

## Driving the nation, balancing life: A review of work-life balance among loco-pilots in India

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**Abstract:** The entire psychosocial working environment for loco pilots (railway train drivers) in India is extremely demanding, isolating, and devoid of socialization. In addition, loco pilots are subject to a great deal of responsibility to be on time and safe. There are few opportunities for personal freedom due to the rigorous schedules and technical constraints, which include the kind of trains and route configurations. Long work hours, strange and inappropriate schedules, and heavy workloads all contribute to the workload, which can lead to serious work-family conflicts. The paper examines work-life quality among Indian Railway train drivers, identifies primary conditions underpinning the problem of work-life imbalances, and clarifies the possible impact on the well-being of drivers and safety in their activities. It considers the applicable concepts regarding work-life balance and studies the impact of working conditions on the well-being of loco pilots, which in turn has an impact on the efficiency and development of the Indian Railways. This study also has theoretical implications for organizations' policies and practices, particularly as the experiences of railway drivers can inform new organization-wide work/life integration policies. The advantages of having a happy and healthy workforce are passed on to both passengers and employees through increased productivity at the workplace, reduced employee absence, and fewer accidents. Subsequently, the enhancement of WLB among railway drivers could be an important source of future research and concern, as it can result in a less hazardous and more efficient experience with the use of public transportation.

**Keywords:** Indian railways, Loco-pilots, Occupational stress, Working conditions, Work-life balance.

### 1. Introduction

#### 1.1. Indian Railway Drivers

One of the most important roles in the Indian Railways system is that of a loco-pilot, or railway train driver, as they are commonly known. In addition to unwavering dedication, discipline, and a high degree of responsibility, their work demands mental clarity and physical fitness. These professionals, who must work in harsh environments, such as inclement weather, at odd hours, and with little time for rest, are responsible for the safe and timely movement of trains.

In addition to driving, operating a train involves managing a sophisticated system with strict timetables, safety precautions, and technical factors like the train's type, the route's topography, and the signal's state. With over 9,200 locomotives, nearly 60,000 coaches, and 2.3 lakh wagons powering Indian Railways, which transports over 25 million passengers and 2.8 million tons of freight daily, the driver's performance directly affects the safety of millions of people [1, 2].

Being a loco pilot is one of the most difficult jobs in Indian Railways because it is a significant responsibility. The effectiveness of the entire railway network and passenger safety may be at risk if they cannot carry out their responsibilities effectively. Therefore, their work requires a high level of focus, awareness, and situational responsiveness, as well as the capacity to react swiftly to new challenges.

Additionally, the working environment puts loco-pilots under more stress. Long-term noise exposure, continuous vibrations, and uncomfortable cabin conditions such as extremes of temperature are among the physical challenges at this point. In terms of psychology, loco-pilots don't interact with many people, which exacerbates feelings of isolation and mental fatigue. The operations they require largely dictate their work-life balance, leaving them without room or control over their work schedule.

The first issue facing railroad drivers today is how to balance work and family obligations. Long workdays, night shifts, and the ability to maintain an irregular schedule hinder drivers' ability to effectively manage their personal and professional obligations. This well-known occupational stressor, this type of work-family conflict, has been linked to decreased job performance, burnout, and deteriorating well-being [3, 4].

Indian Railways has taken some action in response to these issues in recent years. For instance, the Railway Crew Management System (CMS) has been implemented to facilitate crew scheduling and provide additional rest time. Tighter collaboration on cabin ergonomics has also occurred, since newer locomotives are being used to reduce vibration and noise [5]. To alleviate the psychological stress of drivers, some regions are testing counseling and mental health support services [1].

Despite these efforts, the challenge remains substantial. Understanding the lived experiences, stressors, and needs of loco pilots is crucial to formulating policies that ensure both their well-being and the overall safety of the rail network.

