CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

Chapter 3 elaborates on the research technique used to study the WLB of female employees in selected service industries in Ahmedabad, Vadodara, Surat, and Rajkot, Gujarat. The methodology systematically explains the sample strategies, data collection approaches, and statistical instruments employed to analyse the data. The study plan ensures a comprehensive analysis by capturing quantitative elements. At the beginning of this chapter, the research design is discussed, followed by the process of selecting participants through sampling. This is then followed by an exploration of data-gathering strategies, tools, and survey methodologies. The summary of the statistical techniques applied to the data analysis, presented at the end of this chapter, forms the basis for the conclusive analysis discussed in the later sections of the study.

3.2 Research Questions

1. How does support from family and others influence work satisfaction?
2. To what extent does the balance between work and personal life affect work environment satisfaction?
3. In what ways does happiness impact personal life satisfaction?
4. How does social media usage affect stress levels?
5. What is the impact of bringing work home on work satisfaction?
6. How does the time allocation for de-stressing affect stress levels?
7. To what extent does the balance between work and personal life influence personal life satisfaction?
8. How does happiness affect work environment satisfaction?
9. What is the relationship between social media usage and personal life satisfaction?
10. How does bringing work home impact stress levels?

3.3 Research Objectives

Based on the above research questions following research objectives are derived:

➢ To examine the various dimensions affecting the work-life balance of working women.

- To study the impact of various identified factors of work-life balance on working women.
- To suggest measures for improvement of work-life balance of women employees regarding research.
- To study the impact of social media on the work-life balance of working women.

3.4 Pilot Study

An initial inquiry carried out on a small scale before the major study to determine viability, time requirements, expense, danger, and unfavourable outcome is known as a pilot study. The survey and research methods needed to be tested and improved upon in this initial phase. To address respondents' concerns about WLB and determine the elements that lead to concerns about well-being, a questionnaire was created. Basic descriptive statistics were carried out and some preliminary analysis for reliability and measures was also checked. The result from the pilot study was used in the necessary adjustments for the survey to ensure that the final study captured the details of WLB in service sectors.

The pilot study on WLB sought 80 women employees from the service sectors in Gujarat, representing 20% of the total sample. The sample would provide a group for the testing and refinement of the researchers' survey instruments and would ensure that the questions were valid and relevant. The pilot study proved to be informative concerning any impending problems, for example, logistic and response problems, which were then ironed out before the main study. In so doing, the researchers ensured that a full-scale study would give more accurate and reliable results, thereby enhancing the quality of research.

This pilot phase encompassed several sensitive analyses that were crucial for establishing the strength of the research instruments. The Normality Test aimed at checking whether data was normally distributed, a property necessary for any parametric statistical methods. The Reliability Test normally uses Cronbach's alpha (CA) to evaluate for inner coherence among the survey items to ensure they reliably measure the intended constructs.

The Bartlett's Test of Sphericity and the Kaiser-Meyer-Olkin (KMO) Measure of adequate sampling are applied to the Validity Test. The sample was sufficient for factor analysis based on the KMO test, and the results of Bartlett's Test showed if the variables were statistically connected. The Communality Matrix was further applied to assess how well each of the

variables was reflected by the factors extracted, thus validating if the survey was effective in capturing concepts relating to WLB.

3.5 Pilot Analysis

3.5.1 Normality Test

The results of the normality test using the Kolmogorov-Smirnov and Shapiro-Wilk tests are shown in Table 3.1 for a variety of variables. The significant levels for each variable in the two tests are 0.000, including Happiness, WS, WES, PLS, Balance, Stress, WBH, TDS, FO, and SMU. Given that the p-values are less than 0.05, the null hypothesis, which holds that the data are not normally distributed is rejected resulting in the normal distribution of the data. The statistics for Kolmogorov-Smirnov range from 0.191 to 0.308, while for Shapiro-Wilk, they range from 0.810 to 0.911, further confirming the normality.

Table 3.1: Normality Test

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Happiness	.308	80	.000	.879	80	.000
Work Satisfaction (WS)	.254	80	.000	.864	80	.000
Work Environment Satisfaction (WES)	.296	80	.000	.826	80	.000
Personal Life Satisfaction (PLS)	.191	80	.000	.896	80	.000
Balance	.278	80	.000	.839	80	.000
Stress	.202	80	.000	.900	80	.000
Work Brought Home (WBH)	.279	80	.000	.844	80	.000
Time to De-stress (TDS)	.271	80	.000	.894	80	.000
Family and others (FO)	.276	80	.000	.810	80	.000
Social Media Usage (SMU)	.212	80	.000	.911	80	.000

3.5.2 Reliability Statistics

Table 3.2 displays the dependability statistics for a collection of 30 items. With a CA of 0.820, the items show a high degree of internal consistency. This number indicates that the items consistently measure the same underlying concept when taken as a whole. The dependability is constant regardless of item scaling, as seen by CA based on standardized items, which is likewise 0.820. Overall, the strong CA values imply that the items are well-correlated and that the instrument is dependable, giving assurance regarding the reliability of the results.

Table 3.2: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.820	.820	30

3.5.3 Validity Test

Table 3.3 displays the outcomes of Bartlett's Test of Sphericity and the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy. The sample might not be sufficient for factor analysis since the KMO value is 0.778, which is greater than the suggested cutoff of 0.60. A KMO value this high suggests that the correlations between items are sufficient and that the data might be suitable for factor extraction. The approximate Chi-Square value, with 45 degrees of freedom and a significance level of 0.000, is reported by Bartlett's Test of Sphericity. With enough correlations between the variables, factor analysis may move on, as indicated by this substantial p-value, which also shows that the correlation matrix is not an identity matrix. The low KMO score indicates that there are doubts about the sample's suitability for factor analysis, even with the significant result in Bartlett's Test.

