Impact of work life quality on productivity of employees in IT sector in the twin cities of Pakistan: In light of mediating role of burnout

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List of Abbreviations

Term	Definition
CAW	Control at work
DEP	Depersonalization
EE	Emotional exhaustion
GFP	Global forum on productivity
GWB	General wellbeing
HWI	Work home interface
JCS	Job career satisfaction
JD-R Model	Job demand and resource model
LLCI	Lower limit confidence interval
MSE	Mean squared error
OECD	Organization for economic co-operation and development
PA	Personal accomplishment
PRO	Productivity
QWL	Quality of work life
SAW	Stress at work
SPSS	Statistical Package for Social Sciences
ULCI	Upper limit confidence Interval
WCS	Working condition
WHO	World health organization
WLB	Work-life balance

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Abstract

This study investigates the impact of work-life quality (QWL) on productivity while keeping burnout as mediator among employees in the Information Technology (IT) sector of twin cities Pakistan. The aim was to understand the relation between QWL and Productivity with a possible mediation of Burnout. The study, carried out with a sample size of 230 participants, employs process macros for conducting mediation analysis. The sample was gathered through an online survey administered via Google Forms. The findings reveal a significant relationship between QWL and productivity, as well as between QWL and burnout. Notably, burnout is identified as a partial mediator in the association between QWL and productivity. Despite the meaningful insights provided, the study acknowledges certain limitations. One limitation pertains to time constraints, which may have impacted the comprehensiveness of data collection. Additionally, the reliance on self-reporting techniques introduces potential biases. The research adopts a cross-sectional design, emphasizing the need for caution in drawing causal inferences. Overall, this study aims to add to a nuanced understanding of the dynamics within the IT sector, shedding light on the capacity of burnout as a mediator between QWL and productivity. Future researchers can introduce more variables in proposed model and can take more thorough route.

Key words: QWL, Productivity, Burnout, IT sector, Pakistan

Chapter 01 Introduction

1.1 Background

Pakistan's information technology (IT) industry has grown significantly in the last several years, establishing itself as a major force in the world of technology (Shad, 2019). Employers and policymakers are more concerned about the productivity and well-being of their workforces as the industry develops. The work-life quality (QWL) of employees, encompassing various facets of their professional and personal experiences, plays a pivotal role in shaping their overall job satisfaction and performance.

This thesis delves into the complex relationship between worker productivity and work-life quality in the twin cities (Islamabad & Rawalpindi) of Pakistan's IT industry. A comprehensive understanding of this dynamic is crucial not only for organizational success but also for the holistic development of the workforce (Sattar *et al*., 2013). Furthermore, this research aims to investigate the mediating function of burnout, a prevalent occurrence in modern work environments, in the complex relationship between work-life quality and productivity among employees.

Human resources are regarded as the backbone of any company, underscoring the need to ensure that employees are content, motivated, and fulfilled in their roles. As the pivotal force behind efficient resource utilization and strategic decision-making, human resources confer a competitive advantage to organizations (Thakur & Sharma, 2019). Therefore, employees' quality of work life is a crucial aspect to uphold.

The idea of QWL encompasses a favorable work environment, including aspects such as compensation, welfare programs, flexible schedules, positive relationships, and developmental opportunities (Ahmad, 2013). Generally, it encompasses the physical, mental, social, and economic dimensions of work. A high QWL is anticipated to yield positive outcomes for both the individual employee and the organization.

It is widely acknowledged that QWL contributes significantly to employee satisfaction together with job performance (Gayathiri *et al*., 2013). Thakur and Sharma's (2019) findings indicate that, aside from income, demographic factors such as age, gender, and marital status do not impact the quality of work life. Income emerges as a critical factor in assessing work-life quality, a consistent

trend across various organizations and economies. While this study delves into non-income aspects of work-life quality, it conceptualizes it as a three-dimensional construct encompassing freedom and recognition, rewards, and a grievance redress mechanism.

The significance of Quality of Work Life (QWL) extends beyond individual professionals to encompass the overall well-being of the institution. The upkeep of both living and working standards serves as a barometer for the institution's effectiveness. Elevating the living and working conditions of employees within the institution becomes imperative for the sustainable functioning of the organization, its prominence in the sector, and the retention of that standing (Schneider *et al*, 2003). Contentedness, independence, happiness, and competence are intertwined concepts and therefore should be analysed collectively. By doing so, it becomes possible to enhance the quality and efficiency derived from both life and working standards (Auster, 1996).

The literature of reference currently engages in a continuous and productive discourse regarding the elements of Quality of Work Life (QWL) (Sattar *et al*. 2013). This discussion extends to explore its various connections with non-economic performance metrics, specifically, the satisfaction and fulfillment of fundamental physical conditions crucial for ensuring workplace functionality, health, and safety (Pandey & Tripathi, 2018). The QWL's most delicate elements, yet to be thoroughly examined, are inherently linked to the socio-emotional and psychological needs of employees. Exploring these aspects necessitates employing a more behavioral perspective to uncover the components that can exert the most significant impact on job satisfaction, motivation, and specifically productivity (Schneider *et al*., 2003; Ruzevicius, 2007).

Within the realm of health organizations, investigations into the correlation between productivity and QWL have been conducted, suggesting the formulation of effective strategies to enhance productivity within hospital settings (Nayeri *et al*., 2011). However, there remains a dearth of understanding regarding the diverse ways in which the behavioral and subjective elements of QWL can impact an employee's sense of contributing to the organization's productivity. As previously mentioned, there is an opportunity to advance our understanding of the effects associated with subjective assessments of QWL satisfaction on organizational performance. This is particularly crucial in a context where there is a simultaneous push to reduce resource investment and maximize results, emphasizing the significance of productivity (Sirgy, 2011).

It is particularly timely to explore the non-economic facets, specifically subjective or behavioral motivations that drive collaborators to actively contribute to enhancing their organization's productivity. Aligning with the Organisation for Economic Co-operation and Development (OECD) perspective on productivity indicators, the existing variations in productivity among organizations warrant comprehensive studies to unravel the 'black box' of internal productivity determinants (OECD, 2019). Indeed, there is an imperative to progress our understanding of the individual factors influencing organizational productivity. A notable example of this intricate undertaking is the recent initiative by the Global Forum on Productivity (GFP) titled 'The Human Side of Productivity.' This project adopts a multidimensional approach, focusing on key organizational individuals, including workers, managers, and owners (Criscuolo *et al*., 2021).

On the other hand, Burnout is acknowledged as a disruptive element affecting organizational performance and expenses (Pulakanaho *et al*., 2018). The interaction between work-related factors and individual work productivity is notably influenced by both physical and mental health (Leitao *et al*., 2021). The consequences of diminished work productivity encompass heightened absenteeism, presentism, and a decline in workability (Dewa *et al*., 2014). Despite extensive research on work productivity in diverse physical and mental health conditions and disabilities (Pan *et al*., 2021), there is a scarcity of studies examining its connection with burnout.

Recently, the World Health Organization (WHO) has classified burnout as a phenomenon related to work. Moreover, persistent stress has also been identified as a marker. Furthermore, three primary dimensions of burnout has also been identified namely emotional exhaustion or diminished energy, an emotional state characterized by negativity, and reduced effectiveness in professional realm (WHO, 2019). The prevalence of burnout is rapidly increasing, impacting 13–25% of the workforce (Puolakanaho, 2018).

Individuals with heightened emotional intelligence typically experience lower levels of burnout (Grover & Furnham, 2020) as they are better equipped to manage stress, potentially leading to increased productivity (Wan *et al*., 2014). Employing emotional regulation techniques can contribute to a sense of achievement at work. Given that a diminished sense of accomplishment is a key aspect of burnout, these strategies may play a crucial role in preventing the syndrome. Such

feelings of inadequacy in fulfilling responsibilities are linked to compromised worker health and well-being, often stemming from unfavorable working conditions.

As highlighted by (Guan & Jepsen 2020), in addition to emotional regulation techniques, further research is essential to deepen our understanding of burnout components or factors that either motivate or demotivate individuals. Exploring these aspects is crucial for enhancing individual commitment to organizational performance and further integrating existing understanding of QWL.

1.2 Scope:

This research is focused on the IT sector in twin cities, a sector known for its dynamic nature and the constant demand for innovation. The study aims to identify the issues employees faced in IT sector and how these challenges relate to their work-life quality and, consequently, their productivity. The study will further examine whether or not job burnout mediates the association between QWL and productivity of employee. This means that the study will investigate if changes in QWL lead to changes in burnout levels, which in turn influence employee productivity. By concentrating on the IT sector, the findings of this research can provide valuable insights that are context-specific and contribute to the broader understanding of the global IT workforce.