### *1.2. Work Environment and Conditions of Indian Loco-Pilots*

Loco-pilots in India operate under highly demanding working conditions, classified under the 'continuous' roster system. This classification offers no guaranteed calendar-day rest, making it difficult for drivers to maintain a consistent rest schedule. Typically, a loco-pilot works for up to 10 hours at a stretch and may only request relief after completing 12 hours, provided they inform the controller at least two hours in advance [6]. This is in stark contrast to international labor standards such as those set by the International Labour Organization (ILO), which recommend a maximum duty span of 9 hours, with an allowance of one additional hour only in emergencies [4, 7].

The situation is more challenging while operating goods trains, where duties are often irregular and extend beyond 10 hours. Drivers experience prolonged waiting periods for their return to their home station, sometimes up to 48 hours or more. Even after "signing off" duty, loco pilots must wait to be assigned a return trip and may not be able to travel home unless a train is available. After 96 hours post-sign-off, a loco pilot has the right to demand a return to their headquarters, with or without operating a train. Not all of these demands are met right away, which leads to inadequate sleep and long-term family separation.

Furthermore, loco pilots can be called upon in an emergency without the required rest because they are available even when they are sleeping. In addition to causing chronic fatigue, this undermines the fundamentals of work schedules and erodes the concept of occupational health and safety.

Recent studies show the cumulative effects of such irregular schedules on railroad workers' physical and mental health. According to a report by Rao and Naik [8], irregular work schedules and a lack of time for breaks were major contributors to the middle- and severely experienced job-related stress reported by over 70% of locomotive pilots surveyed.

### *1.3. Exploring Cab Conditions and Their Influence on Loco- Pilots*

Drivers who spend extensive time in locomotive cabs may lack necessary ergonomic and safety features. The Central Pollution Control Board's (CPCB) 75-decibel noise limit is significantly exceeded

by diesel locomotives, which can reach 100 decibels. High noise levels may lead to continuous exposure, resulting in hearing impairments and increased driver fatigue [7].

Noise, dust pollution, high temperatures, and fumes from diesel engines or high-voltage electric parts are additional exposures that cause early fatigue and physical discomfort in loco-pilots. Most driving cabs lack adequate insulation, and outside noises, diesel's pleasant smell, and engine heat all make their way into the workplace. The lack of air conditioning, especially in summer, also makes it harder for drivers to be comfortable and focused. Additionally, in electric engines, loco pilots operate under 25kV. OHE electric magnetic flux, which is going to give side effect in the long-run like Cancers, Skin diseases etc., and excess heat in the summers, No AC units are available in the engine, will be effecting their works due to discomfort and even if AC unit is available, sometimes they are not in the working conditions, due to no proper maintenance to make their work environment more comfortable.

Moreover, basic facilities such as toilets are absent inside the cab, forcing drivers to suppress natural bodily needs during long hauls. This not only affects physical health but also increases psychological stress. A recent study by Sharma and Bhardwaj [9] highlighted that improved cab ergonomics and inclusion of sanitary facilities could significantly enhance occupational satisfaction and reduce driver fatigue across multiple railway zones.

#### *1.4. Balancing Personal Life and Work: Challenges for Loco-Pilots*

Loco-pilots face significant disruptions in their personal and family lives due to the nature of their work. Irregular and prolonged duty hours prevent them from spending quality time with their families or participating in social activities. Many drivers reside 5–6 kilometers away from their posting stations and lose valuable rest time commuting, even during designated rest periods.

Despite being one of the most critical components of the railway workforce, loco-pilots do not enjoy the same leave privileges as other railway employees. While other staff members receive 12 national holidays and 52 Sundays per year as guaranteed rest days, loco pilots are often required to work on these days unless they apply for leave in advance, and even then, it is not guaranteed that leave will be sanctioned. This forces them to manage personal affairs such as attending family functions or handling emergencies by sacrificing their limited rest days or applying for urgent leave, often denied due to staffing shortages.

The absence of a scheduled calendar-day rest prevents loco-pilots from fulfilling social and familial obligations, resulting in emotional distress and reduced morale [7]. A nationwide survey by Saxena and Menon [10] found that more than 60% of loco-pilots felt emotionally cut off from their families, with a lack of personal time and unpredictable rosters being two of the main causes.