Table 3.3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.778
Bartlett's Test of Sphericity	Approx. Chi-Square	508.056
	df	45
	Sig.	.000

Table 3.4 displays the Communality Matrix for various variables before and after extraction in factor analysis. Initial communalities are all set at 1.000, representing the total variance in

each variable. Following extraction, the communalities change, showing how much of the variance in each variable is explained by the elements that were kept. High communalities, such as .906 for TDS and .911 for FO, suggest these variables are well-represented by the factors. Lower communalities, like .216 for WBH, indicate that a smaller proportion of variance is explained, suggesting it may not align well with the removed factors.

Table 3.4: Communality Matrix

	Initial	Extraction
Happiness	1.000	.453
Work Satisfaction	1.000	.727
Work Environment Satisfaction	1.000	.779
Personal Life Satisfaction	1.000	.860
Balance	1.000	.664
Stress	1.000	.470
Work Brought Home	1.000	.216
Time to De-stress	1.000	.906
Family and others	1.000	.911
Social Media Usage	1.000	.680

3.6 Rationale for the Study

WLB has become a critical concern in contemporary organizational settings, especially for women employees who must play dual or multiple roles both professionally and personally. The present study focuses on the service sector women employees of major cities in Gujarat, Ahmedabad, Vadodara, Surat, and Rajkot, concerning work demand characteristics and cultural environment in urban setups.

Service sector activity is a very dynamic and demanding field of activities, thus posing special challenges regarding WLB. In this respect, insight into the influence of working hours, organizational support, and work pressure could be very helpful in designing strategies to overcome such challenges in achieving WLB. In addition, family and childcare responsibilities have huge implications on WLB since women usually bear most of the domestic burden.

Investigation of these factors will bring out the support systems that can be put in place to ease these pressures. Flexitime work arrangements and wellness programs are fast gaining recognition as critical factors in enhancing WLB. However, their operationalization and effectiveness differ from one sector or another and even across various organizations. In discussing these aspects, it is hoped that this study will tease out best practices that would enrich WLB for female employees.

Moreover, social media in modern life introduces new dynamics to WLB. The correct understanding of how SMU, addiction, and frequency influence WLB would be required to understand this dual-edged impact on work and personal life. Therefore, the current study will be important for developing comprehensive policies and interventions aimed at a WLB, which would improve the well-being of women workers in Gujarat's service industry and increase job satisfaction and productivity.

3.7 Research Design

This study employs a conclusive research design with a descriptive approach to quantitatively analyse the work-life balance (WLB) among women employees working in major cities of Gujarat, specifically Ahmedabad, Vadodara, Surat, and Rajkot. The research design is structured to offer precise and actionable insights into the WLB challenges faced by women in these urban areas. A total of 483 women employees were selected through quota sampling, ensuring adequate representation across various service sector categories, which enhances the reliability and generalizability of the findings.

Data collection was conducted using structured questionnaires that comprehensively measured multiple dimensions of WLB, including job satisfaction, family responsibilities, and personal well-being. The descriptive nature of the research ensures that the collected data accurately reflects the participants' experiences without manipulation. This descriptive design enables a detailed and systematic presentation of the data, providing factual insights into the current state of WLB among the women in the selected cities.

The descriptive statistics used in this conclusive research design facilitate summarizing the data by presenting the essential features in a clear and concise manner. In addition, correlation analysis is applied to examine the relationships between key variables, such as job satisfaction and personal well-being, allowing the research to uncover any significant connections or patterns within the data. By following this approach, the study provides a robust and thorough

examination of WLB factors, supporting both theoretical understanding and practical decision-making.

3.8 Hypothesis

Hypothesis 1

Null Hypothesis (H_{01}): Support from family and others (FO) does not significantly impact work satisfaction (WS).

Alternative Hypothesis (H_{11}): Support from FO significantly impacts WS.

The support from family and other friends, according to H_{01}, has no observable effect on job satisfaction, meaning that whether or not they are present, there is no difference in levels of work satisfaction. Contrariwise, the H_{11} supposition is that support granted by family and other relationships does indeed have a strong bearing on job satisfaction, which suggests people concern themselves with whether support is extended to them regarding feelings on how content they feel in their jobs.

Hypothesis 2

Null Hypothesis (H_{02}): The balance between work and personal life does not significantly affect work environment satisfaction (WES).

Alternative Hypothesis (H_{12}): The balance between work and personal life significantly affects work environment satisfaction (WES).

The H_{02} states that there is no significant impact on WLB on satisfaction regarding the work environment. On the other hand, the H_{12} explains that there is a significant relationship between WLB and WES. Testing these hypotheses helps in deducing what maintaining a good WLB means in overall satisfaction with the work environment.

Hypothesis 3

Null Hypothesis (H_{03}): Happiness does not significantly influence personal life satisfaction (PLS).

Alternative Hypothesis (H_{13}): Happiness significantly influences PLS.

On one hand, the H_{03} does not provide any definite relationship existing between happiness and PLS, signifying that improvements in satisfaction noted are not a consequence of changes in happiness. On the other hand, H_{13} cites that happiness significantly impacts PLS and thus may truly alter a person's view of the general level of pleasure.