1.3 Research Gap:

While numerous studies have investigated factors influencing employee productivity and well-being, there exists a notable gap in the literature regarding the specific context of the IT sector in twin cities. This research seeks to address this gap by examining the relationship between work-life quality and productivity in a region that is increasingly becoming a hub for IT innovation. Additionally, the mediating role of burnout, a phenomenon prevalent in high-stress environments, will be explored to provide a comprehensive understanding of the dynamics at play.

1.4 Significance:

This study explores the crucial connection of work life quality, employee productivity, and burnout within Pakistan's booming IT sector. Its significance lies in offering valuable insights for both academia and practical implications. By analysing the context-specific factors impacting employees, the study sheds light on how work life quality influences productivity through the lens of burnout.

- This knowledge empowers organizations to tailor HR practices and support programs, fostering a healthier and more productive work environment.

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- Furthermore, the study enriches academic discourse by contributing empirical evidence to existing theories, potentially paving the way for new models in organizational behaviour and human resource management.

- Ultimately, its findings can inform policymakers in crafting regulations that promote a balanced and sustainable work life for IT professionals.

1.5 Objectives:

The main objectives include:

- To quantify the relationship between QWL and employee productivity in the IT sector in twin cities.

- To understand the mediating role of burnout between QWL and productivity.

- To investigate and understand the health of QWL and the level of burnout among employees of IT sector in twin cities.

1.6 Research Questions:

- How does work-life quality influence the productivity of employees?

- Does burnout mediate the relationship between work-life quality and employee productivity among IT professionals?

- What is the current state of QWL and the prevalence of burnout among employees in the IT sector in twin cities?

Chapter 02 Literature Review

In the contemporary professional landscape, the dynamics of work and personal life have undergone significant shifts, prompting a heightened interest in understanding the connection between work-life quality and employee productivity. As organizations increasingly recognize the importance of maintaining a healthy work-life balance, research has centered on unraveling the intricate interplay between these factors. This literature review aims to provide a comprehensive examination of the existing body of knowledge, shedding light on the nuanced relationship between work-life quality and productivity, with a specific focus on the mediating role of burnout.

Work-life quality, a multifaceted concept encapsulating the harmony between professional commitments and personal well-being, stands as a crucial determinant of employee satisfaction and efficiency. This review is grounded in a conceptual framework that recognizes the significance of the interrelationship between work-life quality and productivity. Additionally, the review delves into the mediating role of burnout, understanding how the experience of chronic workplace stress can impact the overall relationship between work-life quality and productivity.

2.1 Work Life Quality:

In essence, the term "quality of work-life" or "QWL" encompasses contentment of employee with their professional life, emphasizing the connection and the nature of worker and their work environment (Rose *et al*., 2006). The conceptualization of QWL spans various factors, with researchers interpreting and operationalizing it differently across different time periods.

During the 1960s to the 1980s, QWL primarily focused on the desirability of working conditions. Subsequently, in the 1980s and 2000s, a need satisfaction approach gained prominence. Presently, researchers use their judgement to employ blend of both approaches (Gogoleva *et al*., 2017). This synthesis results in a comprehensive range of QWL measurements, including sentiments of individuals toward content of their job, the physical work space, compensation, benefits, promotions to say the least. Furthermore, QWL also includes indicators like autonomy, teamwork, say in decision-making, occupational health and safety, job security, communication, support from colleagues and managers, and work-life balance (Adhikari & Gautam, 2010), among others.

Moreover, QWL entails a mixture of strategies, procedures, and the overall atmosphere in the workplace aimed at enhancing and sustaining employee satisfaction by improving working conditions (Nazir *et al*., 2011). In essence, work life quality can be defined as the reflection of needs and desires regarding working conditions, compensation, professional development opportunities, work-family balance, role equilibrium, safety, and social interactions of individuals in the workplace (Ogunsanya, 2017).

The concept of work life quality is a well-established consideration within the realm of organizational dynamics. It encompasses the organization's policies and procedures in response to the desires and expectations of employees, all aimed at achieving a common goal of enhancing performance (Noviyanti *et al*., 2019). A research has elaborate that the QWL refers to the degree to which personnel can ful fill significant personal needs through their organizational experiences (Dhamija *et al*., 2019). Another research further characterizes the quality of work life as a broad concept encompassing various aspects of the work experience (Secapramana *et al*., 2019). Similarly, (Leitão *et al*., 2019) describe it as the overall quality of the human experience within the workplace.

According to (Kocman *et al*. 2018), the QWL is linked with a high level of worker satisfaction, derived from well-designed work structures. (Sugiarto *et al*. 2019) define it as a measure of how employees feel about the safety, comfort, and satisfaction within their work environment and the conditions associated with their responsibilities. (Saputri *et al*., 2020) emphasize that the conscious and continuous improvement of work life quality involves enhancing satisfaction by minimizing monotony, increasing variety, autonomy, responsibility, and alleviating stress.

In summary, work life quality can be synthesized as the satisfaction and security individuals derive from their work experiences. This is reflected in various indicators, including the quality of the work environment, job security, autonomy, and relationships with co-workers (Saputri *et al*., 2020). QWL comprises all critical factors necessary for an organization to make the job appealing for qualified employees and to retain them (Mazlan *et al*., 2018). It is commonly linked to organizational objectives, conditions, and practices that allow employees to perceive a sense of safety, satisfaction, and growth within the organization (Ahmad, 2013). In today's global context, QWL is gaining increased attention as individuals spend a significant portion of their lives in the

workplace. Providing QWL becomes a significant indicator for organizations, positively influencing their image and aiding in employee attraction and retention (Noor & Abdullah, 2012).

Examining the characteristics of work within the contemporary landscape of information and communication technology industries, a recent investigation delineated five dimensions of Quality of Work Life (QWL) specifically concerning IT Professionals. These dimensions encompassed Health and Well-Being, Job Security and Satisfaction, other dimensions include Competency Development, and the equilibrium between work and non-work life (Rethinam & Ismail, 2008). In the present article, we delve into and analyze various dimensions previously explored in literature regarding QWL. The objective is to derive generalizations, particularly in the unique context of the IT sector.

Drawing upon constructs examined in prior research and considering the distinctive nature of work of the Information Technology industry, our study investigates six constructs (Easton & Van Laar, 2012). These include

a) Working Condition (WCS)
b) General wellbeing (GWB)
c) Being in Control at Work (CAW)
d) Work-home Interface (HWI)
e) Job Career Satisfaction (JCS), and
f) Stress at Work (SAW)

2.1.1 A Look at Subjective and Behavioural Dimensions of QWL

Understanding the quality of life can be a bit tricky, especially when looking at how well a community or society is doing based on individual or group experiences. People often connect a good quality of life with better productivity at work. When we think about work, things like stress, control, job security, fairness, conflicts, effort and reward balance, job level, and working hours all play a role. These factors can affect how well we do our job and, in turn, influence our quality of life. For example, issues like insomnia can hurt our work performance and lead to less productivity (Soelton *et al.,* 2022).

A lot of things contribute to our quality of life, like how we feel at work, our health, and whether we have what we need. Policies that take into account each employee's unique needs suggest that improving how we feel about our work, including things like trust, satisfaction, and control, can make us more productive (Anitha, 2014). Still, there's more to learn about how both our feelings and behaviors impact Quality of Work Life (QWL).

Support from friends and colleagues, the environment we work in, and factors like having green spaces in cities can make a big difference in our work quality of life (Crossley & Russo, 2022). There are four main parts of QWL: a safe workplace, health care related to our job, reasonable working hours, and a fair salary (Bora, 2015). Making QWL better is expected to make employees more motivated, leading to better performance. A workplace that supports our personal needs contributes to excellent QWL (Leitão *et al*., 2021).

Models that focus on individual growth needs and important factors like the work environment, job requirements, how bosses behave, extra programs, and the organization's commitment are important in understanding QWL (Jabeen *et al*., 2018). QWL brings benefits like employee pride, commitment to the community, satisfaction, and the organization's positive impact on society, all influenced by how much support the organization gives (Leitão *et al*., 2019).

QWL is about working towards goals within our jobs, affecting our individual quality of life, how well the organization does, and how society functions. It can even change how we see the workplace. QWL shows us how people feel respected, proud of their job, and a sense of belonging all connect to a good QWL (Jabeen *et al.,* 2018). Things like satisfaction, motivation, involvement, and commitment play a big role in how we feel about our work. How we balance work and life is also important for QWL, affecting our overall happiness, job satisfaction, and how committed we are to the organization. But how directly it impacts productivity can vary (Aruldoss *et al.,* 2021).

Improving QWL means getting, training, developing, motivating, and evaluating employees so they can do their best for the organization. Skills, getting better at our jobs, and having opportunities for training are all part of QWL, impacting how satisfied we are with our jobs and how well we perform overall. Studies show that when QWL and motivation are high, employees do better, showing how important QWL is for both our well-being and the success of the organization (Narehan *et al*., 2014).