#### *1.5. Objectives of the Study*

The main purpose of the present study is to examine the work-life balance among loco-pilots (railway train drivers) in India, and one of the focal points is on how the pressure of occupation, anomalous working schedules, and stressors of the surroundings are related to the personal well-being and family life of loco-pilots, with a significant mention of job performance. Precisely, the objectives of the study are to attain the following:

- a. To research the loco-pilot working conditions in Indian Railways, work hours, rest time, schedules, and work-related stressors.
- b. To determine the effect that work schedules and operating requirements have on the personal and family life of the loco-pilots, especially regarding time management, emotional land, and the family.
- c. To consider the physical and psychological risks of being a loco-pilot under the environment of noise, heat, and the absence of other amenities in the locomotive cab.
- d. To investigate the currently existing support systems and organizational policies offered by Indian Railways regarding guaranteeing the well-being and safety of loco-pilots.

- e. To identify gaps in work-life balance policies and suggest actionable recommendations for improving the quality of life and job satisfaction of loco-pilots in India.
- f. To contribute to the academic and policy discourse on occupational health, safety, and human resource practices in the transport sector, particularly in high-responsibility roles like that of railway drivers.

## 2. Understanding Work-Life Balance: Key Concepts and Definitions

### 2.1. Work-Life Balance

Historically, organizations perceived "work" and "life" as two distinct and unrelated domains. Workers are required to prioritize their professional responsibilities above personal needs. Phrases like "what happens outside the office is your concern" were reflective of the organizational mindset in the past. However, this dichotomous view has evolved significantly. In today's dynamic work environment, organizations increasingly recognize that work and personal life are interdependent, and supporting employees in achieving a balance between the two can lead to enhanced productivity and well-being [11, 12].

The 'Work-life balance (WLB)' refers to the equilibrium an individual seeks between work-related duties and personal responsibilities, allowing them to experience satisfaction in both areas. It does not imply an equal division of time but rather an effective integration that meets the individual's needs and goals across different life domains: work, family, personal growth, and societal involvement [13, 14].

A widely accepted definition by Greenhaus et al. [15] describes WLB as "the extent to which individuals are equally engaged in, and equally satisfied with their work and family roles." Similarly, Clark [16] defines it as achieving satisfaction and effective functioning at work and home with minimal role conflict. Kofodimos [17] emphasizes a "satisfying, healthy, and productive life" that balances work, love, and leisure.

With the rise of remote work, digital connectivity, and flexible work arrangements post-COVID-19, the idea of WLB has become even more critical. According to the International Labour Organization (ILO) [4], sustainable work-life balance policies not only promote employee well-being but also enhance organizational resilience and competitiveness.

Organizations have started implementing various work-life initiatives such as flexible scheduling, telecommuting, and mental wellness programs that reflect a shift from the traditional "work-first" mindset to a more holistic, employee-centric approach [18, 19]. Work-life balance is also closely linked to Corporate Social Responsibility (CSR), highlighting that companies are accountable for supporting employees beyond just the workplace [20].

### 2.2. Work-Life Imbalance

The 'Work-life imbalance' occurs when there is a disproportionate emphasis on work at the expense of personal life or vice versa. Kofodimos [17] warns that persistent imbalance, especially work dominance, can result in elevated stress levels, diminished quality of life, and reduced job effectiveness. The psychological strain from unmet expectations in either role may manifest as burnout, anxiety, or deteriorating relationships [21].

Recent studies show that industries with rigid schedules, such as transport and logistics, report higher levels of work-life conflict, particularly among shift-based roles like loco-pilots [22]. This imbalance not only affects personal well-being but also safety-critical performance on the job.

### 2.3. Life and Job Satisfaction

Life satisfaction pertains to an individual's overall assessment of their quality of life, encompassing physical and mental health, relationships, social involvement, and personal fulfillment [23]. Job satisfaction, on the other hand, reflects how positively an employee evaluates their job experience based on emotional and cognitive responses [24].

Studies consistently reveal that a supportive work-life balance improves both life and job satisfaction, leading to greater employee engagement and organizational commitment [25, 26].