Hypothesis 4

Null Hypothesis (H_{04}): Social media usage (SMU) does not significantly affect stress levels (SL).

Alternative Hypothesis (H_{14}): SMU significantly affects SL.

The H_{04} stresses that there is no perceived consequence of the usage of social media on the levels of stress, meaning if any increase in the levels of stress is perceived, the source is not social media. The H_{14} states that the variation in the levels of stress is significantly affected by the use of social media, which will imply a valid relationship between stress variation and the usage of social media. Testing these hypotheses helps to identify whether or not the levels of variation of stress are related to the use of social media.

Hypothesis 5

Null Hypothesis (H_{05}): Bringing work brought home (WBH) does not significantly affect work satisfaction (WS).

Alternative Hypothesis (H_{15}): WBH significantly affects WS.

The H_{05} says that working at home doesn't have a significant effect on the employees' satisfaction with their jobs. It would mean that WS remains at the same level and is unaffected by where one works. The H_{15} suggested that working out of the office decreases or increases job satisfaction in a big way, and with the employees, their relative levels of happiness are increased or go down regarding their ability to work at home. This helps in assessing the effect of remote work on job satisfaction.

Hypothesis 6

Null Hypothesis (H_{06}): Time allocated for de-stressing does not significantly reduce Stress Level (SL).

Alternative Hypothesis (H$_{16}$): Time allocated for de-stressing significantly reduces SL.

According to H$_{06}$, the time taken for de-stressing does not have a significant impact on the reduction of the level of stress. On the other hand, H$_{16}$ suggests that the time taken for de-stressing reduces the level of stress. Testing of these hypotheses shows that we can conclude the presence or absence of a significant relationship between the de-stressing time and reduction of stress, through which future treatments and methods of stress reduction could be determined.

Hypothesis 7

Null Hypothesis (H$_{07}$): Balance between work and personal life does not significantly affect PLS.

Alternative Hypothesis (H$_{17}$): Balance between work and personal life significantly affects PLS.

According to H$_{07}$, there is no significant relation between WLB and PLS. In other words, WLB does not affect people's contentment with personal life. However, H$_{17}$ shows that WLB has a significant effect on PLS. Greater magnitudes of PLS are, therefore, a result of better WLB. Testing these possibilities makes it easier to determine the nature of this relationship.

Hypothesis 8

Null Hypothesis (H$_{08}$): Happiness does not significantly impact Work Environment Satisfaction (WES).

Alternative Hypothesis (H$_{18}$): Happiness significantly impacts Work Environment Satisfaction (WES).

The H$_{08}$ disproves any significant relationship between job satisfaction and happiness, implying that feelings of contentment about the work environment are not affected by happiness. On the other hand, however, the H$_{18}$ presents that there exists a significant relationship between happiness and WES, i.e., higher magnitudes of happiness have been related to high levels of job satisfaction. Testing these possibilities makes it easier to determine the nature of this relationship.

Hypothesis 9

Null Hypothesis (H_{09}): Social media usage (SMU) does not significantly affect Personal life satisfaction (PLS).

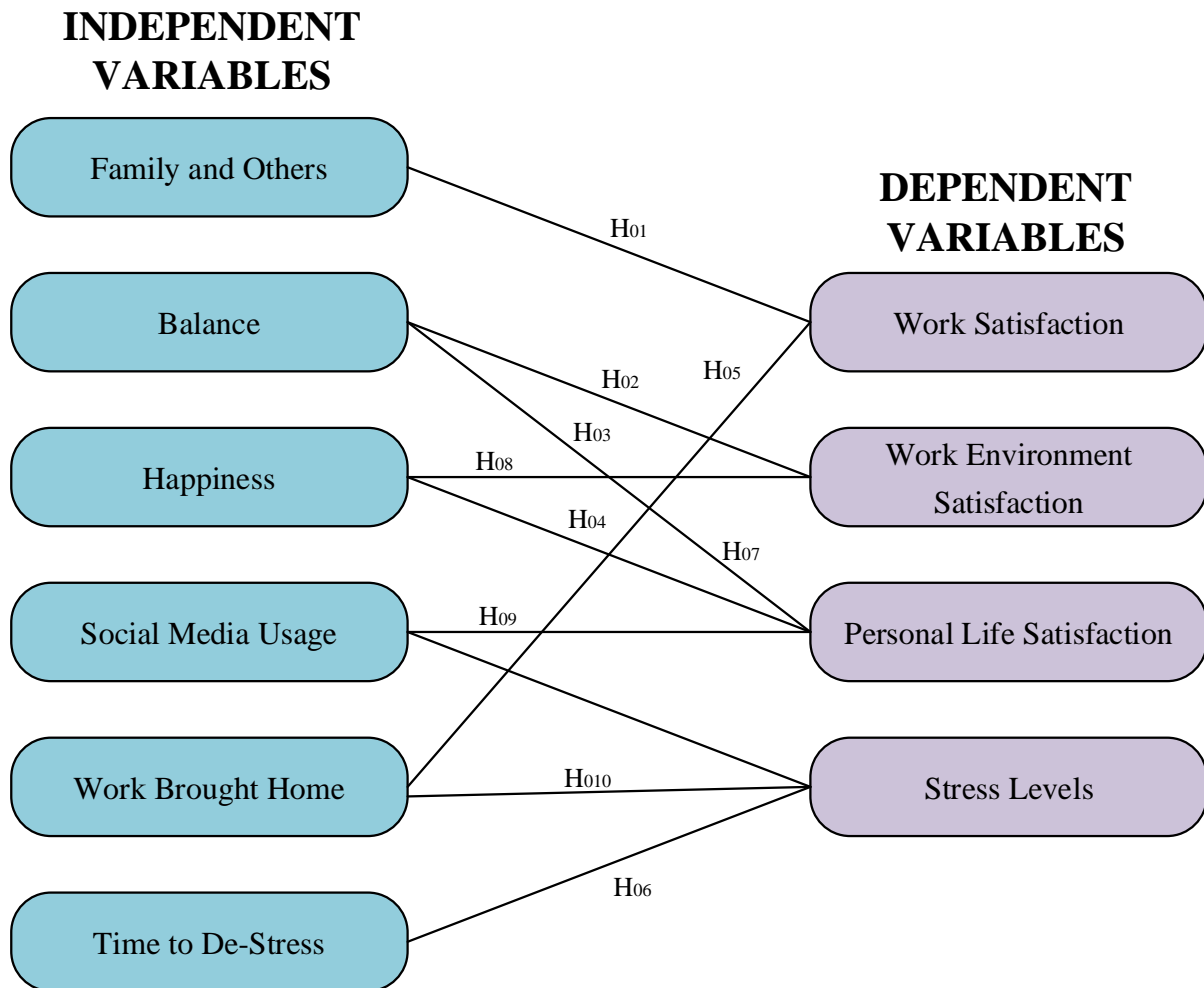**Alternative Hypothesis (H_{19}):** SMU significantly affects PLS.

