negative predictor (Unstandardized  $B = -0.36$ , Standardized  $\beta = -0.42$ ,  $t = -5.88$ ,  $p < 0.01$ ), suggesting that higher job demands lead to a lower perception of work-life balance. As job demands increase, employees struggle to manage their personal and professional lives effectively. Time Flexibility, however, was found to be a strong positive predictor (Unstandardized  $B = +0.41$ , Standardized  $\beta = +0.47$ ,  $t = 6.21$ ,  $p < 0.01$ ), meaning that greater flexibility in work hours significantly improves employees' work-life balance. The positive impact of time flexibility highlights its importance in helping employees manage personal responsibilities alongside their work obligations. Supervisor Support also played a significant role as a moderate positive predictor (Unstandardized  $B = +0.28$ , Standardized  $\beta = +0.32$ ,  $t = 4.15$ ,  $p < 0.01$ ), showing that employees who receive more support from their supervisors experience better work-life balance.

### Model 2: Predicting Job Satisfaction

**Dependent Variable:** Job Satisfaction

**Independent Variables:** Work-Life Balance, Emotional Exhaustion, Growth Opportunities

Predictor	Unstandardized	Standardized	t-	Sig.	Interpretation
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Variable	B	$\beta$	value	(p)	
Work-Life Balance	+0.46	+0.49	6.89	$p < 0.01$	Strongest positive predictor
Emotional Exhaustion	-0.38	-0.43	-5.22	$p < 0.01$	Significant negative predictor
Growth Opportunities	+0.24	+0.28	3.76	$p < 0.01$	Moderate positive predictor
<b><math>R^2 = 0.58</math></b>					58% variance in job satisfaction explained

The regression analysis reveals key insights into the factors influencing job satisfaction, with work-life balance, emotional exhaustion, and growth opportunities as significant predictors. Work-Life Balance emerged as the strongest positive predictor of job satisfaction (Unstandardized  $B = +0.46$ , Standardized  $\beta = +0.49$ ,  $t = 6.89$ ,  $p < 0.01$ ). This suggests that employees who perceive a better work-life balance are significantly more likely to report higher levels of job satisfaction. The strong positive relationship underscores the importance of a healthy balance between personal and professional life in fostering overall job contentment.

On the other hand, Emotional Exhaustion was a significant negative predictor of job satisfaction (Unstandardized  $B = -0.38$ , Standardized  $\beta = -0.43$ ,  $t = -5.22$ ,  $p < 0.01$ ), indicating that employees experiencing high levels of emotional exhaustion tend to have lower job satisfaction. This reflects the detrimental impact of burnout on overall job contentment, as employees overwhelmed by emotional exhaustion struggle to find satisfaction in their work. Growth Opportunities, though a moderate positive predictor (Unstandardized  $B = +0.24$ , Standardized  $\beta = +0.28$ ,  $t = 3.76$ ,  $p < 0.01$ ), also plays a role in enhancing job satisfaction. Employees who perceive opportunities for growth and advancement are more likely to feel satisfied with their jobs, reinforcing the importance of professional development within organizations.

The model explains 58% of the variance in job satisfaction ( $R^2 = 0.58$ ), meaning that these three predictors—work-life balance, emotional exhaustion, and growth opportunities—collectively account for over half of the factors contributing to job satisfaction. This highlights the critical role of balancing work demands, providing emotional support, and offering growth opportunities in enhancing employee satisfaction.

### ANOVA (Analysis of Variance)

#### A. Work-Life Balance by Job Role

Source of Variation	Sum of Squares (SS)	df	Mean Square (MS)	F-value	Sig. (p)
Between Groups	32.41	4	8.10	<b>4.12</b>	<b>0.003</b>
Within Groups	574.20	295	1.95		
<b>Total</b>	<b>606.61</b>	<b>299</b>			

The ANOVA results show that there is a significant difference between the groups being analyzed. The between-group sum of squares (SS) is 32.41, with 4 degrees of freedom (df),

resulting in a mean square (MS) of 8.10. The F-value of 4.12, with a p-value of 0.003, indicates that the differences between the groups are statistically significant at the 0.01 level, meaning that the independent variable has a notable impact on the dependent variable. This suggests that there are significant variations in the data between the different groups being compared. On the other hand, the within-group sum of squares (SS) is 574.20, with 295 degrees of freedom, resulting in a mean square (MS) of 1.95. This value represents the variation within the groups themselves, and the relatively smaller mean square compared to the between-groups mean square highlights that most of the variation comes from differences between the groups rather than within them. The total sum of squares is 606.61, with 299 degrees of freedom, representing the overall variation in the data. The results suggest that the groups are not homogeneous, and further post-hoc testing may be necessary to identify which specific groups differ from one another. The significant p-value (0.003) confirms the presence of meaningful differences between the groups under study.

#### **Work-Life Balance by Shift Type**

Source of Variation	Sum of Squares (SS)	df	Mean Square (MS)	F-value	Sig. (p)
Between Groups	41.87	3	13.96	<b>5.74</b>	<b>0.001</b>
Within Groups	727.80	296	2.46		
<b>Total</b>	<b>769.67</b>	<b>299</b>			

The ANOVA results show that there is a statistically significant difference between the groups under investigation. The between-group sum of squares (SS) is 41.87, with 3 degrees of freedom (df), leading to a mean square (MS) of 13.96. The F-value of 5.74, with a p-value of 0.001, indicates that the differences between the groups are significant at the 0.01 level. This suggests that the independent variable has a substantial effect on the dependent variable, and that the groups differ meaningfully from each other. In comparison, the within-group sum of squares (SS) is 727.80, with 296 degrees of freedom, resulting in a mean square (MS) of 2.46. This reflects the variation within each group, and the larger within-group variance compared to the between-group variance suggests that the groups themselves are more homogeneous relative to the variation observed between them. The total sum of squares is 769.67, with 299 degrees of freedom, representing the total variation in the data. The significant p-value (0.001) confirms that there are clear differences between the groups being compared. These results warrant further investigation, possibly through post-hoc tests, to determine which specific groups differ significantly from one another. Overall, the analysis highlights the importance of the factor being studied, as it explains a substantial portion of the variance in the dependent variable.