#### 2.4. Happiness

Happiness, as a psychological construct, is multi-dimensional. According to Seligman [27], happiness comprises three elements: the pleasant life (experiencing positive emotions), the engaged life (using one's strengths for gratification), and the meaningful life (pursuing a purpose larger than oneself). Authentic happiness, Seligman argues, arises from aligning all three components in daily living [28].

Peterson et al. [29] add that meaningful work contributes significantly to overall happiness, particularly when it aligns with one's values and strengths. For professions like loco-pilots, where stress and isolation are prevalent, access to meaningful roles and personal fulfillment is vital for long-term well-being.

#### 2.5. Quality of Work Life (QWL)

Work quality and employee perceptions of their workplace, including pay, job security, working conditions, interpersonal relationships, and the inherent meaning of work, are referred to as life. According to the American Society for Training and Development (ASTD), QWL is the extent to which employees can satisfy their personal needs through their work experiences [30].

An improved QWL contributes to lower absenteeism, reduced turnover, and better morale, especially in high-stress sectors like rail transport. Recent literature emphasizes the importance of designing jobs that support autonomy, development, and a sense of belonging [31, 32].

#### 2.6. Work-Life Conflict

Work-Life Conflict (WLC) is defined as a form of inter-role conflict where the demands of work and personal life are mutually incompatible in some respect [30]. It typically occurs when time devoted to one role impedes performance in the other. Greenhaus and Beutell [33] identified three types of WLC: time-based, strain-based, and behavior-based.

The consequences of WLC include reduced job satisfaction, increased stress, absenteeism, and decreased performance. With the growing complexity of modern work environments, addressing WLC has become a strategic priority for human resource managers and policymakers alike [34].

### 3. Work-Life Balance: A Review of Key Studies and Findings

Due to limited published research specifically addressing the 'work-life balance (WLB)' of Indian railway drivers, this section integrates studies from other countries and occupations that share similar stressors, such as long hours, irregular shifts, and high-stakes responsibilities.

#### 3.1. Insights from Previous Research on Work-Life Balance

Fatigue and exhaustion in high-demand jobs accumulate over time, especially when work involves long shifts, insufficient rest, and inadequate recovery periods [35, 36]. These conditions are particularly problematic in roles requiring sustained attention, such as locomotive driving, chemical plant supervision, and commercial driving, where fatigue may lead to operational errors and increased safety risks [37-39].

Shift work is closely linked to two major stressors: unsocial working hours and chronic fatigue. These factors contribute to decreased job performance, increased accidents, and disruption in personal and social lives [40-42]. Evidence shows that night shifts and early morning duties adversely impact family roles, sleep quality, and emotional stability [43-45].

Employees frequently report that work interferes more with personal life than vice versa, resulting in increased stress, depression, and health concerns Grant-Vallone and Ensher [46]. Dawson et al. [47]

and Jones et al. [48] demonstrate that long hours without adequate rest impact cognitive function, induce risk-taking behaviors, and are linked with heart disease, poor dietary habits, and mental fatigue.

Work-life conflict (WLC) has consistently been associated with emotional exhaustion, job dissatisfaction, and reduced organizational commitment [33, 49, 50]. A high degree of WLC has also been linked to poor sleep, substance abuse, and elevated stress markers such as cholesterol [49].

A growing body of research supports the idea that employees thrive in family-supportive work environments [51, 52]. These settings not only reduce WLC but also improve job satisfaction and overall life contentment. Individuals with a positive balance in areas experience superior rates of life satisfaction [16]. However, high working hours at the cost of family life often result in stress, distress, and frustrations [15].

The recent studies have also identified the gendered and cultural dimensions of WLB. Valk and Srinivasan [53] state that Indian women face specific challenges due to cultural requirements and the need to balance work and family life. Family support, however, is usually an offset. Similarly, empathy and organizational support from supervisors help improve employees' WLB, as claimed by Zhao et al. [54] and Ferguson et al. [55].

Due to the awkward working hours and excessive working hours in the Indian railway industry, the social and personal relationships between drivers have become strained, as reported by a recent study of Sahoo and Mishra [56]. On the same note, Anand and Sridevi [57] reported that loco pilots in Southern India had high stress and poor job satisfaction due to high working hours and constant transfer. The research programs of Krishnaswamy and Joseph [58] would not emphasize the basic steps taken by the Indian Railways to combat WLB, unlike the situation in certain Western nations, where the formal provision of WLB is more effective.