Based on the H_{09}, there is no visible association between SMU and general life satisfaction, implying that different levels of a person's social media use directly correlate to the measure of general life contentment. On the contrary, H_{19} posits that there is a huge significant difference in the personal level of life happiness, given variations in their use of social media exposure.

Hypothesis 10

Null Hypothesis (H_{010}): Work brought home (WBH) does not significantly affect Stress Level (SL).

Alternative Hypothesis (H_{110}): WBH significantly affects SL.

The H_{010} states that there is no relationship between work-home border behaviours and stress. According to them taking work home leads to a negligible change in the stress level. On the contrary, H_{110} states that taking work home has a great influence on SL, and it proposes a significant correlation. The testing of the two hypotheses against the study at hand will enable a conclusion on the relevance of work-home integration to stress. The results also will give clear indications of a quality and faster stress management mechanism.

INDEPENDENT VARIABLES

Family and Others

Balance

Happiness

Social Media Usage

Work Brought Home

Time to De-Stress

DEPENDENT VARIABLES

Work Satisfaction

Work Environment Satisfaction

Personal Life Satisfaction

Stress Levels

H_{01} H_{02} H_{05} H_{03} H_{08} H_{04} H_{07} H_{09} H_{010} H_{06}

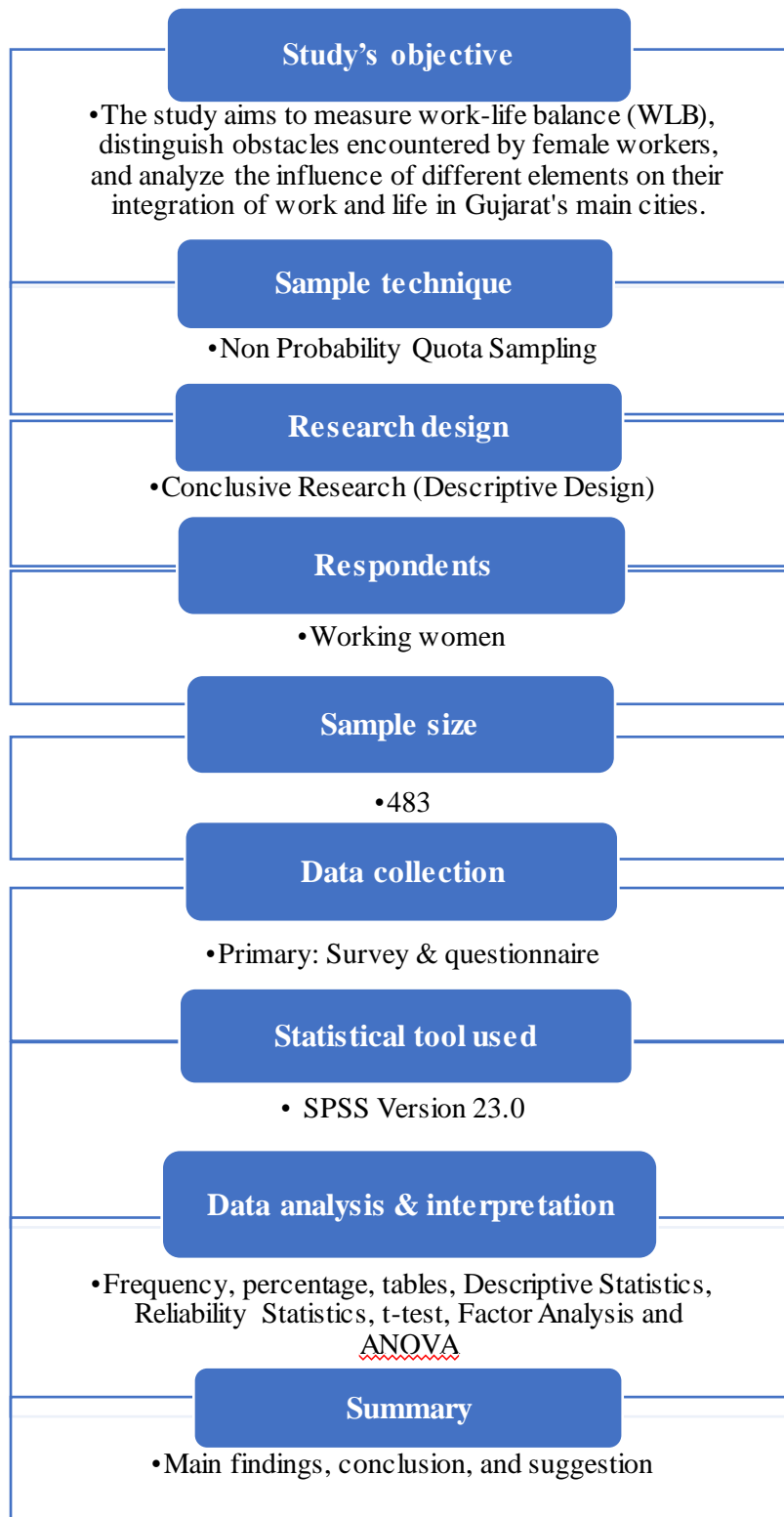**Figure 3.1:** Conceptual Framework (**Source**: Author's work)