2.2 Productivity:

Productivity is the result of performance, reflecting the quantity of output derived from both external, contextual, performance behaviors and opportunity factors (Blumberg & Pringle, 1982). It was contend that issues related to the use of performance measures stem from ineffective measures and a selective development process. Wanyama and Mutsotso (2010) assert that employee productivity is influenced by the time an individual spends physically and mentally engaged in a job (Zhang *et al*., 2020).

Various terms, such as organizational performance, employee performance, corporate performance, and new product development performance, have been employed to describe employee productivity (Damanpour and Evan, 1984; Richard *et al*., 2009). The financial and non-financial outcomes directly impacting organizational performance reflects in performance of employees (Anitha, 2014). The distinction between objective and subjective measures is a common approach in describing performance measures (Bommer *et al*., 1995). While subjective measures are susceptible to supervisory biases, social desirability and biasness of common methods it allows cross-industry comparisons. (Vij and Bedi, 2016). Despite this, subjectivity is favored because they offer relative performance measures (Farooq, 2014).

Employee productivity, often used interchangeably with employee performance, can be defined as the employee's production within a corporation with available resources, indicating efficiency. The time taken to complete a task influences efficiency, and productivity can be quantified in terms of work hours (Sauermann, 2022). Definitions of employee productivity may vary across industries, considering factors like goods produced or service quality.

Organizations can adopt quantity, quality, or combined measures of productivity (Leblebici, 2023). Technological improvements impact staff productivity through innovation, skill enhancement, and efficiency, contributing to profitability and outcomes (Leblebici, 2023). Input characteristics and the efficiency of production resource utilization affect staff productivity, where similar productive technology may yield different results due to varying financial resources.

This study defines employee productivity as the capacity to meet job description and employment agreement goals within a specified period. Metrics such as comparing man-hours to total task

performance and assessing efficiency in meeting targets provide insights into employees' productivity. These measurements assist management in evaluating and quantifying employees' working abilities, facilitating a clear foundation for comparing real and projected outcomes.

2.3 Burnout:

Job burnout, characterized by negative job stress responses, is a well-studied topic in management. Its consequences are both personal (destructive behaviors, illness, substance abuse) and organizational (turnover, absenteeism, reduced performance). Shirom (2003) identifies three key impact areas: organizational, occupational, and individual. Notably, certain occupations like IT face higher burnout risks due to unique job demands (Maslach & Schaufeli, 2001).

IT-specific occupational characteristics (Moore, 2000) deserve research attention. Job burnout theory outlines three response syndromes: emotional exhaustion (resource depletion), depersonalization (relationship dehumanization), and reduced accomplishment/increased incompetence (Maslach & Schaufeli, 2001).

Job burnout is usually indicated by emotional exhaustion. Furthermore, depersonalization, and reduced effectiveness are also characteristics of job burnout. These characters predominantly affects individuals in social professions like teachers, doctors, and social workers (Maslach, 1981). Its impact extends beyond professional life, spilling over into personal well-being and physical health (Charoensukmongkol, 2013; Chesak *et al*., 2019). Research links burnout to increased risk of sleep disorders, obesity, diabetes, and cardiovascular issues, along with accelerated aging and fatigue, and other different mental health related issues (Lapa, 2016). Notably, burnout has even been associated with suicidal inclinations and substance exploitation.

Symptoms commonly observed in individuals experiencing burnout include persistent feelings of chronic fatigue, ongoing exhaustion, challenges in concentration, memory lapses, disorganization, reduced motivation, changes in personality, heightened anxiety, depression, and a diminished sense of accomplishment. (Coplan *et al*., 2018). Interestingly, some reports suggest a potential protective effect of smoking against burnout, possibly due to increased break frequency (Socaciu, 2020).

While past IT studies focused on emotional exhaustion as "work exhaustion" encompassing physical and mental depletion (Moore, 2000), this variant plays a larger role. Work exhaustion has long been linked to IT job artifacts (Allen *et al*., 2008) and can lead to reduced job satisfaction and turnover (Ahuja, 2007). Importantly, work exhaustion in IT goes beyond these consequences and impacts depersonalization and sense of accomplishment. This is crucial because studies in other fields show these different burnout aspects lead to diverse negative outcomes like absenteeism, poor citizenship behaviors, and poor performance (Shih *et al*., 2013).

The investigation into work exhaustion within the IT sector originated with Moore's influential study, initially encapsulating the concept of tedium. Tedium was defined as a state of physical, emotional, and mental exhaustion resulting from prolonged engagement in demanding situations (Pines *et al*., 1981). Job burnout theory subsequently refined this concept to focus on emotional exhaustion (Maslach & Jackson, 1981). Moore adapted Maslach and Jackson's emotional exhaustion scale to encompass emotional, mental, and physical exhaustion among IT professionals, eliminating references to people as the source of exhaustion. Antecedents and consequences of work exhaustion in the IT field were proposed, revealing strong associations with low job satisfaction and high turnover intention. Work overload, role ambiguity and conflict, lack of autonomy, and absence of rewards were identified as antecedents (Moore, 2000).

Despite these advancements, certain dimensions of job burnout prevalent in other fields have not been incorporated or empirically established for IT workers. Job burnout theory recognizes emotional exhaustion, depersonalization (negative, callous, or excessively detached behavior toward others), and diminished personal accomplishment. Depersonalization is considered a coping method for exhaustion, distinct from emotional exhaustion. The Maslach Burnout Inventory (MBI) is a standard measure that includes all three dimensions (Maslach & Schaufeli, 2001).

2.3.1 Emotional Exhaustion:

Feeling perpetually drained and depleted defines emotional exhaustion, the core of burnout according to Maslach & Leiter (2008). This exhaustion stems from excessive workload, conflict, and bad working conditions (Deran & Beller, 2015). The social exchange theory explains this by highlighting the imbalance between effort and reward. This "lack of reciprocity" across

relationships with clients, colleagues, supervisors, and even the organization itself, eats away at an individual's emotional resources, leading to chronic exhaustion. Notably, Schaufeli (2011) emphasizes the role of demanding client interactions in triggering burnout due to their emotional burden.

2.3.2 Depersonalization:

Depersonalization isn't simply a case of "not really caring about work," as Salanova *et al*. (2005) point out. It's a radical distortion of how you experience yourself, encompassing (a) feeling alien in your own body; (b) being a stranger to your own feelings; and (c) losing the thread of your life story, memories, and aspirations. Imagine your internal world fragmented and blurred, like a shattered mirror reflecting a warped image of yourself. This is the essence of depersonalization, as described by Ciaunica *et al*. (2020), where the narrative of your life becomes lost in disconnected pieces.

2.3.3 Personal Accomplishment:

Maslach & Leiter (2008) argue that emotional exhaustion, caused by excessive workload, conflict, and poor conditions (Deran & Beller, 2015), is the main culprit behind these withdrawals. The social exchange theory views this as a matter of unfair "deposits" vs. "withdrawals" in our emotional bank. When clients, colleagues, supervisors, or even the organization itself fail to provide fair returns for our investments, chronic exhaustion sets in. This is especially true for jobs with demanding client interactions, which, as Schaufeli (2011) notes, can drain our emotional reserves even faster.

2.4 QWL and Productivity:

Effective implementation of QWL initiatives by companies can significantly enhance employee productivity (Purwanti & Musadieq, 2017). Based on this definition, a company should ensure the well-being of its employees by offering various services and guarantees to ensure their safety and health during work activities. Occupational safety measures play a pivotal role in boosting company productivity. A high level of work safety helps minimize accidents that can lead to illness, disability, and even fatalities. Maintaining a high level of safety aligns with the efficient upkeep and utilization of work equipment and machinery, ultimately contributing to heightened productivity (Pangestu, 2016).

The intertwining of occupational safety and health with productivity is closely linked to the workforce. Diseases contracted by workers can significantly diminish work productivity, resulting in a decline in the organization's or company's revenue. This decrease in production not only tarnishes the company's image in terms of quality and capacity but also reflects poorly on the company's overall performance (Saputra, 2017). Employees experiencing poor welfare not only foster dissatisfaction within the company but also witness a decline in their productivity, reduced motivation at work, and a decrease in their commitment and loyalty to the company.

In contemporary perspectives, it is evident that merely increasing labor productivity does not equate to increased overall work output. Recent studies emphasize that productivity and the quality of working life serve as pivotal drivers for corporate performance. QWL initiatives has emerged as a crucial influence in augmenting labor productivity across various companies and large enterprises (Leitão *et al*., 2019).

To remain profitable in this demanding environment, corporations strive to optimize human and system performance, focusing on adaptable production processes that enhance quality, reduce costs, and improve delivery schedules (Javaid *et al*., 2022). The increasing complexity of the business world, coupled with the challenges in implementing effective social laws, underscores the strategic importance of ethics in safeguarding companies from unwanted disasters.