### 3.2. Summary of Previous Literature

According to international studies, the safeguarding of the 'physical and psychological well-being of employees' and the presence of 'work-life balance (WLB)' are significant outcomes of organizational and policy intervention. Nevertheless, there are not many studies that specifically focus on the work-life experiences of Indian locomotive pilots, and there is no further intensified research on the subject as well. Negative effects of work-life conflict, family pressures, burnout, and a drop in well-being are the most widespread examples of these effects, extensively discussed in the literature. This is particularly the case with occupations such as operating a rail engine, whereby the impossibility of sitting down at all times and the expectation of the next shift make these potentially fatal conditions even worse.

When other factors besides family are considered, visionaries of the Indian Railway Train Drivers (Loco Pilots) might find it complex to balance both their personal and professional lives. Such problems, related to low quality of life, are also characterized by difficult socialization, limited time to communicate with others, and opportunities for self-deployment and rejuvenation. Their work schedules conflict with the stress of their lives, and they must ensure they arrive on time and safely, which puts pressure on them that affects their jobs. As a result, these elements impact not only their personal well-being but also their productivity and performance at work.

Overall, it is evident from the work-life issues that a thorough investigation into the unique requirements and circumstances of Indian railway drivers is necessary. The executive would have a platform to create personalized interventions to enhance their quality of life both on and off duty. In addition to helping drivers, these enhanced work-life balance initiatives may also positively impact railway operations, increasing system performance and safety.

## 4. Analysis of Gaps, Raised Research Questions, and Key Conclusions

### 4.1. Analysis of Research Gaps

Even though 'work-life balance (WLB)' is becoming increasingly popular worldwide, there remains a significant research gap concerning indigenous railway train drivers. While international studies have explored locomotive engineers' coping mechanisms for fatigue and family life, little attention has been

given to India's social-cultural construction and infrastructure realities. Most recent research on work-life balance in India has focused on corporate employees, IT workers, or women employees, largely neglecting railway workers.

Furthermore, most of these studies are better at gauging the significance of work-family balance, but they are only one aspect of the work-life experience. Some of the important factors that have never been taken into account are social lives and leisure activities, community involvement, and the personal well-being of rail employees. In actuality, the nature of the challenges in the job, such as long working hours, uneven shifts, and fulfilling the duty of passenger safety, also has an impact on the personal health, social lives, and family lives of railway train drivers. In a country like India, where cultural and infrastructural factors are frequently important in the formation of work experience, such a one-dimensional perspective is unable to adequately capture the breadth of the issue and the complexity of work-life integration in the case of a railway train driver.

Therefore, more thorough studies that concentrate on the combined impact of work on the social and personal lives of Indian railway drivers are significantly needed to address the issue. According to this study, the discussion must consider not only work-family balance but also these drivers' capacity to focus on limiting issues of social, personal, and community health. This gap will provide crucial information on how to improve both the effectiveness of the Indian railway system and its standard of living.

#### 4.2. Raised Research Questions

In light of the identified gaps, this study raises the following questions:

- a. How do Indian railway drivers experience their work environment concerning work-life balance?
- b. What work and family factors affect Indian railway drivers' ability to maintain a balanced life?
- c. What strategies or coping mechanisms do Indian railway drivers use to manage the competing demands of their professional and personal lives?

These questions are designed to contribute to a more nuanced understanding of work-life balance in a high-stress, high-responsibility occupation within the Indian public sector.

#### 4.3. Conclusion and Policy Recommendations

The existing body of 'work-life balance (WLB)' literature predominantly focuses on corporate or white-collar environments, leaving the unique challenges faced by Indian railway train drivers largely overlooked. By examining the WLB dilemma of loco-pilots, a group of people who operate under extreme physical and mental strain due to unfavorable schedules and a heavy workload in front of their passengers, this paper aims to fill that gap. These drivers are under a lot of stress due to the 24-hour operation of the Indian railway system, and WLB is a national as well as a personal issue.