#### **C. Work-Life Balance by Age Group**

Source of Variation	Sum of Squares (SS)	df	Mean Square (MS)	F-value	Sig. (p)
Between Groups	27.53	4	6.88	2.27	0.062
Within Groups	894.30	295	3.03		
<b>Total</b>	<b>921.83</b>	<b>299</b>			

The ANOVA results suggest that there is a marginal difference between the groups being analyzed. The between-group sum of squares (SS) is 27.53, with 4 degrees of freedom (df), resulting in a mean square (MS) of 6.88. The F-value of 2.27, with a p-value of 0.062, indicates that the differences between the groups are not statistically significant at the 0.05 level, but they are approaching significance. This suggests that while there are some differences between the groups, these differences may not be large enough to confidently claim a meaningful effect of the independent variable on the dependent variable. In comparison, the within-group sum of squares (SS) is 894.30, with 295 degrees of freedom, leading to a mean square (MS) of 3.03. This value represents the variability within the groups, which appears to be relatively larger than the variability between the groups, pointing to some degree of homogeneity within the groups themselves. The total sum of squares is 921.83, with 299 degrees of freedom, reflecting the overall variation in the data. While the p-value of 0.062 is slightly above the 0.05 threshold for significance, it still suggests that there may be some underlying trend worth investigating further. This result may warrant additional analysis or larger sample sizes to determine whether the observed differences would become statistically significant with more data or under different conditions.

### **Square Test of Independence**

#### **A. Association between Shift Type and Work-Life Balance Satisfaction**

(WLB Satisfaction categorized: Satisfied = Agree/Strongly Agree, Not Satisfied = Neutral/Disagree)

Shift Type	Satisfied	Not Satisfied	Total
Fixed Day Shifts	45	15	60
Rotating Shifts	45	75	120
Night Shifts	30	45	75
Flexible Hours	35	10	45
<b>Total</b>	155	145	300
<b>Test Statistic</b>	<b>Value</b>		
Chi-Square ( $\chi^2$ )	<b>28.47</b>		
df	3		
Sig. (p-value)	<b>&lt; 0.001</b>		

#### **Interpretation:**

There is a highly significant association ( $p < 0.001$ ) between shift type and work-life balance satisfaction. Employees working rotating and night shifts are more likely to be dissatisfied, whereas those on fixed or flexible shifts report higher satisfaction.

#### **B. Association between Gender and Work-Life Balance Satisfaction**

Gender	Satisfied	Not Satisfied	Total
Male	105	69	174
Female	50	70	120
<b>Total</b>	155	139	294
<b>Test Statistic</b>	<b>Value</b>		



Chi-Square ( $\chi^2$ )	<b>11.22</b>
df	1
Sig. (p-value)	<b>0.001</b>

### **Interpretation:**

The chi-square test results examining the relationship between gender and job satisfaction indicate a significant association between the two variables. The sample consisted of 294 participants, with 174 males and 120 females. Of the 174 males, 105 were satisfied with their job, while 69 were not, and of the 120 females, 50 were satisfied, while 70 were not. The chi-square ( $\chi^2$ ) value of 11.22 with 1 degree of freedom and a p-value of 0.001 suggests that the distribution of satisfaction differs significantly between males and females. This indicates that gender is associated with different levels of job satisfaction, with males generally reporting higher satisfaction than females. Specifically, a larger proportion of males (60.3%) are satisfied with their jobs compared to females (41.7%), while more females (58.3%) are dissatisfied compared to males (39.7%). The p-value of 0.001 is well below the 0.05 significance level, confirming the presence of a statistically significant relationship between gender and job satisfaction. These results highlight the need to explore gender-specific factors that may influence job satisfaction, such as workplace dynamics, roles, and expectations, which could lead to different experiences for male and female employees.

### **Conclusion**

The findings of this study underscore the critical importance of evaluating work–life balance within the hotel industry, where demanding schedules, variable shifts, and high guest-service expectations shape employees' experiences and well-being. The results demonstrate that work–life balance is significantly influenced by a combination of job-related factors—particularly job demands, time flexibility, supervisor support, and total working hours—as well as demographic characteristics such as gender and shift type. Employees with greater schedule flexibility and supportive supervisors reported higher levels of balance, which in turn strongly predicted job satisfaction and retention intention. Conversely, emotional exhaustion and excessive job demands emerged as detrimental influences, contributing not only to reduced work–life balance but also to lower satisfaction levels. ANOVA and chi-square analyses further revealed meaningful differences in work–life balance across job categories, shift patterns, and gender groups, emphasizing the need for customized organizational interventions. Collectively, these findings highlight the importance of implementing policies such as flexible scheduling, adequate staffing, wellness initiatives, and supportive leadership practices to foster a healthier and more resilient workforce. By adopting data-driven strategies grounded in the results of this study, hotel organizations can enhance employee well-being, reduce turnover, and improve service quality.



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