In the evolving definition of a successful company, factors such as globalization, information technology, the competitiveness of business globally, and constraints on natural resources have shifted the focus from purely financial metrics to encompass ethics, quality of work life, and job satisfaction (Jones *et al*., 2016). The dynamics of our fast-paced society underscore the importance of understanding what contributes to employee satisfaction in the workplace. This understanding is crucial for human resources practitioners to effectively manage policies and practices that impact employees.

Quality of work life, when given due attention, positively contributes to organizational goals. Programs that empower workers to balance their professional and personal lives have been shown to enhance productivity (Mawu *et al*., 2018). Recognizing and supporting employees through organizational values and policies can alleviate external stresses, enabling better concentration on job responsibilities and reducing absenteeism. This, in turn, improves productivity and fosters increased employee engagement and loyalty.

The findings from hypothesis testing reveal a direct positive impact of QWL on productivity. Correlation in addition to path coefficient analyses indicate a strong influence of quality of QWL on productivity, aligning through previous research results (Mawu *et al*., 2018). It is suggested that organizations create a secure work environment to optimize employee performance, as a good QWL is essentially considered for attracting and retaining employees, achieving growth, and ensuring profitability.

Recently a theory, known as the triad of factors of motivation at place of work (Koziol & Koziol, 2020), has emerged, building upon Herzberg's theory (Herzberg, 1996) and the theory motivation factors of tourists (Koziol & Koziol, 2015). The trichotomy of motivator factors extends Herzberg's two-factor theory, introducing three elements de-motivators, hygienic factors and motivators that influence job satisfaction. In this model, factors contributing to job satisfaction are classified as chances for promotion, opportunities for personal development, bonuses, flexible work hours, cafeteria benefits, acknowledgment of merit, and employer-supported training. (Koziol & Koziol, 2020). Hygiene factors, including compensation, working hours, interpersonal relations, workload, a positive work environment, industrial safety, job content, company policies, responsibility, and social activities, have been recognized. Additional demotivating factors involve issues like workplace harassment by superiors or colleagues, job-related stress, tasks surpassing the employee's psychophysical capacity and qualifications, short-term contracts, constant and intensive employer supervision, and a limited opportunity to bring about changes or implement improvements. (Koziol & Koziol, 2020).

The fundamental objective of quality of work life within an organization is to enhance employee well-being and productivity (Rethinam & Ismail, 2008). Efficient and effective outcomes from employees are not attainable without a focus on QWL, which stands crucial for both employee satisfactions in addition to organizational growth (Yadav & Khanna, 2014). Effectively managing quality of work life leads to healthier, more committed employees who produce higher-quality work (Horst *et al.,* 2014). Numerous studies have corroborated positive correlations between quality of work life and productivity (Thakur & Sharma, 2019).

Organizations that successfully integrate quality of work life measures have the potential to enhance their employees' productivity (Purwanti & Musadieq, 2017). When employees experience

positive physical and psychological well-being within the company, it directly influences the quality of work they produce (Pionistika & Ferdian, 2023). The QWL of an employee correlates with an increase in their work productivity, as highlighted by Tilaar *et al.* (2017).

Considering the comprehensive literature discussed above, the subsequent research hypothesis is developed:

Hypothesis (H1): There is a significant positive impact of quality of work life (QWL) on employee productivity.

2.5 Quality of Work Life and Burnout

With the escalating work demands over the past decades, compounded by the challenges brought on by the COVID-19 pandemic, there has been a rapid increase in the number of employees grappling with psychological issues linked to occupational stress. This surge in psychological challenges has resulted in heightened costs associated with absenteeism, reduced productivity, increased healthcare consumption, and the emergence of long-term public health concerns (Van der Klink *et al.*, 2001). This phenomenon is not limited to employees alone; small and medium-sized enterprise (SME) owners have also experienced elevated stress levels, particularly during the COVID-19 crisis. Their stressors include personnel shortages, financial constraints, liquidity issues, repeated closures and re openings, and difficulties adapting to a rapidly changing environment (Messabia *et al.*, 2022).

Moreover, occupational stress and self-reported sleep quality are closely linked to both QWL and ability to work, emphasizing critical need for screening and addressing these health issues (Bergman *et al.*, 2020). Occupational stress often leads to organizational burnout, which has been analyzed as a moderator in the association between employees' QWL and their perception of contributing to organizational performance. Quality of Work Life (QWL) elements are integrated into the triad of factors affecting workplace productivity, encompassing motivators and de-motivators. QWL hygiene factors, such as ensuring a secure work environment and providing occupational healthcare, strongly impact productivity. On the contrary, burnout de-motivator factors, which include reduced effectiveness, cynicism, and emotional exhaustion, play a crucial

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moderating role in influencing the connection between QWL and the contribution to productivity. (Leitão *et al*., 2021).

Burnout is regarded as a significant stressor, often emerging in the absence or limitation of supportive resources meant for coping with work demands (Kurtessis *et al*., 2017). The quality of work life is perceived as the environment providing moral and material factors to enhance an employee's sense of job security, encouraging optimal performance for the organization (Akter *et al*., 2018). Job burnout, in its simplest form, refers to an employee feeling exhausted, stressed, and pressured at work, leading to difficulties in handling daily responsibilities (Golonka *et al*., 2019). It is considered a type of nervous stress related to work, resulting in physical and psychological exhaustion, impacting the employee's identity and work outcomes due to prolonged pressures (Canu *et al*., 2021).

Common symptoms of occupational burnout include physical and psychological fatigue, loss of interest in hobbies, isolation from colleagues, changes in sleeping and eating habits, insomnia, appetite changes, forgetfulness, decreased functional performance, lack of creativity, tendencies toward depression, and negative thinking (Zgliczyńska *et al*., 2019). Job burnout is not a medical diagnosis, but it can contribute to various medical conditions such as depression, tension, pessimism, and poor memory (Basinska & Gruszczynska, 2020; Kogan *et al*., 2020; Lee *et al*., 2019).

The reasons for employees experiencing burnout are multifaceted, including personal relationships with management, attitudes, and other factors (Lubbadeh, 2020). Drawing from existing literature, the researcher has built a logical relationship between variables, indicating a possible connection. Several studies have explored the impact of QWL on reducing job burnout, highlighting an inverse relationship: as QWL increases, job burnout decreases, and vice versa. For example, Al-Azizi and Gheilan (2020) found that a good quality of work life, encompassing material and moral aspects, significantly reduces job burnout among workers. Wadi (2016) focused on working women, concluding that the QWL directly impacts psychological and functional burnout. Sa'ad (2020) explored the combination of QWL and its role in controlling job burnout, reporting a medium level of QWL and low levels of job burnout. Barbari (2016) determined an inverse link between the QWL and job burnout among workers in media and artistic production. Additionally, Leitão et al.

(2021) demonstrated that a quality work-life environment and a safe work environment contribute to reducing job burnout and increasing productivity incentives.

In developing a hypothesis, it is plausible to propose that quality of work life (QWL) significantly impacts burnout among employees. As evidenced by the aforementioned studies, a positive and supportive work environment, encompassing moral and material factors, is associated with a reduction in job burnout. Therefore, the hypothesis suggests that an enhanced QWL contributes to lower levels of employee burnout, aligning with the existing literature and emphasizing the importance of organizational factors in mitigating burnout.

Hypothesis (H2): There is a significant positive impact of quality of work life (QWL) on Burnout.

2.5 Burnout as Mediator:

In terms of the professional aspect, job burnout has been linked to various detrimental outcomes such as absenteeism, reduced productivity, diminished organizational commitment, motivation, and job satisfaction (Schult *et al*., 2018). It further manifests in adverse effects on physical and psychological health, impacting the overall work quality (Ashrafi *et al*., 2018). The workplace satisfaction level has been identified as a decisive factor influencing workers' health (Faragher *et al*., 2005). Individuals displaying a higher interest in their jobs tend to experience lower levels of burnout (Ashrafi *et al*., 2018), whereas elevated burnout levels may indicate negative attitudes toward work, oneself, and a lack of satisfaction (Embriaco *et al*., 2007).

Organizations with higher burnout levels often witness reduced happiness, job satisfaction, and work engagement among their employees (Schaufeli, 2018). Job burnout has been recognized as potentially impacting nurses' performance, work satisfaction, and quality of work life (Durkin *et al*., 2016), extending to academics, particularly those associated with public universities (Sestili *et al*., 2018). Notably, a high quality of work life has been correlated with increased workplace productivity (Leitão *et al*., 2019). Conversely, stress that is coming from work, anxiety, and burnout are associated with decreased job productivity, incurring significant costs for organizations (Jones-Bitton *et al*., 2019).