By examining the actual experiences of railroad drivers, this study aims to contribute by offering insights into organizational policies and practices that would improve work-life integration. The Indian Railways must develop and implement programs that prioritize the mental and physical well-being of its employees in collaboration with policymakers, trade unions, and researchers. These could include introducing sufficient downtime, modifying work schedules, and creating a support system involving friends and family.

The safety and effectiveness of the railway system, as well as the welfare of the operators themselves, depend on these issues being resolved. High employee performance, lower absenteeism, and fewer accidents are the outcomes of contented and healthy staff, which eventually benefits both workers and passengers. Improving railway drivers' WLB will undoubtedly contribute to the safety and significance of the transportation system in this way, making it an important area for further research and application.

## Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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## References

- [1] Indian Railways HR Manual, *Human resource guidelines for mental health and wellness*. Government of India: Ministry of Railways, 2023.
- [2] Indian Railways, "Indian Railways facts and figures," 2023. [https://en.wikipedia.org/wiki/Indian\\_Railways](https://en.wikipedia.org/wiki/Indian_Railways)
- [3] G. Kecklund, T. Åkerstedt, and M. Ingre, "Train drivers' working conditions and their impact on safety and sleepiness," *Journal of Sleep Research*, vol. 8, no. 1, p. 187, 1999.
- [4] International Labour Organization (ILO), *Working time and work-life balance around the world*. Geneva: ILO Publications, 2022.
- [5] G. o. I. Press Information Bureau, *Indian railways: New initiatives for crew welfare and operational efficiency*. Ministry of Railways: ADD PLACE, 2022.
- [6] R. Singh, *Work scheduling and rest period analysis in Indian Railways*. Lucknow, India: Indian Railway Institute of Transport Management, 2008.
- [7] FIRE Quarterly, *Occupational health and safety in Indian Railways: A report on working conditions of loco-pilots*. New Delhi: Federation for Indian Railway Employees, 2012.
- [8] V. K. Rao and S. Naik, "Occupational stress among Indian railway drivers," *Indian Journal of Occupational Health and Safety*, vol. 45, no. 2, pp. 123–132, 2021.
- [9] M. Sharma and P. Bhardwaj, "Ergonomic design in locomotive cabs," *Ergonomics and Human Factors Journal*, vol. 27, no. 1, pp. 49–65, 2023.
- [10] R. Saxena and A. Menon, "Emotional wellbeing of railway loco-pilots: A national survey," *Journal of Transport and Psychology*, vol. 38, no. 4, pp. 211–225, 2022.
- [11] J. H. Greenhaus and T. D. Allen, *Work-family balance: A review and extension*. In J. C. Quick & L. E. Tetrick (Eds.), *Handbook of occupational health psychology*, 2nd ed. Washington, DC: American Psychological Association, 2011.
- [12] OECD, "Work-life balance: An overview of policies and outcomes. Organisation for Economic Co-operation and Development," 2021. <https://www.oecd.org/>
- [13] T. Agarwala, *Strategic human resource management*. New Delhi: Oxford University Press, 2007.
- [14] J. Bird, *Work-life balance: A guide for managers and employees*, 3rd ed. London: Routledge, 2023.
- [15] J. H. Greenhaus, K. M. Collins, and J. D. Shaw, "The relation between work-family balance and quality of life," *Journal of Vocational Behavior*, vol. 63, no. 3, pp. 510–531, 2003. [https://doi.org/10.1016/S0001-8791\(02\)00042-8](https://doi.org/10.1016/S0001-8791(02)00042-8)
- [16] S. C. Clark, "Work/family border theory: A new theory of work/family balance," *Human Relations*, vol. 53, no. 6, pp. 747–770, 2000. <https://doi.org/10.1177/0018726700536001>
- [17] J. R. Kofodimos, *Balancing act: How managers can integrate successful careers and fulfilling personal lives*. San Francisco, CA: Jossey-Bass Notes, 1993.
- [18] McKinsey & Company, "State of organizations 2023: Reimagining the workplace," 2023. <https://www.mckinsey.com/>
- [19] CIPD, *Flexible working practices in the modern workplace*. London: Chartered Institute of Personnel and Development, 2022.
- [20] R. Welford and V. Mahtani, "Beyond systems: A vision for corporate social responsibility," *Corporate Social Responsibility and Environmental Management* vol. 11, no. 2, pp. 210–221, 2004.
- [21] T. D. Allen, K. A. French, S. Dumani, and K. M. Shockley, "Meta-analysis of work-family conflict mean differences: Does national context matter?," *Journal of Vocational Behavior*, vol. 122, p. 103472, 2020.
- [22] Eurofound, "Working time developments in the 21st century," 2021. <https://www.eurofound.europa.eu/>
- [23] O. M. Karatepe and O. Uludag, "Affectivity, conflicts in the work-family interface, and hotel employee outcomes," *International Journal of Hospitality Management*, vol. 27, no. 71, pp. 30–41, 2008. <https://doi.org/10.1016/j.ijhm.2007.07.001>
- [24] A. P. Brief, *Attitudes in and around organizations*. Thousand Oaks, CA: Sage Publications, 1998.
- [25] G. Johansson and B. Bernspång, "Work-life balance: The importance of job and life satisfaction," *Work*, vol. 20, no. 2, pp. 193–198, 2003.
- [26] P. Warr and I. Inceoglu, "Work-life balance and subjective well-being," *Journal of Happiness Studies* vol. 23, pp. 131–148, 2022.