3.9 Research Philosophy

The study adopted a positivist philosophy to explore how women working in the service sector in the four most significant cities in Gujarat, Ahmedabad, Vadodara, Surat, and Rajkot maintain a WLB. In this case, positivism goes together with objectivity in terms of measurable facts about happenings that could be observed. More so, how the positivist philosophy relates to the study is meant to use statistical analysis to gather various patterns and links. The former would give more convenience in studies on how a variety of work-related factors, including job demands and organizational support, will be able to affect women employees' WLB.

The research is grounded on the belief that by doing conclusive research, social reality, such as WLB in this research, can be measured and understood. The use of standard instruments and structured surveys in the research ensures that data collection is reliable and reproducible, which allows generalization of the findings in the target population. By offering analytically

substantiated viewpoints that might guide organizational and policy choices as well as activities aimed at promoting WLB for women in the field of service, positivism is a useful tool for expanding the body of knowledge in this context. This further assures the objectiveness, validity, and reliability of the research by leaning toward the need for one to draw conclusions based on observable facts and not subjective judgments.

3.10 Work Flow of the study

Study's objective

- The study aims to measure work-life balance (WLB), distinguish obstacles encountered by female workers, and analyze the influence of different elements on their integration of work and life in Gujarat's main cities.

Sample technique

- Non Probability Quota Sampling

Research design

- Conclusive Research (Descriptive Design)

Respondents

- Working women

Sample size

- 483

Data collection

- Primary: Survey & questionnaire

Statistical tool used

- SPSS Version 23.0

Data analysis & interpretation

- Frequency, percentage, tables, Descriptive Statistics, Reliability Statistics, t-test, Factor Analysis and ANOVA

Summary

- Main findings, conclusion, and suggestion

Figure 3.2: Work Flow of the study (**Source:** Author's work)

3.11 Study Area

Gujarat is situated on the western coast of India and is the most industrially advanced state in the country. This state is extremely famous for its strong economy, and it has a very well-built service industry with absolute sub-sectors like finance, education, health, information technology, and hospitality. The main economic centres, such as Ahmedabad, Surat, Vadodara, and Rajkot, draw in a huge workforce; among them, a significant percentage comprises female workers. This study focuses on those locations to get a better understanding of the special possibilities and problems that this dynamic area presents in terms of investigating the WLB of women in the service industry. Figure 3.3 shows the study Area.
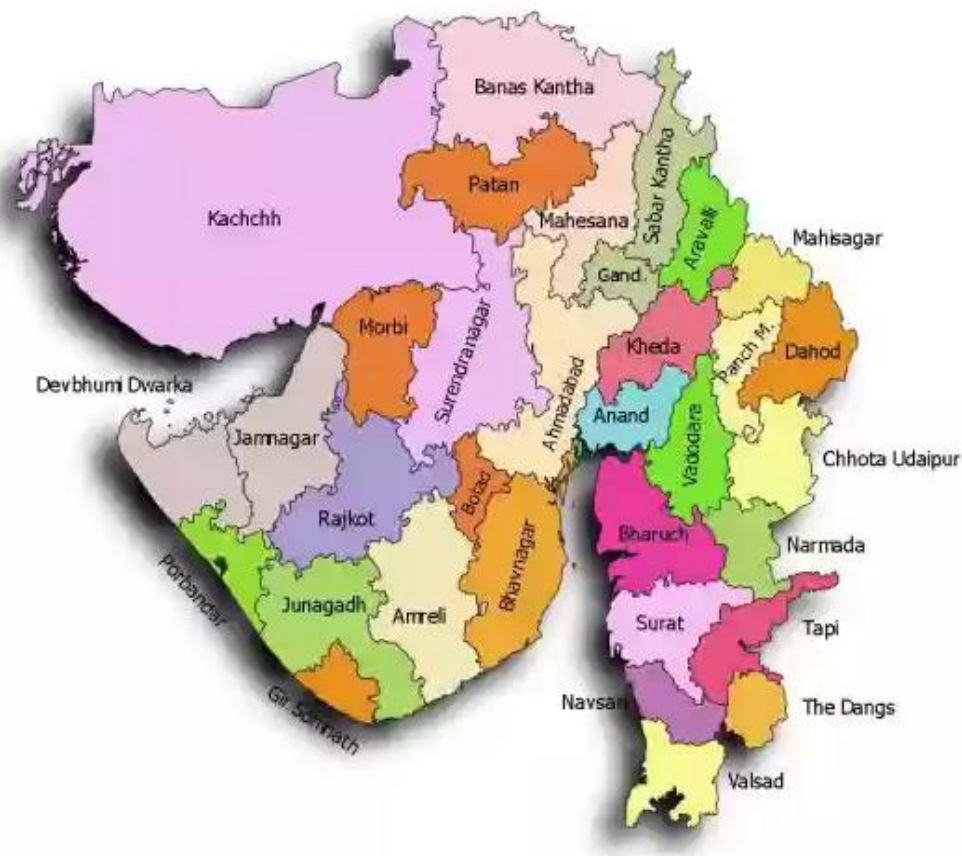
Figure 3.3: Gujarat Map (Google Images)