In a stressful environment, burnout rates tend to rise, as stress is a positive predictor of burnout, leading to negative repercussions on worker productivity (Landrum *et al*., 2012; Ramos-Galarza & Acosta-Rodas, 2019). Severe stress is viewed as leading to emotional exhaustion and burnout, with implications for decreased productivity, particularly in terms of work quality (Singh *et al*., 1994; Donald *et al*., 2004). Previous research has consistently highlighted the negative impact of burnout on productivity, emphasizing its association with diminished work in terms quality rather than quantity (Singh, 2000; Wright & Bonett, 1997).

Employee burnout is directly proportional to losses incurred by the company. Burnout-afflicted employees experience reduced productivity and struggle to perform optimally, often exhibiting a tendency to quit their jobs (Harnida, 2015; Eliyana, 2016). Recognizing factors that can mitigate employee burnout is crucial for companies. Employee engagement, defined as a strong attachment to one's job, has been identified as a significant factor in reducing burnout (Cole *et al*., 2012). Engaged employees work with passion, exhibit dedication, concentration, and energy, fostering a positive relationship with the organization (Cole *et al*., 2012).

In addition to individual interventions, organizational strategies, such as quality of work life (QWL) initiatives, play a pivotal role in managing employee burnout. QWL, rooted in satisfying various needs in the workplace according to Maslow's hierarchy, is instrumental in understanding employee motivations, needs, and barriers (Sinval *et al*., 2020; Seifi & Asgari, 2017). Empirical evidence supports the significant negative impact of QWL on burnout (Agarwal & Solanki, 2020).

Employee productivity has been always a debatable subject in the literature, with QWL programs designed to enhance both well-being and productivity. Various QWL programs, such as communication initiatives, cost reduction programs, labor management, and participative management, aim to improve productivity and employee satisfaction (Klein, 1986; Shareef, 1990). Implementing QWL programs has been shown to lead to increased worker productivity by enhancing working conditions and fostering worker involvement (Martel & Dupuis, 2006; Sirgy *et al*., 2008). Ahmad (2013) emphasizes the importance of a workspace that promotes cooperation among individual toward organizational goals as a cornerstone of QWL.

Prolonged exposure to stressful environments consequences in burnout, which has negative effects on individuals and organizations. Burnout leads to negative professional behaviors, reduced

interest, decreased performance, and increased turnover, impacting both individuals and organizations (Kanwar *et al*., 2009). Management must actively recognize elements contributing to employee burnout and construct a framework to engage with these factors. Attending to burnout not only improves individual performance and job satisfaction but also averts adverse repercussions for the organization. (Ho *et al*., 2009).

In light of the organizational effects of burnout, which include negative behaviors, decreased performance, and increased turnover, it becomes essential to discover the interrelationship between burnout, QWL, and productivity.

Hypothesis (H3): Burnout mediates the relationship between quality of work life (QWL) and employee productivity.

2.6 Theoretical Framework:

The Job Demands-Resources (JD-R) theory, proposed by Demerouti, Bakker, Nachreiner & Schaufeli in 2001, and further discussed by Bakker & Demerouti in 2017, is gaining popularity as a framework for job design and wellbeing. However, there has been limited effort to align it with the international dimension prevalent in many modern organizations. Despite recent calls for exploring cross-cultural validity in the relationships within this theory (Stephan & Jones, 2017), the model primarily focuses on organizational or occupational health, elucidating both the negative and positive aspects of wellbeing.

The central idea posited by the JD-R model is that specific job demands and job resources within an organization interact to determine either positive or negative outcomes (Balducci *et al*., 2011). Job demands encompass characteristics of the work environment that necessitate continuous physical and psychological efforts, potentially leading to undesirable consequences. On the other hand, job resources mitigate job demands and foster an individual's growth and quality of life within the organizational context.

The JD-R model operates under the assumption that, in any work environment, job demands may lead to negative outcomes such as stress, burnout, job dissatisfaction, and decreased productivity, while job resources contribute to higher Quality of Work Life (QWL), increased work engagement,

and improved productivity (Baurer *et al.*, 2014). Individuals unable to effectively cope with these impacts may experience performance decline.

Studies have established a correlation between QWL and productivity (Kim, Lee & Lee, 2019). The original JD-R assumptions propose that employee wellbeing can be comprehended, explained, and predicted by job demands and resources. Job demands may trigger a health impairment pathway leading to burnout or negative outcomes, while job resources may initiate a motivational pathway resulting in productivity or positive outcomes (Bakker & Demerouti, 2014).

Building upon the JD-R theory as a foundational framework, the following hypotheses and research model have been developed:

Hypothesis (H1): There is a significant positive impact of quality of work life (QWL) on employee productivity.
Hypothesis (H2): There is a significant positive impact of quality of work life (QWL) on Burnout.
Hypothesis (H3): Burnout mediates the relationship between quality of work life (QWL) and employee productivity.
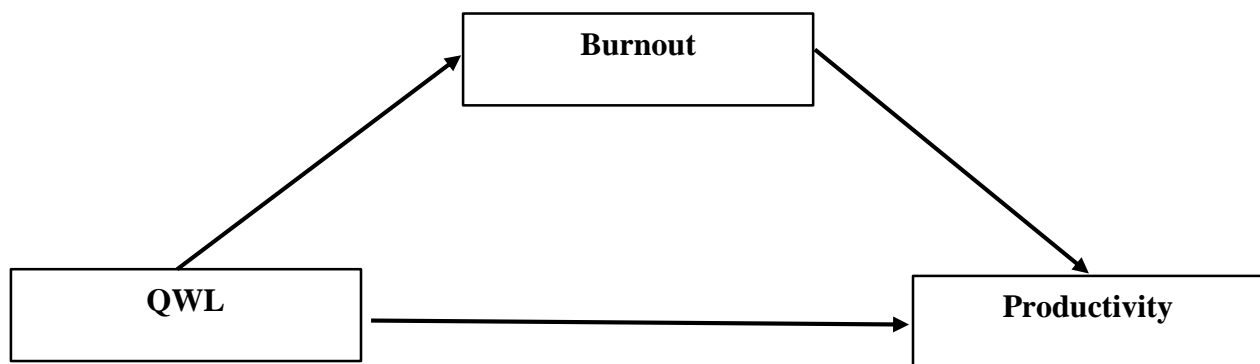
Figure 1: Research Model

Chapter 03 Methodology

This section outlines the research methodology employed to shed light on various aspects of work life quality, employee productivity, and the mediating influence of burnout within the dynamic landscape of the Information Technology (IT) sector in twin cities. The study aimed to provide a comprehensive and statistically sound understanding of how work-life quality influences productivity, with burnout as a potential mediator.

3.1 Research Approach:

The research philosophy for this study is rooted in a positivist paradigm, which emphasizes an objective and empirical approach to understanding the relationships between variables. Positivism aligns with the quantitative nature of the research, seeking to uncover measurable patterns among variables through systematic data collection and analysis (Mohajan, 2020).

The study used a cross-sectional design to collect data at a specific time, aiming to analyze the existing conditions and relationships among the variables. A survey instrument was developed based on established scales and validated work-life quality, burnout, and productivity measures. The data collection process involved administering the survey to a representative sample of IT sector employees in twin cities.

3.2 Research Purpose:

The purpose of this research is to enhance our understanding of the complex dynamics between work-life quality and employee productivity within the context of the IT sector in Pakistan. The study aims to explore the current state of work-life quality experienced by employees in the IT sector of Pakistan, understand how burnout may amplify or mitigate the impact of work-life quality on productivity, measure and analyze the productivity levels, and examine the factors that significantly contribute to or detract from employee productivity in the workplace.

By addressing these objectives, this research will contribute valuable insights to the existing literature, inform organizational practices, and guide policymakers in creating conducive work environments that foster employee well-being and enhanced productivity in the IT sector of Pakistan.

3.3 Research Design:

The research design employed by this study is a cross-sectional survey design. This design is chosen to collect data at a single point in time from a diverse sample from IT sector in Pakistan. The cross-sectional approach allows for the examination of relationships between work-life quality, burnout, and employee productivity within the IT sector, providing a snapshot of the current state of affairs.

A structured survey questionnaire was developed based on established scales and validated instruments related to work-life quality, burnout, and productivity. The questionnaire included demographic questions as well as items measuring key variables such as work-life quality, burnout symptoms, and perceived productivity. The survey instrument was administered electronically, utilizing online survey platform google forms to reach a wide and geographically dispersed sample of professionals. Informed consent was obtained from participants, and anonymity was assured to encourage honest and open responses.

3.4 Unit of Analysis:

The focus of this research is on individuals employed in the IT sector in twin cities of Pakistan as the unit of analysis. Each participant, representing a unique individual within the population of interest, serves as a single unit of analysis. The study collects data from these individuals to examine the relationships between work-life quality, burnout, and employee productivity. By analyzing the responses of individuals, the research aims to draw conclusions about the broader population and contribute to a better understanding of the factors influencing work-related experiences and outcomes in the IT sector.