- [27] M. E. P. Seligman, *Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfillment*. New York: Free Press, 2002.
- [28] M. E. Seligman, T. A. Steen, N. Park, and C. Peterson, "Positive psychology progress: Empirical validation of interventions," *American Psychologist*, vol. 60, no. 5, p. 410, 2005.
- [29] C. Peterson, N. Park, and M. E. Seligman, "Orientations to happiness and life satisfaction: The full life versus the empty life," *Journal of Happiness Studies*, vol. 6, no. 1, pp. 25–41, 2005. <https://doi.org/10.1007/s10902-004-1278-z>
- [30] T. N. Chhabra, *Human resource management: Concepts and issues*. New Delhi: Dhanpat Rai & Co, 2010.
- [31] J. R. Hackman and G. R. Oldham, *Work redesign: Organizational development*. Reading, MA: Addison-Wesley, 2021.
- [32] International Labour Organization (ILO), *Quality of work life: Principles and practices*. Geneva: ILO Publications, 2023.
- [33] J. H. Greenhaus and N. J. Beutell, "Sources of conflict between work and family roles," *Academy of Management Review*, vol. 10, no. 1, pp. 76–88, 1985. <https://doi.org/10.5465/amr.1985.4277352>
- [34] M. R. Frone, *Work-family conflict and employee outcomes: The effects of role stress*. Washington, DC: Psychology Press, 2021.
- [35] G. Hildebrandt, W. Rohmert, and J. Rutenfranz, "12 and 24-hour shifts: A field study," *International Archives of Occupational and Environmental Health*, vol. 33, no. 3, pp. 171–189, 1974.
- [36] R. R. Rosa, "Performance, alertness, and sleep after years of 12-hour shifts," *Work & Stress*, vol. 5, no. 2, pp. 107–116, 1991. <https://doi.org/10.1080/02678379108257008>
- [37] M. J. Paley and D. I. Tepas, "Fatigue and the shiftworker: Firefighters on rotating schedules," *Human Factors*, vol. 36, no. 2, pp. 269–277, 1994. <https://doi.org/10.1177/001872089403600208>
- [38] N. Smith, "Toward a theory of gentrification a back to the city movement by capital, not people," *Journal of the American Planning Association*, vol. 45, no. 4, pp. 538–548, 1979. <https://doi.org/10.1080/01944367908977002>
- [39] R. R. Rosa and M. H. Bonnet, "Performance and alertness on 12-hour shift schedules," *Work & Stress*, vol. 7, no. 2, pp. 103–112, 1993.
- [40] M. J. Colligan and R. R. Rosa, "Shiftwork effects on social and family life," *Occupational Medicine (Philadelphia, Pa.)*, vol. 5, no. 2, pp. 315–322, 1990.
- [41] J. Barling, *Employment, stress and family functioning*. Chichester: Wiley, 1990.
- [42] A. A. I. Wedderburn, *Shift work and health*. London: Her Majesty's Stationery Office, 1967.
- [43] J. Barton, E. Spelten, P. Totterdell, L. Smith, S. Folkard, and G. Costa, "The standard shiftwork index: A battery of questionnaires for assessing shiftwork-related problems," *Work & Stress*, vol. 9, no. 1, pp. 4–30, 1995. <https://doi.org/10.1080/02678379508251582>
- [44] R. L. Repetti, "Effects of daily workload on marital behavior," *Journal of Personality and Social Psychology*, vol. 57, no. 4, pp. 651–659, 1989.