The study focuses on women employees in the service industry in four big cities of Gujarat: Ahmedabad, Surat, Vadodara, and Rajkot. All four cities play a primary role in the economy of Gujarat and offer wide diversity in terms of employment opportunities within the service sector, therefore being quite suitable for studying variations in WLB experiences. The state's

economic centre and largest city, Ahmedabad, offers a comprehensive picture of work-life interactions in an urban environment.

Surat, being the textile and diamond industry hub, would add to the study the dimension of sector-specific problems and benefits. Vadodara would represent the interplay of work and personal life in a medium-sized town with a large educational and industrial presence. Although Rajkot is a small city, it is an upcoming economic hub with expanding service industry activities. Therefore, it would add a different dimension to WLB in the emerging urban scenario.

Thus, the trends and disparities in WLB for women employees shall be analysed in light of data drawn from these chosen cities, which represent different urban settings of Gujarat. This approach will help in understanding how city-specific factors influence work-life integration and is going to be very useful in improving policies and practices for the well-being of women working in the service sector.

3.12 Data Collection

Information gathering for the present study on the WLB of female employees in Ahmedabad, Vadodara, Surat, and Rajkot was done through several direct methods to get relevant information in a timely fashion. First, pilot tests were conducted to check the efficacy of survey instruments and their intelligibility. Then, questionnaires were administered in an organized manner to female employees in the service sectors of both cities. These questionnaires were designed to provide full information concerning WLB, job satisfaction, SL, and support systems.

To ensure that as many respondents as possible are found to provide a representative sample, the survey was done personally, as well as online. Because of this methodology, primary data reflecting the individuals' individual experiences and viewpoints could be directly collected from them. The main techniques for gathering current, relevant, and accurate information about WLB for the female worker were fairly straightforward and gave a strong foundation for analysis, ensuring that the study's objectives were sufficiently met and that the results offered insightful knowledge about the resources and difficulties faced by women working in the service industry.

3.13 Source of data

Data sources refer to the sources of information used in research; they are usually categorized into primary and secondary sources. For this study, primary data collection is employed wherein first-hand information from the respondents is obtained through surveys and structured questionnaires. In doing this, the data obtained will surely be peculiar for the study, arriving at a more precise and relevant analysis.

3.13.1 Primary Data Collection

The primary data in this research on the WLB of the female staff in the service industry at Ahmedabad, Vadodara, Surat, and Rajkot have been directly collected through some direct approaches, such as surveys and structured questionnaires, through pilot research. These tools would provide data directly from the targeted respondents to ensure the information was current and very relevant to the research aims. Such facts formed the bedrock of the study because it was firmly based on facts, as individual experiences, problems, and perceptions of women involved with various service sectors formed the focal points of the study.

These structured questionnaires obtained full information from female employees on their WLB. The data that was obtained included job satisfaction, the level of stress, support systems, and how their work had impacted their lives. The questions were designed in such a manner to elicit answers that would draw attention to the particular problems women in Ahmedabad, Vadodara, Surat, and Rajkot face across various industries, be it IT, health, or finance. Details concerning how WLB is impacted by organizational policy, work culture, and flexible work schedules were also elicited through the survey questions, quite detailed and comprehensive in their coverage of the relevant topics.

The pilot study was conducted to test these survey instruments before the actual collection of data. Pretesting ensures that the questions are right, complete, and properly worded to elicit the required information. Pilot research enables questionnaires to be adjusted to improve reliability and intelligibility. The unique insights with these methodologies were gained directly into the existing situation of WLB for female employees in the Gujarat service industry by primary data collection, which laid a solid basis for analysis and suggestions.

3.13.1.1 Questionnaire Preparation

Several significant demographic parameters will be taken into account in the current research of WLB among female employees in the chosen service sector in important Gujarati cities to gain a general grasp of the respondents' backgrounds. The demographic characteristics that will be covered are age, marital status, educational background, profession type, employment sector, years of experience, annual income, family type, number of dependants, and work location.

In this study, special prominence will be given to Ahmedabad, Surat, Vadodara, and Rajkot. These characteristics will help in segmenting the respondents and also tell how demographic features impact WLB. Based on these qualities in segmenting the respondents, the study can establish trends and relationships that can influence female employees' WLB across various industries. The questionnaire will therefore include research questions that border on the views and experiences of the respondents as far as WLB is concerned.