3.5 Population and Sampling:

The target population for this study was all individuals employed in the IT sector in twin cities of Pakistan. Due to limitations in resources and accessibility, a complete list of all IT sector employees was not available. This made it difficult to draw a random sample representative of the entire population. Given the constraints, convenience sampling was employed. This involved soliciting participation from readily accessible IT professionals through online platforms, professional networks, and personal contacts. To mitigate potential bias, an item-to-sample ratio of 05:1 was applied. This means that for every items in the questionnaire, at least five responses

were collected. This helped achieve a minimum sample size of 225 (45 items x 05 responses per item).

3.6 Sample Size:

During the data collection process, a total of 230 complete responses were successfully gathered, exceeding the minimum threshold of 225 required for analysis. While the sample cannot be guaranteed to perfectly represent the entire IT sector population in twin cities, the use of an item-to-sample ratio and recruitment through diverse channels helped mitigate some potential biases.

3.7 Instrument

A survey questionnaire was developed and adapted using scales from the literature and past papers. The questionnaire was divided into two parts first part collected information about their demographic profile such as gender, age, employment status, and years in in industry. The second part included questions about variables deployed in this study. The variables are measured on a Likert scale of five points from "1: strongly disagree" to "5: strongly agree".

Table 1: Instruments

S. No	Variable	Item	Source	Validated by
1	QWL	24	Easton & Van Laar, 2018	Poku *et al*., 2020
2	Burnout	16	Leiter & Schaufeli, 1996	Jagodics & Szabó, 2022
3	Productivity	05	Chen & Tjosvold, 2008	Iqbal *et al*., 2019

3.8 Data Analysis Strategy:

The SPSS was employed for all statistical analyses in this study. Descriptive statistics like frequencies and percentages were generated to summarize demographic characteristics of the sample and provide overviews of key variables. To address the specific research questions and hypotheses of the study, the PROCESS macro for SPSS was utilized. A significance level of .05 and confidence level of .95 was adopted for all statistical tests.

3.9 Ethical Considerations:

Informed consent was obtained from all participants prior to data collection. Data were handled confidentially and anonymously throughout the research process. Ethical principles for research, including respect for participant autonomy and minimizing potential harm, were upheld.

3.10 Limitations:

The use of convenience sampling may limit the generalizability of the findings to the entire IT sector in twin cities of Pakistan. Self-reported data may be subject to bias and limitations in accuracy. The nature of the study being cross-sectional restricts causal inferences about the relationships between variables.

Chapter 04 Results and Analysis

4.1 Demographic Results:

The table 2 shows the gender, age, employment status, firm size, and work hours of our sample of 230 participants in this study. There are 45 females (19.6%) and 185 males (80.4%) who participated in this study. The participants' ages range from 20 to 35 years old. The most common age group is 26 to 35 years old, which makes up 53% of the participants. The majority of the participants are permanent (194 or 84.3%), followed by contracted employees (25 or 10.9%), and then interns/trainees (11 or 4.8%). Most of the participants work for small firms (130 or 56.5%), followed by medium firms (58 or 25.2%), and then large firms (42 or 18.3%). Most of the participants have 1 to 5 years of experience (166 or 72.2%), followed by those with less than 1 year of experience (56 or 24.3%). Only a small number of participants have more than 5 years of experience (8 or 3.5%). The majority of the participants work more than 8 hours per day (125 or 54.3%). The rest work 8 hours or less per day (105 or 45.7%).

Table 2: Summary of Demographics

Demographics	N	%
Gender		
Female	45	19.6%
Male	185	80.4%
Age		
20 to 25	108	47.0%
26 to 35	122	53.0%
Employment_Status		
Contracted	25	10.9%
Internee/Trainee	11	4.8%
Permanent	194	84.3%
Firm_Size		
10 to 99 Employees	130	56.5%
100 to 249	58	25.2%
500 +	42	18.3%
Experience		
<1 Year	56	24.3%
1 to 5 Years	166	72.2%
> 5 Years	8	3.5%
Work_Hours		
8 >	125	54.3%
8 ≤	105	45.7%

4.2 Reliability test of Variables:

The table 3 shows the results of Cronbach's alpha test for three variables: Quality of Work Life (QWL), Burnout, and Productivity. Cronbach's alpha is a measure of internal consistency, which is how well related a set of items are to each other. A higher alpha score indicates that the items are more internally consistent, and thus more reliable as a measure of the construct (Hajjar, 2018).

All three variables have good internal consistency, with alpha scores above 0.85. Cronbach's alpha for QWL is 0.901 (raw), 0.914 (standardized), for Burnout: 0.876 (raw), 0.884 (standardized), and for Productivity: 0.918 (raw), 0.924 (standardized).

Table 3: Reliability of Variables

Variable	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
QWL	0.901	0.914	25
Burnout	0.876	0.884	17
Productivity	0.918	0.924	6

The table shows the results of Cronbach's alpha test for three variables: Quality of Work Life (QWL), Burnout, and Productivity. Cronbach's alpha is a measure of internal consistency, which is how well related a set of items are to each other. A higher alpha score indicates that the items are more internally consistent, and thus more reliable as a measure of the construct (Hajjar, 2018). All three variables have good internal consistency, with alpha scores above 0.85. Cronbach's alpha for QWL is 0.901 (raw), 0.914 (standardized), for Burnout: 0.876 (raw), 0.884 (standardized), and for Productivity: 0.918 (raw), 0.924 (standardized).

4.3 Questionnaire Analysis:

The table 4 suggests Job-Career Satisfaction (JCS) has the highest mean score (4.018), indicating it as the area where employees are most satisfied. Emotional Exhaustion (EE) has the second-lowest mean score (3.071), suggesting that employees experience moderate levels of emotional fatigue in their jobs. Depersonalization (DEP) has the lowest mean score (2.892), implying that employees generally feel a sense of connection to their work and colleagues. Working Conditions (WCS) has the lowest standard deviation (0.860), meaning that employee ratings in this area are relatively consistent. While Stress at Work (SAW) has the highest standard deviation (1.140), indicating that employees perceive stress levels in their jobs quite differently.

Table 4: Questionnaire Analysis

Parameter	Mean	Std. Deviation
JCS	4.018	0.925
CAW	3.161	1.026

HWI	3.616	1.079
SAW	3.065	1.140
GWB	3.222	0.942
WCS	3.868	0.860
OVL	3.691	1.092
QWL	**3.550**	**0.528**
EE	3.071	1.087
DEP	2.892	1.062
PA	3.831	0.956
Burnout	**3.300**	**0.587**
PRO	**3.888**	**0.746**

4.4 Hypothesis Testing:

To test hypothesis process macros (version 4.2) were applied. Process macros written by Andrew F. Hayes. Andrew Hayes created Process Macro, a bootstrapping statistical computer program, as an add-on for SAS and SPSS (Hayes 2013). The application is intended to investigate how one or more moderating or mediating factors affect the connection between the variables that are independent and dependent. The application calculates standard errors, regression coefficients (both standardized and unstandardized), t and p values, R2, and the total, indirect, and direct impacts of X on Y.

Hypothesis (H1): There is a significant positive impact of quality of work life (QWL) on employee productivity.

The table 5 indicates a moderate positive correlation between employees' QWL and productivity (R = 0.6215). About 62% of the variation in Productivity can be explained by the model. R-sq = 0.383: This means that 38.3% of the variance in Productivity is accounted for by QWL. While MSE = 0.3431, represents the average squared error of the model's predictions. And, F-statistic is significant ($p < 0.001$), suggesting that the model is reliable and that QWL has a significant effect on Productivity.

Table 5: Analysis of QWL and Productivity

Outcome: Productivity

Model Summary

R	R-sq	MSE	F	df1	df2	P
.6215	.383	.3431	143.524	1.0000	228	.0000
Model						
	Coeff	se	t	P	LLCI	ULCI
Constant	.7712	.2630	2.932	.0037	.2530	1.0223
QWL	.8779	.0733	11.9802	.0000	.7335	1.0223

Hypothesis (H2): There is a significant positive impact of quality of work life (QWL) on Burnout.

According to table 6 R: 0.2789, indicates a weak positive correlation between the predictor variable (QWL) and the outcome variable (Burnout). About 28% of the variance in Burnout can be explained by QWL. And R-sq: 0.0778 means that QWL accounts for about 7.8% of the variation in Burnout. The F value suggest that the model is statistically significant. The table further suggests that QWL has a statistically significant positive relationship with Burnout. However, the strength of the relationship is weak, as indicated by the low R-squared value. This means that other factors, not included in the model, likely also contribute to Burnout.