- [45] J. C. Duchon, T. J. Smith, and M. M. Milczarek, *The effects of work on family life among married female nurses*. Cincinnati, OH: NIOSH, 1997.
- [46] E. J. Grant-Vallone and E. A. Ensher, "An examination of work and personal life conflict, organizational support, and employee health among international expatriates," *International Journal of Intercultural Relations*, vol. 25, no. 3, pp. 261–278, 2001. [https://doi.org/10.1016/S0147-1767\(01\)00003-7](https://doi.org/10.1016/S0147-1767(01)00003-7)
- [47] D. Dawson, K. Reid, and M. Thomas, "Fatigue and alcohol as risk factors in the aviation industry," *Occupational and Environmental Medicine*, vol. 58, no. 3, pp. 169–173, 2001.
- [48] C. B. Jones, M. Gates, and S. Watson, "Nurses' intentions to stay in the profession," *Nursing Economics*, vol. 24, no. 1, pp. 26–40, 2006.
- [49] M. R. Frone, *Work-family balance*. In J. C. Quick & L. E. Tetrick (Eds.), *Handbook of occupational health psychology*. Washington, DC: American Psychological Association, 2003.
- [50] N. R. Lockwood, *Work/life balance: Challenges and solutions*. Alexandria, VA: Society for Human Resource Management, 2003.
- [51] L. M. Lapierre, "Supervisory support and work-family conflict: A meta-analysis," *Journal of Occupational Health Psychology*, vol. 13, no. 1, pp. 1–14, 2008.
- [52] T. A. Beauregard and L. C. Henry, "Making the link between work-life balance practices and organizational performance," *Human Resource Management Review*, vol. 19, no. 1, pp. 9–22, 2009. <https://doi.org/10.1016/j.hrmmr.2008.09.001>
- [53] R. Valk and V. Srinivasan, "Work-family balance of Indian women software professionals: A qualitative study," *IIMB Management Review*, vol. 23, no. 1, pp. 39–50, 2011. <https://doi.org/10.1016/j.iimb.2010.10.010>
- [54] G. Zhao, S. Li, M. Sun, and S. A. Wilde, "Assembly, accretion, and break-up of the Palaeo-Mesoproterozoic Columbia supercontinent: Record in the North China Craton revisited," *International Geology Review*, vol. 53, no. 11–12, pp. 1331–1356, 2011.
- [55] M. Ferguson, D. Carlson, S. Zivnuska, and D. Whitten, "Support at work and home: The path to satisfaction through balance," *Journal of Vocational Behavior*, vol. 80, no. 2, pp. 299–307, 2012. <https://doi.org/10.1016/j.jvb.2012.01.001>
- [56] C. K. Sahoo and S. Mishra, "Occupational stress and work-life imbalance: A study among railway drivers," *South Asian Journal of Human Resources Management*, vol. 7, no. 2, pp. 276–291, 2020.

- [57] M. Anand and K. Sridevi, "Work-life balance challenges among loco-pilots in Southern Railways," *Journal of Management and Labour Studies*, vol. 46, no. 1, pp. 45–56, 2021.
- [58] N. Krishnaswamy and A. Joseph, "Institutional responses to occupational stress among railway drivers in India," *Indian Journal of Industrial Relations*, vol. 58, no. 1, pp. 134–148, 2022.