On a five-point Likert scale that runs from "Strongly Disagree" to "Strongly Agree," responses to these questions will be summed up. Thanks to the larger response space provided by the Likert scale, it will be easier to discern from the data how much respondents agree or disagree with statements regarding, among other things, the challenges of reaching WLB, employer support, the impact on personal life, and satisfaction with current work arrangements.

Hypothesis development will revolve around the links between demographic factors and WLB outcomes, such as how different types of jobs might affect levels of stress or how marital status may impact work-life satisfaction. The structured method calls for comprehensive and quantitative data so that statistical analysis may be performed to determine the WLB of female employees in Gujarat's service industry.

3.13.1.2 Response Collection

A questionnaire, prepared for the present study on WLB of female employees in the service sector of Gujarat, was transformed into a Google Form to collect effective data from working women in Ahmedabad, Surat, Vadodara, and Rajkot. The four cities were chosen as major focal points to document the diverse experiences of female employees working in various businesses in Ahmedabad, Surat, Vadodara, and Rajkot since both cities are surrounded by their highly developing service sectors.

Such open-ended questions gave an easy avenue for the respondents to react at their most convenient time. This was specifically important in getting responses from various types of women, including those of different ages, educational levels, and professions. Google Forms was used in this research to ensure speed processes in data collection, covering various perspectives about WLB challenges, support at the workplace, and personal experiences.

The findings are in tune with most of what women experience in balancing work and personal responsibilities in fast-moving metropolitan environments. The approach has also allowed an in-depth study of the issues of female employees in the selected service industry units in Ahmedabad, Vadodara, Surat, and Rajkot and provided valuable information on factors that affect WLB.

3.13.2 Secondary Data Collection

The researcher employed a comprehensive approach to data collection, drawing from both primary and secondary sources. Secondary data was gathered from a variety of materials, including books on Indian Economy, Human Resource Management, Organizational Behavior, Women at Work, Women Empowerment, Women Entrepreneurship, Work-Life Balance, Gender Disparity, Research Methodology, and Statistics. Additionally, periodicals, manuals, and newspapers were consulted to stay updated on the latest developments in the field. To access a wider range of information, both paid and open-source databases were utilized. Furthermore, online resources, particularly those focusing on international research related to the topic, were explored.

The Management Journal served as a crucial tertiary source of data, providing a foundational understanding of the research area. The process of collecting secondary data began with identifying the specific field of research and conducting a thorough literature review. Relevant websites, books, and journals were examined to gain insights into the topic and narrow down the research focus. Subsequently, in-depth reviews of reputable national and international journals were conducted to gather detailed information. To ensure the research was up-to-date, newspaper articles and magazines were also analysed.

By combining these various sources of secondary data, the researcher was able to establish a strong foundation for the study and gain a comprehensive understanding of the existing literature on work-life balance among women employees in the service sector.

3.14 Sampling Technique

In the present study on WLB among female employees of Ahmedabad, Vadodara, Surat, and Rajkot, quota sampling was adopted to get a representative sample from various subgroups within a population. The population is selected on relevant factors like age, education level, work function, and industrial sector. This approach helped in underpinning the life balance and its pervasiveness across all service industry segments. In ensuring that every subgroup was well represented in the final sample, participants in each quota were selected using a non-probability quota sampling procedure. This approach obtained a variety of viewpoints and experiences that make the findings of this study valid and accurate. It accommodated the probable underrepresentation of certain subgroups within the process and enabled the study to make a fair judgment about the challenges of WLB faced by working women in the largest cities of Gujarat. This helped elaborate on differences and similarities between various groups to arrive at more sensitive and realistic recommendations.

3.15 Study Respondents

The respondents' range for the present study on the WLB of female employees in the chosen service industry was spread over Ahmedabad, Vadodara, Surat, and Rajkot to ensure a thorough study. The majority of responders were women working in the information technology, health, finance, education, and hospitality industries in these four major Gujarati cities. To capture a range of different experiences concerning WLB, the sample was selected to capture women across different age groups, educational backgrounds, job responsibilities, and years of work experience.

In the selection of the respondents, it applied quota sampling. This helped to ensure that different segments of the service industry were represented proportionately. The segments included senior executives, middle-level managers, and entry-level participants. The research also focused on women working on contracts or as freelancers, and full-time or part-time occupations to examine how such different types of jobs impact WLB. The research tried to bring out nuanced knowledge of WLB problems and support by adopting a diverse pool of respondents. It afforded key insights into the experiences of women employees working across industries and roles in the main towns of Gujarat.

3.16 Sample Size

The sample size calculated for the present study on the WLB of female employees in the selected service industries of Gujarat was determined using a statistically sound method. Specifically, the calculation was based on a population proportion formula, which takes into account the estimated proportion of success (p), the proportion of failure (q), the standardized value corresponding to the desired confidence level (Z), and the acceptable margin of error (E).

For this study, the proportion of success (p) was estimated at 70%, implying that 70% of the target population is likely to have the experiences or characteristics being studied. Accordingly, the proportion of failure (q), which represents the remainder of the population, was set at 30%. A 99% confidence level was chosen for the analysis, corresponding to a Z-value of 2.576. The margin of error (E) was set at 5%, which is a commonly accepted threshold in social sciences research.