Table 6: Analysis of QWL and Burnout

Output: Burnout						
Model Summary						
R	R-sq	MSE	F	df1	df2	p
.2789	.0778	.3191	19.2294	1.0000	28.0000	.0000
Model						
	Coeff	se	T	P	LLCI	ULCI
Constant	2.2003	.2536	8.6753	.0000	1.7005	2.7000
QWL	.3099	.0707	4.3846	.0000	.1706	.4491

Hypothesis (H3): Burnout mediates the relationship between quality of work life (QWL) and employee productivity.

As mentioned in table 07 The R = .6671 is indicates a moderate positive correlation between the predictors (QWL and Burnout) and the outcome (Productivity). About 44.51% of the variance in Productivity can be explained by the model. The table also indicates (F = 91.0311, p < .0001) that the overall model is statistically significant, meaning it's unlikely that the observed relationships between the predictors and outcome are due to chance. However, QWL (coefficient = .7785, p < .0001): This suggests that QWL positively effects the employees' productivity. For every one-unit increase in QWL, Productivity is estimated to increase by 0.7785 units, holding Burnout constant. And Burnout (coefficient = .3209, p < .0001): This suggests the positive correlation between burnout and productivity, but the effect is weaker than that of QWL. For every one-unit increase in Burnout, Productivity is estimated to increase by 0.3209 units, holding QWL constant.

Table 7: Burnout as a mediator

Outcome: Productivity						
Model Summary						
R	R-sq	MSE	F	df1	df2	p
.6671	.4451	.3116	91.0311	2.0000	227.0000	.0000
Model						
	coeff	Se	t	p	LLCI	ULCI
Constant	.0653	.2891	.228	.8216	-.5043	.6349
QWL	.7785	.0727	10.7051	.0000	.66352	.9218
Burnout	.3209	.0654	4.9026	.0000	.1919	.4498

The results as shown in table 08 illustrates a significant positive relation between QWL and productivity, both directly and indirectly through burnout. Here's a breakdown of the findings: Total effect of QWL on productivity is 0.88, meaning a one-unit increase in QWL leads to a 0.88-unit increase in productivity. This is statistically significant (p < 0.001). Direct effect of QWL on productivity that is the effect not mediated by other variables. It's 0.78, meaning even after accounting for burnout's influence, a one-unit increase in QWL leads to a 0.78-unit increase in productivity. This is also statistically significant (p < 0.001). While the Indirect effect of QWL on productivity that is the effect mediated by burnout. It's 0.10, meaning a one-unit increase in QWL leads to a 0.10-unit increase in productivity through the influence of burnout. This is also statistically significant.

Table 8: Total, Direct and Indirect effect of QWL on Productivity

Total, Direct and Indirect Effect						
Total effect of X on Y						
Effect	Se	T	p	LLCI	ULCI	c_cs
.8779	.0733	11.9802	.0000	.7355	1.0223	.6215
Direct effect of X on Y						
Effect	Se	T	p	LLCI	ULCI	c'_cs
.7785	.0727	10.701	.0000	.32	.9218	.5512
Indirect effect(s) of X on Y:						
	Effect	BootSE	BootLLCI	BootULCI		
Burnout	.0994	.0537	-.0239	.1891		
Completely standardized indirect effect(s) of X on Y:						
	Effect	BootSE	BootLLCI	BootULCI		
Burnout	.0704	.0392	-.0160	.1388		

The analysis shows that burnout partially mediates the relationship between QWL and productivity. This means that some of the positive effect of QWL on productivity is explained by its influence on burnout, which then leads to higher productivity as reflected in Figure: 02. Point effect of the indirect effect at which p-value is statistically significant is .0994.
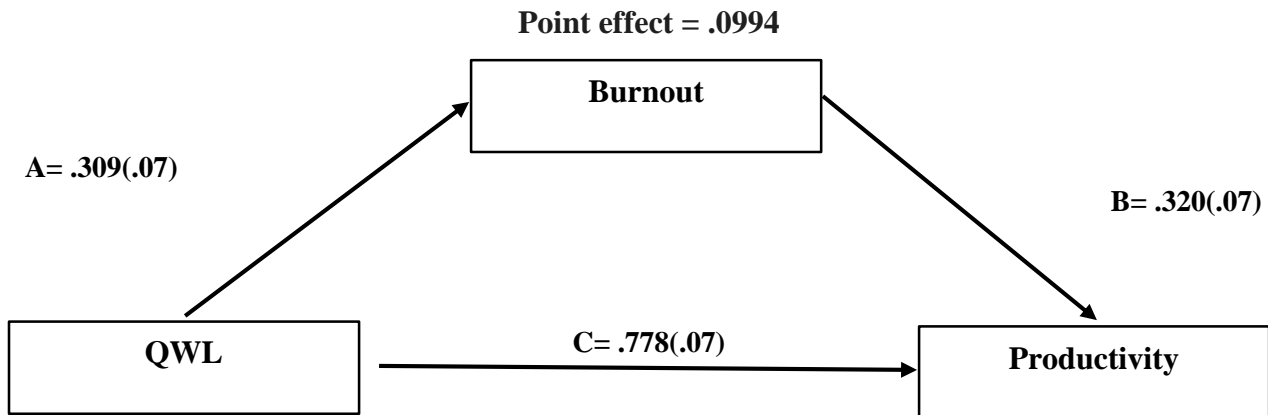
Figure 2: Result of Analysis

Chapter 05 Discussion

The present study aimed to identify the relationships between QWL, burnout, and productivity among employees in IT sector in twin cities of Pakistan. Our hypotheses proposed that QWL has significant relationships with both productivity and burnout, and that burnout mediates the relationship between QWL and productivity. The findings confirmed a significant positive correlation between QWL and productivity, suggesting that higher QWL leads to improved employee performance in IT sector aligned with previous researches in medical sector etc. This also aligns with previous research demonstrating that factors like work-life balance, job satisfaction, and positive social interactions at work contribute to enhanced employee engagement and ultimately, productivity (Maslach, Leiter, & Schaufeli, 2001). As hypothesized, a significant positive relationship was observed between QWL and employee productivity. This finding aligns with the Job Resources and Demands Model (JD-R Model), which posits that job resources, such as autonomy and work-life balance, can enhance employee well-being and ultimately lead to improved performance. In the context of our study, increased QWL likely provided IT professionals with the resources needed to cope with job demands, manage stress, and maintain high levels of engagement, thus translating into higher productivity.

Furthermore, the results highlighted QWL as a key predictor of burnout, confirming our second hypothesis. This finding also echoes the JD-R Model, suggesting that high-quality work environments reduce job demands and provide resources that prevent burnout. By offering greater work-life balance, supportive relationships, and meaningful work, organizations can foster employee well-being and resilience, preventing them from experiencing emotional distress, de-personalization, and reduced sense of personal accomplishment. The positive results of H1 and H2 are in line with the previous findings that states employees perform at their best and show high productivity when provided with a safer environment (Kiriago & Bwisa, 2013) (Leitão *et al*., 2019).

Our findings for hypotheses 1 and 2 are in line with the extensive literature base supporting JD-R assumptions for the relationship between demands/resources and burnout/QWL. Similar to our results, (Agarwal & Solanki, 2021) in their analysis (linking JD-R theory with QWL and Burnout in the workplace) find large support for the demands/resources relationship with

burnout/engagement, where only physical demands do not show significant results for the relationship between demands and burnout. Likewise, with the exception for a distinction in hindrance and challenge demands regarding their differing impact on engagement, the (Leitao *et al*., 2021) also supports these key assumptions. Despite robust meta-analytic support for the core assumptions of the JD-R model, the partial mediating role of burnout) has not yet been empirically assessed.

However, contrary to our hypothesis (H3) burnout only partially mediated the relationship between QWL and employee productivity. This suggests that improved QWL directly enhances productivity, but also indirectly influences it by reducing burnout. This finding further strengthens the case for prioritizing QWL initiatives in the IT sector, as they not only directly benefit employees but also contribute to their productivity through reducing burnout.

Future research could explore more comprehensive models incorporating these additional variables and conduct formal mediation analyses to test the proposed pathway more rigorously. In conclusion, this study provides initial evidence for the significant relationships between QWL, burnout, and productivity. QWL appears to promote increased productivity while acting as a potential buffer against burnout and its negative consequences. However, the remaining unexplained variance and limitations in the current study highlight the need for further research to gain a deeper understanding of the complex interplay between these factors and develop effective interventions to improve employee well-being and performance.

5.1 Practical Implication:

The findings of this study offer valuable insights for managers and stakeholders in the IT sector to improve employee well-being and performance. Managers should foster a high -quality work environments through initiatives that promote work-life balance, flexibility, autonomy, and positive social interactions can lead to significant gains in both employee satisfaction and productivity. They need to introduce and implement proactive measures to identify and address early signs of burnout, such as stress management programs and employee assistance services, can prevent a decline in productivity and maintain a healthy and engaged workforce. But they also need to understand burnout can't be address and mitigate in solitary managers shall regularly monitor employees QWL in a bid to decrease burnout in employees and increase productivity. IT

sector is twin cities Pakistans' fast growing sector providing services globally and this only increase the need for managers to recognize the individual needs and preferences and adopt personalized approaches to have better QWL and increase in productivity. Regularly monitoring employee QWL, burnout levels, and productivity allows organizations to assess the effectiveness of implemented initiatives and adapt them as needed for optimal results.