Using these parameters, the sample size (n) was calculated as follows:

p (estimated proportion of success) = 0.70

q (estimated proportion of failure) = 1 - p = 0.30

Z (Z-score for 99% confidence level) = 2.576

E (acceptable margin of error) = 0.05

$$n = \left(\frac{Z^2 \cdot p \cdot q}{E^2} \right)$$

Substituting the values:

$$n = \frac{6.635 \times 0.21}{0.0025} = \frac{1.39335}{0.0025} = 557.34$$

After rounding up, the required sample size was determined to be 557

For continuous variables where the standard deviation is known, a similar formula is used. In the given example for continuous data, the Z-score for a 99% confidence level was used, along with a standard deviation of 0.5 and a margin of error of 5%. This results in a sample size of approximately 557.34, which would typically be rounded up to 557.

These calculations ensure that the sample size is large enough to yield statistically significant results while also being manageable for in-depth analysis. The chosen sample size reflects a balance between accuracy and feasibility, providing robust data for examining WLB among female employees in the major cities of Gujarat. The selected sample size is representative of companies that have been in operation for five years or more in service sectors.

3.17 Sample Size Calculation (As per selected city)

Table 3.5: Working Population data as per Census 2011

Total population of Gujarat (2021)	Main working population	Main working male population	Main working female population
6,04,40,000	2,03,65,374	1,65,67,695	37,97,679

Table 3.6: Population data as per Census 2011

City	Total Population	Male Population	Female Population
Ahmedabad	55,77,940	29,38,985	26,38,955
Vadodara	16,70,806	8,69,647	8,01,159
Surat	44,67,797	25,43,623	19,24,174
Rajkot	12,86,678	6,74,355	6,12,323

Total	**1,30,03,221**	**70,26,610**	**59,76,611**

The population for this study was calculated by targeting women employees in the service sectors of Ahmedabad, Vadodara, Surat, and Rajkot. A total sample size of 557 participants was determined, representing a cross-section of these cities.

Sample Distribution,

Ahmedabad - 26,38,955 * 557 / 59,76,611 = 246 respondents

Vadodara - 8,01,159 * 557 / 59,76,611   = 75 respondents

Surat   19,24,174 * 557 / 59,76,611   = 179 respondents

Rajkot 6,12,323 * 557 / 59,76,611   = 57 respondents

<div align="center">

Total = 557

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As part of the research, we initially shared the questionnaire to 600 working females across various regions. However, only **483 respondents** provided fully completed responses that were deemed suitable for inclusion in the analysis. These completed responses formed the basis of our study, ensuring the validity and reliability of the research findings.

3.18 Statistical Analysis

The responses of the women workers working in the service sector in Ahmedabad, Vadodara, Surat, and Rajkot were analysed using one of the prominent statistical analysis software, SPSS. A host of quantitative techniques was used in this research to obtain a robust interpretation of data. Descriptive statistics was used to summarize and characterize demographic and WLB data, thereby producing a profile of the respondents with clarity about their background and experiences. The means comparison within the different demographic groups like married vs. single employees was done using t-tests, towards the identification of significant differences in WLB outcomes.

ANOVA was conducted to find the variance among variables mainly regarding the influence of different sectors and professional roles on WLB. These statistical methods were very essential in confirming important trends, connections, or correlations in data to subsequently confirm the conclusions of this study. It has thrown up valuable information about variables that go on to determine the WLB of women workers, thus helping in better decision-making and strategic planning toward addressing work-life issues within the service industry in Gujarat.

3.19 Ethical consideration

Informed consent from all the respondents shall be required in the first instance, which would confirm that each respondent is aware of the purpose, processes, and implications of their withdrawal from the study at any time. These will be very important ethical issues in making certain research about WLB among women employees of some service industries in Gujarat. Absolute confidentiality has to be observed; hence, all personal information obtained in the course of this study has to be secured through high-level encryption and storage to prevent the leaking of any information on the identity of the participants in this study.

The information obtained in all responses should not indicate specific answers; rather, information has to be provided in a summary form. As such, every researcher must avoid conflict of interest or bias that may influence the outcome of his research work. It should be made certain that participants are aware of the fact that their responses will only be used for research purposes and in no way affect them regarding their employment or professional standing.

This should include any possible psychological effects of discussing matters related to WLB concerns, as well as the provision of resources or help to participants in discomfort. A relevant review committee or ethics committee should be consulted for ethical approval of this research to ensure that it is carried out by ethical research principles. Transparency, decency, and confidentiality in the handling of all research procedures are often the cornerstones of ethical integrity in science.

3.20 Summary

Chapter 3 of this study shows a quantitative research design for the analysis of WLB among women employees working in major cities of Gujarat, particularly in the cities of Ahmedabad,

Vadodara, Surat, and Rajkot. The sample size is 483 women selected through quota sampling, with adequate representation ascertained for varied categories of service sectors. Data were collected on structured questionnaires that measured manifold dimensions of WLB such as job satisfaction, family responsibilities, and personal well-being. Descriptive Statistics will enable research to summarize data concerning basic features, while Correlation Analysis enables research to establish relationships between variables.

Regression analysis will be conducted to determine what factors influence WLB, while factor analysis to identify the underlying dimensions. The methodology chapter also explains the validity and reliability of the research instruments in assuring accuracy and consistency in the findings. The ethical requirements of informed consent and confidentiality of responses were pointed out at the beginning to protect research integrity. The limitations of the study, such as constraints in sampling and response biases, were acknowledged and foreseen as probably affecting the outcome of this study. The methodology will, in all respects, assure an understanding of WLB issues for service sector women and contribute valuable insights toward their work and personal lives.