5.2 Limitation:

While this study offers valuable insights, it is important to acknowledge its limitations. First of all, convenience sampling was used in this study that might have limit the generalizability of findings to the entire IT sector in twin cities of Pakistan. Additionally, self-reported data might have introduced potential biases especially when productivity and burnout is concerned as recall bias or the taboo of admitting one's struggle is prevalent in Pakistan. Additionally, cross sectional design was used to conduct this study might have restricted result in certain manners. But the major limitation of this study was self-reported data to measure Productivity future researchers can opt for more practical means to measure productivity.

5.3 Future Research Recommendations:

Building upon this study future researcher can explore various directions; Future research could employ longitudinal studies, mixed-methods approaches, and investigate other sectors and contexts to deepen our understanding of the complex relationships between QWL, burnout, and productivity. As this study used quantitative approach that though gives a snippet from larger sample but can also miss out on some major insights future researchers can take In-depth interviews or focus groups with IT professionals could offer richer insights into individual experiences and interpretations of QWL, burnout, and their impact on work performance. Combinations of qualitative and quantitative methods can also be deployed to enhance the results. Furthermore, hard outcome evidence can be used by future researchers instead of self-reporting method to measure productivity. Future researchers can also expand the investigation to include potential mediators and moderators beyond burnout could deepen understanding of the mechanisms affecting productivity within IT sector or beyond.

Conclusion

In twin cities IT companies, this study found a strong correlation between QWL, burnout, and worker productivity. Higher QWL has a direct impact on productivity as well as an indirect one through a decrease in burnout. In order to establish a healthy and productive work environment for employees, the findings recommend that the IT sector prioritize QWL activities and proactive burnout management measures. Further research should continue to explore these relationships and refine our understanding of their dynamics in diverse contexts.

In the dynamic IT companies of twin cities, where retaining talent and achieving high-quality results are crucial, it is essential to comprehend the elements that impact worker productivity. Inspired by the Job Demands-Resources Model (JD-R Model), this study examined the complex interaction among employee productivity, burnout, and QWL. The study, which employed a quantitative methodology, concentrated on Pakistani IT workers, a group recognized for making major contributions to the country's digital economy.

The hypotheses examined in this study aimed to study how QWL interacts with employee productivity and burnout. The first hypothesis (H1) purposed a significant positive relationship between QWL and employee productivity, which was found to be supported. This confirms the notion that employees thrive in a work environment characterized by high QWL. This aligns with previous research highlighting the positive influence of QWL on employee contentedness, engagement, satisfaction, and ultimately, productivity (Bakker & Demerouti, 2007; Wright & Cropanzano, 2000).

The second hypothesis (H2) proposed a significant positive relationship between QWL and burnout, and this, too, was confirmed. This finding emphasizes the detrimental effect of poor QWL on employee well-being, pushing them towards exhaustion, depersonalization, and reduced sense of professional accomplishment. It aligns with the JD-R Model's premise that low job resources, such as inadequate support or limited autonomy, deplete employees' reserves, increasing their vulnerability to burnout (Bakker & Demerouti, 2007). This finding is particularly relevant in the Pakistani IT context, where demanding work schedules, pressure to meet project deadlines, and limited flexibility can contribute to feelings of exhaustion and depersonalization (Shahzad *et al*.,

2017). The findings also align with motivators identified by Herzberg in his theory of motivation. QWL coupled with emotional distress restricts the relationship between QWL and contribution to productivity H3. This has also been identified by previous work (Shanafelt *et al*., 2012; Weber & Jaekel-Reinhard, 2000). Moreover, higher burnouts are also associated with stressful working environments, being staff' stress a positive predictor of burnout, as prior studies already conveyed (Söderlund, 2017).

The most intriguing aspect of this study lies in the third hypothesis (H3), which proposed that burnout mediates the relationship between QWL and employee productivity. The analysis revealed that burnout partially mediates the relationship, confirming its significant but not exclusive role in influencing productivity. This implies that while improving QWL leads to enhanced employee productivity, the presence of burnout can reduce this positive effect. This finding resounds with prior studies highlighting the multifaceted nature of productivity, where individual factors like burnout can moderate the impact of work environment variables (Maslach *et al*., 2019).

This partial mediation highlights the importance of adopting a holistic approach to enhancing employee productivity in the Pakistani IT sector. While encouraging a positive QWL with work-life balance, job security, and meaningful work is crucial, organizations must also prioritize initiatives that directly address burnout prevention and employee well-being. This could involve implementing flexible work arrangements, offering stress management programs, providing access to counseling services, and fostering a culture of open communication and support and most importantly understanding the individual needs.

Furthermore, considering the specific challenges faced by the Pakistani IT workforce, tailored interventions may be necessary. Further studies ae required with other variables like time zones to understand the challenges specifically faced by IT sector of Pakistan. Long working hours, inadequate compensation, and limited career development opportunities can worsen burnout tendencies. Therefore, organizations should actively listen to their employees' concerns and address them through policies and practices that promote fairness, growth, and recognition. Additionally, managers need to incorporate mindful practices and emotional intelligence training programs to equip employees with coping mechanisms to manage stress and prevent burnout.

In conclusion, this study sheds light on the elaborate relationship between QWL, burnout, and employee productivity in the Pakistani IT sector. While a focus on creating a high-quality work environment remains crucial, recognizing the mediating role of burnout emphasizes the need for a complicated approach. By combining QWL initiatives with burnout prevention strategies, Pakistani IT companies can build a thriving workforce that is not only productive but also resilient and well-being-focused. It's need of the hour to prioritize both individual and organizational well-being, the Pakistani IT sector can unlock its full potential and contribute significantly to the nation's economic and technological advancement.

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THESIS QUESTIONNAIRE

Name _____

Gender   ☐ Male   ☐ Female   ☐ Prefer not to say

Age   ☐ 20 to 25   ☐ 26 to 35   ☐ 36 to 45   ☐ 45 to 55   ☐ 55 or above

Employment Status   ☐ Permanent   ☐ Contracted   ☐ Intern/Trainee

Firm Size   ☐ 10 to 99 employees   ☐ 100 to 249   ☐ 250 to 499   ☐ 500 +

Years in IT sector   ☐ > 1 year   ☐ to 5 year   ☐ + year

Daily Working Hours   ☐ 8 Hours   ☐ < 8 hours

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Quality of Work Life					
I have a clear set of goals and aims to enable me to do my job.					
I have the opportunity to use my abilities at work.					
I feel able to voice opinions and influence changes in my area of work.					
My employer provides adequate facilities and flexibility for me to fit work in around my family life.					
My current working hours / patterns suit my personal circumstances.					
I feel well at the moment.					
When I have done a good job it is acknowledged by my line manager					
I often feel under pressure at work.					
Recently, I have been feeling unhappy and depressed.					
I am involved in decisions that affect me in my own area of work					
I am satisfied with my life.					
I am encouraged to develop new skills.					
In most ways my life is close to ideal.					
My employer provides me with what I need to do my job effectively					
My line manager actively promotes flexible working hours / patterns .					
I work in a safe environment.					
Generally things work out well for me.					
I often feel excessive levels of stress at work.					
I am satisfied with the training I receive in order to perform my present job.					

Recently, I have been feeling reasonably happy all things considered.					
I am satisfied with the career opportunities available for me here					
The working conditions are satisfactory.					
I am involved in decisions that affect members of the public in my own area of work.					
I am satisfied with the overall quality of my working life.					
Burnout (Exhaustion, Cynicism, and Personal Efficacy)					
I feel emotionally drained from my work					
I feel fatigued when I get up in the morning and have to face another day on the job.					
I feel used up at the end of the workday.					
Working all day is really a strain for me.					
I feel burned out from my work					
I'm becoming increasingly uninterested in my daily tasks at work.					
I've been feeling unenthused about taking on new projects, as the workload seems overwhelming.					
I find myself not bothered to contribute ideas in team meetings					
I'm experiencing doubts about the long-term sustainability of the current workload and its impact on my well-being.					
I've become somewhat cynical about the effectiveness of my work.					
I strive to be effective in my role by consistently.					
My contribution to the team's success has been significant.					
I take pride in being good at my job.					
I feel exhilarated when faced with challenging tasks.					
I approach challenges with confidence.					
I have accomplished many worthwhile things in this job.					
Productivity					
I have a high work performance.					
I accomplish tasks quickly and efficiently.					
I set a high standard of task accomplishment.					
I achieve a high standard of task accomplishment.					
I always beat our team targets					